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# **THE NATIONAL CORPORATE SYSTEM**

**Conceptual foundations  
of performance management**

LEV CHERNOY



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## SUMMARY

The set of corporations and firms in the national market economy is viewed as a complex open dynamic system. The book looks into the basic characteristics of this system that affect its intrasystem cohesiveness, dynamics and resistance to destabilizing externalities. The extent and ways of market self-organization in a national corporate system are considered together with the system's key parameters purposefully manageable through state regulation and the public sector. Key management actions to enhance the self-organization and efficiency of Russia's national corporate system are prioritized with regard to their implementability. The book is intended for economists and public administration specialists, students and a broad readership interested in economic problems.

### THE NATIONAL CORPORATE SYSTEM. Conceptual foundations of performance management

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# TABLE OF CONTENTS

INTRODUCTION .....	9
FOREWORD.....	19
FROM THE AUTHOR.....	27
<b>Chapter 1. Institutional, system and functional specifics of the corporate basis of a market economy</b>	
1.1. Structural elements of a corporate system and their institutional specifics.....	29
1.2. Interactions Between Corporations That Impart System Integrity Characteristics to a Corporate System .....	32
1.3. Main system-critical factors, operation framework conditions and structure quality of a corporate system.....	38
1.4. Proper and improper system characteristics of a corporate system and the economic policy factor.....	46
1.5. Multiplicity of corporate system parameters directly affecting the economy efficiency.....	49
1.6. Basic corporate system operation framework conditions and its system quality: characteristics of links .....	51
1.7. System functions of the corporate system core and periphery.....	55
1.8. Public policy as a factor affecting the corporate system structure and system quality.....	57
1.9. National corporate systems and the global corporate system: common features, specifics and nature of interaction .....	60
1.10. Conclusions from Chapter 1.....	66
<b>Chapter 2. Conditions for maintaining the efficiency of the economy corporate basis at a level ensuring the sustainable operation of the reproduction loop</b>	
2.1. Efficiency of a corporate system, its system quality and the set of operation framework conditions: characteristics of links ....	68

2.2. System characteristics of a corporate system and their efficient reproduction.....	71
2.3. Prerequisites for ensuring an acceptable level of corporate system efficiency under the given operation framework conditions.....	82
2.4. The need for boosting the economic potential of a corporate system as a factor constraining specialization processes within the system of local regional corporate modules.....	88
2.5. Conventionalisation of corporate systems: its causes, results and implications.....	93
2.6. Impact of changes in the foreign exchange and tariff policy on national corporate systems and the global corporate system.....	101
2.7. System conditions for efficient absorption of foreign capital by the corporate basis of a weak economy.....	106
2.8. Maintenance of the economic subjectness resource of the state and the corporate system at a level ensuring manageability of economic processes and adaptation of the corporate system of a weak economy to WTO membership requirements.....	108
2.9. Conclusions from Chapter 2.....	112

**Chapter 3. Uncontrolled and controlled transformations  
of the economy corporate basis: patterns, tools and impact  
on development processes**

3.1. Uncontrolled changes in the economy corporate basis: their nature and implications.....	114
3.2. Generalized representation of corporate system transformation management.....	120
3.3. Targets and tools of regulatory actions transforming the economy corporate basis.....	121
3.4. The mechanism of downgrading the system quality of a corporate system in a crisis and restoring its performance when the economy emerges from the crisis .....	130
3.5. Functions of the public sector performing as a tool to manage corporate system performance and factors determining the reasonable size and form of state presence in the economy.....	135
3.6. Main subsystems and tools for managing corporate system performance.....	152
3.7. System specifics of the normal evolution scenario for corporate systems in developing countries.....	155
3.8. Conclusions from Chapter 3.....	161

**Chapter 4. Management of corporate system performance in different stages of a modernization cycle**

4.1. Institutional specifics of modernization agents and their input into the corporate system modernization process.....	164
4.2. Factors determining specific requirements for corporate system performance management in the modernization stage.....	169
4.3. The adequate size of the state-controlled corporate system sector in different stages of the modernization cycle and factors determining it.....	173
4.4. Conditions for efficient use of the economic potential of small and medium firms in various modernization cycle stage.....	178
4.5. The need to maintain the CS economic subjectness resource at an above-critical level as a necessary condition for its accelerated modernization.....	185
4.6. The normal evolution path of the corporate system in a modernizing economy.....	189
4.7. Impact of neo-liberal economic paradigm transformations on modernizing corporate systems. Conditions for subsequent efficiency growth in the economy corporate basis.....	196
4.8. Conclusions from Chapter 4.....	207

**Chapter 5. Conditions for maximizing export efficiency in the manufacturing industry segment of a corporate system**

5.1. Factors affecting the export efficiency of a corporate system.....	209
5.2. Factors limiting the input of small and medium firms into the economy export capacity; conditions for neutralisation of these factors.....	214
5.3. Options of export capacity distribution between the corporate system core and periphery.....	216
5.4. Impact of economy openness on the corporate system export capacity.....	217
5.5. Factors affecting corporate system export specialization.....	218
5.6. The functional completeness of a corporate system as a condition to boost the development of an export-oriented economy.....	220
5.7. Conclusions from Chapter 5.....	222

**Chapter 6. The corporate system of modern Russia: establishment, status, capacities and mechanisms for enhancing performance**

6.1. The Russian corporate system: the impact of the economic policy factor.....	224
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6.2. Imaginary and real structural defects of the Russian economic system and conditions for their elimination .....	251
6.3. Impact of the foreign capital factor on Russia's corporate system development potential.....	266
6.4. Factors affecting the choice of a strategy to improve Russia's corporate system performance and conditions for its implementation .....	274
6.5. Capacities and constraints of modernization strategy options for Russia's corporate system and economy.....	280
6.6. Prerequisites for increasing the exports and import substitution potential of corporations in Russia's manufacturing industry .....	292
6.7. Conclusions from Chapter 6.....	296
<b>GENERAL CONCLUSION .....</b>	<b>299</b>
<b>APPENDICES</b>	
<i>Appendix 1.</i> The controlled evolution of the Indian economy corporate system as an example of the normal phase path of a corporate system based on an underdeveloped economy with a large nonmodern sector and a substantial potential size of production and market .....	303
<i>Appendix 2.</i> The South Korean model for managing the corporate system of a modernizing economy with a medium potential size of the domestic market .....	321
<i>Appendix 3.</i> The Taiwanese model for managing the corporate system of an economy with a low potential domestic market and based on culture-driven entrepreneurship .....	343
<b>REFERENCES .....</b>	<b>373</b>

# INTRODUCTION

Since its emergence in the sixteenth century, Russia has been a major player on the world stage, a role that its geographical size (currently largest in the world) and population (ninth globally as of 2013) ensure into the foreseeable future. Economically, however, Russia has traditionally lagged the world's leaders, even during the Soviet Union's heyday in the Depression and war-torn 1930s and 40s. Russia's relative economic backwardness persists to this day, over two decades after ridding itself of the Soviet Union's costly empire and the top-down command economy imposed upon it by communist ideology. In 2012, despite a long energy and raw materials boom in its favor, the Russian economy produced only \$14,000 per person, a lackluster 44th in the world.<sup>1</sup>

The proximate cause of Russia's economic anemia is clear: its government has rarely provided its subjects cum citizens with sufficient freedom to unleash fully their inventiveness, entrepreneurial spirit, or work ethic. Although it scored high on some parts of the Fraser Institute's Economic Freedom Index, Russia's overall score in 2013 was just 6.55 (out of 10), 101st in the world. Holdovers from the Soviet regime like red tape, corruption, capital controls, trade restrictions, and weak property rights continue to constitute major drags on Russia's economic growth and development.<sup>2</sup> In the modern world, business corporations generate most economic activity. It is unsurprising, then, to discover that Russia's corporate system is, in the words of academicians G.V. Osipov and V.L. Makarov in the Foreword to this volume, "still rather weak". Outside of the natural resource sector, Russia has yet to spawn a world class corporation.

The ideas in this book arose as the author struggled to understand how the corporate systems of major Western economies developed and why they proved themselves superior to Soviet economic institutions given that Western corporations were also heavily regulated by, and in some instances even owned and operated by, their respective states. The result is a comprehensive neo-Russian perspective on global economic and business history that is logically rigorous, although not yet statistically tested, and that explains Russia's continued economic malaise.

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<sup>1</sup> Nation Master, "Russia," (March 2014).  
<http://www.nationmaster.com/country-info/profiles/Russia>.

<sup>2</sup> Fraser Institute, Economic Freedom of the World 2013 Annual Report.  
<http://www.freetheworld.com/release.html>.

Chapter 1, “The Corporate Basis of a Market Economy”, proffers an inclusive theory of the corporation that encompasses most forms of business enterprise. While excluding partnerships and proprietorships, the definition includes joint stock companies (whether formally chartered or not), holding companies, asset management groups, financial and industrial groups (FIGs) like keiretsu and chaebol, state-owned and/or state-controlled companies, and even cartels, consortiums, and syndicates. It asserts that limited liability is the main impetus for incorporation and that most large businesses opt for formal incorporation in order to shield investor assets from corporate creditors.

Chapter 1 also asserts that corporations are best understood as parts of complex systems or networks. They are not just standalone entities engaged in arms-length market transactions with other corporations, individuals, and governments but rather institutions embedded in various long-term relationships with other economic entities. They regularly enter into formal contracts and informal understandings of varying durations and intensities. Suppliers engage in relational contracting, adjusting the terms of their agreements as economic conditions change over years, decades, and occasionally centuries of mutually beneficial interaction. Corporations also regularly purchase equity stakes in suppliers, customers, and others in their sector, industry, location, and/or function. Sometimes the holdings are uni-directional and enough to assume formal control but often, in the case of Japanese keiretsu and other FIGs, they are bi-directional crossholdings that do not create control rights. Other long-term relationships involve credit, the *sin qua non* of capitalism. Ultimately, the web of interactions constituting the corporate system (CS), not the individual companies composing the CS, are what add value and hence create wealth. The chapter also posits the existence of subsystems, including a CS “core” that accounts for 50 to 70 percent of economic activity and a CS “periphery” that accounts for most of the rest, as well as subsystems designated by sector (e.g., agriculture), by geography (e.g., Silicon Valley), and by function (e.g., construction and road maintenance, oil, etc. companies providing support for the transportation sector).

Russia’s CS remains relatively low quality and inefficient, in part due to the relative weakness of Russia’s financial system, development of which has been hampered by numerous factors described below. Instead of a financial core that interacts at arms length with numerous borrowers from throughout the economy, as in many developed economies today, Russia still largely relies on banks cloistered within FIGs, much as parts of the industrializing the US did in the early and mid nineteenth century.<sup>3</sup> To obtain enough financing to grow and develop into global competitors, Russian companies must join, or help to create, a FIG, which is easier said than done given the substantial complexity of the CS and its sundry subsystems, especially in a geographically expansive and rapidly changing nation like Russia.

CS development is to a large extent dependent on the state of the global economy, the development level of the domestic economy, overall domestic political

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<sup>3</sup> Naomi Lamoreaux, *Insider Lending: Banks, Personal Connections, and Economic Development in Industrial New England* (New York: Cambridge University Press, 1996).

stability, and specific economic regulations ranging from monetary and fiscal to competition and social policies. Unsurprisingly, national corporate systems vary widely: some are devoid of a core, or nearly so, while others lack geographical subsystems. Some display few links between geographical or industrial subsystems while others are richly intertwined. A quality CS has a strong core, well-developed industrial and geographical subsystems, and numerous connections between subsystems. Unless impeded, a quality CS will tend towards efficiency, as measured by corporations' susceptibility to market and investment risks, ability to make capital investments in large projects, ability to finance R&D and adopt new technology from elsewhere, competitiveness in foreign markets, and other variables. The higher the quality of the CS, the more efficient the CS and hence the more efficient the overall economy, *ceteris paribus*. That is especially true of the efficiency of the credit subsystem.

When the CS cannot meet emerging challenges, state intervention can be salubrious, as it was in postwar Britain with the nationalization of the aviation, broadcast, energy, mining, and transportation industries. Postwar France and Italy also responded to deficiencies in their corporate systems by nationalizing banks and other businesses and restoring private ownership only after CS revitalization. Emerging market economies, including India, find it advantageous to bolster CS weaknesses with public financing and state-run enterprises. Even the United States provides public support to its CS when it becomes unbalanced, as during the economic and financial crises of 2007-9. It also subsidized CS subsystems to jumpstart investment in infrastructure and R&D during the Cold War.

By necessity, the core CS of emerging and transitional economies, like 1990s China and Russia, respectively, are typically composed of state-controlled corporations, which is preferable to what occurred in China and Mexico in the 1920s–30s when the quality of their core corporate systems fell due to an influx of foreign-controlled corporations. Privatization and sale of corporations to foreigners weakens the domestic CS by severing or weakening links between the various subsections and by degrading the core CS.

The CS responds to changes in public, especially economic, policies. Where cartels were countenanced, for example, they were important parts of the CS until they were outlawed and suppressed, as in postwar Europe. Similarly, merger policies affect CS structure by influencing optimal corporate strategies regarding vertical and horizontal integration, mergers, and so forth. The same goes for the global corporate system (GCS), which is composed of national and macroregional CSs, like those of the EU and NAFTA, and transnational corporations (TNCs).

The GCS was largely a product of the second half of the nineteenth century, after the development of national CSs in the United States and Britain and the proliferation of TNCs and similar structures, like international cartels.<sup>4</sup> The qual-

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<sup>4</sup> Robert E. Wright, *Corporation Nation* (Philadelphia: University of Pennsylvania Press, 2014); Mark Freeman, Robin Pearson, and James Taylor, *Shareholder Democracies?: Corporate Governance in Britain and Ireland Before 1850* (Chicago: University of Chicago Press, 2012); Mira Wilkins, "The History of Multinational Enterprise," in Alan M. Rugman, ed., *The Oxford Handbook of International Business* (New York: Oxford University Press, 2009), 3–38.

ity of the GCS has waxed and waned subject to positive and negative shocks such as the Great War, the postwar recovery, the Great Depression, World War II, the Cold War, collapse of the first Bretton Woods System, disintegration of the Soviet bloc, and sundry financial panics, among others.

Chapter 2, “Conditions for Maintaining the Efficiency of the Economy Corporate Basis”, reminds readers that CS quality does not ensure CS efficiency because even a quality CS can be degraded by adverse shocks and policies. CS efficiency cannot be measured in Pareto terms, which entails improving the condition of one or more individuals without rendering anyone worse off, because the CS is a dynamic concept and not one of equilibrium. Kaldor-Hicks efficiency, which allows winners to compensate losers for the effects of policy changes, is more relevant but ultimately falls short because sometimes it is necessary for some individuals to suffer losses today so that everyone may experience gains in the future. CS efficiency is therefore best gauged by comparing it to CS potential, which essentially means comparing per capita income growth between peer nations over extended, crisis-free periods. Those with the highest per capita incomes have the most efficient corporate systems and vice versa.

Special economic interests (SEIs) are entities, ranging from individuals to businesses to international NGOs like the World Bank, that influence (usually by hampering the optimization of) the CS by pushing for changes in economic policies, like tariffs and other taxes, interest rates, and so forth, beneficial to themselves. Latin America and Russia in the 1980s and 1990s were subject to considerable SEI pressure that limited CS efficiency. Sometimes SEIs counterbalance each other, producing little net effect, so while SEI policy tampering can hurt CS efficiency, it is not the only cause of low CS efficiency. Policy trends not directly influenced by SEIs, like increased trade liberalization or stable monetary policies, can also, for example, affect CS efficiency.

SEIs, random events, and other shocks are potentially damaging to CS (and hence economic) efficiency because efficiency depends on a certain degree of harmonization between the CS, the real economy, and economic policy. Adverse events threaten to destabilize existing corporate relationships, potentially transmitting shock waves to other parts of the CS. Opening international trade, for example, can pressure local producers and everyone in their networks, thus hurting CS development and efficiency. Of course shocks can also be positive. Policy changes rendering corporate mergers easier, for example, could improve CS efficiency in nations, regions, or industries where corporations are insufficiently large to tap economies of scale or scope.

The GCS and major national CSs have undergone two major sea changes. The first occurred during the Great War and Great Depression and was characterized by increased state intervention, from banking system restructuring in the United States to the command economies of the fascist regimes and the Soviet bloc. The second took place in the last few decades of the twentieth century, as American and British policies again became more market-oriented (privatization, free floating exchange rates, deregulation of financial markets, etc.) and the former members of the Soviet bloc transitioned toward more open economies. The neoliberal policies of the latter twentieth century did not, however, re-constitute pre-war

policies but rather supplanted them with even more stringent free market policies. Their seeming success gave rise to a “single international economic policy”, the so-called Washington Consensus imposed on nations throughout the world by the International Monetary Fund (IMF) and World Trade Organization (WTO).<sup>5</sup>

The Washington Consensus damaged many national corporate systems, further weakening their domestic economies by exposing them to intense international competition before they had a chance of succeeding. The chaining of “Asian Tigers” like South Korea after they accepted IMF loans during the 1997-98 currency crises is proof positive of the vacuity of the Consensus and other hard-line neo-liberal policy prescriptions. So, too, was the rapidity of the spread of financial contagion in 2008. China and India are thriving today because they did not buckle to the IMF or join the WTO until their respective corporate systems were sufficiently developed to handle the resulting strain.

The importance of competition between individual corporations has been exaggerated to some extent. The economies of Taiwan and Japan grew quickly after World War II despite a decided lack of domestic competition and considerable government CS guidance, hence the ubiquity of the 1980s sobriquet, “Japan, Inc.”<sup>6</sup> Subnational, national, and regional corporate systems, however, are likely to compete with each other into the foreseeable future as there appear to be natural limits to economic specialization.

Similarly, TNCs are not as powerful as sometimes claimed because their growth is constrained by a variety of factors, especially the development of the corporate systems of China and other eastern Asian nations. While TNCs and other foreign capital flows have obvious positive effects on domestic economies, they also have some negative effects on local CS development, which can essentially cleave into disparate, and largely unconnected, domestic and international segments. Foreign capital infusions have even caused the disintegration or criminalization of domestic corporate systems. WTO membership is likewise a double-edged sword that can impede, retard, or even reverse CS development.

Chapter 3, “Transformation of the Economy Corporate Basis”, begins with the observation that transformations of the CS can be uncontrolled or controlled. Uncontrolled transformations, which predominated before the Great Depression, were unable to optimize the CS because unregulated corporations increased their market power and decreased competition to the point of reducing the effect of market signals, forcing the adoption of competition policies like America’s anti-trust laws. CS transformation, uncontrolled except during the Great War, led to financialization, or the rapid growth of the financial sector in proportion to real economic activity. The result was the stock market bubble and crash and subsequent Great Depression. For the next half century, most governments carefully controlled CS transformation but in the 1980s it was again liberated, and unsurprisingly spawned a new bout of financialization and its concomitant dramatically negative consequences. Adoption of the Euro, for example, slowed growth in most EU nations and thereby caused the eurozone crises of 2009-12. Crises damage

<sup>5</sup> Joseph Stiglitz, *Globalization and Its Discontents* (New York: W. W. Norton, 2002).

<sup>6</sup> <http://www.investopedia.com/terms/j/japaninc.asp>.

the CS by causing bankruptcies, precipitating defaults, and so forth, tearing relationships asunder and rendering them defunct for years and even decades afterwards. Uncontrolled or unguided corporate systems will, in other words, suffer from a chronic lack of efficiency.

Controllable CS transformations are planned and often implemented by tweaking numerous CS parameters, including regulations, corporate governance rules, corporate ownership (e.g., nationalization), tax laws, trade policies, and so forth. They are essential to economic modernization, as witnessed by the American, British, and Japanese cases in the nineteenth century,<sup>7</sup> and the Asian Tiger cases in the twentieth. Controllable transformations are also important components of economic recovery after crises.

Public ownership of parts of the CS is another means of controlling transformations, one that can be very successful as numerous wartime mobilizations attest. Public ownership of corporations and/or government subsidization of privately owned corporations can also help to jumpstart CS and hence economic development. The public sector can play an important role in development where the private CS cannot finance investment programs for major capital-intensive projects, strategic industrial projects, or mission critical infrastructure (communication, transportation, water), and under numerous other conditions.

Chapter 4, “Management of Corporate System Performance”, posits that a modernization agent, be it the state, domestic capital, or foreign capital, can jumpstart economic modernization economy-wide. Domestic capital served as modernization agent in the first economies to experience modern growth, including the Netherlands, Britain, the United States, France, Germany, and Japan. Russia, by contrast, cycled through public, foreign, and domestic modernization agents. The state took the lead during the reign of Peter the Great, but relinquished it to foreign and domestic capital under Alexander II. In the late nineteenth century and up to the Great War, Russia’s CS and economy developed rapidly under the policy reforms initiated by Sergei Witte.

Like many other modernizing economies reliant on foreign capital, Russia’s CS split into two, an efficient, modern one and a less efficient, more traditional one. In fact, no economy has ever been completely modernized by foreign capital alone because foreign capital seeks only the highest returns, and those are almost invariably found only in the resource extraction sector. The state and/or domestic capital must therefore step in to modernize the rest of the economy or the bifurcation will persist. Most nations, from Russia to established Latin American countries to newly liberated colonies in Africa and Southeast Asia, opted for the state as the main economic modernization agent because it seemed to offer the quickest path to development.

Secondary modernization and economic recovery initiatives have also often relied on the state as modernizing agent, as in most Western European countries following World War II. Even in Great Britain, the government substantially comple-

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<sup>7</sup> Wright, 2014; Freeman et al, 2012; Thomas McCraw, *Creating Modern Capitalism: How Entrepreneurs, Companies, and Countries Triumphed in Three Industrial Revolutions* (Cambridge: Harvard University Press, 1998).

mented domestic capital. The financial crises at the end of the first decade of the new millennium also elicited considerable state-based effort, even in the United States. Remodernizing and revitalizing the Russian CS will likewise require state participation.

As an economy modernizes, so too does its CS, which at the beginning is a relatively small part of the overall economy and of low quality and efficiency. By the end, the CS is as efficient as that of mature economies. Harmonizing the CS and modernization paths can speed, or at least ease, both journeys. That means that over the course of development, monetary, exchange rate, and trade policies and the size and regulatory powers of the state need to change in harmony with the needs of the CS. Regulatory powers, for example, need to be stronger when the CS is of low quality, the economy and markets are inefficient, market and investment risks are high, the trade gap is large, and so forth. Similarly, the state-controlled part of the CS typically needs to grow more rapidly at first but usually later should give way to the privately-controlled CS. Public CS is often necessary even in places with significant private capital, such as Russia, because private investors are often reluctant to risk their capital at first.

Micro (nine or fewer employees) and small (10 to 49 employees) businesses are, collectively, also important to modernization, especially in its early stages, due to their ubiquity. Most do not incorporate until they grow to be medium sized (50 to 300 employees) but they often supply inputs to bigger businesses, including corporations. During the modernization process, they often need government support, especially credit, in order to remain profitable while growing. Their growth is essential because small, and especially micro, enterprises cannot, in principle and by definition, drive economic modernization. Contrary to common belief, micro, small, and medium businesses (SMEs) were not harbingers of growth or development in South Korea, the United States,<sup>8</sup> or anywhere else for that matter, as evidenced by the large inputs from the state that they required to begin operation and remain afloat. That is not to say, however, that SMEs should not be subsidized because they do soak up excess labor and provide cheap inputs for the core CS. Laws protecting SMEs from the encroachment of foreign capital can also be salubrious because, as explained above, foreign capital can impede CS development.

State involvement in modernization can also help to protect those who lose out during periods of rapid economic change by compensating them for lost rents and by minimizing the extreme boom and bust cycles associated with uncontrolled CS development. By controlling the CS, especially the core CS, governments can jumpstart development as they did in India, South Korea, and Taiwan. Foreign capital is no substitute because, again, it is usually focused on raw material extraction rather than domestic development of key sectors like communication, electricity, and transportation infrastructure. The openness dictated by the Washington Consensus institutions therefore actually impedes modernization. Brazil's development, for example, was stunted by the IMF. Only nations with a sufficiently efficient CS, like China, can survive massive foreign capital inflows. Early modern-

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<sup>8</sup> Scott Shane, *The Illusions of Entrepreneurship: The Costly Myths that Entrepreneurs, Investors, and Policy Makers Live By* (New Haven: Yale University Press, 2008).

izers did not have to suffer from such intrusions so they followed a more normal and less rocky development path.

Neoliberal policies like the Washington Consensus have also riddle the EU with numerous problems, including a significant number of destabilizing factors, incomplete absorption of national CSs, and a high level of CS integration with the United States, all of which led to the eurozone crisis. The absence of controllability of CS transformation in the EU and the US dooms their economies to lurch from crisis to crisis without substantially increasing CS efficiency or economic growth. In that sense, neither the financial crisis of 2008 nor the subsequent euro crisis are over, they are merely in remission, awaiting a new shock or the excess buildup of new pressures to foment a new wave of destabilization. In other words, the same sort of vicious cycle of crises that decimated the developing corporate systems of Latin America and Southeast Asia is preventing the remodernization of mature economy corporate systems as well.

Chapter 5, “Conditions for Maximizing Export Efficiency”, attributes CS export competitiveness to state modernization efforts, as exemplified by the policies of Malaysia, Singapore, South Korea, Taiwan, and Thailand. SMEs can play only minor roles in export competitiveness unless aided by specialized export-oriented trading corporations supported by the state. Governments must also push corporate systems to diversify the range of export goods they produce, especially toward more sophisticated and high-tech products and away from semi-finished products and components. Overspecialization leaves the domestic CS subject to destabilizing market shocks from which recovery can be impossible. It also renders the domestic CS subject to external influences that impede its development.

As its name, “The Corporate System of Modern Russia”, implies, the sixth and final body chapter overviews the current status and future prospects of the Russian CS. The Washington Consensus and IMF conditions significantly diminished its quality and efficiency and thereby impeded Russian economic growth. It would have been better to have copied the New Economic Policy reforms of the 1920s or to adopt the US CS from the 1960s, which was approximately harmonious to Russia’s economy in the early 1990s. Instead of applying the lessons of history to the problem of transitioning from a command to a market economy, however, neoliberal policies were applied in the quickest and most damaging ways possible. That entailed cutting the government out of the CS as rapidly as possible and introducing high levels of competition too soon by breaking up domestic, formerly state-owned monopolies into competing units and eliminating international trade barriers. Russia’s CS therefore remained inefficient and became highly vulnerable to external shocks that have since rendered its development impossible and its engineering and light industrial sectors moribund. The policy of breaking up large Russian enterprises also stalled stock market development. By 2010, only about 900 companies were listed on the two major exchanges because most were far too small to have their shares traded in arms-length transactions. The former state-owned monopolies, by contrast, would have remained large and formidable after privatization had they not been broken up.

Mergers have since helped Russian corporations to achieve economies of scale and scope but they have not gone far enough, even in the state-controlled military

hardware industry. Holding companies like Gazprom, Rosatom, and United Shipbuilding predominate instead of more efficient fully integrated corporations (like, say, General Electric or General Motors in the United States). Due to Russia's instability and weak credit system, Russian companies find the holding company structure more flexible and hence more amenable to their interests. Instead of a U.S.-style merger movement or German "bank capitalism",<sup>9</sup> Russia found its core CS denuded of globally competitive companies and hence vulnerable to TNCs and other forms of foreign capital. It is currently crippled by aging industrial production equipment and little capacity to procure new equipment, further reducing its international competitiveness.

This sorry state of affairs need not have occurred. In 1913, Russia's banking system was much larger and robust than in 2001 and the quality of its CS was correspondingly higher. The great inflation of the early 1990s decimated the nascent banking system and people's confidence in it. Hyperinflation was followed by a liquidity crisis, sovereign debt default and concomitant loss of bank deposits, and the disintermediation caused by the high rates paid on GKO (short-term government treasury bills) and the lack, until recently, of a deposit insurance program. As recently as 2010, the aggregate resources of all of Russia's banks did not amount to the assets of any major global bank such as JPMorgan Chase or HSBC.

Given those problems, it could take too long (decades) to develop a private domestic banking system, which will be squelched anyway because of Russia's accession to the WTO in 2012. Russia therefore should emulate France, Japan, and several other countries and establish banks that specialize in servicing specific sectors and performing specific functions. Because most corporate share purchases are funded by bank loans, Russia's anemic banking sector has impeded the development of domestic stock markets and minimized corporate market capitalization. Inflation, loss of personal savings, vouchers, the liquidity crisis, and the debt default of 1998 also hurt demand for corporate shares. Low prices for corporate shares, at times only 10 percent of their real value, impeded corporate operations and growth by raising the cost of capital prohibitively high.

Russia should not have joined the WTO or otherwise encouraged free trade. Instead, it should return to the pre-Great War practice of placing moderate tariffs on imports, case-by-case. Had it done so during the transition period, it would not have lost its light industrial or engineering CS subcomponents. Since 1992, only an undervalued ruble has provided some protection of the domestic Russian CS, and that only from mature economies and not places, like China, with grossly undervalued currencies. CS weakness has also limited the ability of Russian corporations to make significant R&D investments. In fact, General Electric alone invests more in R&D than all of the Russian CS. Contrary to common belief, energy and other extractive industries cannot save the Russian CS as most natural resources come from only a few regions, especially the Urals Federal District. Moreover, the weakness of the financial system described above has already weakened even the

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<sup>9</sup> Naomi Lamoreaux, *The Great Merger Movement in American Business, 1895-1904* (New York: Cambridge University Press, 1985); McCraw, 1998.

natural resource sector's international competitiveness and will continue to do so in the future unless reforms are initiated.

Obviously, the Russian government should take steps to improve the financial system and to encourage the formation of FIGs. But that will be insufficient to spark remodernization, especially with accession to the WTO. So it should also implement policies like those of postwar Japan and Europe, including creating or otherwise encouraging national champions and TNCs, limiting foreign capital to an economically sound percentage, establishing and subsidizing special investment banks to aid key industries and sectors, and more carefully regulating the CS. The export and import-substitution potential of the CS must be increased by providing manufacturers with low cost loans and by channeling investment to them from natural resource exporters. Mergers in manufacturing should be encouraged so that integrated corporations supplant relatively inefficient holding companies. State-of-the-art technology must be imported or developed, necessitating a sharp increase in R&D spending and human resource development. SMEs should be enlisted as subcontractors to the large export champions.

The book closes with a general conclusion that encapsulates the main arguments about the development of the CS and the state's crucial role in it, in Russia and all the world's developed economies. The conclusion is followed by three lengthy case studies that describe the controlled evolution of the Indian economy (Appendix 1) and the South Korean (2) and Taiwanese (3) models for managing the CS of a modernizing economy. By carefully analyzing those and other cases, Russia and other nations in need of economic modernization or remodernization can develop plans for increasing the efficiency of their domestic corporate systems and hence their per capita incomes.

This book addresses the modernization of transition economies and corporate systems from a new angle that will prove useful to both researchers and policy-makers.

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## FOREWORD

In his early domestic publications in the late 1990s, Lev S. Chernoy had already given a sharp, highly interested, and fresh insight into crucial problems of the Russian economy. He gave the impression that he approached those problems not only as a scholar but also as a practical entrepreneur and insider well aware of all nuances and pitfalls of big business organization, technology, and finance.

More monographs and a host of articles in academic journals followed, in which Chernoy consistently scrutinized economic opportunities and risks for the Russian economic system during its development and challenges that financial and economic globalization posed to this country.

His new monograph explores a very interesting and extremely disputable topic. He evaluates corporations and economic entities functionally equivalent to them that operate as an integral system within the national market economy.

Once, Russian Academician Dmitry S. Lvov quite precisely marked that in their development, modern global markets increasingly tend to depart from classical markets in the sense of Ricardo and Smith. Most markets are explicitly and implicitly being cartelized and dominated by major financial and industrial corporations. While competing, the latter build up stable long-term relationships between themselves and smaller market entities. Thus, the interests, areas of activities and geography, product lineups and pricing policy, etc., are harmonized. The same occurs at both the country and global level.

The content of these relationships is conceptually new. Chernoy can definitely be credited with identifying vital properties of the systematicity in them and endeavoring to depict the economic life of corporate entities in a national economy as an integral systemic array.

It should be noted that Chernoy's ideas to some extent summarize Oliver Williamson's approach, who in his works identified the path of economic organization theory evolving from in-house "nanoeconomics" to corporation microeconomics and further to the mesoeconomics of market and nonmarket cooperation of various corporations.<sup>10</sup> However, before this book by Chernoy appeared, economic organization theory contained a very poorly investigated "uncertainty zone" lying between the lower levels of mesoeconomics and the macroeconomic business organization at the country level. In his research, Chernoy essentially clarifies this

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<sup>10</sup> See O.E. Williamson. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. St. Petersburg: Lenizdat; CEV Press, 1996.

zone. In fact, he brings the micro-, meso-, and macroeconomic elements of a corporate structure to a single structural system organization, which he defines as the corporate base of a national economy.

The novelty of Chernoy's approach lies in defining the array of corporations in the national economy as a complex dynamic open system – *the corporate system*. Yet more revolutionary is his endeavor to examine the main system-critical parameters and properties of this system and explore ways and mechanisms to manage these parameters to enhance the efficiency of the economy.

To explain his approach, Chernoy has introduced a number of reasonably required new categories and notions to economic theory.

Future studies will probably reveal whether his system of notions to describe a corporate system is the most effective (optimal and exhaustive) in terms of theory and methodology. At this point, it should be acknowledged that the apparatus employed in this study (*the core and periphery of a corporate system, its financial core, sectoral corporate segments, functional corporate modules, local regional corporate modules, operation framework conditions of various types and origin, structural quality, system quality, dynamic potential, economic subjectness resource, etc.*) correlates in a sufficiently precise and well thought out manner both with the historical and contemporary international corporate practice and the practice of public macroeconomic management.

This conceptual apparatus is introduced and employed in a logically clear and coherent manner. Every new notion relies on those introduced earlier and is illustrated by international and domestic experience gained from the evolution of market economies. Finally, Chernoy convincingly demonstrates that his apparatus is methodologically instrumental both for normative studies and for describing complex phenomena and processes taking place at the various levels of interaction between economic agents themselves and economic agents and the state.

Chernoy's new study appears to need mathematical models to substantiate the corporate system dynamics and estimates derived from these models. However, rigorous scrutiny of the monograph suggests that mathematical support for the Chernoy's conceptual framework would most likely be premature. Particularities are prone to obscure rather than highlight the logic of his proposed approach. In our opinion, this approach in the first place can and should become the subject of substantial academic discussion.

Though some notions introduced by Chernoy concern qualitative aspects, his work employs quantitative parameters and indicators that have been well defined and validated internationally. For example, they are the notions of a *corporate system core* in general and its *financial core*. The production scale of leading Russian corporations is compared with the global leaders to reveal that the core of a domestic corporate system emerging from marketization of the national economy is still rather weak.

The comparative historical approach plays a deservedly important role in the Chernoy's concept of corporate system dynamics. He extensively employs international and domestic statistics and impressive references. They help in analyzing how corporate systems have been established in highly developed and developing countries and identify their transformation mechanisms and content. To this end,

the development of national economies and the world economy are reviewed in various stages together with crises, modernization transformations, involvement in globalization processes, etc.

Relying on this material, Chernoy shows that corporate systems interact between themselves and with the state. The interaction is not confined to purely market relationships; it is also formalized through various institutions. In this way, the corporate system structure is evolving to become more sophisticated (*structural quality*) and builds stable system cohesiveness properties (*system quality*). Thus, corporate systems acquire the ability to adequately service basic reproduction processes in a national economy.

Chernoy also introduces a conceptual neologism, *local regional corporate module*. In our view, this notion is especially important for Russia with its rich variety of geographic, climatic, demographic, infrastructural, and other conditions. Chernoy convincingly explains the difference between this structural formation from the well-known *regional cluster* according to Michael Porter, as well as the correlation between them. At the same time, it appears that the content of the notion *local regional corporate module* might be – and this is quite an important problem for Russia – adjusted and elaborated based on the Soviet experience, where functionally similar (though managed by directives and plans) structural formations existed within “economic districts” and “territorial economic complexes”.

In our opinion, Chernoy’s notions of *functional completeness* of a corporate system, as well as the *economic subjectness* of a corporate system and the state, deserve special attention. They aim to identify the ability of a corporate system to achieve its own priority targets and secure national economic interests. For Russia, this is one of the key issues on the national agenda in light of the positively crucial priorities (positively declared by Russia’s leadership) of economic modernization and innovation-driven development.

In his approach to appraise the efficiency of the corporate system, Chernoy relies on its *economic potential*. It is essential that the author from the start deals with *dynamic potential*. He regards it as a value that varies in evolution of the corporate system (or, on the contrary, degradation). Further, he introduces the notion of *corporate system efficiency* as the ability to realize the available economic potential and secure conditions for its buildup.

It should be noted that Chernoy strongly argues for the necessity of such a “dynamic” approach. The author shows that the most common methods to evaluate the corporate system efficiency (to be more precise, the entire economy efficiency) by GDP per capita and its growth rates as well as the classical models of Pareto efficiency and their complements formulated in Kaldor–Hicks and Lipsey–Lancaster criteria<sup>11</sup> are insufficient because the dynamic development of a corporate system presumes conceptual departures from the economic equilibrium. In addition, it presumes that resources are reallocated in line with certain priorities of the economic objective setting thus infringing the interests of some market agents.

In this connection the writer emphasizes that the priorities of setting economic objectives may lead to (in world economic history this happened more often than

<sup>11</sup> Kaldor, 1939; Hicks, 1939; Lipsey and Lancaster, 1956.

not) fundamental violations of the above criteria in order to enhance the corporate system dynamics and build up its economic potential. In other words, to ensure much higher efficiency in the future.

At the same time, in our opinion, a more in-depth review of the Pareto model of efficiency and the ensuing concepts that developed it could have made the methods proposed to appraise corporate system efficiency more precise and accomplished. It is especially important for a domestic economy, because it is directly associated with mechanisms used to establish priorities for economic objective setting.

Chernoy explores this problem to show that the priorities of setting objectives determining state economic policy may be greatly distorted due to the influence of strong lobbying groups (financial, resource, military-industrial, etc.) guarding their own *special interests*. Eventually, the above priorities may give rise to conventions negatively affecting the economic subjectness resource of the state and the corporate system, deoptimizing its structure and adaptation level to the conditions of the operation framework, and ultimately decreasing both the economic potential and efficiency of the corporate system.

In exploring the evolution of national corporate systems, Chernoy focuses on the mechanisms of their transformations. To this end, he has adopted a weighted and substantiated approach – in is quite essential, in our view – to correlate the processes of market self-organization of a corporate system with the processes controlling its structure and dynamics through various state economic policy tools.

Chernoy believes and convincingly shows that the basic structures and institutions of a corporate system originate and develop in a natural way, driven by adaptive responses of market agents to market forces. Further, he just as convincingly shows that economic processes from time to time may be challenged by conditions with which the adaptive capacities of individual corporation groups and the entire corporate system fail to cope. These conditions may comprise primarily political, military, economic, and social crises and shocks, as well as situations calling for fundamental changes to the system of priority development targets. In this case, the state is forced to restructure the corporate system or at least, say, roughly adjust it.

Drawing upon the economic history of advanced and developing countries, Chernoy reveals that government “regulatory interventions” in the corporate system regularly took place, and such interventions undertaken in highly developed market economies during the current global crisis is no exception to the rule, but an ancient and established practice. He points out that this practice extends beyond the so-called merit goods provided by the state and beyond other activities in “areas of market failure”.

Chernoy divides the state management mechanisms of the corporate system into universal economic policy, selective economic policy, and state entrepreneurship to investigate the conditions, capabilities, efficiency, and feasibility of these mechanisms for application in corporate system “settings” under various conditions, as well as in implementing the economic objective-setting priorities.

Chernoy has analyzed the state functions and role in making direct or indirect efforts to enhance corporate system efficiency. This analysis, in our opinion, is

one of the most detailed, complete, and deepest to be found in contemporary economic literature. For modern Russia, which after the collapse of the Soviet command economy went as far as to almost entirely deny the need for state adjustments to the economy, such an analysis drawing upon international experience in corporate system management appears imperative and timely.

Chernoy examines the role and level of economic leverage of the state to regulate corporate system efficiency in order to reveal the logic of changes in the involvement and functions of the public sector in the corporate system that occur along the way to various national development goals. Applying this logic to crisis conditions and to meet the challenges of industrialization, primary modernization, and technological remodernization of market economies, he covers in greater detail various conditions and different phases/stages of economic advancement, which the public sector of the corporate system has to match.

Chernoy exposes how the self-organization of the corporate system, affected by market signals and regulatory actions of the state when it employs economic policy tools and public sector regulation, become complementary mechanisms and conditions for dynamic economic advancement. The book shows how a corporate system in its evolution enhances its adaptability, driven by market signals, to the set of operation framework conditions, including external shocks, and adequately secures investment and reproduction processes in core segments of the national economy. This paves the way toward downsizing the public sector and weakening or canceling selective state interference with different corporate system segments.

Among other things, the part of the study highlighting the role of the public sector as a basis for enhancing private enterprise appears highly informative. For example, Chernoy suggests that the public sector of a corporate system can significantly raise the earning power of the private sector by developing infrastructure and reducing aggregate market risks in the national economy, thus encouraging foreign investment in the country.

The chapter focusing on state-run corporations is very interesting, albeit challengeable. Chernoy draws numerous examples from advanced and developing countries to reveal their role in addressing strategic development issues faced by the corporate system and the entire national economy. He also demonstrates that quite a number of countries, including the US, do not discard the institution of state-run corporations, nor do they harbor such intentions.

Looking into the history of the establishment and operation of state-run corporations in Russia, Chernoy points to mistakes (primarily legislative) that have called into question the efficiency of the economic institution under review. He concludes that decisions being taken at present to liquidate or marketize some Russian state-run corporations are unjustified or premature. Whether it is feasible in Russia's conditions to make necessary changes to (and moreover, to comply with) the legislation on state-run corporations remains an open-ended question.

Emphasizing that a national corporate system is an open system, Chernoy reviews in depth its relationships with the external economic world and their transformations against the background of economic globalization.

He exposes how the international monetary system, foreign exchange and customs tariffs policy, etc., can affect a national corporate system. He explains how

and why the transition from the Bretton Woods monetary system to the Jamaica Accords, allowing financial markets to value national currencies, and the elimination of customs tariffs by national economies trying to join the WTO substantially lower the level of economic subjectness of the corporate systems of weak economies.

Chernoy proves (using simple models or drawing upon global experience) that the above factors call for a specific economic policy to be pursued by weak economies to maintain the economic subjectness and efficiency of the national corporate system at a sufficiently high level. He believes that this economic policy, among other things, must envisage monetary exchange with the external world and refrain from accession to the WTO until the national corporate system has achieved the required threshold of economic subjectness and efficiency. It should be noted that many Russian economists fully agree with Chernoy's conclusions.

The section on the export capacity of a national corporate system contains a significant analysis of the factors affecting exports. Chernoy correlates goods and services produced by the national corporate system in terms of prices, technology, range, and marketing competitive power to make an important distinction between its own and actual exportability of different segments in the national corporate system. He draws important conclusions as to what conditions are needed to enhance corporate system export efficiency. These concern the adjustment range of this indicator through an undervalued exchange rate of the national currency and capacities to build up the export capacity of small and medium corporations and enterprises, as well as the disability of the corporate system to specialize in both low- and high-tech exports.

The last chapter, which is the most extensive, deals with the enhancing the efficiency of Russia's corporate system. In our view, Chernoy offers here one of the most in-depth analyses domestically available, which covers the structural and systemic (ranging from socioeconomic to geographic and climatic) factors, both general and specific to Russia, that affect the above indicator. Drawing on broad statistics and scholarly publications on the corporate systems of different countries, as well as imperial, early Soviet (the New Economic Policy period), and post-Soviet Russia, he points out key drawbacks and restrictions that inhibit enhancing of the efficiency of the modern national corporate system.

In his detailed and reasonable approach, Chernoy looks at constraints stemming from the basic framework conditions, which arise from nature and national history and under which the corporate system operates and develops. He distinguishes the above from the constraints and drawbacks stemming from the poorly elaborated national strategy of economic development (prioritization in setting economic objectives). The latter also imply distortions and mistakes in the economic policy that the Russian authorities pursued in the post-Soviet marketization of the command economy.

According to Chernoy, excessive reliance on self-adjustment of the economy under various market factors and the lack of an active state regulation policy to manage the corporate system parameters and variable operation framework conditions of the economy are among the most significant constraints on corporate system development in Russia associated with economic objective-setting priorities.

Chernoy believes that mistakes in setting objectives underlie such shortcomings of the national corporate system as those listed below:

- weakness of the domestic system of financial corporations;
- lack of a core with major international corporations in the financial and nonfinancial segments of the economy (except in the resource sector component);
- high competitiveness in most sectoral segments of the corporate system that are open to world markets while the overwhelming majority of most corporations in these markets maintain a weak competitive position;
- the absence of transregional corporations securing the efficient economic cohesiveness of the national economic space, etc.

Chernoy blames these shortcomings for the low level of economic subjectness and the obviously inadequate efficiency of the domestic corporate system. Finally, he gives detailed and comprehensive proposals (including some legislative measures) related to the capacities, conditions, procedures, and mechanisms for eliminating most of the above shortcomings.

In the appendices, Chernoy offers a detailed insight into the developed corporate systems of India, South Korea, and Taiwan, which greatly differ in size as well as natural and sociocultural characteristics. Since modern Russia is apparently a less advanced market economy than the above countries, the information in the appendices, in our opinion, is rather interesting and enlightening for Russian readers.

Naturally, Chernoy's new monograph raises many questions. As the title suggests, the book just outlines the conceptual foundations of managing the efficiency of the corporate system. In this sense, the book cannot claim to be a comprehensive review of the problems nor, moreover, propose comprehensive solutions to them.

So, although Chernoy regards the stock market as one of the crucial institutions linked to the corporate system, the book barely touches on interaction between them.

The ways of address certain controversies and conflicts between institutional entities involved in corporate system development also raise questions. Chernoy identifies the focal points of these potential conflicts, inquiring into how special interest groups influence economic legislation. He emphasizes that final conventions between the state and businesses in this area may substantially deoptimize economic policy.

Hence, there are doubts whether the policy to consolidate corporations may be effective in modern Russia. On the one hand, we have to admit that in most segments of the open global economy, only large and superlarge corporations and financial and industrial groups have sufficient potential for investment, research, technology, and human resources to stay competitive in world markets. However, on the other hand, the huge lobbying potential of such superlarge corporate entities heightens the risk of embedding their special interests, which run counter to the priorities of society and the national economy in legislation and state economic policy.

Furthermore, Chernoy scrutinizes the capacities and mechanisms of state management of corporate system efficiency. However, the answer as to what can guar-

antee the quality of such management has yet to be found. There are fears that the discretionary – dictated by their own interests – behavior of state managers controlling the relevant management structures is likely to lower rather than enhance economic subjectness and corporate system efficiency. Would not the “governing modules” that Chernoy proposes to employ in state universal, selective, and state-entrepreneurship economic policy become another corruption zone eroding the fabric of the domestic economy?

In this connection, we presume that in the future the interrelationship between the economic subjectness resource of the state and that of the corporate system will be additionally reviewed. Chernoy is correct to point out that this is one of the critical areas where conflicts of interests arise. And these conflicts may unfold under various scenarios, from an actual confrontation between the state and businesses to their “friendly merger” due to their corruption and subcriminal connections.

However, it should be admitted that the questions raised above relate to political and legal rather than economic regulation. Of course, they should be put to Russian authorities rather than to the author of this study, and they in no way belittle the positive achievements of this research.

The book is written in simple and clear language and does not require any special knowledge or efforts to wade through sophisticated equations and terminology. All six chapters have voluminous references and notes, and they end with clearly formulated conclusions guiding the reader through the basic theses of the study.

In our view, this is a book that explores one of the basic institutions of Russia’s developing market economy, not only in scope, but also from a very fresh and promising conceptual angle.

For that we should be sincerely grateful to the author.

*Academician G.V. Osipov*  
*Academician V.L. Makarov*

## FROM THE AUTHOR

In Soviet times, when I started to work in entrepreneurial cooperatives, I understood (to be more exact, first, I sensed rather than understood) very well that the Soviet planned economy was a complex system. Every now and then, I encountered malfunctions, complications, and clogs in this system. I was well aware that many faults and vices pervaded in the system, despite its sophisticated organization.

When in post-Soviet times I joined a large business in the metallurgy industry, almost immediately I realized the consequences of dismantling the previous system at a time when a new one had not even been considered, to say nothing of being in place. In fact, my job was to revitalize the disrupted economic ties that had existed in Soviet times and restore the pieces of economic structures that had survived since then, on a necessary and locally feasible scale. Almost all of my time and energy were consumed by nearly impenetrable clogs and errors arising at every step.

It was apparent to me and others that the Soviet command system had lost economic competition to market systems. My conclusion was that the winning market systems adopted by leading countries in the West and East were, in a sense, more “systemic” and better organized.

How were they organized?

At that time, my economic education consisted solely of a Soviet university course and therefore I had to approach some professional economists. But instead of a clear answer I received explanations explaining nothing: the systematicity of Western economies stems from the market mechanisms governing them. I began looking for a better answer in books, but that did not help me much.

Later, after I wrote some books and articles, in addition to my candidate thesis, which to some extent improved my economic knowledge, I approached Academician Dmitry Semyonovich Lvov with the same question. He was the first to explain that every market economy, indeed, exhibited complex and diverse non-market relationships, along with market ones, between all economic agents. In general, these relationships are quite stable and differ from country to country, for example, in the US, Germany, and Japan, to name a few. Moreover, the state often seeks to actively regulate – in different ways – these relationships.

Academician Lvov’s advice was to look into the evolution of market economies if I wanted to have a full understanding of the systematicity of such relationships. Admitting that the experience of the old developed market countries would be

valuable in this respect, preference should be given to those countries that had succeeded in creating an efficient market economy in recent decades.

I am very grateful to Academician Lvov for this advice. Largely thanks to him, first, my doctoral thesis on national corporate systems appeared and, then, the present book, but regrettably he did not live to see it published.

While working on the thesis and this book, I discussed their main ideas with top Russian economists and sociologists: RAS Academician Valery Leonidovich Makarov; RAS Academician Gennady Vasilievich Osipov; Georgy Borisovich Kleiner, corresponding member, RAS; Valery Anatolievich Tsvetkov, corresponding member, RAS; Doctor of Economics Bagrat Aikovich Yerznkian; and Doctors of Economics Viktor Evgenievich Dementiev, Roman Mikhailovich Kachalov, Oleg Sergeevich Sukharev, Yuri Boleslavovich Vinslav, and Albert Aleksandrovich Zarnadze. I received from them quite a number of valuable questions, remarks, and advice for which I am deeply and sincerely grateful.

*Lev Chernoy*

# INSTITUTIONAL, SYSTEM, AND FUNCTIONAL SPECIFICS OF THE CORPORATE BASIS OF A MARKET ECONOMY

## 1.1. Structural elements of a corporate system and their institutional specifics

### *Corporate system content. Primary and superstructure corporate entities*

A corporation as defined by the legislation of the US and other countries is a legal entity (legal person) separate from the individuals who are its owners.<sup>12</sup> This distinguishes corporations from enterprises of individual ownership and partnerships.

According to this definition, any joint stock company, open or closed, is a corporation.

From a formal point of view, holding companies apparently are also corporations. Formally, a syndicate is also a typical corporation, since it requires a specialized body to market its products. The same is applicable to asset management groups.

A developed corporate system (CS) always includes groups of various kinds, comprising more or less powerful financial and industrial groups (FIGs), including business groups, which are typical of Russia. In addition, they can comprise cartels and syndicates, which was common before World War II.

Cartels and groups, apart from specialized management structures supporting their operation, if any, effectively represent a superstructure over corporations proper. This fact alone provides grounds to regard groups and cartels as CS elements.

In addition, groups and cartels, like corporations proper, are legal entities separate from the physical and legal persons who control them and whose property

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<sup>12</sup> See The Joint Stock Company..., 1995. Pp. 34–36; Ustyuzhanina, 2005; Kochetkov and Supian, 2005.

they are. Hence, they can be treated as a prototype of conventional corporations and, accordingly, as CS elements.

State-controlled companies, unless the state is their sole owner, are corporations by definition.

In regard to unitary state-run enterprises or governmental enterprises, as well as in regard to state property in its entirety, the state behaves as an asset management group owned by a multitude of natural persons (in this case, citizens of the country). Therefore, not only state-controlled joint stock companies, but also state unitary enterprises performing the same functions as typical corporations, can be treated as part of the CS.

In bankruptcy, the owner of an enterprise with a sole registered owner, in contrast to a closed joint stock company, is liable for the enterprise's debts with his own property and becomes a bankrupt himself. Under usual conditions (as long as the enterprise owner is not a bankrupt), by and large a private company, in contrast to a corporation whose controlling shareholding is held by one person, is not allowed to publically issue shares.

Accordingly, a private enterprise owned by an individual may be regarded as a sort of "degenerate version" of a typical corporation or a corporate-type entity or, at least, a potential corporation. The same holds true for and is applicable to more or less major economic entities with collective (cooperative) ownership.

In practice, at present, major private enterprises more or less account for a small part of the economy, because enterprise owners prefer to do business as a limited liability company.

In China, 460,000 private enterprises established by residents (without enterprises in the individual sector) in 2004 on average employed only 24.7 people per enterprise. At the same time, 328,000 limited liability companies also established by Chinese residents in the same year employed on average 51.6 people.<sup>13</sup>

The larger a private enterprise, where the assets are not separated from a natural person, the greater the risks to the owner. This is the main reason for substituting corporations for private enterprises. Chinese entrepreneurs think that if an industrial enterprise employs around 50 people, the risk level becomes too high to run it as an individual ownership enterprise.

It is common practice nowadays to incorporate a private enterprise if its output and the number of employees grow. That is why a significant number of Chinese private enterprises that existed in the mid-1990s have incorporated to date. Similar processes were taking place in all former centrally planned economies, including Russia, at the time when the nonpublic sector was burgeoning in those economies.

Thus, a CS proper is a system of enterprises that formally have the status of a corporation ("formal corporations").

A CS that in a broad sense corresponds to the corporate base of the economy includes, apart from formal corporations, functionally equivalent units as primary corporate entities. These also comprise enterprises in individual ownership that are close, in terms of functions, organization, and technology, to corporations proper and unitary state enterprises.

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<sup>13</sup> China statistical yearbook, 2006. P. 505.

In addition, a CS in a broad sense comprises secondary (superstructure) corporate entities. These are various groups (including financial industrial groups FIGs) cartels, consortiums, as well as various sectorial associations of producers of goods and services.

Associations of producers of goods and services harmonize the economic behavior of its members and secure their special interests. Therefore, such associations may be regarded as a special kind of business groups which, under certain conditions, can carry out the same functions as cartels. As for consortiums, they are business groups by definition.

Finally, a CS also contains a system of tertiary superstructure corporate structures, discussed below. In the same way that the system of secondary corporate entities (cartels, syndicates, groups) plays the role of a superstructure over primary corporate entities, primary and secondary corporate entities taken together are a kind of base to build the tertiary superstructures of a CS.

Corporate superstructures mainly work to reduce the capacity of the CS and the entire economy to generate market and investment risks, thus creating more favorable conditions for the operation of both corporations and the entire economic system.

### *Institutional structure of an advanced corporate system*

A review of the history of national economies that achieved a sufficiently high level of development reveals the following tertiary structures or subsystems in their CS:

- a) a subsystem including a *CS core* (or cores) composed of major corporations and groups of various kinds (also cartels and syndicates, if any) and a *CS periphery*, which comprises the rest of the primary and secondary corporate entities;
- b) a subsystem of *sectoral corporate segments (SCG)*, each consolidating the corporations of a national economy primary industry;
- c) a subsystem of *local regional corporate modules (LRCMs)* operating within the given economic space. One LRCM can contain several subsystems as regional clusters (according to Michael Porter) of different sectoral and functional orientation. For example, the LRCM of California, USA, includes regional clusters of computer-based intellectual technologies in Silicon Valley, shipbuilding, military-industrial complex facilities, winegrowing, and others. Most corporations and superstructures of a regional module (except in some export-oriented regional clusters) usually market the bulk of their turnover (goods and services) within the LRCM;
- d) a subsystem of CS segments performing economic functions complementary to the sectoral segments (a subsystem of *functional corporate modules FCMs*). For example, the FCM of fertilizer production, agricultural machinery, and other, services agricultural corporations. The FCM of geological and geophysical services, drilling, field and mining equipment manufacturing, etc., services oil and

gas and mining corporations. The FCM of construction and road maintenance, road and transportation machinery, etc., ensures the operation of transportation corporations. The FCM of export and import supports (including export-import banks, trading and marketing corporations, etc.) assists corporations of a large sector or a group of sectors to interact efficiently with the external economic environment. That implies, among other things, marketing and expanding the global footprint, purchasing investment products, component parts, materials, etc. In some cases, the corporate system is distinctly split into two poorly linked subsystems, one of which primarily covers the domestic market; the other, the foreign market.

In this case, the above subsystems can overlap each other to a certain degree, inasmuch as they consist of primary and secondary corporate entities. So, the same corporations (primary corporate entities) can be a part of secondary corporate entities (group), or a part of such tertiary corporate structures as the CS core, LRCM, particular sectoral segment, or specialized functional module (Fig. 1.1).

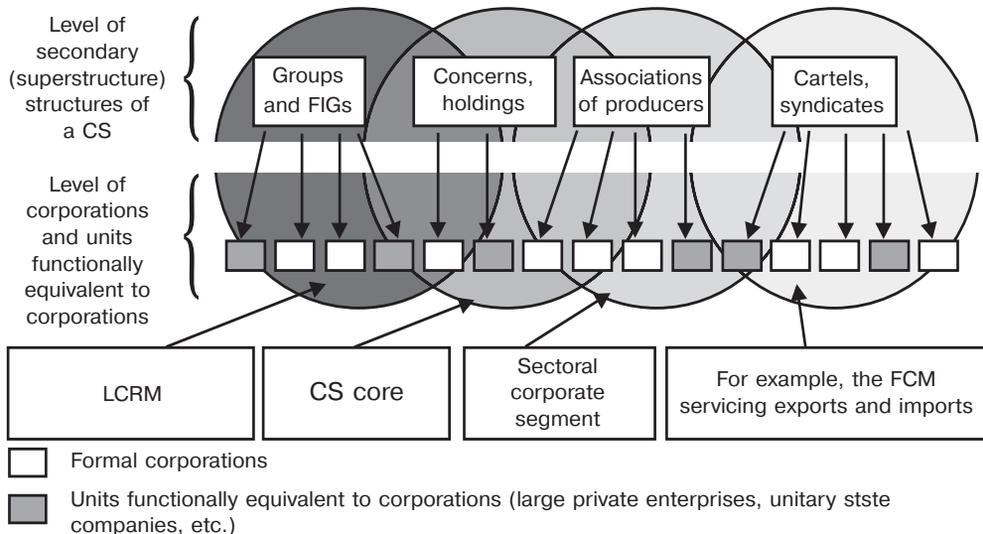


Fig. 1.1. Structure of a corporate system in a broad sense

## 1.2. Interactions between corporations that impart system integrity characteristics to a corporate system

The axiomatics underlying the classical and neoclassical (and, moreover, neo-liberal) economic paradigms effectively narrows the relationships between the market entities down to purchase and sale deals. The same axiomatics effectively

ignores the influence of the problem of investment on the economic behavior of market entities producing goods and services.

Market entities acting formally within the classical, neoclassical, and neoliberal economic paradigms are free from transaction costs, do not worry about fundraising for investments, do not need new technology, do not suffer from competitiveness deficiency, and do not face market and investment risks. They are not threatened by bankruptcy, and in their economic behavior they ignore this possibility. Hence, there is no need for them to enter into more or less stable relationships between themselves.

A set of corporations with such an approach to the market should not and cannot have systemic properties. However, the reality is totally different. In fact, market entities, including corporations as the main entities of the modern market (this situation has existed at least since the second half of the 19th century), enter sustained relationships between themselves that are not reduced to individual purchase and sale deals. The number of these relationships may vary, but they do exist.

There are several types of such relationships (Table 1.1).

*Table 1.1*

**Basic primary factors of relationships determining the individualization and systemic organization of the corporate space**

<b>Factors of competitive corporation individualization</b>	<ul style="list-style-type: none"> <li>• Market relationships of purchase and sale</li> <li>• Competitive market relationships</li> <li>• Competitive specialization and diversification</li> </ul>
<b>Factors of horizontal and vertical systemic co-organization and interaction of corporations and superstructures (factors of CS system cohesiveness)</b>	<ul style="list-style-type: none"> <li>• Steady production relationships of horizontal and vertical cooperation</li> <li>• Relationships of subcontract commercial lending</li> <li>• Personal relationships based on confidence of long-term investment lending</li> <li>• Relationships of capital participation (including mutual participation in capital)</li> <li>• Informal market or activity sharing agreements</li> <li>• Interdependence on externalities arising in the course of operations</li> </ul> <p><b>Reduction in aggregate economic risks (investment, production, marketing, pricing, etc.) due to the above links and relationships.</b></p>

Sole businesspersons (tailor, car mechanic, hairdresser, cosmetician, etc.) with a narrow circle of clientele, as well as buyers of goods and services in a store or service company, are market agents. But they are not CS elements, since they do not have stable system links to other market agents and institutions. A multitude of links – both horizontal and vertical – between elements is a necessary condition for CS systematicity. As we see, these links are diverse and reach far beyond competitive relationships.

Sustained production relationships are the simplest. In most cases they originate automatically if production requires semifinished products and component parts to be supplied over a long period of time. If products that meet the relevant requirements are not mass produced by a large number of suppliers (for example, run-of-the-mill metalworks), then they are supplied on a sustained basis by a certain supplier (or suppliers) subject to certain requirements. These cooperation production links may be documented (in most cases) by contracts.

Generally, more or less sustained production cooperation relationships also involve competition. But an act of competition proper (presuming selection of potential suppliers) in this case study takes place after a somewhat lengthy time interval.

In practice, business groups established in response to the needs of production cooperation (and often due to the division of production and marketing operations) are in most cases quite stable. That is, once established production relationships tend to self-stabilize in various ways.

A large company providing commercial lending to small firms involved in the same production process is a common practice. Personal relationships fostered in the course of business cooperation also stabilize production cooperation links after a certain period of time (it varies from case to case).

At first glance, such relations alone turn the market of potential suppliers into a noncompetitive market and thus inhibit the efficient operation of enterprises. However, in practice such relationships always reduce economically critical (production, marketing, pricing, investment) risks.

For example, the risk related to supplies of low-quality semifinished products or component parts is always an economically critical factor in the manufacturing of a sophisticated item. However, irrespective of the presence or absence of contractual relations, this risk tends to dwindle if the personnel among the producers of semifinished products and component parts are connected through a dense web of personal ties to the people among the consumers.

Ties between corporations are most noticeable when established through participation in capital, i.e., shareholding.

In practice, a CS is structured so that a significant percentage of lower level corporations (relatively small) is controlled through the capital participation system by corporations of a higher level, relatively larger, and the latter, following the same pattern, are controlled by yet larger financial and nonfinancial corporations. As a rule, the top of this pyramid accommodates major financial institutions and asset management groups.

There is also a system of horizontal capital participation through mutual (cross) shareholding in corporations of the same level or scale. That is especially typical, for example, for Japanese superholdings and FIGs.

One capital participation system is basically enough to transform an amorphous set of corporations into a corporate system. In this connection, it is significant that privatization processes in most of the former centrally planned economies gave rise, first, to joint stock companies (corporations linked with

each other exclusively through production ties, largely still unstable) and only afterwards to more sustained relationships from this amorphous mass of primary corporations through the system of capital participation. Later, this primary CS structuring underwent some radical restructuring (the secondary structuring of the CS followed by tertiary structuring).<sup>14</sup>

In Russia, CS structuring processes associated with changes in the capital participation system are apparently far from finished. In practice, the restructuring of the capital participation system never stops.

Further, capitalism, above all, implies credit. However, credit always presumes a certain economically critical connection between market agents. An advanced system of such relationships is generated already in the process of normal commercial lending, including crediting by issuing commercial paper. Relationships between the lender and borrower automatically become sustained, where medium-term and, especially, long-term loans are involved. Where the law grants a lender of a long-term investment loan the right to control its use (such legislation is quite common), the lender acquires additional levers to control the borrower.

The predominance of financial corporations and above all banks in the CS of developed countries in the early 20th century resulted directly from their functions as lenders. Major banks and other financial institutions would not be able to join the CS core of developed countries without performing lending functions. The same is true for major FIGs. By definition, a FIG cannot exist without a major bank or banks performing within it the functions of a lending and financial core.

Typically, any developed CS has a certain number of links and dependences stemming from contractual relations not related to production cooperation and the relations between a lender and a borrower. In particular, such links are inherent in a cartel or syndicate.

Cartels and syndicates had dominated Europe's economic mainstream before World War II. After the war, most developed market economies prohibited cartel agreements (i.e., agreements on market sharing and price fixing for marketed products) by law.

However, cartel agreements have not been totally removed from economic practice.<sup>15</sup>

Where the market is oligopolistic (as many modern markets are), its participants tend to harmonize, sometimes rather substantially, their economic behavior without involving any legal documents. If a small number of financial institutions, like in the US, controls the key companies of the nonfinan-

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<sup>14</sup> However, there are exceptions. In the Czech Republic, investment funds bought out most of the Czech counterparts of Russian vouchers and rather quickly took control of most of the joint stock companies. This combination (investment funds as holdings coupled with joint stock companies) has proven there to be rather lasting. See Kudrov, 2006.

<sup>15</sup> Apart from a multitude of informal cartel agreements widely used in economic practice in the second half of the 20th century and the beginning of the 21st century, there still exists such a powerful formal international cartel as the Organization of Petroleum Exporting Countries (OPEC).

cial sector, the economic behavior of both the controlling institutions and the companies controlled inevitably becomes harmonized to some extent.<sup>16</sup>

The thesis on the transition of capitalism into the phase of organized capitalism (Rudolf Hilferding<sup>17</sup>) was proposed at the beginning of the 20th century exactly in connection with the above circumstances. Under this transition, integrated CSs with considerably dense diverse intrasystem links were to replace more or less amorphous CSs in developed countries.

As a result, advanced CSs, in addition to the above structural subsystems, give birth to a financial core with its diverse structures as well as multibusiness and specialized corporations and groups, transregional and transnational corporations and groups, etc., all of which were reproduced on a sustained basis. (Fig. 1.2).

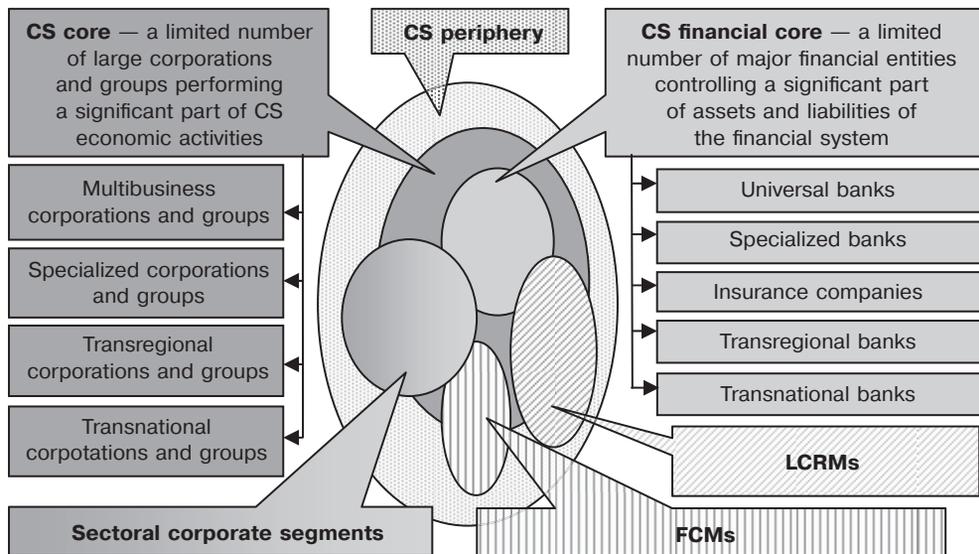


Fig.1.2. Generalized representation of a corporate system structure

At the same time, the density of intrasystem links and the integration level of the currently operating CSs vary considerably. Globalization processes have led to the erosion and reduction of the integration level of a significant part of national CSs. However, in some cases they have encouraged the emergence of new integrated CSs both at the national and macroregional levels (like in Southeast Asia, Europe, and North America).

In the contemporary global economy, a typical CS still contains economic links of various kinds within a country or macroregion rather than within the global

<sup>16</sup> If, for example, banks "x" and "y" concurrently control companies "a" and "b", banks "x" and "y" and companies "a" and "b" coordinate, to a certain extent, their economic behavior.

<sup>17</sup> The History of Economic Thought. 1994. Part. II. Ch. 11.

framework. In other words, nowadays the CS system integration level of almost all strong economies is quite high.

At the same time, disintegrated CSs with weak intrasystem links today are, and were in the past, inefficient CSs lacking competitiveness and financial stability.

The CS constantly interacts with the country's economic, social, and political institutions, and, to some extent with the external (international) institutional environment. While establishing and changing internal system links in the course of this interaction, the CS also acquires own external system links; i.e., it becomes an open system by definition.

Fig. 1.3 shows the place of the CS within the institutional system.

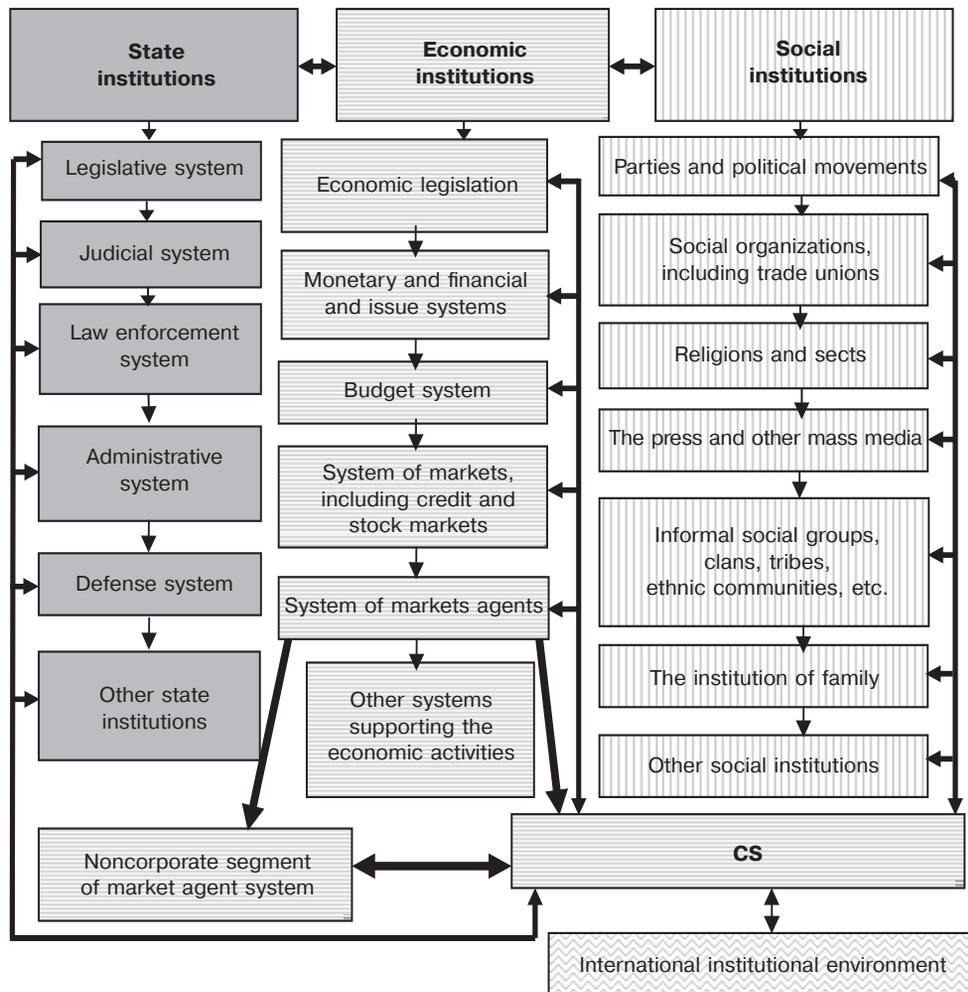


Fig. 1.3. The place of the corporate system in the institutional environment

Self-organization driven by market signals and the state and other subsystems of the institutional environment continually modify the condition, structure, and configuration of links in the CS. We witness waves of mergers and acquisitions or, on the contrary, the splitting up of corporations and superstructures of the first level, nationalization and privatization, structural responses of corporations to changes in economic and other legislation and the strategy and market behavior of the CS corporations in response to crises and shocks in the global market environment, etc.

Thus, the *CS*:

- *is distinguished from social, political, and economic institutions by its specific functions that implement the bulk of economic activity within the national economy;*
- *contains structurally related specific elements and subsystems as well as specific links between the elements and subsystems that ensure its systemic integrity;*
- *supports the system of links with the external institutional environment;*
- *exhibits the internal dynamics of changes in structures and links.*

The above suggests that a *CS is a specific complex open dynamic system*. Hence, it calls for examination of the CS structure, system specifics, its interaction with the institutional environment, and ways to increase its efficiency.

### 1.3. Main system-critical factors, operation framework conditions, and structural quality of a corporate system

For a CS taken as a whole, both the characteristics of the subsystems of primary and secondary corporate entities and those of the earlier mentioned tertiary subsystems linked with the level of the primary and secondary corporate entities are system-critical.

Below, the basic system elements of the above subsystems and their system-critical characteristics are outlined.

#### ***1. The subsystem of primary corporate entities***

The subsystem comprises corporations and corporate entities functionally equivalent to them.

The system-critical indicators displaying the state of the subsystem of primary corporate entities include, above all, the indicators showing the proportion of the production output and capital of this system of:

- 1) groups of corporations differing in size;
- 2) corporations controlled by different categories of owners (including corporations controlled by a small number of residents and foreign natural persons in the capacity of strategic owners) and corporations controlled by different categories of institutional investors, including the state and TNCs (transnational corporations);

- 3) mother corporations, daughter corporations, granddaughter corporations; and corporations within hierarchical and ring-type holding structures
- 4) corporations within business groups of different categories, including FIGs with cores consisting of major financial structures;
- 5) corporation groups with pronounced systemic qualities (for example, featuring higher than usual vertical integration of production, or if it is the multibusiness type, etc.);
- 6) groups of corporations performing various specialized functions.

Moreover, the system-critical (structure-forming) indicators of the subsystem of primary corporate entities include indicators showing:

- a) the permeation level of the subsystem of primary corporate entities with horizontal links, including production links and those that stem mainly from the capital participation system and borrowings;
- b) level of its permeation by vertically oriented links generated by the capital participation system and partly through the institution of crediting;
- c) competitiveness level.

### ***2. The subsystem of secondary (superstructure) corporate entities***

This subsystem includes cartels, syndicates, various business groups, and concerns whose core contains nonfinancial corporations and FIGs, holdings, consortiums, and associations of producers. The system-critical indicators of the state of the subsystem of secondary corporate entities include, above all, indicators showing the proportion of CS production output and capital of different categories of secondary corporate entities.

Secondary corporate entities of the above-listed categories are functionally necessary for their ability to reduce the susceptibility of both individual corporations and, even more importantly, the entire CS to market and investment risks. In this case, a specific secondary corporate entity (under contemporary conditions, it is usually a group) acts toward corporations as a superstructure.

### ***3. The core–periphery subsystem***

Key system-critical indicators showing the state of the core–periphery subsystem<sup>18</sup> illustrate:

- 1) the proportion of the core and periphery in CS assets and production output;
- 2) the level of CS core integration or splitting (and if the CS core is substantially disintegrated, the number of cores and subcores in it);
- 3) the proportion of CS periphery capital controlled by CS core corporations;
- 4) the proportion of CS core (and, accordingly, of the entire CS) of corporations controlled by different categories of owners, including local private capital, foreign private capital, the state, etc.;
- 5) the proportion of corporations holding major assets abroad in the CS core controlled by local capital;

<sup>18</sup> For details see below.

- 6) involvement of CS periphery corporations in cooperation links with its core corporations;
- 7) the proportion of the CS core credit sector in the assets and liabilities of the entire CS credit sector.

#### ***4. The subsystem of local regional corporate modules***

The subsystem of local regional corporate modules (LRCMs) is composed of certain geographically separated corporate modules and determines the territorial structure of the CS. The CS of national economies with a small land area and that of underdeveloped economies may lack distinctly segregated LRCMs. At the same time, LRCMs in the CS of countries with a relatively large land area, by and large, are distinctly segregated even if the national economy is highly developed.

LRCMs may, to some extent, duplicate each other or significantly differ both in structure and functions. This factor is a source of substantial differences between specific LRCMs, irrespective of what the systems of primary, secondary and tertiary corporate entities of the corporate base of the economy look like.

Typically, an economy with a large land area in the initial stage of economic modernization has some parallel and weakly interacting centers of economic development emerging in the economic space, while the economic space as a whole represents a cellular structure resulting from uneven economic development across that land area. By and large, modernization processes come with the transregionalization of economic links.

Under certain conditions, the modernization process may be accompanied by a decrease in integration of the economy system across the country and even the emergence of substantially autonomous LRCMs that had not existed before in the economic space in question. This is often the case when special economic zones, export processing zones, offshore zones, etc., are established within a structurally uniform economy. In such cases, large scale capital imports within a short time generally bring about growth in the mutual autonomy of LRCMs and increase the differences between LRCMs in terms of modernization level.

In its modern form, the CS of Russia features extremely high fragmentation across the country, where some LRCMs may significantly vary in content and quality. Among them are the corporate module of the Urals Federal District, which accounts for most hydrocarbon production, the Moscow corporate module, the Far East corporate module/modules, to name a few.

The following system-critical indicators (parameters) are key in depicting the state of the LRCM subsystem:

- 1) proportion of LRCMs exhibiting substantial autonomy in the CS and their economic importance;
- 2) distribution of CS economic potential among various LRCMs;
- 3) distribution of CS export potential among LRCMs;
- 4) distribution of scientific and technological potential among LRCMs;

- 5) degree of mutual autonomy of LRCMs;
- 6) proportion of export in LRCM output;
- 7) proportion of services in GDP per LRCM (the higher the proportion, other things being equal, the higher the degree of mutual autonomy of LRCMs);
- 8) presence of specialized regional clusters (according to Michael Porter<sup>19</sup>) within LRCMs and the economic and functional (including export) orientation of these clusters (the latter is important since the export orientation of regional clusters, as a rule, substantially raises the degree of autonomy of relevant LRCMs from the national CS).

### ***5. The subsystem of sectoral corporate segments***

Sectoral corporate segments (SCSs) mean CS structure modules which fulfill basic economic functions in the given national economy, i.e., functions normally needed regardless of changes in the operational conditions of the economy in question and its CS.

Among them are:

- 1) the function of production and sales of industrial products in aggregate and broken down into categories by low-, medium-, and high-tech products;
- 2) the function of production and sales of nonfinancial services;
- 3) the function of production and sales of financial services;
- 4) overall commercial distribution functions.
- 5) the function of production of goods and services for the domestic market;
- 6) the function of production of goods and services for foreign markets.

The state of the SCS subsystem is displayed primarily by indicators showing the proportion of the assets, output, and profits of the corporate base of the economy of:

- a) specialized corporations;
- b) nonspecialized corporations;
- c) corporations of all categories performing the above functions.

In addition, the system-critical characteristics of the SCS subsystem encompass:

- 1) the proportion of corporations controlled by residents, nonresidents, and the state of the assets and production of the basic SCSs;
- 2) the presence of corporations and substructures of the basic SCSs in the CS core;
- 3) the presence in the basic SCSs of FIGs capable of self-financing production programs and R&D;
- 4) the overall permeation of SCSs by vertical and horizontal system links, including those between the core and periphery corporations.

It is obvious that if a country lacks mineral resources, its CS does not need a mining industry SCS. However, in this case, SCSs earning foreign exchange from exporting goods and services should be developed strongly to purchase the lacking resources abroad.

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<sup>19</sup> Porter, 1985.

### **6. The subsystem of functional corporate modules**

Functional corporate modules (FCMs) are specialized CS subsystems supporting the operation of the basic SCSs.

The agricultural SCS needs FCMs for fertilizer production, agricultural machine building, exports and imports of agricultural produce, etc.

The SCS of mineral extraction and processing need FCMs of geological and geophysical services; manufacturing of drilling, field, mining equipment and pipes; etc.

The transportation SCS needs FCMs of construction and road maintenance, manufacture of road and transportation vehicles, etc.

Efficient interaction between the corporations of a large sector or a group of sectors with the external economic environment (including marketing and efforts to enter global markets, as well as the purchase of investment products, component parts, materials, etc.) requires an FCM of export and import support (including export–import banks, trading and marketing corporations, etc.).

When a country lacks certain SCSs, the national CS does not need FCMs to service these SCSs. However, this is not always the case in an open economy. For example, in a country that lacks natural conditions to efficiently develop large-scale agriculture, but has deposits of potassium salts, phosphates, and natural gas, the FCM of fertilizer production for export may acquire special importance and become one of the most critical SCSs for the CS and the entire economy.

Basic system-critical characteristics of the FCM subsystem are:

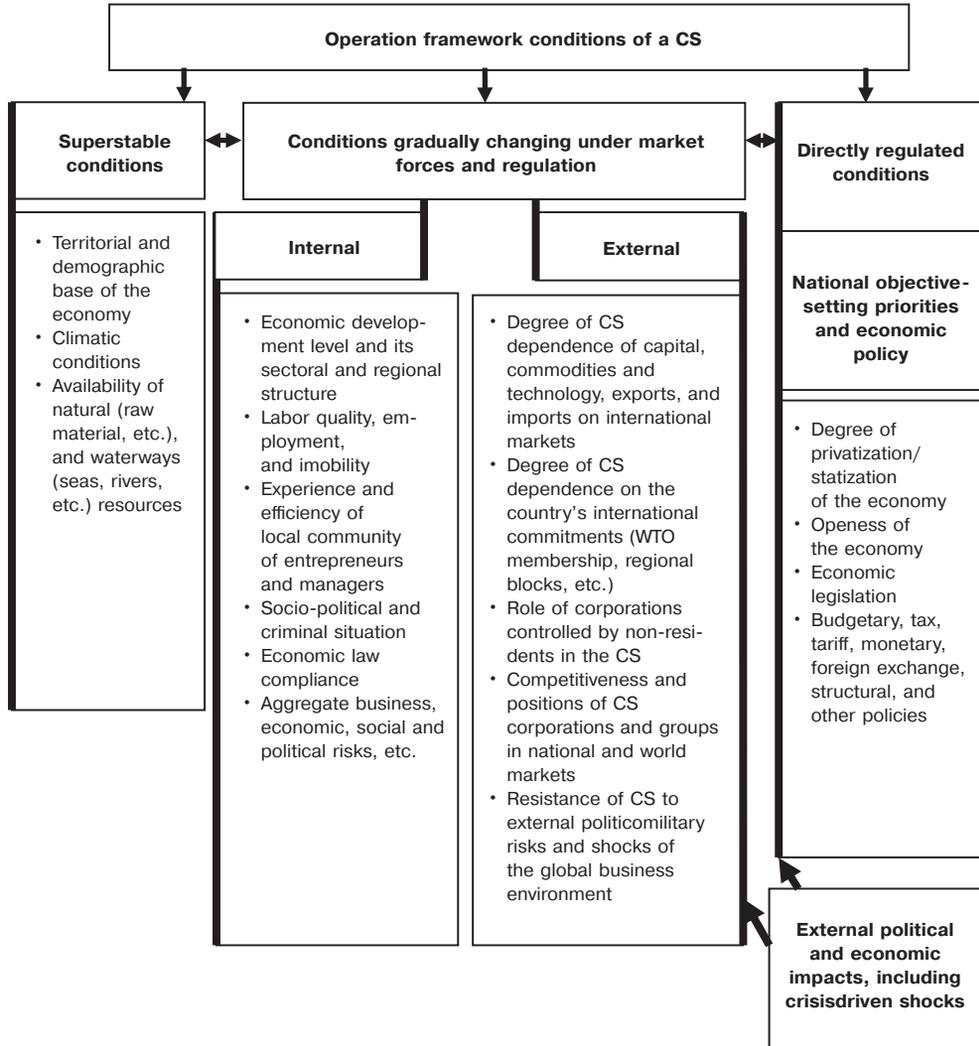
- 1) the presence of FCMs supporting the operation of the basic SCSs of the national CS;
- 2) competitiveness of goods and services of the FCMs in the national and global market;
- 3) the proportion of goods and services provided by corporations controlled by residents, nonresidents, and the state in each FCM.

A CS as an open system interacts through direct and reverse links with the external institutional environment and depends on its parameters.

Some of these parameters like climate, territory, the raw materials and demographic base of the economy, are superstable. Others, like the CS sectoral and regional structure, labor force quality, experience and efficiency of the local community of entrepreneurs and managers, change slowly due to market self-regulation and regulatory actions.

There are still other parameters that may change rather quickly, which are affected by CS system links with the external economic environment, as well as regulatory actions arising in connection with economic objective setting and policy.

All these parameters are a sort of CS *operation “framework conditions”* (Fig. 1.4).



**Fig. 1.4. Typology of main framework conditions affecting CS operation and development**

In practice, all the three categories of framework conditions are important for CS operation:

- 1) superstable or at least highly stable conditions, which are weakly susceptible or completely resistant to market forces (for example, the economy's land area, availability of natural resources, and the ability of the environment to cope with pollutant discharges from hazardous industrial facilities);
- 2) conditions notably changing due to market forces and the economic development process (for example, the level of economic modernization, GDP per capita);

3) conditions susceptible to adjustments, including to those made within a short time (for example, economic legislation).

One part of the CS operation framework conditions changes predominantly under intrasystem factors pertinent to the economy and the CS (like the level of development). Another part changes under external market forces (for example, the capacity of export markets, world prices), but hardly depends at all on the domestic market where the specific CS is functioning.

The following factors can also at any time exert a pronounced framework impact on the CS:

- a) economy development level (its stepwise change is impossible);
- b) real competitiveness of the economy<sup>20</sup>;
- c) the state of the global economic environment;
- d) various political factors;
- e) the level of market and investment risks in the medium and long term, including social and political risks;
- f) remuneration and social security policy;
- g) antimonopoly legislation;
- h) budgetary and tax policy;
- i) policy on regulation of flows of goods and services and investment;
- j) monetary and foreign exchange policy.

The budget and monetary regulation of the CS and the entire economy rely on the size of the budget and the monetary policy acting as essential framework conditions for the CS operation and the economy. Therefore, market processes can be modified by modifying the parameters of the budget and monetary policy.

The above set of characteristics determine the structural state of any CS because of differences in the development history and operation framework conditions. The entire set of CS system-critical characteristics will further be referred to as the *CS format* for short. At the same time, each of the system-critical variables characterizing the state of any of the subsystems filling the CS to some extent affects the corporate system as a whole.

At the same time, experience gained in developed and developing countries suggests that some generalized characteristics normally can reflect the level of CS structural development.

***The most essential generalized structural characteristics of a CS are:***

- *The proportion of the corporate core, including the financial core, in the CS assets.* The proportion of core corporations and superstructures in the CS assets and production and the ability of the core to financially support the main reproduction processes within the CS and perform system co-organization functions for the CS periphery determine the strength of the CS core.

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<sup>20</sup> Since the effective competitiveness of an economy at each given time is a function of the foreign exchange rate, the real competitiveness of an economy must be estimated at PPP exchange rates of the national currency. Actual (operational) competitiveness may be quite high due to an undervalued exchange rate, while the real competitiveness can remain low. By and large, economies with relatively low efficiency normally maintain an acceptable level of competitiveness due to an undervalued exchange rate policy.

- *The level of CS system integration* (CS overall permeation by horizontal and vertical system links).
- *The level of CS integration across the country* (the depth and strength of system links of various types between local regional corporate modules).
- *CS functional completeness* (the ability of the corporate system, including its sectoral elements as well as regional and functional modules, to jointly perform functions that are basic for the economy in question, such as investment and infrastructure support, production, exports, imports, commercial distribution and social functions, etc.).

For example, the higher the proportion of the core in CS assets and sales, the better developed the system of financial markets, and the smaller the proportion of enterprises controlled by foreign capital in the CS, other things being equal, the higher is the systemic integration of the CS.

The higher the CS permeation by transregional corporations and the smaller the proportion of the CS of corporations predominantly targeting the external market and the denser economic links between the LRCMs, other things being equal, the higher the level of CS integration across the country.

National corporate systems widely vary in structure. Weak economies often feature a loose core, or even totally lack it, CS functional incompleteness and a low permeation level with vertical and horizontal system links. Economies with a small land area do not need several LRCMs. Countries without substantial raw material resources have immature SCSs and FCMs servicing them, or lack them, and generally have more advanced export-oriented SCSs and related FCMs. In a country's CSs, the proportion of capital held by residents, nonresidents, and institutional investors, including the state, in the assets of CS structural subsystems varies greatly.

However, in general, the CS core and LRCMs, sectoral segments, and FCMs that support the reproduction loop of the national economy are indispensable CS structural subsystems. To maintain a sustained reproduction process in a national economy, all these subsystems with their system links must adapt to superstable CS operation framework conditions.

Based on the above, we introduce the notion of *CS structural quality*.

***The CS structural quality depends on:***

- *CS core assets in the corporate system;*
- *the presence and development level of the related subsystems LRCMs, SCSs and FCMs supporting the reproduction loop of the national economy (the degree of CS functional completeness relating to the existing superstable operation framework conditions);*
- *the permeation level of the CS by systemic horizontal and vertical links.*

A CS with a strong core and developed LRCM, SCS and FCM subsystems densely permeated by horizontal and vertical system links and highly adapted to superstable operation framework conditions has a high structural quality.

For example, India lacks a stable winter transportation link through the Himalayas and its CS can be built only if this is taken into account. Taiwan's CS cannot have large national raw-material corporations in SCSs because the country lacks raw materials, but it must have strong export orientation subsystems in the SCSs and FCMs.

## 1.4. Proper and improper system characteristics of a corporate system and the economic policy factor

The set of CS system-critical characteristics include:

- 1) characteristics which are a direct function of the current economic policy or that pursued in the preceding, relatively short, time interval;
- 2) characteristics which are not directly a function of the current economic policy and that pursued in the preceding, relatively short, time interval;
- 3) characteristics that are partially determined by the state of the current phase of the economic policy and partially by other factors.

In this context, improper, proper, and mixed (or partially improper) system characteristics of a corporate system will be outlined below.

**Improper system characteristics** of a CS are characteristics which can be changed practically without delay, if the economic policy changes. The category of improper system characteristics of a CS, inter alia, includes indicators showing the proportion in it of:

- a) the regulated sector in the CS, including the sector with regulated prices or, on the contrary, the proportion in the CS of the deregulated sector with a liberalization level substantially exceeding the average level;
- b) the CS sector protected by tariffs or, on the contrary, unprotected by tariffs;
- c) the CS sector open or, on the contrary, closed to foreign capital investment;
- d) the CS sector whose development is somehow stimulated (for example, using tax credits);
- e) state-controlled corporations, since the size of the public sector can be substantially changed within a short time due to privatization or nationalization.<sup>21</sup>

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<sup>21</sup> If a political, social and economic situation allows for no uneven increment or decrement of the proportion of the state-controlled sector in the CS, the relevant proportion indicators acquire the quality of “quasi-proper” system characteristics of the CS and act as its conditionally proper characteristics. This was the situation with the public sector in most countries in the 1970s.

It would seem that after World War II a more or less large public sector became a permanent institution in modern economies, both developing and developed. Even so, in the 1980–90s, the situation changed fundamentally due to the deep privatization of most economies driven by direct political factors and special interest factors rather than by economic necessity (see below). In most countries, the privatization of the public sector continues. It is typical, however, that the proportion of the public sector in the assets and products of national CSs varies enormously. In some countries (China, India, Iran, and most Arab countries), the proportion is still considerable, while the economy of countries that substantially retained the public sector by and large exhibits growth rates notably above the global average.

Thus, regardless of whether the proportion of state-controlled corporations in the CS assets is high or low, this indicator and related proportion indicators cannot yet be viewed as CS proper system characteristics. Whether the presence of the public sector in a typical CS is feasible or not does not depend directly on economic factors and therefore this issue will be open in the decades to come.

If system characteristic “y” of the CS of the economy depends on improper system characteristic “x” of the CS of the same economy, it will automatically become either a partially improper or effectively improper system characteristic.<sup>22</sup>

Taking the above into account, the category of proper system characteristics of the CS also comprises, apart from the proper CS characteristics in a strict sense, system characteristics in which the improper component is relatively small. These are effectively the “almost proper” system characteristics of a CS or nonstrictly proper system characteristics.<sup>23</sup>

Accordingly, the category of CS *proper system characteristics* (including “almost proper characteristics”) comprises:

- a) all or almost all indicators measuring the concentration of production and capital in the nonpublic sector of the CS and all or almost all indicators measuring the distribution of capital in the nonpublic sector of the CS among different categories of legal entities;
- b) all or almost all indicators measuring the positions in the nonpublic sector of the CS of corporations controlled by legitimate local private capital, illegitimate private capital, legitimate and illegitimate foreign capital, and foreign capital of uncertain origin;
- c) all system characteristics of the CS sector controlled by criminal capital;
- d) all or almost all indicators measuring the positions of business groups of various kinds and FIGs and cartels, if any, including informal ones, in the CS nonpublic sector;
- e) all or almost all indicators measuring the contribution to GDP made by the CS by different categories of mutually complementary corporation groups (including real sector corporations, redistribution corporations, corporations of nonfinancial services proper, without trading services), as well as the positions of all lending institutions and financial corporations in the CS;
- f) all or almost all indicators measuring the state of the corporate capital participation system (i.e., the proportion of mother companies, daughter companies, etc., and other institutional investors in corporate capital).<sup>24</sup>

Economic development broadens the range of CS indicators that, to some extent, are regulated by economic policy tools or by special institutions established

<sup>22</sup> For example, indicators of the proportion in the CS nonpublic sector of corporations controlled by various categories of owners (including small individual owners, a limited number of strategic owners or other corporations) are attributed to CS proper system characteristics. Similar indicators related to the entire CS, i.e., taking into account state-controlled corporations, in this case will be partially improper characteristics of the CS.

<sup>23</sup> For example, indicators measuring the proportion of the assets owned by various categories of nonstate owners in the CS assets fall into the category of nonstrict proper system characteristics of the CS. If the state owns a small proportion of the same assets, the above indicators may be regarded as proper system characteristics of the CS. Where the proportion owned by the state in the CS assets is large, the same indicators will fall into the category of partially proper system characteristics of the CS.

<sup>24</sup> The list of proper system characteristics of the corporate system is not confined to the aforementioned indicators.

in line with a certain economic policy. For example, a ban on cartels and an antimonopoly policy made a significant impact on the CS format of almost all developed countries as of 1970. After World War II, the CS format of many Western European countries changed substantially due to nationalization.

The CS format of former colonies changed even more due to nationalizations made after attaining independence and the adoption of economic policies accelerating public sector development. The policy of accelerated export sector development pursued by Taiwan, Singapore, South Korea, Malaysia, and other countries of Southeast Asia in the 1960s–1970s significantly affected their CS format (see Appendices 2 and 3). Later, the privatization and openness policy adopted by many developing and new industrialized countries to meet WTO membership requirements similarly affected their CS format.

The economy policy factor alone does not affect the liberalization and privatization level. Therefore, it continues to have a substantial impact on the parameters of CSs of all, including national and macroregional, levels, as well as on the parameters of the global CS even under the neoliberal economic paradigm that has been predominant after 1980 and is aimed at increase the level of economic liberalization and privatization. In some respects, this impact tends to increase.<sup>25</sup> Sometimes, national CSs are radically reformatted.<sup>26</sup>

The contribution of proper and all almost proper system characteristics to the CS format obviously tends to decrease. This is true at least for the “old” CSs (i.e., without the “new” CSs that have emerged in the process of marketization of administrative economies). This conclusion, with reservations, can be extended to the global CS.<sup>27</sup>

<sup>16</sup> The openness policy has led to growth in the proportion of local companies attributed to the TNC category and affiliates of external TNCs in practically all open CSs. Moreover, the openness policy caused waves of corporate mergers and acquisitions. In the 1980s–1990s, the policy of privatization and formation of regional economic blocs had a considerable impact on the CS format in many market economies. However, the actual impact of the openness policy and, especially, liberalization of capital movement and foreign investments is not confined to the above. So, at present, for example, one can speak about Canada as a special economic entity only with certain reservations, since it has been subjected to americanization and is considerably integrated into the US CS. The CS of Mexico is also heavily americanized.

<sup>26</sup> For example, in Europe the process of formation of a single European CS (the EU CS) replacing national level CSs (German, French, Italian, etc.), which had substantial economic autonomy, has made significant progress. Another example is the establishment of NAFTA, which has substantially americanized the Mexican and Canadian CSs and led to their desovereignization. A single North American CS is effectively being formed within NAFTA. Similarly, if the plans concerning the free trade zone launched in 2010 within ASEAN, including China, are fully implemented, the national CSs currently servicing the economies in ASEAN member countries will lose a considerable part of their economic sovereignty.

<sup>27</sup> With reservations, since, on the one hand, the effect of pure market factors on the world CS in recent decades has increased and, on the other hand, the concerted actions of developed countries after 1970 resulted in such a phenomenon as a global economic policy that has never existed before. It is manifested by the fact that WTO membership implies the pursuit of an economic policy whose key parameters were defined by developed countries as early as the 1980s. It is typical that for most countries, the economic policy meeting WTO membership requirements is not the best scenario and they are forced to pursue this economic policy under direct or indirect pressure (economic and political) exerted by developed countries, as well as by the IMF and the World Bank, which they control.

The boundaries between the proper and improper system characteristics of the CS evidently tend to become fuzzy and the proportion of the CS partially proper system characteristics tends to grow. The latter are produced by superposing the improper component, which is a function of the current economic policy format, on the CS proper system characteristics.<sup>28</sup>

### 1.5. Multiplicity of CS parameters directly affecting economic efficiency

The efficiency of the system of market corporate agents (primary and secondary corporate entities) and, accordingly, the CS and the economy as a whole, other things being equal, is higher when:

- 1) the susceptibility of corporate entities to market and investment risks is lower and, accordingly, the stability of their financial position and creditworthiness is higher and the potential for bankruptcy is lower;
- 2) the ability of corporate entities to make capital investments in major projects is higher;
- 3) the ability of corporate entities to finance R&D and assimilate new technology is higher;
- 4) the susceptibility of corporate entities and, accordingly, the economy as a whole to regulatory actions is higher, including those involving budgetary and monetary policy tools;
- 5) the ability of corporate entities to create integration effects across the country when carrying out economic activity is higher;
- 6) the competitiveness of corporate entities in external markets is higher;
- 7) the competitiveness of corporate entities in internal markets is higher;
- 8) the ability of the CS credit sector to absorb and redistribute efficiently accumulations made in various economy sectors is higher.<sup>29</sup>

It is obvious that considerable differences exist between corporate entity systems servicing various economies in all the listed positions. For example, the corporate entity system servicing the Russian economy is clearly less efficient than that servicing the US economy.

If corporate entity system “A” in the above-listed positions is more efficient than corporate entity system “B”, then economy “A”, other things being

<sup>28</sup> For example, where an antimonopoly policy is in place (that directly targets a relatively small number of corporations), almost all indicators measuring the concentration of production and capital are placed into the category of CS partially proper characteristics, since they are all, to a certain extent, modified under the impact of the antimonopoly policy.

<sup>29</sup> The above correlation takes place because the competitiveness of nonfinancial corporations always greatly depends on the efficiency of the credit system of the economy, i.e., on the system of financial corporations. Moreover, the production cost of any corporation at the end of the production chain is heavily dependent on the efficiency of corporations involved in this production chain.

equal, will be more efficient than economy “B”. If corporate entity system “A”, in terms of the above conditions (1–8), exhibits superiority in efficiency over corporate entity system “B”, this superiority will take place irrespective of variations in the liberalization and privatization levels of economies “A” and “B” and, hence, those of the CS servicing them.

The correlations (1–8) suggest that changes in the parameters of the corporate entity system, apart from those in the level of CS privatization and competitiveness, automatically initiate changes in certain parameters directly illustrating economic efficiency. For this reason, it is not enough to manage liberalization and privatization parameters alone to make the economy work efficiently, and therefore highly liberalized and highly privatized economies generally show low efficiency.

Moreover, the level of market and investment risks rises in response to growing economic liberalization, other things being equal, while the willingness of the CS sector controlled by private capital for capital investments declines in response to growing investment risks. Therefore, attempts to compensate for the deficit in CS efficiency by increasing the privatization and liberalization level may exacerbate adverse implications stemming from this deficit.

As often as not, this situation was observed during the marketization of former centrally planned economies.<sup>30</sup>

In reality, the system characteristics of the CS of the economy are capable of materially impacting the performance of the economy. This can be exemplified well by the credit system. If the credit system is unable to efficiently redistribute financial accumulations, the efficiency of the market economy is considerably reduced. This was evident in developed countries even in the mid-19th century, to say nothing of contemporary market economies.

The paralysis of the credit system caused by the 1929 crash automatically paralyzed the entire US economy. The paralysis of the Russian credit system caused by the demonetization policy (after 1993, until the end of the 1990s) in a similar manner paralyzed the Russian economy, turning it into an economy of bankrupts with all its inherent consequences. The performance of the Russian credit system dramatically declined in August–September 1998, inevitably causing an overall economic crisis. In the same manner, the efficiency of the US credit system dramatically declined in 2008, initiating a slump in US and global stock markets that eventually ended in a global economic crisis.

It is quite obvious that a CS consisting of small and medium enterprises functionally differs both from any CS with a core consisting of major non-financial corporations, but without major banks, and from a CS with a core containing strong financial entities. In practice, all, without exception, more or less salient system characteristics of a CS are vital. They all affect the CS efficiency and, as a consequence, the economy’s performance.

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<sup>30</sup> Kolodko, 2000. Pp. 45–46.

## 1.6. Basic CS operation framework conditions and its system quality: characteristics of links

A high structural quality imparts only some of its efficiency potential to the CS to support the reproduction process in the CS proper and across the national economy. To realize the above potential, CS system characteristics, including its structure, should be adapted to all slowly changing CS operation framework conditions (including internal and external conditions) (See Fig. 1.4).

Regulated framework conditions (economic objective setting and basic elements of the economic policy) and the system of externalities represent a special group of framework conditions capable of imposing an external dynamics, one way or another contradicting the CS adaptive self-regulation processes, on all the CS structures and segments in response to market signals. In this connection, we distinguish *basic framework conditions* (superstable and slowly changing) to which the CS is generally able to adapt over time in response to market signals, and *governing framework conditions* (encompassing regulated framework conditions like national objective setting and economic policy and externalities, including shocks) requiring from all the CS subsystems prompt – though not always feasible – adaptive responses.

Based on the above grounds, we introduce the notion of CS system quality.

***CS system quality is determined by its structural quality and the degree of harmonization of the CS basic properties and its basic operation framework conditions.***

The higher the CS structural quality and the better its characteristics are harmonized with the basic operation framework conditions, the higher the CS system quality. The system quality, which takes into account the degree of CS adaptation to the basic framework conditions, also partly determines the *CS dynamic potential*, i.e., its potential ability to ensure the reproduction process in the national economy under changing operation framework conditions.

A deficiency in CS structural quality can be partly compensated for by a high degree of harmonization between the CS system characteristics and the operation framework conditions.

For this reason, developing economies (with low CS structural quality) were able in the 1950s–1980s (as long as the structural quality and the basic operation framework conditions were harmonized) far outpace the developed economies in terms of growth rates.

The disharmony between the structural quality and the CS basic operation framework conditions (and, correspondingly, maximization of the CS system quality) needs to be minimized to enhance the CS efficiency and the market economy serviced by the CS in question.

This situation is exemplified by Britain's economic policy. Before World War II, the British economy had been operating at the then acceptable level of economic efficiency. After World War II, the country needed to upgrade production

facilities within a short time, especially in such capital-intensive industries as coal mining and metallurgy. The private sector was not able to meet this challenge within an acceptable timeframe due to the economic social and political risks prevailing at that time. Thus, development of the British economy stalled at a time when it badly needed economic growth (which was dependent not only on economic but also on social and political factors).

The nationalization of some industries solved the problem of investments. “Between 1946 and 1949, the Labour government nationalized (generously compensating the owners...) the mining industry, internal transportation, electric power stations, telegraph and radio communications, civil aviation, and the natural gas industry. In 1951, the same approach was used to nationalize major iron and steel producers.”<sup>31</sup>

After the Tory party came to power in Britain, some enterprises and even industries, including automobile transportation, were denationalized. However, the 1946–1949 nationalization helped meet the investment challenge, which appeared to be unsolvable in that situation (under the available economically critical framework conditions). The challenge was met by adapting the CS structure (by establishing a system of state-controlled corporations) to the operation of the economy framework conditions, including the condition of its production facilities, the need for development, and the then level of market and investment risks.

Some other European countries, including France and Italy, and their CSs, experienced similar transformations after World War II (for the same or similar reasons), where the public sector had a strong presence in the banking system, too.

The policy of compensating for the deficit of CS structural quality by means of high level harmonization between its system characteristics and the operation framework conditions was broadly employed and is being still employed by most postcolonial economies in the course of their modernization.

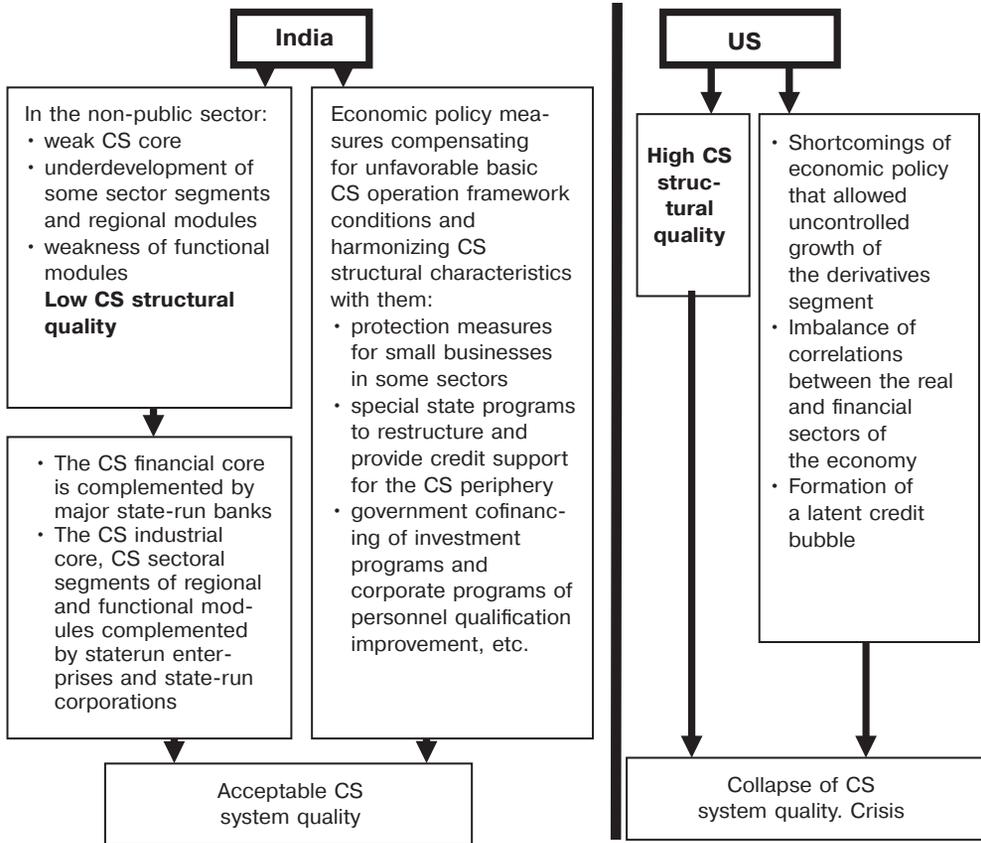
So, in India the relatively low CS structural quality (weak core, numerous underdeveloped LRCMs, SCSs, and FCMs) is compensated for by heavily public financing of development programs and establishing state-run corporations in the weak CS subsystems. Various measures are taken there to harmonize the CS structural characteristics with such operation framework conditions as a huge proportion of the nonmodern sector in the economy, low-skilled labor, etc.<sup>32</sup>

At the same time, the CS system quality and the whole national economy, even with a high CS structural quality, may dramatically decline if the CS system characteristics and its operation framework conditions are not harmonized. The US CS appears to have experienced the above situation at the end of 20th and the beginning of the 21st centuries, which caused, first, the American and, then, the current global economic crisis (Figure 1.5).

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<sup>31</sup> Foreign Countries, 1957. P. 45.

<sup>32</sup> See Appendix 1.



**Fig. 1.5. CS system quality correlated with the degree of harmonization between CS system characteristics and CS basic operation framework conditions**

In recent decades, the US share in the global industrial production and global GDP has been diminishing rather fast. This alone suggests that the US CS parameters and, primarily, its competitiveness are not harmonized with the operation framework conditions of the US economy.

In fact, the competitive performance of most US manufacturing corporations does not meet such operation framework conditions as:

- a) the openness policy of the economy pursued concurrently with the foreign exchange policy based on equality between the dollar exchange rate and its purchasing power parity at the time when new industrialized countries and then China began to push their exports using undervalued national currency exchange rates;
- b) the high level of market and investment risks typical of the US economy (as a result of the openness policy and substantial risks generated by financial markets), which adversely affects the willingness of American corporations to invest in the US real sector and encourages capital flight from the US);

c) the too narrow technology gap between the US economy and its Asian rivals to maintain the competitiveness of US corporations at a level acceptable for the high level openness of the US economy.<sup>33</sup>

Very fast and radical changes may take place under certain circumstances within the system of operation of the economy framework conditions. For example, a large-scale military conflict always boosts market and investment risks that paralyze economic activity.

In practice, in such large-scale conflicts like World War I and II the prewar private corporate sector was unable to adapt to the military risks. The fighting countries eventually achieved the necessary level of their CSs by switching their operation into a state-regulated regime (i.e., by changes to the system of framework conditions aimed at compensating for the adverse effects of growing market risks driven by war).

Because the efforts proved insufficient, the state had to step in as a strategic investor in the CS sectoral segments and functional modules crucial for military operations. In this way, the paralyzing impact of increasing investment risks on the investment activities of private businesses had been compensated.

High system quality is a necessary, yet insufficient condition for a CS to be highly efficient. It is clear that the governing framework conditions (GFCs), apart from the system quality, affect CS operation. In addition to the abovementioned harsh external shocks like armed conflict or a major crisis, these are primarily changes in the national objective-setting and the economic policy.

In this context, we introduce the notion of *economic subjectness resource (ESR)*. The ESR for the entire state system ( $ESR_{st}$ ) **is defined as the ability of state power, under the given conditions, to shape and implement an economic policy based on its own national objective-setting system with its hierarchy of priorities.**

It is evident that if the state heavily depends on external debt and economic policy directives associated with IMF stabilization loans (like Russia in the 1990s and Greece in 2010–2011), the  $ESR_{st}$  cannot be high.

The ESR for a CS (“ $ESR_{CS}$ ”) **is defined as the ability of the CS to operate and develop under given conditions with the highest possible degree of autonomy from the negative effects of economic systems and factors, including external shocks, that are external to the given country.** For example, when most major corporations borrow abroad and rely heavily on the investment portfolio of nonresidents in their assets (like in modern Russia), the  $ESR_{CS}$  cannot be high.

Other things being equal, the  $ESR_{CS}$  is higher when:

- a) the proportion of major corporations in the CS assets is higher;
- b) the CS credit sector is better developed;

<sup>33</sup> The program of John F. Kerry, who was the Democratic Party’s presidential nominee in the 2004 elections, envisaged rather drastic changes in US economic policy. It was proposed, for example (under a 10 million jobs program) to launch large-scale measures to solve the energy problem and make American corporations, by adopting appropriate laws, repatriate capital from abroad. If the Kerry program had been adopted, the US CS system quality would have undoubtedly risen fast. In fact, to improve the US economy, John Kerry offered to adopt the economic policy pursued in the first years after World War II by most of today’s developed countries.

- c) the degree of system integration of the entire CS and across the country is higher;
- d) in efficient modernized economies, the proportion of services in GDP (since a low proportion of the exports and imports component is typical of services as compared with the consumption of commodities) is higher.

In this case, the  $ESR_{St}$  and  $ESR_{CS}$  are interdependent, since the level of the  $ESR_{CS}$  has a bearing on the boundaries of the economic objective setting of an autonomous state, while the  $ESR_{St}$  determines a feasible state economic policy aimed at enhancing the CS system quality.

Thus, the  $ESR_{St}$  and  $ESR_{CS}$  levels are additional critical interdependent CS operation framework conditions.

## 1.7. System functions of the CS core and periphery

The presence of a core and periphery is typical of all more or less developed CSs. The CS core contains a limited number of major corporations and superstructures of the first level, which in total account for 50–70% of sales of goods and services.

As a matter of fact, the CS core can be considered stable when it contains a limited number of corporations that account for 50–70% of economic activity.

It is typical that developed CSs have a financial core containing a limited number of banks that account for 50–70% of the assets and liabilities of the banking system. Major integrated groups should also be attributed to the CS core. Under contemporary conditions, these are usually major FIGs and holdings. In most developed CSs that had existed before World War II, cartels and syndicates were important structural elements in their CS cores.

In economies where the state as an owner has a strong presence in the CS, this presence is almost always stronger in its core. Usually, in developing and modernizing economies, state-controlled corporations and banks are broadly represented in the CS core.

In new market economies emerging from the marketization of command economies in the early privatization stage (but only after substantial economic liberalization), the CS core can contain mainly state-controlled enterprises. This can be exemplified by the CS of the Russian economy in 1993–1994 and that of the Chinese economy as it was 10–15 years ago.

Under certain conditions, CS core functions may be performed by corporations controlled by foreign capital. However, in such cases, the CS and its core normally display high amorphism and low intrasystem linkage. Such were most “open” weakly developed or simply weak economies, like China’s economy in the 1920s–30s or, until recently, the economies of Mexico and Argentina.

The greater the CS core, the higher the CS intrasystem linkage and, other things being equal, the CS structural quality. The greater the proportion of the CS core in the CS, the higher, other things being equal, the efficiency of the financial markets servicing the economy. And vice versa, if the CS core is un-

derdeveloped, the financial markets servicing the CS are by and large also underdeveloped.

It is CS core corporations that in most cases concentrate the main components of the “efficiency potential” of the national economy listed above in Section 1.5. These components include elevated financial sustainability and reduced responsiveness to risks; the ability to invest in major projects, R&D, and assimilation of new technology; the ability to integrate the economy geographically, through transregional corporations; and competitiveness in foreign and domestic markets.

Further, regulatory actions delivered through monetary and budget policy channels are generally translated via the CS core into the corporate base of the economy and its periphery. This is true, since a core permeated with intrasystem links directly and indirectly controls the bulk of the CS periphery via the system of production links and capital participation.

For this reason, new market economies with an undeveloped or amorphous core almost always feature low responsiveness to a system of such regulatory actions.

Conversely, developed economies with a strong CS core are highly susceptible to monetary and budget policy tools, as well as to nearly any change in economic legislation.

The ability of corporations making up the CS core to influence the economic processes is lower, other things being equal, the higher the criminality of the economy, the lower the proportion of transregional corporations in the CS, and the lower the development of the capital participation system. The presence of foreign capital in the CS core raises its susceptibility to state regulatory actions unless and until this presence loosens the intrasystem linkage of the CS core. The latter is possible where the segment that is controlled by foreign capital and is export-oriented, with most its system links associated with the external economic environment, accounts for a significant proportion in the CS core.

In developed economies, the core accounts for almost the entire CS system quality resource, while its periphery, only for a relatively minor part. However, in economies with weak and even medium-level development with an amorphous and underdeveloped CS core, the CS periphery may account for the bulk of the system quality resource. When the economy is substantially underdeveloped, the CS may lack a core altogether, as happened in the initial period of economic modernization in most of developing economies.

The proportion of the system quality resource concentrated in the CS core in any case does not decrease during the operation of “closed” and “semiclosed” economies where the interaction with the global market is regulated. However, the situation in open economies may be (and often is) different, since in such economies the system integration level of the CS core is usually declining, while the core amorphism tends to grow.

In the latter case, the proportion of the core in the CS system quality resource decreases, other things being equal, while the proportion of the periphery grows. Here, the contribution of the CS core and periphery to its economic subjectness resource follows almost the same pattern.

Thus, a strong core is a must to achieve high CS structural and system quality.

So in 2007, the 50 largest US financial and nonfinancial corporations and groups filling the CS core, with most of them being transnational or at least transregional, controlled about 58% of total national assets.<sup>34</sup> In 2005, General Electric spent over \$5 billion on R&D, which exceeded Russia's entire relevant spending.

In Japan, in 2006 six superholdings – shudan<sup>35</sup> – through a system of the largest subordinate holdings and their subcontracted corporate periphery accounted for about 70% of national industrial output.

In 2008, 90 major private corporate groups and state-run enterprises controlled about 60% of the nonfinancial assets in the Indian economy.<sup>36</sup>

## 1.8. Public policy as a factor affecting CS structural and system quality

The condition of any CS is essentially a function of public policy (primarily economic policy). Practically any aspect of public policy affects the dynamics of the CS economic mass, its permeation with intrasystem links, and its structure.<sup>37</sup>

For example, the European economy before World War II had been an economy of cartels; after the war, this ceased when cartels were banned.

Corporate mergers may be restricted, banned, or allowed and even encouraged by law.

By creating free-trade and offshore zones the state automatically changes the CS structure operating within the national economy (in this case actually promoting its disintegration). The same result is achievable through a stringent antimonopoly policy. By banning cartels and syndicates in developed countries, the public policy has changed the CS structure both in those developed countries and across the entire global market economy.

The public policy substantially determines:

- a) the size of the state's presence in the CS as a strategic owner and investor (i.e., its statization or, on the contrary, privatization level);
- b) the liberalization level of the CS operation regime;
- c) the level of the CS openness for foreign investors;
- d) conditions of competition with external manufacturers in the domestic and, partially, foreign market (governed by the foreign exchange policy, subsidies policy, international trade agreements, etc.);
- e) other CS structural features (for example, the proportion of corporations controlled by foreign capital and located within special economic zones in the CS, the production concentration level, the proportion in CS core and periphery, etc.).

<sup>34</sup> Forbes Global, 2007.

<sup>35</sup> Bandurin, Zinatulin, 1999.

<sup>36</sup> Statistical Abstract India, 2008.

<sup>37</sup> See, e.g., Grinberg, Rubinstein, 2008.

Thus, public policy affects both the CS structural and system characteristics, as well as its operation framework conditions. Thus, it has a bearing on such interrelated parameters as the dynamic potential and competitiveness of the CS and the entire economy (under contemporary conditions, the competitiveness of the corporate base of the economy almost matches that of the economy), as well as the  $ESR_{CS}$ .

When the state introduces high customs tariffs to protect the national market against the foreign market, it helps keep the national market for local producers. Thus, the state to a certain extent weakens both the influence of foreign CSs on the national CS and indirectly enhances the system integration level and ESR of the latter.

Any stimulation of the national CS by monetary, budget, tax, tariff, structural policy and economic legislation tools can produce similar effects if it bolsters the specific economy and excludes a notable reduction in its ESR.

If the state seeks to open up the CS that services its economy (which has been quite typical of state economic policy in recent decades), the immediate result of such a policy is a reduction in the system integration level of the national CS and, under certain circumstances, its disintegration.

Before 1917, Russia pursued a policy to encourage the formation of an integrated CS within the Russian Empire. Modern Russia is pursuing a policy that in general does not encourage the formation of an integrated CS within the national economy. We will dwell on this phenomenon later.

The presence of the state in the CS may increase or decrease its efficiency. In a situation where the CS is underdeveloped, the presence, if not conspicuously redundant, of the state in its production sector generally raises the CS structural and system quality and stimulates nongovernment sector development. After 1945, this was noticeable in dozens of countries.

By switching the CS to a regulated operation regime, the state almost always promotes an increase in its integration and densifies intrasystem links. The expansion of the public sector within a specific economy generally enhances national CS integration. This holds true at least where the state concentrates resources in sectors which, under given conditions, are not attractive for private capital (usually they are capital-intensive industries and almost always infrastructure sectors). The pricing policy of the CS public sector (railroads, electric power, various infrastructure sectors) is generally beneficial for the CS private sector.

In other words, when the state assumes functions which the private sector of the CS is unable to perform efficiently in a given situation or which are simply cumbersome for the private sector, the presence of the state in the economy encourages the development of the national CS.

Historically, the state normally enters the economy when the CS structural and system quality of the private sector are low and, above all, when the capacity of the private sector to finance capital-intensive sectors is low. In most cases, as the CS private sector becomes more efficient and market and investment risks decrease, the state tends to be less involved in the production sector of the economy and the CS as a strategic owner.

Quite a long time ago, it was convincingly proved in practice and theory, as well as by some Russian economists, that it was not necessary to minimize state economic functions to enable the economy and the CS servicing it to operate efficiently.<sup>38</sup> In this connection, it should be noted that regulated CSs with a significant state presence in corporate property dominated in the world market economy after 1945 until the mid-1980s.<sup>39</sup>

In fact, during the period when the “two systems” rivaled each other, the US CS was also regulated. Large portions of its GDP were reallocated through the budget, and extremely copious regulations were issued for corporations. In the 1950–1970s, the US government made heavy contributions to its economic infrastructure development and agriculture.<sup>40</sup> Finally, the facts of active state regulation and state entrepreneurship in the CS of some substantially different developing countries (India, China, South Korea, Malaysia, Brazil, Taiwan, Iran, etc.) cannot be challenged<sup>41</sup>.

It is significant that the presence of state-controlled corporations in the CS always, other things being equal, imposes certain restrictions on the implementation of economic integration projects on a macroregional and global scale. In Western Europe (excluding new market economies), the privatization of a considerable part of the state economic complex existing as early as the beginning of the 1980s by no means increased the efficiency of national economies, or Europe’s economy as a whole. However, privatization had promoted the formation of a single macroregional system on a European scale and, indirectly, the establishment of the EU as a confederate political formation. Perhaps this precisely one of the main goals of the privatization policy.

If an economy has a considerable state economic complex that is offered for privatization to foreign investors under a high-level openness policy, privatization always, to a certain degree, weakens the links among local corporations and strengthens their links with the foreign market or individual segments of it.

In practice, the state is able to entirely disintegrate the CS operating within its framework by pursuing a policy encouraging the integration of the CS into CSs operating on a country (macroregional) scale. Usually, key elements of such a policy are openness, equal rights for foreign and local investors, and privatization. However, in reality, as long as the country predominantly uses the national currency, the probability of integrating the CS operating within its framework into external systems is always low.<sup>42</sup>

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<sup>38</sup> See Abalkin, 1998; Chernoy, 2000 and 2003; Shamkhalov, 2005; Polterovich, 2007.

<sup>39</sup> See Veduta, 1998; Bor, 2000.

<sup>40</sup> See, e.g., Porokhovskiy, 2005.

<sup>41</sup> See Puzanovsky and Morozov, 2002.

<sup>42</sup> However, an “open” CS can be split into subsystems with considerable mutual autonomy, including a subsystem of corporations predominantly associated with the foreign market and foreign corporations and predominantly targeting the domestic market.

## 1.9. National CSs and the global CS: common features, specifics, and nature of interaction

### *Institutional and system characteristics of the global CS and the impact of globalization processes on its system quality*

The system elements of a global CS (GCS) are:

- 1) national or country CSs (CCSs) operating within the national boundaries and macroregional CSs of international economic blocs (the EU, NAFTA, ASEAN, etc.);
- 2) the TNC system (including transnational banks, bank-type structures, and asset management groups) and other transnational structures stemming from corporations proper (such as numerous transnational cartels and similar structures that had been operating before the 1930s based on market division agreements).

Thus, a GCS has two tiers or levels. The lower tier – the base – contains CSs of the country or bloc level, and the upper tier is the TNC system.

The TNC system and similar structures act like a superstructure in relation to the set of CSs of the lower tier.

At the same time, the TNC system has some characteristics of a local (country) CS (though relatively amorphous). First, because most of the TNC economic mass is pegged to a metropolis (in contemporary conditions, these are primarily the US, EU countries, Japan, and, in recent years, China). Second, because TNCs operate in an environment of strong interaction with corporations that are not part of this system and with the noncorporate sector of the world economy.

Nowadays, it appears that there is a tendency to treat the notion of TNC more broadly and attribute to it corporations whose affiliates outside a metropolis have small sales volumes. If we attribute to the TNC category only companies whose affiliates account for no less than 10% of the total company sales and for no less than several millions of dollars or euros and exclude those whose affiliates operate in the host countries under national treatment, the tendency toward transnationalization of the global economy will not be as obvious. Further, if TNCs based in the US and the EU (or some EU countries) are ignored, then the current proportion of TNCs in the global economy is unlikely to be much higher than 100 years ago.

It is true that TNCs internationalize the world economy, and it is also true that TNC affiliates in host countries are quickly integrated into the local economic environment, and, so to speak, nationalized. Both these processes have been running in parallel practically at all times.

Thus, we witness, in a sense, a paradoxical situation. The more obstacles that encountered by goods and services moving across the country borders or economic blocs acting as “interfaces” in the world economic space, the lower, other things being equal, the integration of the GCS and the less pronounced its system integrity characteristics. However, on the other hand, it is impossible to form CCSs in the absence of “economic interfaces” and hence it is impossible for the GCS to materialize in its present form.

### *Factors of system integration and disintegration of the global CS*

As early as the 18th century, individual corporate structures across all world economy sectors seemed to float in a sea of noncorporate market entities. Their aggregate mass was too insignificant to speak about a global CS. The GCS system originated when the condition of the global economy corporate sector began to have a bearing on the condition of the global economy and when international markets emerged, i.e., only in the second half of the 19th century.

TNCs play the role of system integrators for the GCS and, according to proponents for easing restrictions on TNC operations, always increase the CS efficiency in the countries where they operate. However, according to the available data, the arrival of TNCs in underdeveloped countries by and large reduces the proportion of the local private sector in the production, exports, and banking assets rather than promoting their economic growth and development.<sup>43</sup>

But TNCs and similar structures (for example, international cartels) are not the only integrators of the global CS. Factors adding system properties to the set of corporations operating within the global economy also include:

- 1) the world market as such (being a set of world markets of specific goods and services), where both TNCs and CCSs act as its agents;
- 2) elements of the division of labor between CCSs;
- 3) the system of reserve currencies;
- 4) such organizations as the GATT (superseded by the WTO) and such, strictly speaking, noncommercial institutions as the IMF and the World Bank.

Factors inhibiting the integration processes in the GCS and to some extent diluting the GCS are:

- 1) state economic and political sovereignty;
- 2) directly state-controlled economic subsystems;
- 3) regulated GDP reallocation systems within the national boundaries (through the state budget and other regulated channels);
- 4) a multitude of currencies (monetary sovereignty factor);
- 5) the existence of different “capitalism models” (Rhine, Anglo-Saxon, Japanese, etc.) and significant differences in economic legislation;
- 6) the services sector, most of which cannot be imported;
- 7) the factor of the shadow and criminal economy chiefly confined to national boundaries;
- 8) competing macroregional economic blocs (the EU, NAFTA, MERCOSUR, etc.);
- 9) crises, which always lower the GCS integration level.

The actual GCS integration level at any given moment is determined by the balance of factors acting as GCS system integrators and system disintegrators.

<sup>43</sup> See, e.g., Kiely, 1998; Navarro, 1998; Anisimov et al., 1997; Smyslov et al., 2006; Lobantseva et al., 2002; Chernoy, 2003; Romanova, 2004.

### *Periodic changes in the integration level of the global CS and their causes*

The above balance tends to change from time to time. For several decades preceding World War I (1914), the relative force of factors playing the role of system integrators in relation to the GCS exceeded those playing the role of its system disintegrators. Therefore, the GCS integration level was increasing during that period. The integration level in the period immediately preceding World War I was very high.

World War I caused its dramatic decline.

After the war, between 1919 and 1929, the global market economy (without the Soviet Union, which dropped out of the world market economy) had rapidly reintegrated.

The global crisis that began in 1929 (with its trough hitting in 1929–1932) and then World War II (1939–1945) caused a slump in the integration level of the global economy and the GCS.

The world market economy and the GCS continued to disintegrate after the end of World War II. Its immediate cause was the emergence (in Europe, too) of numerous regulated economies of mixed type. As a system they were close to wartime economies that typically had a CS with cores filled with companies either entirely government-owned or controlled by the government as a strategic owner and investor. The disintegration peaked about 1953.

Between 1953 and 1976, the GCS integration level, as a result of the offsetting of its integration–disintegration factors, remained at about the same level.

After 1976 (when currencies abandoned the gold standard under the Jamaican agreement that formalized the restructuring of the international monetary system), the economic objective-setting system focusing on development targets was replaced with one focusing on a high level of economic liberalization, privatization, and openness. At the same time, the GCS system integration began to increase, which had apparently been foreseen by the relevant option of the economic paradigm. This came to be known as a global globalization process.

It appears that a *globalization* cycle should be a more exact name for this process. It is already a second globalization cycle in the economic history of the world. The first cycle started almost 100 years before the current one, i.e., around 1876, and ended in 1914. It is no accident that the integration level of the GCS and the world economy in the period immediately preceding the 2008–2009 world economic crisis did not exceed the integration level of the GCS in 1913. In any case there are serious grounds for this view.<sup>44</sup>

The accumulated evidence suggests the presence of integration–disintegration waves in the world economy and that nowadays the world economy and global CS are at the initial stage of their disintegration process.<sup>45</sup> It is quite likely that the unfolding economic crisis may at least partially reverse world economy integration processes.<sup>46</sup>

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<sup>44</sup> Chernoy, 2003.

<sup>45</sup> See Hirst, Thompson, 1996; Golansky, 1999; Chernoy, 2003; Soros, 2004; Smyslov, 2006.

<sup>46</sup> Sapir, 2008.

At the same time, it is commonly believed that the GCS can eventually evolve to reach the integration level of highly integrated country CSs (CCSs) and acquire properties that are nowadays typical, for example, of the CS of the US economy.

However, the actual state of affairs does not give grounds for such a conclusion. Today, the Chinese economy produces almost as many diverse industrial goods as the rest of the world and its cement production (1.4 billion tons in 2008) even exceeds that of the rest of the world. Hence, it is absolutely impossible to imagine that this giant economy backed by its enormous foreign exchange reserves and huge population is likely to be integrated by developed economies. India's economy, with its population of more than one billion people, is also hardly amenable to integration.

Regardless of such factors as the economies of China and India restricting the integration processes, there are some purely economic factors that work on the GCS as system disintegrators.

*First*, these are the rapidly advancing services sector and the fast growth of services over the last 100 years in the global GDP as well as of the services sectors in the national CS in the total global GDP. Some 100 years ago, the amount of services produced by corporate entities in the US was negligible, but nowadays it is enormous. The situation in other developed economies and actually all more or less modern economies appear to be similar.

However, services represent a special product. Exports of services, in their nature as a product, account for a minor part of the total amount of services (including education, healthcare, housing, etc.) Services provided by TNCs as a percentage of global services are also relatively small. By and large, services markets are local and will remain such for indefinitely.<sup>47</sup>

*Second*, global integration processes in the CS are inhibited by the increasingly important role played in the world economy by its highly criminalized and ordinary shadow sectors. For the most part, they (except for part of the shadow capital flows) operate within national CSs. If integration processes going on in developed and developing economies fail to promote significant GDP growth, they apparently will be capable of criminalizing both these economy categories (primarily, developing economies) and create quite tangible barriers for TNCs operating in the latter.

*Third*, at present, offshore zones intensively criminalize the entire global economy and, at the same time, undermine the stability of the global financial system. Thus, they seem to have become a factor inhibiting the integration of the global economy.

The above factors work at least to partially compensate for the integration processes unfolding in the "white" sector of the economy. Their influence appears to be increasing.

Any CS servicing a national economy with a substantial territorial base (like China, India, the EU, the US, Canada, and Russia) normally consists of cer-

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<sup>47</sup> Member countries are incapable of elaborating mutually acceptable conditions for the market globalization of services. Primarily for this reason the Doha Round talks within the WTO have been unsuccessful for many years.

tain geographically separated LRCMs that have substantial mutual autonomy or substantially differ functionally and institutionally. However, it is obvious that the relative stability of LRCMs suggests the presence of system constraints on integration processes in CSs both at the national and global level.

An insight into system constraints on the integration level of the global economy and the GCS supporting its operation suggests that the higher the system integration level of the global economy, the higher (provided that its market quality is retained) the likelihood of crises. Thus, crises of medium intensity have followed each other over the last two decades. The current global economic crisis broke out also because its origination and evolution mechanism had much in common with the 1929–1932 crisis.

Any such crisis, however, hinders integration processes in the global economy and GCS and even promotes their reversal.

There is a purely formal indicator showing that the GCS is still far from looking like a national CS. The elimination of substantial differences in the dynamics of economic processes taking place within the national CSs would be an outward manifestation of such a transformation. However, we see that in this regard, little has changed over the last 100 years. The current crisis has already intensified rather than reduced differences in the dynamic characteristics of national CSs, for example, between the growth rates of the developed economies and new market economies without China and India, or between those of the Chinese and Indian economies and the developed economies, etc.

***The global CS as a factor, in contrast to local CSs,  
enabling the implementation of competitive strategies***

The GCS structure is in general similar to that of a CS operating within definite national boundaries. However, within any such CS, competition relationships between geographically separated LRCMs are less manifest than those between the national and macroregional CSs within the GCS.

The GCS is open to competitive strategies that cannot be implemented within national CSs. First, this happens because economic legislation, economic priorities, foreign exchange policies, exchange rate factor, level of openness, etc., constrain competitive strategies permissible within national boundaries. Second, the national CSs within the GCS can protect national markets with tariff and non-tariff barriers, or by granting preferences to national corporations, etc.

Within national CSs, corporations are the main competing units, while in the GCS, even in its modern heavily integrated state and with TNCs interacting globally, they are geographically separated CCSs operating within definite national and regional boundaries.

On a global scale, competition between CSs usually also implies competition between economic systems or economies with certain system qualities. This can be exemplified by the economies of Japan and the US, the EU, economies of Anglo-Saxon capitalism, or Rhenish capitalism, the economic systems of devel-

oped countries, China, India, etc. The more the economic systems differ, the less the competition between the relevant CSs involves competition between individual corporations within these CSs.

The above is true as long as there are autonomous national CSs. Where the globalization process is accomplished, their disappearance would automatically and substantially reduce the number of competitive strategies that differ in quality and are amenable to implementation within the global economic space. Presumably for that reason it is unlikely that all CSs will lose their autonomy and become unified. At any moment, there is the need within the global economy to select from a range of competitive strategies. This means that a certain number of national CSs with a substantial ESR should be available.

### ***Impact of integration and disintegration phases of the global CS on the evolution conditions of national CSs***

The GCS integration phase always features relatively favorable business trends in the world economy and fast growing world markets along with substantial opportunities for capital and technology exports. This phase favors the flow of technology and capital from developed national CSs into undeveloped ones, as well as through TNCs.

The GCS integration phase is especially good for triggering an economic development mechanism within economies with their own insufficient (in any case below a certain critical level, which is typical of some African and Latin American economies) development potential. It also can promote development in economies and CSs whose economic modernization (with a deficient development level or limited territory, population size, resources, etc.) is achievable only through intensive cooperation with the world market and, in particular, through capital imports from developed countries. It is no accident that the economic breakthrough in ASEAN member countries, Taiwan, and South Korea (see Appendices 2 and 3) occurred when the world market was expanding rapidly, accompanied by a rapidly rising GCS integration level.

The GCS disintegration phase is always a phase where complex economic problems arise even in relatively highly advanced economies (for example, due to the acute need for economic rehabilitation and the soonest elimination of the consequences of crisis or war). In the GCS disintegration phase, developed countries usually lack free capital. Therefore, in this phase they can hardly influence the economic development and economic policy of underdeveloped countries.

Thus, in the GCS disintegration phase, countries in need of development have the opportunity to choose a development model. Of course, this is done with due regard for the constraints of the economic policy pursued by developed countries and export and import capabilities. To address development problems, most developing countries in the 1950s–1960s chose the economy modernization model, relied mainly on self-financing enabled through regulation of the economic process and the public sector.

But not all the countries that chose this model to develop their economies and CSs managed to adhere to the modernization path long enough. Among countries that have succeeded are India (see Appendix 1), China, and Iran.

On the other hand, disintegration of the GCS (as occurred in the aftermath of the 1930s crisis and then World War II) prompted most relatively developed countries to choose an economic development strategy utilizing internal accumulations to the fullest extent possible within the mixed economy model. That led to choosing a relevant model of the national CS relatively protected against external competition and with a core dominated by state-controlled corporations.

Though economic strategies implemented in the GCS integration and disintegration phases are viewed as direct rivals, they substantially complement each other over the whole GCS integration–disintegration cycle.

Thus, there are certain grounds for viewing the GCS integration–disintegration cycles as a necessary condition to maximize the efficiency of the global economy regarded as the aggregate of national economies and CSs servicing the latter, over time spans roughly corresponding to large (“Kondratiev”) market cycles.

## 1.10. Conclusions from Chapter 1

1. Taken in its entirety, a national CS represents the formation of a complex system. It comprises a system of primary corporate entities consisting of corporations and structures equivalent to them; a system of secondary (superstructure) corporate entities, which, in modern conditions, are primarily groups of various types, and in the past also cartels and syndicates; such subsystems coupled with primary and secondary corporate entities as “CS core” and “CS periphery”; a subsystem of LRCMs; a subsystem of SCSs; and a subsystem of FCMs.

2. There are a multitude of CS system-critical parameters and subsystems. Therefore, the management of CS liberalization and privatization parameters alone is not enough to make a national economy operate efficiently. As a result, highly liberalized and highly privatized economies universally demonstrate low efficiency.

At the same time, the state of the CS structure can be described by aggregate indicators. These comprise the presence of a strong core, including a financial core, in the CS; the level of CS system integration (overall permeation of the CS by system links); the level of CS system integration across the country (depth and strength of various system links between LRCMs within the given CS); and CS functional completeness (the ability of the CS, including its SCSs, LRCMs and FCMs, to jointly perform, for the given economy, basic functions like providing investment and infrastructure facilities, production, export, import, commercial distribution, and social functions, etc.)

3. The performance capability of the CS servicing the national economy depends on certain superstable, slowly changing and regulated economically critical conditions (CS operation framework conditions), on the one hand, and CS system-critical parameters (CS format), on the other.

4. The strength of the CS core, its system and territorial integration level, and functional completeness, as well as harmonization between the CS format and the superstable framework conditions, determine the CS structural quality. The CS structural quality and harmonization between the CS system characteristics and the superstable and slowly changing (basic) operation framework conditions determine the CS system quality. In many cases, flaws in CS structural quality can be compensated for by a high degree of harmonization between the CS format and the basic framework conditions, thereby achieving an acceptable CS system quality level. That enabled developing economies with a low CS structural quality level, as long as the above harmonization was in place, to advance in the 1950s–70s at higher rates than developed economies.

5. In developed economies, the CS core accounts for almost the entire CS system quality and ESR, while the corporate periphery, only for a relatively minor part. However, in underdeveloped and even moderately developed economies, where the core share in the CS assets is either small, or the core is amorphous, or both, a significant part of the system quality and ESR may reside in the CS periphery.

6. Where the CS is underdeveloped, the presence of the state in its production sector, if not excessive, generally raises the CS structure and system quality and stimulates CS nonpublic sector development. The state must have a sufficiently high ESR to produce such a stimulating effect.

7. CCSs are distinguished from GCSs primarily by a considerable ESR. TNCs and similar formations (for example, international cartels, very numerous before World War II) fulfill the role of an important (though not the only) system integrator for the array of CCSs present in the GCS. However, at any time a variety of factors work within the GCS to further GCS disintegration. The balance of factors acting as GCS system integrators and system disintegrators determines the actual GCS integration level at any given moment.

8. This balance tends to change from time to time. Accordingly, the presence of large integration–disintegration cycles is typical of the GCS. The GCS integration phase promotes transfer of technology and capital from developed to undeveloped CCSs and triggers an economic development mechanism in weak CCSs. The GCS disintegration phase always gives rise to acute economic problems even in rather highly developed economies. Transition from GCS integration to its disintegration and back generally leads to replacement of the economic paradigm dominant in the global market economy. There are certain grounds to regard GCS integration–disintegration cycles as a necessary condition to maximize the efficiency of the global economy as the aggregate of national economies and the CSs servicing them, with time spans roughly corresponding to large (“Kondratiev”) market cycles.

# CONDITIONS FOR MAINTAINING THE EFFICIENCY OF THE CORPORATE BASIS OF THE ECONOMY AT A LEVEL ENSURING THE SUSTAINABLE OPERATION OF THE REPRODUCTION LOOP

## 2.1. Efficiency of a CS, its system quality, and the set of operation framework conditions: characteristics of links

As shown above, the CS system quality depends on how well the CS format is harmonized with the set of basic operation framework conditions.

However, high CS system quality is a necessary, but insufficient condition to secure the CS efficiency, since it is also affected by:

- 1) The governing operation framework conditions, including economic policy and its changes, and external economic, political, social, military impacts, including shocks, of the international institutional environment;
- 2) additional operation framework conditions, such as the ESR of the CS proper ( $ESR_{CS}$ ) and the state ( $ESR_{st}$ ) pursuing a certain economic policy.

The  $ESR_{CS}$  is critical for CS resistance to negative external impacts, while the  $ESR_{st}$  is critical for the state's ability to independently establish economic objective-setting priorities, as well as to design and implement an economic policy required to attain the set objectives.

The notion of CS efficiency employed here calls for an explanation.

Most of the conventional notions used to evaluate economic system efficiency are hardly applicable to a CS.

For instance, the Pareto efficiency criterion<sup>48</sup> (improving the position of part of the market agents without making other market agents worse off) cannot be used because the development of a CS as a dynamic system involves conceptual departures from economic equilibrium and reallocates resources, which infringes on the interests of some market agents dictated by certain economic objective setting priorities.

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<sup>48</sup> Podinovsky, Nogin, 1982.

The Kaldor–Hicks criterion is better for defining CS efficiency<sup>49</sup> (when the system is in an economic transition, the gain of part of the market agents is sufficient to compensate for the loss of other market agents). However, in a dynamic system at the CS level, the majority of market agents may often suffer a temporary loss in view of everyone finally gaining from CS development at some time in the (usually rather distant) future. In other words, the above implies the use of the “deferred reward” principle.

For the same reasons the Lipsey–Lancaster criterion or the “theory of the second best”<sup>50</sup> is also inadequate to describe CS efficiency. This criterion being in fact an application of the Pareto criterion deliberately ignores those segments or economic sectors for which the conditions fulfilling the Pareto criterion cannot be realized.

For the above reasons, our approach to CS efficiency assessment is based on the notions of “CS potential” and “degree of CS potential development” (the approach developed earlier at the Central Mathematical Economics Institute (CMEI RAS) by Sukhotin, Dementiev, and Petrov<sup>51</sup>). This approach employs, as a measure of efficiency, the ratio between the actual and potential economic outcome achieved in this CS.

**CS potential** is characterized by results achievable by the CS when the available creative opportunities, which also comprise the CS intrinsic system quality and ESR, are utilized to the utmost under specific conditions of changing national objective-setting and economic policies, or external shocks.

**CS efficiency** is expressed through CS potential actualization, its degree being indicative of the CS efficiency level.

It is apparent that both the CS potential and its efficiency in the above sense significantly depend on the ability of state and CS subsystems and elements to implement an economic policy (corporate strategies) aimed at enhancing these indicators; i.e., they depend on the state and  $ESR_{CS}$ .

Hence, **high efficiency** is demonstrated by a CS with high system quality and a high ESR ( $ESR_{CS}$ ) operating in an economy with a high  $ESR_{st}$  and pursuing an economic policy that is optimal in a given situation to reveal the CS potential.

It should be emphasized the CS structural quality, system quality, and efficiency are tied by direct and reverse links both to other CS parameters, including its ESR, and with the main parameters of the state system, including the ESR of the state, objective-setting principles, and economic policy.

So, the  $ESR_{CS}$  largely depends on the basic operation framework conditions. The ESR of the state and the range of economic policy tools depend on the CS structure and system quality, basic operation framework conditions, and vice versa. The current CS efficiency and other factors must be taken into account to set national economic objectives and design an economic policy.

<sup>49</sup> Kaldor, 1939; Hicks, 1939.

<sup>50</sup> Lipsey and Lancaster, 1956.

<sup>51</sup> See Sukhotin, Dementiev, Petrov, 1986; Sukhotin, 1989.



If these rates exceed the average ones in the comparable economies, the CS efficiency may be deemed high.

So, the growth rates of per capita income in South Korea were much higher than in a cluster of comparable economies before the  $ESR_{CS}$  and  $ESR_{ST}$  of the country had dramatically declined under the pressure of IMF conditions for stabilization loans (requiring downsizing of public spending and splitting of chaebols into independent corporations).<sup>52</sup>

The CS of modern Russia's economy in terms of efficiency in the above sense can be compared, with some reservations, with the CSs of Brazil and Turkey.

In the transformation periods of CS development, ***CS efficiency can be estimated in terms of its ability to implement national economic objective setting priorities.***

Apparently, these priorities can be very different, even rather radical. For example, in Pakistan, when its relations with India were exacerbated, Zulfikar Ali Bhutto, when he was Pakistan's Minister of Foreign Affairs, declared that "Pakistanis will eat grass but make a nuclear bomb". After that, a huge proportion of the aggregate national resources were channeled to support the nuclear program. In Taiwan, before modernization began, the national objective setting placed the highest priority on the buildup of a strong CS sectoral segment capable of boosting exports of industrial products to open markets, thereby earning foreign exchange needed to import raw materials and investment equipment.<sup>53</sup>

In any case it is clear that even a mature market economy must heavily rely on the national objective-setting and economic policy to retain CS efficiency by adapting its format to the set of operation framework conditions in response to market signals. This means that optimal economic objective setting must be harmonized both with the current CS format and its basic operation framework conditions. Violations of such harmonization may bring about CS disadaptation to aggregate operation framework conditions and, as a consequence, lower the CS efficiency.

In other words, whatever system quality the CS may have, national objective setting and economic policy are key factors to secure the efficiency of the national CS and the economy it services.

## 2.2. System characteristics of a CS and their efficient reproduction

### ***Factors directly affecting a CS format***

At arbitrary time point "t", the set of CS system characteristics (CS format  $CSF_t$ ) is a function of (1) the CS format as at time point "t -  $\Delta t$ " ( $CSF_{t-\Delta t}$ ), and (2) changes in this format  $\Delta CSF_{\Delta t}$  over time interval " $\Delta t$ "<sup>54</sup> associated with the influence of market forces and the economic policy.

<sup>52</sup> See Appendix 2.

<sup>53</sup> See Appendix 3.

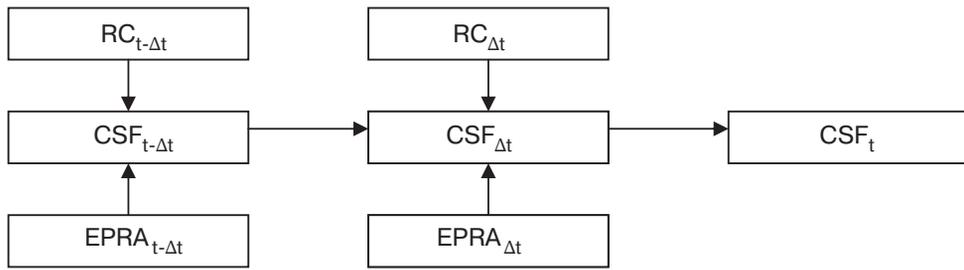
<sup>54</sup> Interval time " $\Delta t$ " is deemed small (for example, a year).

$CSF_{t-\Delta t}$ , in turn, is a function of the cumulative effects produced on the CS system characteristics over a relatively lengthy time interval preceding the moment “ $t - \Delta t$ ” by the following main factors:

- processes in the reproduction loop;
- economic policy (See Fig. 2.2).<sup>55</sup>

Thus, the CS format CSF at time point “ $t$ ” contains three principal components:

- 1) component  $CSF_m$  sourced by market forces in the period preceding time point “ $t$ ”;
- 2) component  $CSF_e$  sourced by the economic policy in the period preceding time point “ $t$ ”;
- 3) component  $CSF_{te}$  sourced by the economic policy elements directly affecting the system characteristics of the CS at time point “ $t$ ”.



**Legend:**

$CSF_t$  – CS format at time point “ $t$ ”

$CSF_{t-\Delta t}$  – CS format at time point “ $t-\Delta t$ ”

$\Delta CSF_{\Delta t}$  – changes in the CS format during time interval “ $\Delta t$ ”

$RL_{t-\Delta t}$  – the state of the reproduction loop during a more or less lengthy time interval preceding time point “ $t$ ”

$EPRA_{t-\Delta t}$  – the state of the economic policy and the related system of regulatory actions during a more or less lengthy period time preceding time point “ $t - \Delta t$ ”

$RL_{\Delta t}$  – the state of the reproduction loop during time interval “ $\Delta t$ ”

$EPRA_{\Delta t}$  – the state of the economic policy and the related system of regulatory actions directed at the economy during time interval “ $\Delta t$ ”.

**Fig. 2.2. Factors affecting the CS format dynamics.**

In addition to the above,  $CSF_t$  is affected by the state and dynamics of the noncorporate market sector and those of the nonmarket sector of the economy. As a rule, the impact of the last two additional factors in the present market economy

<sup>55</sup> Here and below, the influence of the economic policy on the format of the system characteristics (and any other characteristics alike) of the CS also implies the influence of regulatory actions linked with the economic policy and affecting the entire economy and the CS in particular, on the above characteristics.

is much less than that of the main factors mentioned earlier. As a first approximation, it can be written as

$$CSF_t = F(CSF_m, CSF_e, CSF_{te}), \quad (2.1)$$

where the contributions of market factors and economic policy to the CS format can vary dramatically.

It is conceptually important that the economic policy as a regulated framework condition for the operation of the CS and entire national economic system at any time point “t” must be harmonized, to some extent, with the existing basic framework conditions, which are not amenable or poorly amenable to changes driven by market forces and regulation.

In other words, the basic framework conditions affect both the economic policy content and market interactions between corporations. However, the economic policy, market interactions, and basic operation framework conditions in turn affect the CS system characteristics (i.e., the CS format).

Hence, during CS operation, the CS format affected by market forces adapts, to varying degrees, to the existing system of operation framework conditions, including the basic framework conditions and economic policy. Over time, changes in the operation of the economy framework conditions, including the economic objective-setting system and economic policy in general, bring about changes in the CS format.

However, the CS format and national economic policy, too, have to take into account the existing basic operation framework conditions.

The list of factors affecting the CS system characteristics (and the entire format) can be extended, because the influence of market forces and the economic policy are impacted by certain other factors.

### ***Impact of the factor of special economic interests on the system characteristics of a CS***

The economic policy is always based on more or less stable elements of the economic objective-setting system. At the same time, the economic policy, as well as the economic objective-setting system, can be affected by the factor of ***special economic interests (SEIs)*** of groups or individuals exercising an economic, political, social and other influence.

The economic policy affected by SEIs may be modified in accordance with the economic interests of these groups or individuals (for example, exporters, importers, other representatives of the business world and the establishment, trade union leaders where trade unions are strong, etc.). The pressure on the economic policy from TNCs, foreign lenders, and international financial institutions (for example, the IMF and the World Bank) can produce similar effects.

The SEI factor has an effect on the dynamics of the CS system characteristics, since it affects the economic policy in a broad sense. For example, it has a bearing on antitrust legislation, legislation on capital exports (since over time such export

can significantly affect the CS system characteristics), foreign direct and portfolio investment, customs tariff policy, foreign exchange policy, tax regulations, etc.

In view of the above, the CS format at time point “t” ( $CSF_t$ ) can be generally expressed as

$$CSF_t = F(CSF_{t-ep}, OFA), \quad (2.2)$$

where

$CSF_{t-ep}$  is the contribution of the economic policy factor to  $CSF_t$  formation;

OFA is the contribution to  $CSF_t$  formation of other framework conditions and factors other than framework ones, i.e., not characterized by significant stability and regularity (drought, flood, earthquake, various social crises and military and political disasters, etc.).

The SEI factor falls under the OFA category. The presence of SEIs alone may also be treated as a framework condition. However, the SEI factor cannot be treated as a framework factor in terms of its implementation, since it exhibits significant changeability and, in general, is not adjustable. In this case, this factor usually has an important bearing on economic objective setting and economic policy, not vice versa.

The presence of the SEI factor almost always hampers the optimization of CS system characteristics.<sup>56</sup>

If growth rates of the economic mass of the entire CS and especially its real sector are close to the marginal ones for the given conditions, this suggests that the pressure of the SEI factor on the economic policy is minor. Hence, its impact (for the most part negative) on CS system characteristics is also minor.

At the same time, low growth rates of the CS and the entire economy, despite the available capacities, are not always caused by the pressure of the SEI factor deoptimizing the economic policy. But the SEI factor still places substantial pressure on the latter.

The economic policy format (“EPF”) can be split into three components:

- 1) component  $EP_{fram}$  corresponding to the current set of CS operation framework conditions (the random factor in  $EP_{fram}$  is expressed in variability in possible economic policy options under the same framework conditions)
- 2) component  $EP_{sei}$  reflecting the effect of special interests
- 3) component OFA reflecting the impact of other factors less special interests, including the state of the economy reproduction loop and markets:

$$EPF = F(EP_{fram}, EP_{sei}, OFA). \quad (2.3)$$

The greater the  $EP_{sei}/EP_{fram}$  ratio, the poorer the economic policy matches the objective conditions (including the interests of large social communities) for its implementation and the greater are the “scissors” between the actual and the “normal” economic policy option. Since the economic policy one way or another

<sup>56</sup> The factor of special economic interests places substantial pressure on the state of a CS and its evolution only when relevant entities of the economic process acquire the ability to influence, in a sense, exclusively, certain policy parameters, in the same way as the economic entities within a cartel acquire the ability to influence prices. Generally, the less the influence of the SEI factor on economic policy, the greater the influence of purely market factors on it, and vice versa.

affects CS system characteristics, the CS format at any given time “t” to a certain degree reflects the pressure of the factor of special interests during extended time period “ $\Delta t$ ” preceding time point “t”.

In reality, any economy always has rivaling “groups of special interests” (“GSEI”). If during time “ $\Delta t$ ” these groups were somehow counterbalancing each other, the economic policy as at time point “t” will more or less match the norm for the existing economic, social and political situation. Otherwise, the policy can reflect a stronger impact of the SEI effect. The same holds true for system characteristics of the relevant CS as at time point “t”: in the first case they will correspond to the “normal” operation of the economy conditions, in the second, they will notably depart from the standard for the situation in question.

From equations (2.2) and (2.3) it follows that the considerable exposure to the SEI factor demonstrated for a long time by the CS format and the economic policy generation system can dramatically reduce CS efficiency.

If the pressure of the SEI factor on the economic policy is mounting fast, under certain conditions the CS efficiency can dramatically drop, and the CS will simply be disorganized to a varying degree<sup>57</sup>.

Something similar occurred in some countries of Latin America in the 1980–90s. The same is applicable to Russia. It appears that the dynamics of Russia’s economic policy and CS system characteristics in the 1990s was to a great extent determined by the SEI factor pressure. In any case, many researchers have no doubts about the influence of certain groups of special interests (first and foremost, of the financial and resource lobby and business community connected with TNCs) on the economic policy in that period.<sup>58</sup>

If the global economy is an economy of autonomous state market modules, then the international economic policy depends only slightly on the GSEI factor as the impact of rivaling SEI groups on the global economic policy is counterbalanced or mutually “compensated”. Where a small number of economic modules with more or less matching CSF “profiles” and similar SEI systems capable of harmonizing their own special interests dominate in the global economy, it is quite possible that the international economic policy is aligned with the interests of one or several GSEIs. This reduces the efficiency of the global economy or segments of it controlled by GSEIs.

This situation does not just exist in theory. Cartels (including, international cartels) are known to have dominated Europe’s economy for about 50 years before World War II, each being a product of harmonization of the interests of cartel members.

The current global crisis stems from excessive liberalization of conditions for mortgage loans in the US. However, this liberalization has resulted from the har-

<sup>57</sup> See Kolodko, 2000. Pp. 45–46

<sup>58</sup> This issue is highlighted in numerous studies, suggesting that the short-term government bonds (GKO) pyramid and withdrawal of financial assets by insiders from it triggered the Russian economy default in 1998. At the same time, many economists believe that the catastrophic net capital outflow from Russia during the 2008–2011 crisis can also be attributed to the SEI factor affecting economic policy. The latter, at least from the end of 2008 to mid-2011, actually failed to inhibit capital outflow.

monization of special economic interests of a few (including, transnational) players in the US lending market.

Thus, the global market economy and the global highly privatized CS, both meeting WTO standards, need to minimize the influence of the SEI factor on international economic policy to operate efficiently. Deoptimization of this policy may entail significant consequences; therefore, it is more important to minimize the influence of the SEI factor on international economic policy than on the economic policies of national states.

### ***Changes in operation framework conditions as a cause of changes in CS system characteristics***

The framework conditions affecting the economic mechanism operation (hence, the system characteristics and CS format) can be regulated or nonregulated. An economic policy with related by-laws and regulatory actions directed at the economy is treated as a regulated framework condition. Other framework conditions of an economic nature are nonregulated or poorly amenable to regulatory actions, for example, the efficiency of the business community.

The framework conditions of social and political nature are partially attributed to the category of regulated conditions (for example, selective legislation), partially to the category of nonregulated conditions, or those poorly adjustable (for example, the crime rate).

The nonregulated framework conditions usually make a certain impact on the regulated ones (for example, on the economic policy).

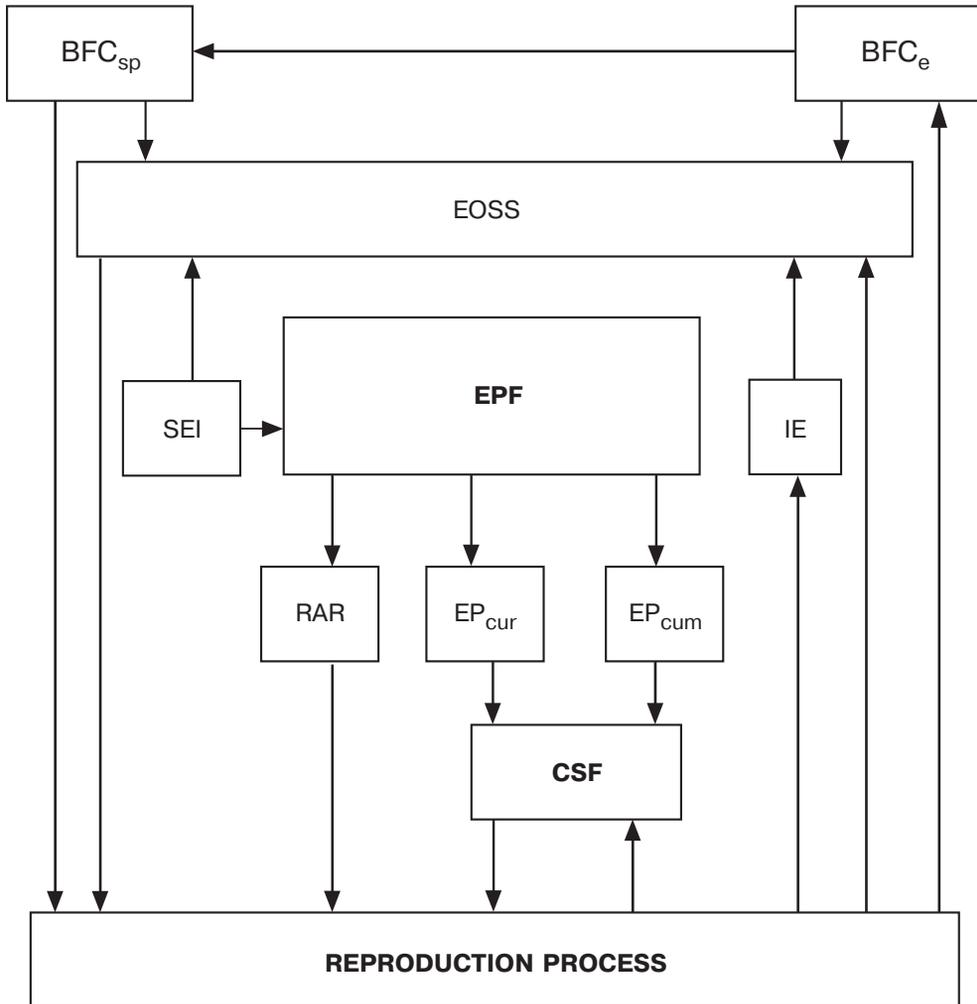
The economic objective-setting system (EOSS) is among the framework conditions that significantly impact the current state of the CS and the direction and nature of changes in the latter. Since the EOSS is derived from the set of framework conditions depicting the state of the cultural, social, and economic environment (or, more precisely, from the cumulative effects created by relevant institutional factors), it is assigned to the category of derivative (secondary, tertiary) framework conditions. An economic policy as a whole in relation to the EOSS (or at least to its main elements) is also a derivative framework condition.

In practice, different methods to address economic problems, i.e., diverse economic policy options, are compatible with an EOSS conforming to market economy standards.<sup>59</sup> The choice of option varies from case to case. Therefore, economic policies in general (not to mention an economy regulatory system matching the specific economic policy option) are not identical to the EOSS.

The system of links involved in shaping the economic policy and defining its format is shown in Fig. 2.3.

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<sup>59</sup> For example, a specific investment program to achieve an x% rate of economic growth can combine, in various proportions, funding through different channels. The same is done to improve living standards or, for example, to enhance economy competitiveness.

**Legend:**

CSF – system characteristics of a CS

BFC<sub>e</sub> – basic framework conditions of economic nature

BFC<sub>sp</sub> – basic framework conditions of social and political nature

EP<sub>cur</sub> – current regulatory actions directed at CSF linked with economic policy

EP<sub>cum</sub> – regulatory actions directed at CSF linked with economic policy over a more or less lengthy time interval preceding the current moment (cumulative impacts)

RAR – regulatory actions directed at the reproduction loop that do not directly target the CS (for example, effects produced by budget and monetary policy tools)

IE – actions directed at the economic policy not associated with a change in the EOSS and sourced from processes taking place in the reproduction loop

SEI – special economic interests

**Fig. 2.3.** System of links involved in shaping economic policy and defining its format

Thus, the economic policy format as at time point “t” is a function of:

- the reproduction process running for a more or less lengthy time interval;
- various kinds of basic (nonregulated or poorly adjustable) framework conditions, including both purely economic and sociopolitical factors, as well as the SEI factor. The economic policy acts as a derivative (secondary, tertiary) framework condition for these factors.

Since the basic framework conditions affect the economic policy format and the market interaction system, while the economic policy and market interactions, in turn, affect the CS system characteristics and format, the basic framework conditions also indirectly affect the CS format.

The interaction system depicting the links outlined above is presented in Fig. 2.4.

The above suggests the following.

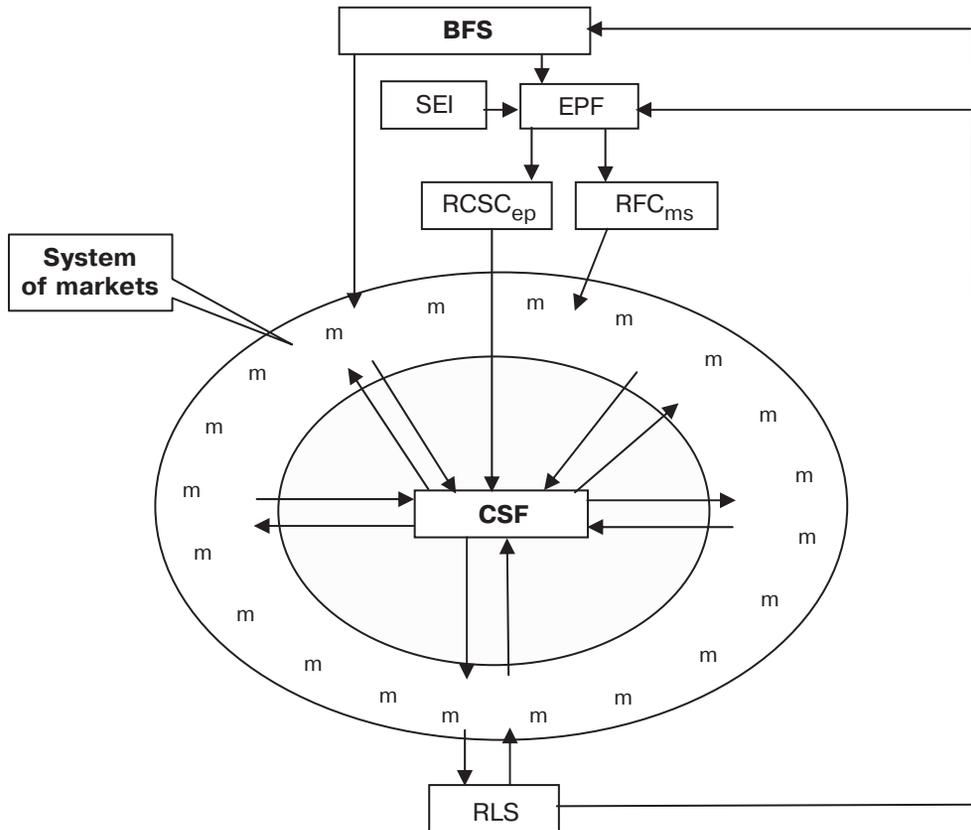
If within a more or less lengthy time interval the economic objective setting system underlying the economic policy implemented in the framework of economy “x” is identical to that implemented in the framework of economy “y”, and the basic operation framework conditions of economies “x” and “y” are comparable, the system characteristics of the CSs servicing economies “x” and “y” will be rather similar.

At the same time, if economies “x” and “y” significantly differ in basic framework conditions, one should not expect similarity between their CS system characteristics even where the economic objective-setting and economic policy format in economies “x” and “y” are very much alike.

This implies that, as the basic operation framework conditions of the CSs of various countries conceptually differ, there is no universal option of economic objective setting and economic policy that would be equally efficient for all national and/or macroregional CSs.

Changes in the system of operation of the economy framework conditions (including the EOSS and economic policy as a whole) automatically bring about changes in the CS format. As a rule, these changes may take a long time (adaptation period). At any given moment, the CS format either has already adapted to the existing set of framework conditions or is (through market interaction mechanisms and corporate strategy modification) gradually adapting to the framework conditions.

Exactly for this reason changes in economic legislation significantly raising the openness of specific economies have been accompanied by considerable changes in the national CSs servicing these economies. So, changes in economic legislation enhancing the competitive power of the markets of goods and services, including financial markets, by promoting their openness have increased market and investment risks. That became one of the main causes of the widespread practice of corporate mergers substantially concentrating production and capital in all developed countries. At the same time, that boosted the presence of companies dependent on external TNCs in the cores of the CSs in developing countries.

**Legend:**

BFC – basic framework conditions

CSF – CS format

SEI – special economic interests

EPF – economic policy format

RFC<sub>ms</sub> – regulated framework conditions directly affecting operation of the system of marketsRCSC<sub>ep</sub> – regulated components of CS system characteristics directly defined by economic policy

M – components of the system of markets

RLS – state of the reproduction loop

**Fig. 2.4. Interaction of various factors shaping and changing the system characteristics of a CS**

Just reducing import tariffs on goods practiced mainly in the GATT era crucially affected the structure of national CSs and the global CS. However, this impact was not always invariably positive. The economies and CSs retaining consid-

erable autonomy continue to adapt to the system of the lowest import duties on goods.<sup>60</sup> So does the US economy.<sup>61</sup>

Changes in the global monetary system associated with the final departure of currencies from gold and the switch to a unitary exchange rate determined by the market<sup>62</sup> had a significant impact on national CS system characteristics. Among other things, these changes have led to:

- a dramatic increase in the proportion of the financial sector of the global CS and TNCs in the global economy;
- the erosion of a considerable part of the CS built on national economies;
- the formation of a considerable number of “split” CSs with a low ESR within developing economies;
- the formation of macroregional CSs from national CSs (above all, the all-European CS).

The system of framework conditions determining development of the global economy has once again undergone drastic changes after China’s administrative economy made the transition from a world market outsider to a mixed economy with an advanced CS. Due to its size, China’s CS is basically not amenable to integration by the CSs of “old” developed countries.

This is another (relatively new) framework condition that has a bearing on the evolution of the global economy as a whole. As a consequence, it is unlikely that an integrated global CS with a core consisting of CSs of the “old” market countries will emerge in the foreseeable future.

Regulatory actions of specialized functionally oriented controlling systems such as central banks (the Fed in the US), investment promotion systems (if any) for priority economic sectors, social services, and the public sector (to the extent it is used for administering current economic processes) make up a special category of directly regulated (governing) CS operation framework conditions. Various functional control subsystems addressing specific economic objectives (privatization, an increase in export capacity of the manufacturing

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<sup>60</sup> The imbalance of world trade and, then, of the world financial system, having developed into a chronic institution, is an indicator of incomplete adaptation of the system of national economic modules to the current level of openness.

<sup>61</sup> Hence, the American practice of imposing nontariff barriers to imports and the growing practice of imposing antidumping duties some the imports that are qualified as dumping. These duties are distinguished from conventional import tariffs only by higher selectivity (duties are imposed on specific exporters rather than on groups and types of merchandise).

<sup>62</sup> The 1944 conference at Bretton Woods agreed that paper money would be exchanged for gold only by central banks and only on their request. Formally, currencies stopped being pegged to gold by the decisions of the Jamaica Conference in 1976. As a matter of fact, the transition to the system under which the unitary exchange rate is determined by the market alone took several decades. At present, the exchange rate of most national currencies is determined by the market with a certain, not too active participation of the relevant central bank in determining the exchange rate (within the framework of the exchange rate adjustment policy).

However, the directive determination of exchange rates, which are usually grossly undervalued and maintained at a certain fixed (or changing from time to time) level is still practiced. The rate of exchange of the Chinese yuan (renminbi), being today one of the major world currencies, is established by directives and roughly matches China’s national price level for materials and supplies.

industry or modernization of individual segments of it, etc.) also fall under this category.

So, at any given time, monetary aggregates M0 (amount of money in circulation) and M1 (amount of cash and money in current accounts) depend both on operation of the market mechanism and the central bank's regulation of the money supply dynamics. Since market processes have a strong impact on M0 and M1, they are, strictly speaking, not CS operation framework conditions, though they contain an essential "framework component" associated with the monetary policy of the central bank. However, as the CS of economies with developed market mechanisms actively respond to the expansion or contraction of M0 and M1, there are reasons to attribute M0 and M1 to the economy and CS operation framework conditions.

The same is true for central bank refinancing rates.

To this end, the Keynesian strategy of regulating the economic dynamics prefers to use budget policy (by changing the amount and structure of budget expenditures), while the monetarist strategy prefers monetary policy (by changing the quantity of money in circulation and loan interest rates). However, both these strategies are essentially based on the economic dynamics managed by affecting the directly regulated operation framework conditions of the economy.

This example shows that the state of the governing operation framework conditions can deeply affect economies (and, consequently, the CSs), both positively and negatively.

### *Interaction of various categories of factors in the course of forming and changing the system characteristics of a CS*

As illustrated above, the CSF (if the SEI factor is ignored) depends on its basic (superstable and slowly changing) operation framework conditions, regulated framework conditions, and market interactions. Among the above-listed conditions, the basic framework conditions are primary, since they directly affect both the system of market interactions, economic policy, and hence, the regulated operation framework conditions of the CS.

The CSF heavily depends on the dynamics of reproduction loop processes and, hence, on market factors. But the CSF proper, for its part, at any given time impacts market interactions and reproduction processes. As the system of links involved in the formation and reproduction of CS system characteristics is a system with reverse links (see Figs. 2.1 and 2.4), even relatively minor changes in the system of framework conditions can lead to notable variations in the CSF.

The CSF at any given time is determined both by conditions existing within (due to loops with reverse links containing the CS and the system of markets) and outside the market system. This is so, because the regulated framework conditions (including direct regulatory impacts on the CS in the framework of a specific objective-setting and economic policy) are essentially determined by nonmarket factors (social, political, and even psychological) and by the random factor (see Fig. 2.3 and 2.4).

The percentage of intra- and extrasystem factors in the CSF is an essential system feature of it. The greater the input of the extrasystem factors into the CSF, the less the input of market factors therein and the more traditional the nature the CS exhibits (see below).

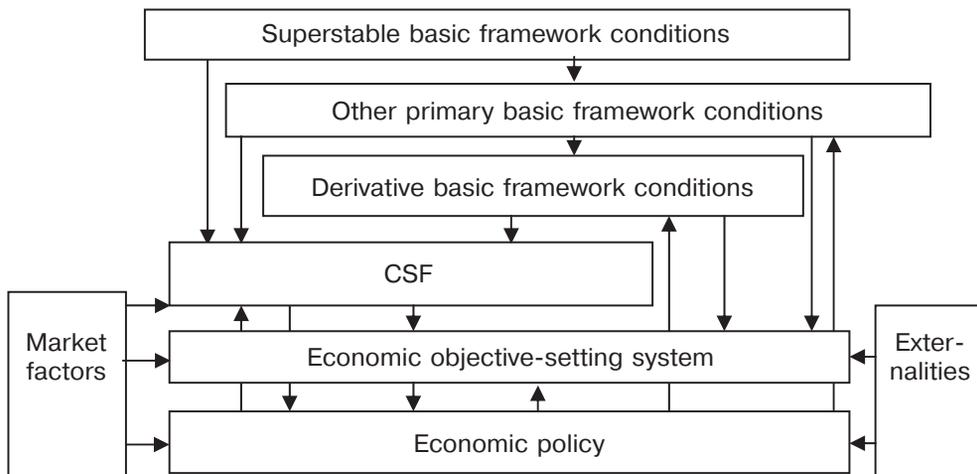
### 2.3. Prerequisites for ensuring an acceptable level of CS efficiency under the given operation framework conditions

The loop that contains regulated framework conditions (jointly determining the economic policy format in general and the EOSS in particular), the CSF and basic framework conditions is a loop with reverse links.

Consequently, efficient operation of the CS and economy as a whole depends on a certain degree of harmonization between:

- operation of the basic framework conditions the economy and the CSF;
- the economic policy, in particular, the EOSS, on the one hand, and the basic operation framework conditions of the economy, on the other;
- the economic policy and the existing inertial CSF elements not amenable, under the given conditions, to abrupt changes under the pressure of the economic policy factor (Fig. 2.5.).

If the CSF fails to meet the CS basic operation framework conditions, the CSF is gradually modified so that this inadequacy is eliminated. In practice, purely market factors can substantially slow down elimination of the above inadequacy. This process can be accelerated by CS system optimization by adjusting the CS system characteristics.



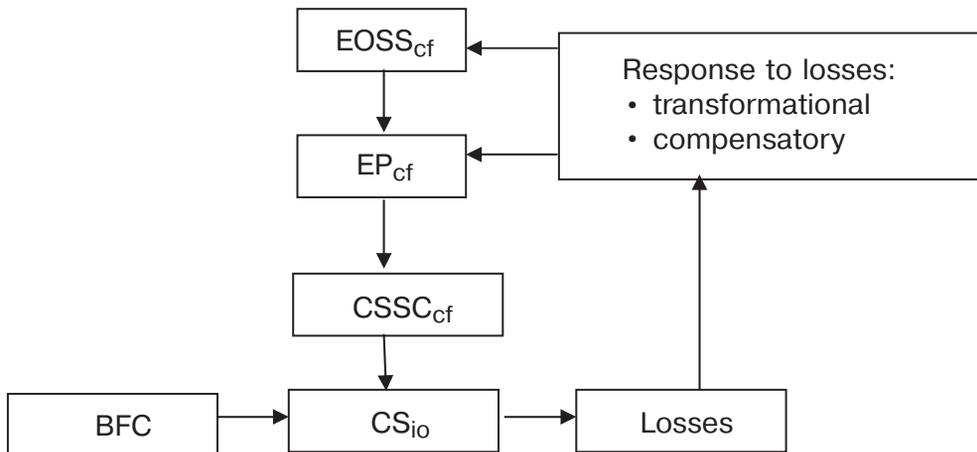
**Fig. 2.5. A system of main direct and reverse links harmonizing the system characteristics of a CS (CSF), its operation framework conditions, the market factors and economic policy**

For example, if the CS is less competitive than its external competitors due to a lack of large enough corporations within the CS core, a policy of mergers and large competitive entities stemming from existing corporations can smooth this inadequacy.

Exactly this was done in Britain in the first half of the 1920s to raise the competitiveness of British industry to an acceptable level (in parallel, the banking system was restructured toward concentration). In recent years, Russia has undergone similar, but rather partial, CS restructuring. Its scope obviously was not wide enough in view of the anticipated accession to the WTO.

If the EOSS (hence, economic policy) fails to match, even partially, the existing set of CS basic operation framework conditions, an imbalance will occur between the CS system characteristics (since they are affected by economic policy) and the basic operation framework conditions. This will automatically reduce the CS and economy efficiency as a whole. Eventually, this will lead to a shortfall or loss in economic efficiency.

A response, if any, to losses, may involve the elimination of the above-mentioned imbalance by modifying the economic policy and, first and foremost, the EOSS. There are two ways to make this modification: by eliminating the inadequacy between the economic policy and the existing set of CS basic operation framework conditions (*transformational response to losses*) or by compensating the negative influence of this inadequacy on the economy and the CS servicing it (*compensatory response to losses*) (Fig. 2.6).



**Legend:**

BFC – system of basic operation of the economy framework conditions

EOSS<sub>cf</sub> – fragment of the EOSS failing to match the basic framework conditions (conflicting with them)

EP<sub>cf</sub> – fragment of the economic policy associated with the EOSS<sub>cf</sub>

CSSC<sub>cf</sub> – fragment of CS system characteristics matching the EP<sub>cf</sub>

CS<sub>io</sub> – inefficient CS operation regime

**Fig. 2.6.** A system of interactions enabling the elimination of mismatch between the EOSS/economic policy and the CS basic operation framework conditions.

It is quite common that the economy liberalization (regulated framework condition) level mismatches the business community efficiency (basic framework condition). If a business community features (a) a lack of efficiency, including a lack of willingness for capital investment in production, (b) willingness for the inflation models of economic behavior and (c) willingness for semi-criminal and criminal models of the economic behavior, then exceeding a certain critical level (sufficiently low) of economy liberalization will reduce rather than augment the CS and economy efficiency.

This happens because of the declining CS system quality due to the growing percentage of the inefficiently operating sector in the CS and, under certain conditions, due to the disrupted reproduction of fixed assets.

The combination of a highly liberalized economy and low efficiency of the business community produces the effects experienced by the majority of new market economies, including Russia<sup>63</sup>.

If the economic policy fails to match the existing CSF inertia elements, the CS and entire economy efficiency can decline due to the discrepancy between the CS operation conditions and its format.

For example, where the CS lacks a core composed of large corporations capable of producing high-tech products, implementing ambitious investment projects and allocating considerable funds to finance R&D, the opening up of the economy generally leads to negative consequences like squeezing local producers out of the market. The failure of the CS financial sector under the given conditions to provide efficient credit services to the real sector (for example, due to the small size of the banks and high sensitivity of the credit sector to various risks) brings about similar results.

In other words, the CS efficiency directly depends on harmonization between its system characteristics and the set of operation framework conditions. As illustrated above, CS efficiency also depends on the adequacy between the basic and regulated (defined by the economic policy) framework conditions and the ESR of the state and the CS proper.

### ***Operation of the economy management system and the autonomy of the CS from administrative actions***

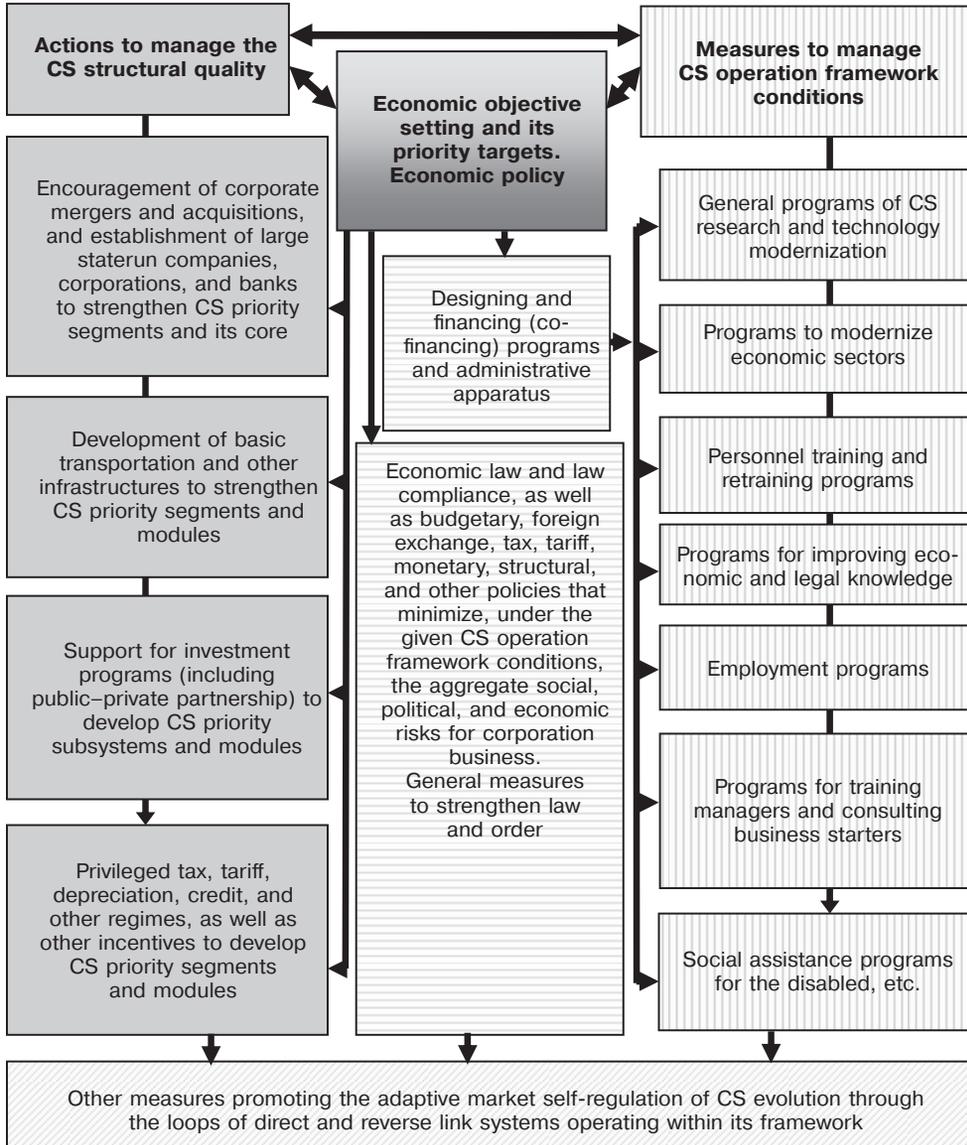
Any market economy has a certain operation of the economy management system (EOMS). An EOMS usually provides measures and mechanisms to raise the CS structural quality and improve slowly changing and regulated CS operation framework conditions (Fig. 2.7).

Significant changes in the system of framework conditions affecting the operation of the economy automatically lead to (over time, if not immediately) changes in the EOMS of this economy, or to be more specific, in the tools and regulatory

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<sup>63</sup> The thesis under which the higher the economic liberalization level, the higher, under all circumstances, its efficiency level, implicitly relies on the assumption that there is no need for harmonization of the basic framework factors and regulated framework factors (including the level of liberalization and privatization). Yet this need is obvious.

power used to administer the operation of the economy or individual segments of it. At any given moment, the condition of the CS reflects both the cumulative effect of the EOMS influence on the CS in the preceding time interval and the effect of the EOMS influence on the CS produced at the current time.<sup>64</sup>

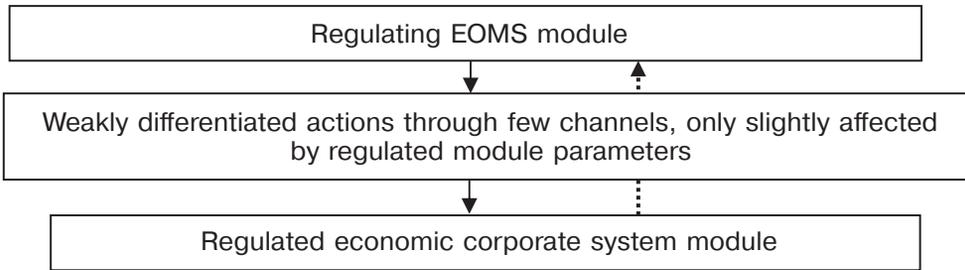


**Fig 2.7. Basic mechanisms raising the CS system quality by managing its structural quality and operation framework conditions.**

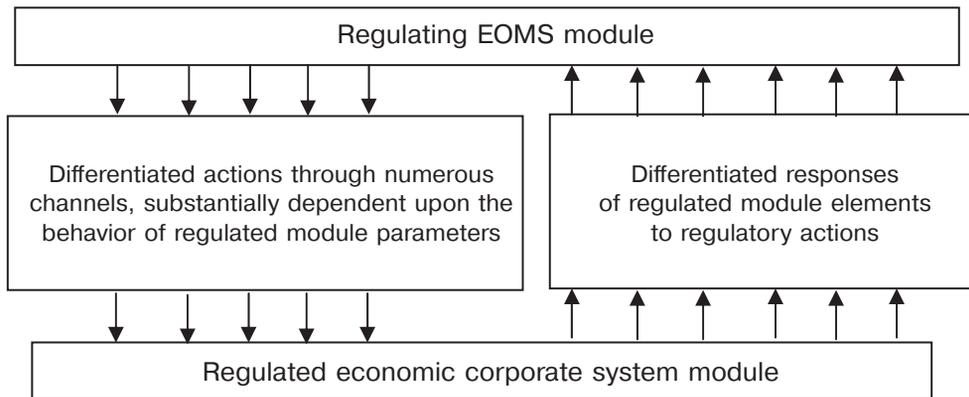
<sup>64</sup> See Chapter 3 for details on the management of CS parameters.

EOMS options differ from each other in their ability to influence the processes in the economy and the CS and, accordingly, in the degree of CS autonomy from the EOMS.

In economies with a considerable level of liberalization and privatization, the CS as a whole and its nonpublic sector usually exhibit a high degree of autonomy from the EOMS (see Fig. 2.8). But the CS nonpublic sector may be also highly dependent on the EOMS influence (see Fig. 2.9).



**Fig. 2.8. Typical regulatory scheme for developed Western and underdeveloped economies that exhibits high autonomy of the regulated economic module from the regulating module**



**Fig. 2.9. Typical regulatory scheme for modernizing economies that exhibits low autonomy of the regulated economic module from the regulating module. The scheme shows numerous loops with a system of reverse links through which the regulated module affects the regulating module**

The first combination is indicative of economies with a relatively low level of modernization (where the “unorganized”, conventional sector dominates), and modernized liberalized economies, including developed economies in the form they acquired after 1980. The second combination is indicative of mixed economies.

In the first case the set of regulatory actions (defined by EOMS parameters) is not much affected by CS regulated module parameters, and the system of regulatory actions is not differentiated. Generally, here the modern sector of the entire economy or the entire CS acts as a regulated economic system.

In the second case (when CS regulated modules exhibit low autonomy from the EOMS), the dependence of the set of regulatory actions on the condition of regulated modules is quite high. In other words, in this case, the EOMS–CS regulated module system tends to form numerous reverse link loops.<sup>65</sup>

In this case, numerous and differentiated tools are used for economy parameter regulation, with due regard to the economic situation and operation framework conditions of the economy.

In a real, more or less advanced, market economy the nature of the regulatory influence of the EOMS on the CS at any given time is, to a certain degree, a function of the state of CS (which, in turn, substantially depends on the EOMS influence on the CS in the preceding period).

The higher the priority of development, the heavier the dependence of the current EOMS parameters on the CS parameters in the preceding period. If this dependence is high enough, the aggregate consisting of the EOMS and CS (or the CS segment whose state has an especially important bearing on EOMS parameters) combines very actively interacting subsystems of market and nonmarket methods to manage the state of the economy. The mutual autonomy of market and command economy systems under the above preconditions is lost, and real economic management acquires mixed “command market” characteristics.

In the same way, the mutual autonomy of the EOMS and the CS segment affected by this EOMS is lost to a certain degree and their combination generates a special system aggregate, which will be further referred to as a “*command corporate mixer*”.

It should be noted that command corporate mixers are quite typical in situations when an economy and its CS strongly need regulation, since they cannot adapt, relying on purely market mechanisms, to abrupt changes in the operation framework conditions (war, acute crisis). In terms of content, command corporate mixers resemble an intensively regulated mixed economy adapted to wartime challenges.<sup>66</sup> The World War II economies of the US, Great Britain, Germany, and Japan belonged to this type of economy.

However, after the war, many countries continued for many years to intensively regulate their economies based on command corporate mixers. The command corporate mixer established in the course of Taiwan’s economic modernization<sup>67</sup> replicated a similar formation that emerged in the Japanese economy after 1945. This led the well-known futurologist Herman Kahn to conclude in the 1960s that although corporations operating in the Japanese economy, at first glance, seem to compete as they do in the US, in fact the CS of the Japanese economy is structur-

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<sup>65</sup> Conversely, a command economy with a very high regulatory potential of the economic management system demonstrates weak reverse links in the regulating module–regulated economy modules system.

<sup>66</sup> Chernoy, 2003.

<sup>67</sup> See Appendix 3.

ally close to a single major corporation with a more or less decentralized system to manage branches and affiliates.<sup>68</sup>

Later, in the 1980–1990s, the command corporate mixer in Japan’s CS was so manifest that many economic analysts dubbed this mixed economy structure the “Japan Corporation”.

## 2.4. The need to boost the economic potential of a CS as a factor constraining specialization processes within the system of LRCMs

Typically, economic activity in modern market economies (in contrast to traditional economies based mainly on agricultural production) are distributed rather unevenly across the country with the bulk of them concentrated in a few economic centers (in urban agglomerations and mining production areas).

Since any CS is pegged to a system of economic centers, its corporations are also distributed rather unevenly across the country and its LRCMs are territorially tied to urban settlements (groups of settlements).<sup>69</sup>

In practice, even in an economy with a sizeable land area, around 90% of the economic activity of the CS servicing this economy is usually concentrated in several dozen relatively small centers of economic activity and relevant LRCMs.<sup>70</sup>

The state of any LRCM system is primarily indicated by:

- a) the degree of amorphism or, vice versa, integration level of the LRCM system<sup>71</sup>;
- b) the distribution of the economic mass of the CS among LRCM categories differing in size<sup>72</sup>;
- c) dispersion (scattering) of functional and institutional characteristics of LRCMs or, conversely, the degree of their functional and institutional similarity.

### *The balance of factors increasing or decreasing the functional and institutional features of LRCMs*

In the era preceding the appearance of CSs with a core consisting of corporate giants scattered over numerous locations across the economic space, every com-

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<sup>68</sup> Herman Kahn and Anthony J. Wiener, 1967.

<sup>69</sup> A local regional corporate module always matches a definite group of corporations or a corporate complex. Theoretically, it is possible to employ the concept of “local corporate complex”. However, preference is given to the term “LRCM”, since the concept of “module” (as distinct from the concept of “complex”) suggests the existence of a whole whose part it is.

<sup>70</sup> See Granberg, 2001; Rodionova and Bunakova, 1999.

<sup>71</sup> A local corporate module system with substantial amorphism (which also suggests the amorphism of the entire CS) degenerates into a quasi-system, a mechanical array of local corporate modules.

<sup>72</sup> The situation depends on whether 70–80% of the economic mass (assets, sales) of the CS are concentrated in 2 to 3, or in 10 to 20, or in 40 to 50 local corporate modules.

paratively large economic center was matched by a LRCM that was essentially independent of other LRCMs operating in the relevant space.

Apparently, the CS composed of such modules is rather amorphous. The same situation was observed a little more than 100 years ago in all modern developed countries. However, then the number of LRCMs with a considerable volume of economic activity even in relatively big economies confined to the national boundaries was relatively small.<sup>73</sup>

Big translocal corporations and corporate-type structures (concerns, cartels, syndicates, etc.) were developing accompanied by economic links permeating the economic space and extending beyond individual economic centers. Meanwhile, the economic autonomy of local corporate modules appeared to weaken and the integration level of economic spaces confined to the relevant national boundaries started to rise. In parallel, as the production and associated economic modernization was growing in scale, the number of local economic systems and, hence, that of LRCMs began to grow.

Two more important tendencies came to be directly linked with output growth and the widening range of goods and services. On one hand, LRCMs were enhancing their functional and institutional specialization, on the other hand, more LRCMs with a high degree of functional and institutional similarity were filling the CS.

The system and functional characteristics of LRCMs are substantially a function of their economic mass and, hence, also a function of the economic mass of the relevant economic centers. In practice, an LRCM localized in a big city and its vicinity (with an overall population of several million people) notably differs in its institutional and, usually, functional characteristics from the LRCM localized in an economic unit (a city with suburbs) with a population ten times smaller, let alone LRCMs localized in small towns.

In view of this, the functional and system similarity of an LRCM implies, here and below, mainly LRCMs that differ slightly in economic mass (production output, total assets).

Primarily, the factors listed below contributed to the *reciprocal similarity* of LRCMs (and, hence, to a decrease in dispersion of their functional and system, including institutional, characteristics, at least with comparable levels of economic activity) at the stage of “spontaneous” industrialization taking place in the last decades of the 19th century and the first decades of the 20th century:

- 1) growth of medium-size local economic centers that paved the way for equalizing, to a certain degree, LRCM development conditions;
- 2) horizontal expansion of technologies from the centers of their generation and greater access to them;
- 3) development of the banking system and loan financing as a factor equalizing economic advancement conditions across the country;
- 4) development of railroads and, later, automotive transportation as a factor also equalizing the economic advancement conditions of local economic centers;

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<sup>73</sup> In 1880, the backbone of the US CS comprised several dozen LRCMs with substantial autonomy concentrated around big cities. The backbone of old Russia’s economic system in 1913 comprised hardly more than ten LRCMs concentrated around the biggest cities.

5) in the context of the above circumstances, greater diversification of production within individual LRCMs.

The factors listed below were key for *the growth of dispersion (scattering)* of LRCM functional and system characteristics in the process of more or less spontaneous industrialization:

- 1) during the initial phase of process development, patch-wise industrialization and relatively faster industrialization of traditional trading and political centers (around big cities)<sup>74</sup>;
- 2) in the “old” sectors, as output grows, the number of enterprises producing homogeneous products tend to decrease (to benefit from economies of scale); this, other things being equal, also helped augment LRCM functional specialization;
- 3) the arrival of large local corporate complexes tied to mineral resource deposits and specializing in their mining and primary processing<sup>75</sup>;
- 4) an increase in the proportion of new industrial goods in the total industrial output and emergence of new industry sectors<sup>76</sup>;
- 5) growing urban population and economic importance of big cities and agglomerations.

The last trend is directly associated with the concentration of corporate assets of the manufacturing industry and services sector in big cities and urban agglomerations.

LRCM mutual similarity and differentiation processes (increasing and decreasing the dispersion of their functional and system characteristics) are balanced by both the existing economic environment and the economic policy factor (which, in turn, is a function of social, political, and economic environment conditions). As it was in the past, so it is now.

At the initial stages of modernization, the dispersion of the LRCM functional and system characteristics usually tends to widen. Over time, as modernization evolved, sooner or later this dispersion, conversely, began to diminish.

In a modernized economy confined to the relevant national boundaries, the dispersion of functional and system characteristics of local economic complexes (and, consequently, LRCMs), other things being equal, is lower, the greater the size of the territorial and demographic basis of the economy, the less specialized the economy, the higher the proportion of the CS sector producing services and servicing the production of services, and the higher the economic development level. Under deindustrialization, if it is not accompanied by growth in the propor-

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<sup>74</sup> At the later industrialization stages with industrial facilities spreading across the country, the industrialization factor appeared to reduce the dispersion of functional and institutional LRCM characteristics (see also below).

<sup>75</sup> The number of major mineral deposits in an economy is always limited. Therefore, the number of large local corporate complexes specializing in mining and primary processing of mineral resources is limited, too. Such complexes always accompany industrialization. But as their number in any case is relatively small, they contribute to the dispersion of LRCM system functional characteristics.

<sup>76</sup> In the early 20th century, most sectors of the engineering and chemical industries were categorized as new industry sectors.

tion of the CS sector producing services or servicing the production of services, the dispersion of functional and system characteristics of the local corporate modules will, other things being equal, increase.<sup>77</sup>

The Chinese (mainland China) economy with its unique demographic mass and extensive territorial basis arouses particular interest in connection with changes in the dispersion of functional and system characteristics of local economic systems in the course of economic development. Industrialization in China at its initial stages, as anywhere, progressed in a patchwork manner. During the implementation of the first five-year plan to develop the national economy (1953–1957), the functional differentiation of local economic complexes grew rather than diminished.

The first attempt to reverse this tendency took place in 1958, when, under the Great Leap Forward project, six economic cooperation areas (whose economic complexes in the long term were expected to duplicate each other) and the so-called “industrial provinces” were delineated. The objective was to duplicate, as much as possible, key heavy industry sectors within each province.

The implementation of all these plans was discontinued in 1961 after the failure of the Great Leap Forward, but they were revitalized at the end of the 1960s. In the 1970s, other programs were carried out concurrently to institute a system of mutually duplicating economic complexes at different subordination levels, including:

- 1) economic complexes exhibiting considerable functional similarity in the economic cooperation areas (Northeast, North, East, Northwest, Southwest and South Central China);
- 2) economic complexes in industrial provinces exhibiting a slightly weaker functional similarity;
- 3) industrial complexes at the district subordination level duplicating each other and aimed chiefly at supporting agriculture.

Moreover, subdistricts also made attempts to establish their own industrial base in the 1970s. Later it was realized that the districts and subdistricts using their own resources were unable to create modern industrial complexes. Therefore, the approach to administer economic complexes at the municipal, district and subdistrict levels had been adjusted so that vast rural areas were put under the control of nearby large and medium-size cities. Moreover, these cities, whose rights were extended to the rights of district administrations, absorbed a considerable number of rural subdistricts<sup>78</sup>.

Eventually, these transformations in the Chinese economy by the mid-1980s led to the emergence of several hundred local economic modules of the city-dis-

<sup>77</sup> This can be exemplified by the economic situation in Russia over the last 20 years. The importance of the gas and oil complex has dramatically risen and the sectors engaged in extraction and primary processing of other minerals have increased the dispersion of the functional characteristics of local economic agglomerations filling domestic LRCMs and, hence, the Russian economy.

<sup>78</sup> As of 1984, 295 municipalities exercising the rights of district administrations controlled a total area of 1.87 million km<sup>2</sup> with a total population of 498 million people, out of which urban areas (i.e., directly subordinated to municipal administrations) accounted for 730,000 km<sup>2</sup> populated by 191 million people (China Statistical Yearbook, 1984. P. 47).

strict level and relevant LRCMs. The modules were economically highly autonomous and functionally substantially complete and similar.

Nevertheless, the LRCMs of the city–district and province level localized in China’s maritime provinces and hinterland substantially differ from each other functionally and institutionally.<sup>79</sup> This gap had been gradually growing since the 1980s (when Chinese enterprises began their incorporation) and until 2005–2007. To date, however, it has become less wide as the hinterland began to enjoy the “catch up effect” and the institutional characteristics of the Chinese economy were becoming more uniform across the country. Changes in the economic objective-setting priorities (toward lowering the priority development of the export sector) and WTO membership requirements also contributed to bridge the gap.<sup>80</sup>

Anyway, at almost all development stages of the modern CS, China had a great number of LRCMs that were highly similar functionally and institutionally. There is no reason to believe that this situation will undergo significant changes in the future. China vividly illustrates that LRCM specialization has its own natural limits. Furthermore, it may be assumed that under certain conditions, functionally similar LRCMs may be duplicated in economies with a large territorial base.

### *Constraints on the economically feasible specialization level of national CSs within the global CS*

The emergence of new functionally full-fledged centers of economic activity is typical of the entire global economy at all stages of its evolution. Between the 1930s and the 1960s, these had been the economies of the Soviet Union and Japan. In recent decades these centers have been China, India, South Korea, Brazil, and ASEAN countries.

It is significant that the CS of the US, the EU, and Japan by and large functionally duplicate each other. National CSs operating within the EU demonstrate rather weak economic specialization.

In the future, the global CS (GCS), whatever it might be, is expected to exhibit a certain number of mutually competitive national CSs that substantially duplicate each other.

The likelihood of the emergence of a GCS consisting of specialized national and macroregional CSs is low. This is explained by the fact that “growth oppor-

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<sup>79</sup> The LRCM of the maritime provinces of China are distinguished from those in its hinterland by:

- a) a substantially higher level technology;
- b) substantially higher export-oriented industrial production (seven maritime provinces and Shanghai, a city with province status, account for about 80% of this production);
- c) a substantially larger share of corporations controlled by foreign capital in the total output;
- d) a substantially smaller share of the public sector;
- e) substantially higher level development of the CS services sector.

<sup>80</sup> The presence of LRCMs in the national CS that operate under different economic policies conflicts with WTO membership requirements.

tunities” for a GCS consisting of mutually complementary specialized CSs are relatively minor and, in any case, less than for a GCS that consists of functionally similar rivaling CSs. This gives rise to the reproduction of mutually competitive national CSs that functionally duplicate each other.

Economic growth opportunities start to fade when the specialization level of a CS is exceeded. The greater the aggregate potential of the economy (territorial basis, resources, population size), the lower, other things being equal, this specialization level.

In view of the situation with the economic specialization of the CS in such countries as the US, Canada, Iran, and even Saudi Arabia, the current specialization level of the CS of Russia’s economy (when facilities using advanced technology are disappearing and the country’s food self-sufficiency is low) is evidently too high.

The specialization level of most LRCMs filling Russia’s CS (at least related to the manufacture of medium- and high-tech products) is also obviously excessive, which hampers the use of economic potential available in the country’s regions.

## 2.5. Conventionalization of CSs: its causes, results, and implications

### *System prerequisites for conventionalism of CSs*

The format of any CS includes components reflecting the input of basic operation framework conditions into its system characteristics, and the influence of market forces and the long-term and current market policy, i.e., regulated operation framework conditions (see Equation (2.1)).

However, an economic policy (irrespective of the objective rationale behind it) is always a product of harmonization of the interests of various socially and politically important groups and, hence, is of a straightforward conventional nature. The greater the input of the components associated with the economic policy into the CSF, the higher is its degree of conventionality.

So, if at some point in time the input of the economic policy factor into the CSF increases, while the input of market factors (which are intrasystem ones for markets and, accordingly, for the CS) decreases, the degree of conventionality of a CS increases.

Exactly this occurs in periods of crises (in the crisis response phase) and wars (when the economy is adapting to challenges in increasing the capacities of war production segments and servicing military needs).

Crises – if they exceed certain levels in scale and duration (as occurred in 1929–1932 and is occurring today), and large wars (including the two world wars) some time thereafter always bring about significant changes in economic policy and, consequently, changes in the format of CSs – increase the degree of conventionality of both the global and national CSs.

Major conflicts between countries or military blocs (even when they do not develop into direct military confrontation) also are factors that increase the conventionality of the CSs associated with the economies participating in the conflicts. The Cold War is the best historical example.

***Changes in the CS conventionality level between 1913  
and demonetization of gold by the Jamaica Conference in 1976***

For about a century, after the Napoleonic wars and until World War I, national CSs and the global CS had almost always developed under the influence of market forces alone. All the key elements of national CSs in the form they had around 1914 (including cartels, syndicates, groups or concerns, and American trusts) originated under the influence of factors that were almost exclusively intrasystem for the relevant markets and the entire GCS.

Conversely, factors that were external for market forces, including manifold sociopolitical factors, and especially the economic policy factor, were becoming increasingly important for the CSF in the 20th century.

Processes that may be treated as “grassroots conventionalization” – cartelization in Europe and the establishment of monopolistic entities in the US – started in advanced national CSs as far back as the late 19th century.

The US responded to these processes by adopting antimonopoly legislation, which compensated (though by no means fully) for market forces undermined by the establishment of oligopolistic and monopolistic markets in the preceding decades. As for cartels, they were simply banned in developed countries after World War II.

In the course of CS adaptation to elevated market risk levels, grassroots local conventions emerged under the influence of market forces. As a response, governing state and transnational conventions were forged, thus limiting (by economic policy tools) opportunities for certain CSF transformation options. Nevertheless, the epoch of large-scale restructurings of CSs initiated by economic policies began during World War I. During that period, the CSs of all major warring countries acted quite quickly to switch to the regulated operation regime. Numerous state (governmental) enterprises were set up.

After the war, the changes in the CSs that took place during the war in almost all the warring countries (except Russia) were gradually reversed by changing the economic policy. However, against this background, some countries implemented state authority-led conventions concerning novel types of economic policy directly affecting the CSF.

So, as mentioned above, before the 1929 crash, numerous mergers initiated by public authorities radically changed the structure and, in general, the format of both the industrial and financial sectors of the British CS. The crisis triggered a new wave of convention-led CS restructurings.

In Italy, a considerable number of big companies were nationalized and transferred for management to the Institute for Industrial Reconstruction (IRI) to rescue them from bankruptcy.

In Germany, the CS switched to the regulated operation regime in 1933 and later comprised a large group of government-owned enterprises.

In Japan, the CS operation regime was relatively liberalized in the 1920s was replaced in the 1930s by a semi-command regime. A planned economy was instituted in Manchuria (or Manchukuo, a formally independent state, which was actually the Japanese army's domain).

In the US, the New Deal of the Roosevelt administration originally targeted the total cartelization of the economy. Though this plan had been abandoned, the 1930s saw significant changes in the US CS. Along with establishing a number of administrations with very broad economic powers and resources and focusing on the crisis and economic reconstruction, some crucial institutional changes (primarily in the CS financial segment) were implemented. In particular, the banking system underwent a drastic restructuring. This involved the liquidation of a multitude of banks, while the remaining ones were split between the financial system core, consisting of a limited number of investment banks, and the remaining commercial banks. At the same time, a national deposit insurance scheme was established for the first time in history in the US.

The impact of the conventional component (economic policy) on the US CSF was exacerbated dramatically during the Great Depression and further increased during World War II. Then it declined, and about 30 years after the end of World War II, the influence of the economic policy and market signals on the US CSF became comparable.

The neoliberal economic paradigm replacing the traditional economic paradigm again led to a drastic change in the US corporate base of the economy. As a result, the share of financial corporations and the services sector and TNCs, as well as corporations controlled by foreign owners and corporations based in off-shore zones, considerably increased in the US CS.

In Western Europe, like in the US, the conventionalization of national CSs was very high during World War II; however, after the war it slightly declined, but continued to maintain sufficiently high levels. The CSF of major Western European countries in the 1970s (i.e., at a time when these economies still enjoyed considerable autonomy) was at least as much dominated by the economic policy factor as by market factors.

Finally, the modern EU CS, to a considerable extent, is a derivative of a policy aimed at establishing, in the long run, a highly integrated European community, which is regarded, economically and politically, as the European counterpart of the US.

Thus, on the whole, prior to World War I, the CS conventionality was relatively small not only in the West, but also worldwide. Conventionality soared during World War I and II, when the economies were adapting to military needs, the regulated economy sector was quickly growing, and the proportion of the pure market sector of an economy was diminishing. After the end of World War I and II, the conventionality of national CSs significantly declined as state regulation and state presence in the economy were scaled back.

However, World War I and II left a noticeable "conventional footprint" on the global CS, especially on the CSs of European countries and Japan. World War I

had already led to deep statization of the European economies and CSs. Basically, this process proved reversible.

World War II promoted the statization of European CSs even more. But this time the economy statization processes related to the war period were not only reversed, but advanced considerably in the first postwar decade.

Like World War I, World War II necessitated a dramatic increase in the regulatory potential of the EOMS. After World War II, the regulatory potential of the EOMS notably decreased, though it did not reach the 1938 level. Programming and indicative planning became the new standard for regulatory actions directed at the CS and economy as a whole not only in Europe, but also elsewhere. In the early postwar years some countries introduced hard currency regulation, rigid price controls, and even (like in Britain) a resource rationing system.

These EOMS transformations were directly caused by a multitude of acute shortages of supplies, including food and financial resources, and high investment risks experienced by most postwar economies (except the US and some countries beyond Eurasia).

Thus, World War II gave birth to a new system of operation framework conditions of the global and individual economies. Under this system, a notable reduction, within a short time, in the degree of conventionality of national CSs was able to spark major economic and social upheavals.

In the period immediately preceding World War II (1938–1939), the CSs of European countries featured a high proportion of cartels and a relatively low proportion of the public sector containing state-controlled companies (the latter proportion was significant only in Germany and Italy). After World War II, the CSs of European countries, conversely, lacked cartels, while government-owned companies accounted for a sizeable percentage in the economy, whose economic mass initially consisted mostly of nationalized private corporations.

Before World War II, the CSs of European economies (except the Fascist and Nazi countries) operated in a deregulated regime. After World War II the majority of these CSs adopted an operation regime where the regulating role of the state was rather high.

It is obvious that the above-mentioned (rather radical) changes in the operation framework conditions of the economies significantly raised the degree of CS conventionality of the main European countries after 1938, which in 1950 was much higher than in 1938. In practice, after 1945 it took 20–30 years for most countries to liquidate the shortages and risks hampering the deregulation and destatization of national economies.

In the first three decades after World War II, the degree of conventionality in practically all the CSs of developed nations and the GCS as a whole was sufficiently high. Therefore, it is no wonder that almost all CSs that formed in developing countries (replicating the experience of developed countries) in this period demonstrated an extremely high conventionality.

As a result, practically all more or less advanced CSs in the mid-1970s, i.e., in the period immediately preceding the onset of liberalization and privatization transformations on a global scale, showed a high level of conventionality. However, the level of conventionality of the GCS in that period was still relatively low.

***Liberalization and privatization transformations taking place since the last quarter the 20th century and their effect on the CS conventionality level***

It should be noted that until the mid-1970s, no large-scale restructuring of CSs had been undertaken other than under the pressure of force majeure events (war or crisis). After 1975, the global economy and GCS embarked on a restructuring for the first time in world history without any special motivation. It began in 1976 when the Jamaica Conference made a crucial decision, without serious discussion among economists and without informing the general public, to totally demonetize gold and rely on the market when determining the rates of national currencies.

The rationale for these decisions was as follows:

- in the past, political and social, rather than economic, factors initiated the deliberalization and statization of economies and CSs;
- the market regulation of economic processes (at least when glaring shortages had been eliminated by that time in most developed countries) itself is quite efficient and does not need to be complemented by an operation of the economy management system with high regulatory potential;
- therefore, the economy, including the currency system, requires deregulation and destatization.

The above was presented to the general public as necessary conditions for returning to a “real”, i.e., the most efficient, market economy.

It was expected that liberalization and privatization transformations launched around 1980 would reduce (by giving the green light to market forces) the conventionality level of the targeted economies and CSs, like what happened soon after the end of World War I.

That might have happened if:

- 1) the process of liberalization–privatization transformations, at least in its main part, had been backed by a strengthening of the relationship between currencies and gold. This option was seriously considered as far back as the early 1980s;
- 2) the liberalization–privatization transformation process from the start did not target a significant reduction in the ESR of most national CSs and countries;
- 3) the process of liberalization–privatization transformations did not target significant growth in the internationalization of world financial markets, regardless of the influence of this process on the behavior of most economies.

In other words, to bring national CSs and the global economy back to the 1913 standard system, *it was necessary to*:

- 1) step up efforts to peg currencies to gold;
- 2) reverse the tendency to reduce the level of tariffs imposed on exports and imports;
- 3) reduce the degree of internationalization of financial markets and furthermore, bring most of the financial transactions back to within national boundaries.

*However, something diametrically opposite was done:*

- 1) the monetary system option pegging currencies to gold gave way to equating money to shares and determining exchange rates by the market. This led to considerable departures of the market value of most currencies from their purchasing power, thus creating numerous price distortions in the economy. Figuratively speaking, it created market “false mirror effects” for manufacturers, consumers, and investors;
- 2) the system of import tariffs was practically reduced to zero;
- 3) the autonomy of local financial markets had been effectively liquidated;
- 4) a policy of equal rights for entrepreneurs (natural and legal persons) – residents and nonresidents alike – was adopted instead of a policy of leaving national markets to local entrepreneurial communities.

As a result, efforts made under the motto “back to a normal market” brought something different, namely: one model of the market economy had been replaced by another, and one economic paradigm was replaced by another economic paradigm, which later, in the 1990s, became known as neoliberal.

As a consequence of the liberalization and privatization transformations undertaken in the last quarter of the 20th century and bringing the economic policy in most countries in line with the requirements of the neoliberal economic paradigm, the degree of conventionality of the GCS and national economies (and the CSs supporting their operation) rose dramatically.

### ***Dependence of the system characteristics of a CS on the conventionality level of the economic objective setting***

In the course of its operation, any system of economic entities tied to an immature technological base enabling its operation in a practically nonregulated regime automatically increases its economic mass unless and until its growth process is thwarted by destructive factors (like natural disasters, epidemics, and wars) or growth capabilities based on the territorial, resource, and technological bases in question have been exhausted. Economies aimed at modernization and modern advanced economies place high priority on increasing their economic mass and technological level. The ability of an economic system to expand reproduction is its basic identification feature similar to the ability of plants or animals to grow.

If an (EOMS) is based on the EOSS placing the highest priority on development, the EOMS operation will accelerate development, as much as possible under these circumstances, working like a multiplier for market forces. For example, if CS market sector growth rates under the given basic operation framework conditions of a deregulated economy are 3–4% and have risen to 6–8% due to EOMS performance (which was often the case when the EOMS was formed in line with modernization paradigm requirements), the multiplier effect of the EOMS will be 2.

Hence, as long as the EOMS creates multiplier effects of expanded reproduction, changes in the CS driven by the EOMS are harmonized with the influence of market signals on development. In this sense, the CS conventionality appears to be minimal.

If the EOMS, in contrast, is unable to service the expanded reproduction process (or, under certain conditions, even simple reproduction), the EOSS and the related EOMS are believed to be affected by deoptimizing conventional factors. Among them, the influence of SEI exercised by certain economic, political, and social groups on the EOSS and the EOMS is pivotal.

It is evident that in this case the degree of conventionality of the EOSS and the EOMS derived from the latter is higher, the greater that economic objective setting depends on SEIs presumably not interested in development.

In this case, changes in the CS degree of conventionality depend on the pressure on the EOMS exerted by the SEI factor more than on the potency of EOMS regulatory actions directed at the CS and the entire economy. Thus, the corporate base of the economy's efficiency appears to be a function of the conventionality conditions imposed by the influence of SEIs on economic objective setting and the EOMS.

***Impact of neoliberal paradigm conventionalism of the global economy  
on the system quality and efficiency of the GCS and its national CSs***

There is no doubt that the transformations of most market economies and the former socialist economies after 1980 performed in accordance with the requirements of the neoliberal economic paradigm raised the degree of conventionality of the entire global economy and most national economies.

As a result, one version of neoclassical economics has transformed into an effective “mainstream ideology” that dictates the standards for a certain “***single international economic policy***”. They comprise maximum privatization, liberalization, CS competitiveness and openness of economies for goods and capital streams, minimum budget reallocation of GDP and state noninterference in the economy, etc. These standards have been embodied in the requirements imposed by the IMF and IBRD for credit recipient countries, and GATT and later WTO rules. These requirements gave equal rights to local and foreign investors, effectively banning the tariff protection of domestic markets and preferences to support the domestic and export competitiveness of national CS segments. The standards have substantially limited the permissible adaptation mechanisms of CS elements and subsystems to operation framework conditions. Thus, they reduced the  $ESR_{St}$  and  $ESR_{CS}$  of the countries following these standards.

Compliance with the requirements of “international economic policy” effectively means delegating a material part of the ESR of countries and national CSs to external economic partners and world markets, which is especially painful for the CSs of weak economies.

Before joining the WTO, and especially before the 1997–98 crisis, the so-called “Asian Tigers” had shown the highest economic growth and development rates. Thereafter, they had to restructure their CSs in compliance with IMF stabilization loan requirements, thus substantially reducing the  $ESR_{st}$  and  $ESR_{cs}$ .

For example, GDP growth rates in South Korea dropped noticeably after its chaebols were split under the IMF pressure into specialized corporations, and the public budget cut the funding for the governmental administration of CS system quality. China joined the WTO only when its  $ESR_{st}$  and  $ESR_{cs}$  had become higher than in most countries. China and India, in administering their CS development, refuse to follow numerous “international economic policy” recommendations (for example, to step up efforts to reduce the presence of the public sector in the CS and stop supporting exporting corporations through undervalued national currency rates).

The growth of neoliberal conventionality of the global CS and national CSs has resulted in:

- 1) a system of offshore zones whose absolute negative impact on the international economy was recognized during the current world crisis;
- 2) hypertrophy of the financial sector and its clearly excessive degree of liberalization, which finally led, as in 1929, to a global crisis;
- 3) growth of the gray and shadow economy sector;
- 4) partial deindustrialization of some comparatively developed countries, including the US and Russia;
- 5) failure of most developing economies transformed in the neoliberal sense to implement the available potential of economic advancement (the growth rates of the developing economies of this category after the above transformation, at best, have dropped to those of advanced economies);
- 6) slackening of the real sector of the global economy (if China, India, and Iran are ignored);
- 7) transformation of cross-border financial and trading flows into a chronic and exacerbating imbalance;
- 8) formation of a system of institutional traps<sup>81</sup>, which many economies (including Russia and many Latin American countries) could not avoid;
- 9) continuous mergers, acquisitions, and spinning off at the corporate level and, as a result, growing instability of the corporate policy and reduction in the ability of corporations to design and implement long-term strategies, as well as major investment and, particularly, innovative, projects;
- 10) a growing ability of both the global economy and local CSs to generate market and investment risks.

The above processes associated with the growth of conventionality of the global CS increased the general instability of the global economy. This accelerated the transformation of the US credit crisis into a global economic crisis.

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<sup>81</sup> Polterovich, 2005.

## 2.6. Impact of changes in the foreign exchange and tariff policy on national CSs and the GCS

Minimizing import tariffs is commonly believed to automatically open the market. However, this measure alone does not always suffice. It happens automatically only when there are no tariff barriers on imports, while the currency rate either equals its purchasing power parity (PPP) or exceeds it (as nowadays yen exchange rates do).

Under the gold standard, the approximate equality of the exchange rate and PPP of currencies was achieved more or less automatically (due to currencies rigidly pegged to gold, or gold and silver). However, later the situation changed. During World War I and World War II, after paper money ceased to be freely convertible into gold with official exchange rates determined by pegging currencies to gold, the currency rates of most warring countries (including all European powers) exceeded their real purchasing power.

The situation again drastically changed after restructuring the international monetary system based on the Bretton Woods Agreement, when central banks were to exchange paper money for gold only if the money came from another central bank. Since paper money was no longer converted into gold, this made it possible to establish the exchange rates of currencies at levels much lower than their PPP and employ a system of multiple exchange rates. As a result, weak currencies with an exchange rate much lower than the PPP came to play a predominant role in global foreign exchange markets. The system of multiple exchange rates, in one form or another, became common practice<sup>82</sup>.

In other words, the decisions taken at the Bretton Woods Conference to rebuild the international monetary system helped use undervalued exchange rates as nontariff barriers to protect the market<sup>83</sup>. Japan was the first to amply use this opportunity to establish the exchange rate of the yen, after its stabilization, at a level twice as low as its real purchasing power.

In the first decades after World War II the main parameters of the global foreign exchange system were determined in conformity with the Bretton Woods Agreement. In that period, strong economies like the US protected their markets, first, by the high competitive power of local producers, second, by tariff barriers, and third, to a

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<sup>82</sup> For example, the practice of applying one exchange rate for trade operations and another for capital transactions was widespread (Chernoy, 2003. Pp. 202–204).

<sup>83</sup> Indeed, if the exchange rate of country “x” is undervalued against the PPP of its currency, the prices for imported goods tend to exceed the prices for similar goods of local producers, automatically creating the effect of market protection. But this effect manifests itself only under certain conditions. If the economy of country “x” turns out low quality, or more expensive, analogs of imported goods, even taking into account the exchange rate factor, the market protection effect owing to the undervalued exchange rate of the local currency manifests itself weakly or fails to do so at all. If the ratio of PPP to the national currency exchange rate in country “x”, the importer of goods or services, is the same as in country “y”, the exporter of these goods or services, the market of country “x” is left with practically no protection from imports from country “y”.

lesser degree, by nontariff barriers to imports. Meanwhile, weak economies, where local producers had low competitive power, protected their market during that period by import duties and a policy of undervalued and multiple exchange rates.

Eventually, national markets in the 1950–70s were highly protected. This alone augmented the autonomy of national CSs. The longer the international monetary system was under the Bretton Woods Agreements, the higher the autonomy the national economies (and national CSs) enjoyed and the more decentralized was the GCS.

When the basic parameters of the international monetary system were determined by the Bretton Woods Agreements and considerable import tariffs and state involvement in the economy were allowed, the global market system showed the highest growth rates. This happened because under the above conditions, the system quality of the CS rose due to actions simultaneously affecting the parameters of the CS proper (and, above all, the degree of its statization) and the external conditions of its operation (rate of exchange and tariffs).

The exchange rate of national currencies and tariffs in Bretton Woods-type economies almost always matched the competitive strength of local corporations that facilitated minimizing market and investment risks (and, thus, minimizing the transaction costs of local producers and simultaneously maximizing their willingness to invest). The monetary system performing under the Bretton Woods Agreements restricted capital transactions (including capital flows from developed economies to developing ones). The main negative effect of the above was a slowdown in new technology diffusion from developed economies to developing ones.

In the 1970s, the system of international foreign economic relations again underwent a restructuring under which national economies and the CSs intensified their relations.

In the monetary area this restructuring meant completely abandoning currency pegged to gold (that was formally recognized by the Jamaica Accords in 1976) and switching to market determination of a unitary rate of exchange.<sup>84</sup>

The restructuring also meant a reduction in tariffs.

Capital flows were gradually liberalized and equal rights granted to local and foreign investors.

In the 1990s, tariff protection was practically eliminated almost everywhere. Consequently, the markets of developed nations, where the currency purchasing power and exchange rate approximately matched each other, were left practically unprotected. In contrast, the markets of developing countries were protected against imports from mature economies in the 1990s no less than in the 1970s owing to wider discrepancies between the exchange rate and PPP of the currencies of developing countries. In the 1990s, the real purchasing power of the currencies of developing countries, if their GDP is converted into dollars, on average exceeded three times their exchange rates.<sup>85</sup> For industrial goods, this ratio was less, but it still remained considerably high.

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<sup>84</sup> So far this restructuring has not been accomplished and likely never will be, because the central banks in some countries like China, an economic giant, still determine the exchange rate, regardless of currency strength.

<sup>85</sup> Russian Statistical Yearbook, 2001. P. 638. For details, see Dolotenkova, 2001.

This worked to restrict imports from mature economies to developing countries. As long as developing countries manufactured low-tech industrial products and simply could not do without imports from mature economies, the above circumstance was not too important. But then newly industrialized countries appeared in the world economic arena with efficient CSs and embarked on an undervalued exchange rate policy (like Japan in the 1950–1970s, and later South Korea, Taiwan, China, and India) that worsened the position of mature economies.

Factors intensifying cooperation in production between developing economies and their CSs came to the fore. This resulted in the establishment of ASEAN (Association of Southeast Asian Nations), which has evolved into an economically viable unit, and in endeavors to create efficient economic unions in Latin America (MERCOSUR, etc.). In the early 2010s, a free-trade zone was launched embracing ASEAN and China.<sup>86</sup>

The transition to the system of national currency exchange rates determined by the market dramatically increased, due to permanent fluctuations in rates, market and investment risks even for advanced economies. These risks were even greater for developing economies. Moreover, the transition to the open market policy (first for goods, then for goods and services, and later for investments) also heightened market and investment risks.

Actually, these risks had long ago risen to a supercritical level, bringing about a general slowdown in growth rates (if China with its “semiplanned” economy and the former Soviet bloc countries are ignored), a series of stock market crises, and today’s international trade imbalance and current global crisis.

The global economy responded to the growing market and investment risks stemming from the liberalization and openness policy with massive mergers at the corporate level and the establishment of macroregional economic blocs (macroregional fragmentation). The establishment of NAFTA and the EU was definitely fueled by this process. To this end, most national currencies of the EU member countries were replaced by the euro, a single currency. Thus, the European financial markets substantially reduced risks generated by them.

The macroregional fragmentation of the world economy has led to the establishment of CSs servicing the relevant macroregional economic complexes. Though this process in general is at its initial stage, the formation of a single all-European CS within the EU has advanced quite far to date.

In the 1980s, according to the prevailing view, the policy of market determination of currency rates would soon lead to a single world economic space and, hence, to a single world CS with TNCs as the main agents. Europe’s economic regionalization and separation and their consequences were not fully realized.

That partially happened because the ability of TNCs to create integrating effects in the world economic space was exaggerated. In addition, the determination of exchange rates in the market unexpectedly created effects that hampered the integration and unification of market economies.

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<sup>86</sup> Newsru.com, 05.01.2010.

### *Factors constraining the growth of the proportion of TNCs in the GCS*

Nowadays it is evident that there are some factors that inhibited the expansion of TNCs based in developed countries (further referred to simply as TNCs) in the last two decades and continue to do so at least in areas of the “world economic periphery” if not in the world economy as a whole.

*First*, opportunities for increasing the proportion of TNCs in the economy of many regions of the world are limited due to efficient competitors emerging at the local level and other, including sociopolitical, factors.

Southeast Asia and East Asia, where efficient CSs fueled by local capital are already in place, are practically closed to further expansion of TNCs from developed countries. Such a situation is even more typical of China. The capital brought into China is for the most part the capital of ethnic Chinese with a minor Japanese input. In China this capital has occupied the niches targeted by Western and Japanese TNCs.

Opportunities for TNCs to increase their global presence by increasing their footprint in the economic space of the Middle East and South Asia are also extremely limited. It appears that the TNC presence in the CSs of Latin and Central America in view of the social and political situation in these parts cannot be significantly expanded and may over time even decline.

Russia remains the only region in the world where the role of TNCs is still minor. Anyway, here Western TNCs inevitably will have to deal with their Chinese rivals. Already the presence of Chinese corporations in the sectoral corporate complexes of the forest and construction industries of Russia is rather strong. In addition, the recent loan agreements of Rosneft, Transneft, and Gazprom with Chinese corporations to finance projects in Russia will probably result in a large-scale capital inflow from China into the Russian oil and gas sector.<sup>87</sup>

*Second*, the expansion of TNCs from developed countries everywhere, apart from a few countries and regions, is inhibited by a high and increasingly growing level of market and investment risks of various kinds, including social, military, political, and criminal risks.

*Third*, there are system constraints on TNC expansion into a zone where exchange rates are undervalued with respect to PPP (“UER zone”). However, this expansion is limited, since huge profits earned by TNCs and expressed in UER zone prices, when converted into hard currency, are reduced by the ratio of the exchange rate to PPP, if both are calculated in cents per national currency unit.

In the gold standard era no such problem arose. But it exists now when currency rates are determined by the market. Meanwhile, TNCs based in developed countries, like their owners – natural and legal persons – are in developed countries and pay dividends in the currencies of developed countries, but not in the currencies of periphery countries.

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<sup>87</sup> Reuters reported that on December 9, 2008, when negotiating a loan to Rosneft and Transneft, China’s CNPS, along with government guarantees for loan repayment, demanded guarantees for oil supply in the form of shares in some companies owning certain Russian oilfields.

This automatically limits the size and structure of TNC investments in the UER zone, which are made on a highly selective basis. TNCs tend to avoid investing in capital-intensive industries, or where the export potential is limited, or hard currency cannot be earned.

*Fourth*, the giant Chinese economy with its huge exports is a powerful system constraint on the expansion of TNCs from developed countries in the world economic periphery. Since the 1980s, TNCs have launched considerable export facilities outside developed countries (in China, too).

With China a competitor operating in an undervalued yuan exchange rate regime and delivering nowadays huge amounts of high-tech products to international markets, the establishment of export-oriented facilities in underdeveloped countries is a priori unprofitable both for Western and Japanese TNCs. This limits the opportunities for their further expansion in the CSs of periphery countries.

For the above reasons, the proportion of foreign direct investment (FDI) into developing and former centrally planned economies in the 1990s declined. In 1989–1994 (during the negotiations under the eighth GATT round when developing countries were required to grant the same rights to domestic and foreign investors), it averaged 31.5%, in 1999 (after granting equal rights!) it dropped to 23.7%, and in 2000 it decreased to 20.9%.<sup>88</sup>

In the early 21st century the above proportion continued to decline. During the present world financial and economic crisis, when the confidence of investors in the stability of the markets of developing countries has been undermined, the proportion of developing countries, and weak economies in general, receiving FDI again dropped significantly.<sup>89</sup>

The West hardly expected the emergence of efficient economies in the world economy periphery and efficient CSs in South Asia, Southeast Asia, and China, which have effectively inhibited the proportion of Western TNCs in the world economy from further growth. If China, with its gigantic output of various products comparable with the EU and the US taken together, and even with all the developed countries<sup>90</sup>, is taken into consideration, the proportion of Western TNCs in the world economy after 1980 appears to have decreased.

At the beginning of the globalization process, which soon gave way to macroregional fragmentation of the world economy, TNCs mainly acted as carriers of capital and technology and an external stabilizer for the CSs of developed economies.<sup>91</sup>

<sup>88</sup> World Investment Report, 2001. Pp. 291 and 296.

<sup>89</sup> See RBK daily, 16.04.2009.

<sup>90</sup> RBK daily reported on January 23, 2009, that steel output in China in 2008 exceeded 542 million tons, or about 38% of its total world production.

<sup>91</sup> The mechanism of the external stabilization of CSs in developed nations by their TNC expansion is implemented by spreading of aggregate market and investment risks over the countries in which they operate. Since at any given moment the level of the above risks varies from country to country, losses (reduction in operation profitability) incurred in one country are in this case compensated for by increasing operation efficiency in another country. As underdeveloped and developing countries are generally exposed to higher market and investment risks, the TNCs of developed countries, at least since the 1970s, have sought to transfer their main operations and investments to other developed countries (Held et al., 2004. Pp. 286–287).

It was expected that, later, TNCs would assume the function of a systems integrator of the world economy. Today, TNC affiliates based in developed countries and operating within the world economic periphery carry out mainly the same functions as 20 or 30 years ago. This primarily implies the function of an external stabilizer for the CSs of developed economies.

If the TNC system is viewed as a whole, i.e., TNCs based in developed countries and China and companies with foreign capital, primarily export-oriented, employing in 2009 about 27 million people<sup>92</sup>, the situation with TNC functions looks differently. The imbalance of international export and import streams was essentially caused by the export-oriented activities of TNC enterprises (including those with foreign capital based in China). In other words, the TNC system, if TNC affiliate enterprises based in developed countries are ignored, is gradually turning into a destabilization factor of the world economy in its present form.

Nowadays TNCs, as in the past, promote the integration of economies and the CSs of developed countries. But at the same time, in contrast to the past, the TNC system as a whole from a factor promoting the integration of the global economy and GCS is turning into a factor promoting disintegration processes in them, primarily in the form of regional fragmentation.

## 2.7. System conditions for efficient absorption of foreign capital by the corporate base of a weak economy

Positive effects created by foreign capital inflows into an economy are well known and obvious. But at the same time, foreign capital inflows in the form of direct and portfolio investments may have some negative effects.

*First*, when a weak economy CS is permeated by TNC affiliates, its exposure to regulatory actions (especially implemented by using monetary and fiscal policy tools) inevitably decreases. A weak economy, which is poorly amenable to regulatory actions as it is, may become totally uncontrollable.

*Second*, with a broad presence of TNC affiliates and national companies controlled by foreign capital in a weak economy, the CS tends to split into the CS of the external market and that of the domestic market. In highly open economies, this process evolves regardless of the TNC presence in them, as can be seen in Russia. But the greater the proportion of TNCs and companies controlled by foreign capital in the economy in question, the farther the above process has advanced.

*Third*, when an economy with a vast territorial base hosts TNCs, the latter are generally scattered across the national territory. Coupled with the overall economic weakness, this may lead to its fragmentation. For instance, the localization of enterprises with foreign capital predominantly in the maritime regions of China has led, if not to the splitting of the corporate base of the economy into the CS of the maritime regions and that of the hinterland regions of China, at least to something

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<sup>92</sup> China Statistical Abstract, 2010. P. 135.

very similar. At present China recognizes that this problem is becoming increasingly exacerbated. Russia already faces the same problem in its Far East, and will, sooner or later, in its other regions.

*Fourth*, with massive foreign capital inflows into a weak economy, local entrepreneurs are driven out of the CS sectors that are attractive for foreign capital. This effect may take place even regardless of the efficiency of local entrepreneurial communities, because weak economies maintain the undervalued exchange rates of local currencies, which automatically creates the effect of subsidizing investors from developed countries that invest in the economy in question. Where foreign capital drives local entrepreneurs out of the economy, the proportion of the shadow sector, because it is protected by its very nature from foreign capital inflows, in the economy grows, as well as the crime rate in the local entrepreneurship community.<sup>93</sup> The negative impact of these processes on economic performance is obvious.

*Fifth*, a weak economy before large foreign capital starts to flow into it usually lacks an established CS core containing major nonfinancial corporations and groups controlled by local capital. All the above processes hamper the formation of such a core. Its absence inevitably limits the current performance of the national CS and growth of its potential, i.e., opportunities to raise efficiency.

Finally, foreign capital inflows almost always reduce the ESRCs and this reduction is the greater, the more the foreign exchange policy and capital movements are liberalized. In this case, the liberalization of capital movement in the form of direct investment is less important than that in the form of portfolio investment and loans. The lower the CS efficiency and its ability to self-finance, including by resources of the local credit sector, and the lower the potential of the exchange rate stability of the local currency, the higher the risk of collapse of the ESRCs and growing dependence of the CS on foreign capital and external shocks.

An overload of short-term foreign debt may have an especially negative impact on the ESR of a CS whose format does not match that of the CS of developed countries. A good example is the collapse of the ESRCs of major Southeast and East Asia countries as a result of the 1997–1998 crisis caused by overloading the CSs with foreign debt and portfolio investments in a situation where a highly liberalized approach was adopted to determine exchange rates and regulate capital movements.

During the 2008–2010 crisis and in its immediate aftermath, the Russian CS was overloaded with external debt with the entire economic system being highly liberalized and open. In this situation, the CS was threatened with losing a substantial part of the ESR because the market capitalization of corporations and the exchange rate fell too low. Domestic and foreign investors lost confidence in the stability of the national economy.

Foreign capital inflows generally increase the current CS efficiency and its dynamic potential in the short term. But this does not mean that they will mechanically increase its efficiency in the medium and, moreover, in the long term.

To enhance the latter, foreign capital inflows and outflows and the foreign exchange policy should be managed to balance the positive and negative consequences of foreign capital inflows so that they exceed outflows.

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<sup>93</sup> Chernoy, 2004. Pp. 201–203.

## 2.8. Maintenance of the ESR of the state and the CS at a level ensuring manageability of economic processes and adaptation of the CS of a weak economy to WTO membership requirements

When an economy is relatively small, its ability to adequately meet development and often even simple reproduction challenges is dependent on the accessibility of foreign markets for local exporters.

The establishment of the GATT and then WTO placed small economies and even the majority of medium-size economies in a rather difficult position.

On one hand, accession to the WTO is a must, because a country cannot survive without imports, but the imports must be counterbalanced by exports. Once, this condition promoted fast expansion of GATT and then WTO membership.

On the other hand, for any economy to develop and even to retain the economic status quo, it is necessary to maintain the ESRst and ESRcs at a certain above-critical level ensuring the manageability of economic processes.

WTO membership, however, envisages the alienation of part of the ESR of their state and national CS from each WTO member country in favor of other WTO member countries as they undertake to:

- pursue a low tariff policy;
- give equal rights (usually after a transition period), even more importantly, to local and foreign investors, including local and foreign banks, financial corporations, and insurance companies.

A low tariff policy alone does not substantially reduce the ESRcs, since its effects may be compensated for if there is an adequate ESRst level, by maintaining a low exchange rate of the relevant national currency, which is permitted by WTO membership requirements. In addition, these requirements actually do not prohibit the use of nontariff barriers to imports.

At the same time, the policy of granting equal rights to local and foreign investors may over time substantially reduce the ESRst and ESRcs. This happens because different countries are losing their ESRcs unevenly, even when following the same WTO rules, under which economic sovereignty is exchanged effectively in equal amounts.

A crude model of this process looks as follows. Let us assume that the initial level of the ESRcs in country “x” is ten units and in country “y”, three units. Then, if these CSs by time point T have exchanged two units of ESRcs when functioning within the WTO, then at that time point the CS of country “x” will have eight units, while that of country “y”, one unit of economic subjectness.

It is evident that a series of such exchanges may result in the complete loss of the ESRst and ESRcs of weak economies, which will inevitably cause the disintegration of their system. Such transformations will drastically reduce the manageability of such CSs through government regulatory actions. The transformations will either throw the CSs back to the state of an amorphous and functionally inefficient array of poorly linked corporations or transfer the management and system integration of disintegrated national CSs to the external CSs with a greater ESR, which nowadays, are the CS of US, the EU, and China.

Since the  $ESR_{St}$  and  $ESR_{CS}$  of weak economies substantially decrease over time, sometimes to zero, as a result of WTO membership, their ESR needs to be maintained at a level securing the efficient management of the economic processes.

The above-critical level of the ESR of the national state  $ESR_{St}$  in this case is generally secured by:

- a) a moderate dependence of the national economy on external markets of raw materials, goods, and capital;
- b) the absence of the dependence of the national financial system and national economic policy on institutional requirements related to loans extended by international financial institutions (the IMF and World Bank);
- c) accession to the WTO with conditions and reservations enabling adequate, in terms of duration and scale, management of priority segments of the national CS by tariff, preferential, and other economic policy tools;
- d) large-scale participation of the state in the management of the national CS through budget tools and the public sector;
- e) hence, the highest possible autonomy of the national economic objective setting under these conditions from the above-mentioned neoliberal international economic policy;
- f) the highest possible ESR level of the  $ESR_{CS}$ .

It is quite evident that the  $ESR_{CS}$ , other things being equal, is greater, the greater:

- the size of the economy;
- the efficiency of the local business community;
- the share of the public sector in the CS assets;
- the share in the CS assets of system-level stable major and huge corporations and groups;
- the CS investment potential, i.e., opportunities for CS development based on self-financing;
- the technological and general competitiveness of the economy.

At the same time, it does not seem indisputable that the  $ESR_{CS}$  substantially depends on:

- the efficiency of the stock market, because the market capitalization of the CS assets directly depends on the efficiency of the stock market and its size;
- the efficiency of the CS credit sector, since it substantially affects the capacity for lending to finance adaptation to the market and ambitious investment projects;
- the proportion of services in the CS, since the proportion of exported and imported services in the aggregate exports and imports is always small; therefore, the higher the proportion of services in CS sales, the larger, other things being equal, the  $ESR_{CS}$ .

The above suggests that before and after accession to the WTO, the  $ESR_{CS}$  of a medium-size economy may be substantially increased by implementing an adaptation program providing for:

- a) a restructuring of the CS nonfinancial sector to increase the proportion of system-level stable and strongly competitive large corporations in the CS and

- reinforcement of the CS production core; the specific restructuring strategy is naturally a function of the state of the CS;
- b) if needed, a restructuring of the credit system to enhance its ability to service the real sector and, above all, its ability to provide investment lending to the real sector; for example, the establishment of banks lending to small and medium enterprises, public utilities, innovative projects would be targeted;
  - c) adoption of a package of measures to enhance the ability of local corporations to resist hostile takeovers, including by increasing the proportion of closed joint stock companies (CJSCs) in the CS and establishing large FIGs. Or even by following the German joint stock legislation and the German CS structure, which offer to CSs stronger resistance to hostile takeovers;
  - d) a package of measures to enhance the efficiency of the stock market, aimed at increasing market capitalization that will raise the CS investment potential and its ability to resist hostile takeovers;
  - e) promotion of investments in the real sector, including by establishing mandatory investment standards for depreciation purposes, as well as development of the investment complex;
  - f) implementation of actions to accelerate the development of the services sector; the latter, however, is possible only when the income of the bulk of the population exceeds a certain threshold value;
  - g) strengthening of the  $ESR_{CS}$  by regulating exchange rates, capital flows, etc.<sup>94</sup>
- The  $ESR_{CS}$  of Russian-type economies with a substantial territorial base may also be boosted by promoting the development of transregional corporations controlled by local capital.

It is evident that the greater the market capitalization of national corporations, the smaller the likelihood that these corporations in an open market will be transferred to foreign owners. It is also clear that if corporations borrow from external markets because the domestic lending market is limited, the  $ESR_{CS}$  of the national economy decreases, not to mention that such borrowing is always associated with substantial risks like the kind experienced by ASEAN countries in the 1990s and modern Russia.

Moreover, WTO membership requirements do not prohibit actions to develop small and medium businesses, as was done in South Korea after entering into an agreement with the IMF in 1997 to restructure its economy relying on higher liberalization, privatization, and openness (see Chapter 4 and Appendix 2).

Most of the above ways to raise the  $ESR_{CS}$  are able to create a notable positive effect only where the size of the economy is above critical. This condition is directly related to the policy of boosting the openness of national CSs in the last three decades, or actually even earlier, which was coupled with a policy of establishing economic blocs – like free trade zones – involving medium and small economies. The latter policy gave rise to the emergence of such organizations as ASEAN in Southeast Asia, MERCOSUR in Latin America, etc. The establishment of the EU and NAFTA also encouraged the growth of the  $ESR_{CS}$  of the integrated economies in Europe and North America. Actually, these blocs, as are

<sup>94</sup> For details, see Chapter 4 on mechanisms to increase the ESR of a weak economy CS.

generally all economic blocs and unions, are organizations for exchanging national  $ESR_{st}$  aimed at raising the aggregate ESR of bloc members and the relevant integrated CS to a level higher than they would have reached without blocs.

It is obvious that national economies differ greatly in terms of ESR size. The  $ESR_{st}$  of China, the US, India, and the EU as a whole can hardly be reduced to zero. At the same time, many countries have lost virtually the main portion of their  $ESR_{st}$ . In fact, the number of countries with a large  $ESR_{st}$  in comparison with their number at the beginning of the 20th century has not changed. However, the number of CSs with a large  $ESR_{CS}$  in comparison with the same period has noticeably increased.

The processes alienating the economic sovereignty of the  $ESR_{st}$ , and thus reducing the  $ESR_{CS}$ , generally appear to have an adverse impact, especially on the economic dynamics of the real sector, whose integration with the world economy, other things being equal, is always higher than that of the services sector. In most countries, the  $ESR_{st}$  is being reduced concurrently with part of  $ESR_{CS}$  spilling over to the services sector and shadow economy.

A country with a substantial  $ESR_{st}$  and an economy serviced by the CS with a high  $ESR_{CS}$  enjoys greater freedom in choosing priorities for economic objective setting and economic policy. From this viewpoint alone, the size of the ESR at the country and corporate level is critical for the efficiency of the CS and national economy serviced by it.

However, this alone does not determine the economic importance of the ESR. The problem of the ESR is, by and large, one of manageability of the economy. If the  $ESR_{st}$  and  $ESR_{CS}$  are sizeable, the economy is manageable. The smaller they are, the lower is the exposure of the economy and the relevant CS to the regulatory actions of any type. There is always a certain critical level of the  $ESR_{CS}$  and  $ESR_{st}$  for the given conditions and given state of the national economy below which the economy becomes unmanageable.

Under the scenario in question, the national economy and its CS in fact cease to be potential management targets.

For economies with an extensive territorial base, the loss of the ability to manage the economy from the national level sooner or later leads to disintegration of the economy and its CS, and their piecemeal integration into their adjacent economic formations with a high ESR level. In other words, collapse of the  $ESR_{st}$  and  $ESR_{CS}$  of some economies leads to ESR reallocation between some countries and their economic blocs rather than to the reduction of the ESR of the entire world economy.

At present, practically all WTO members, including not only developing and new market economies, but also developed ones, have to increase or at least retain their  $ESR_{st}$  and  $ESR_{CS}$ . This is caused by a pressing need for better harmonization of the processes taking place in the national (regional) and international markets.

Apparently, this need has long been recognized by the leadership of some countries, for instance, Japan. To retain the  $ESR_{st}$  and  $ESR_{CS}$ , Japan has pursued an economic policy for over two decades that combines an overvalued exchange rate of the yen with high land prices to discourage potential foreign investors from investing. In addition, minimum loan rates create an excess supply of capital and make foreign capital unnecessary, while at the same time promoting stability of the

financial position of corporate market agents. The orientation toward low rates of economic growth that has been typical of the Japanese economic model over the last two decades has diminished Japan's attractiveness to foreign investors, in fact closing Japan's CS to them.

The simplest way to increase the  $ESR_{CS}$  is to increase the proportion of corporations controlled by the state in the CS. Before the crisis, the policy of enhancing the proportion of the public sector in the CS and the policy of selective governmental support of certain groups of corporations was viewed by the economic mainstream as grossly contradicting WTO membership requirements, though China joined the WTO in 2001 with a giant public sector, which is still in place.

However, the current crisis has created force majeure events that have dramatically boosted the government's role as an economic process regulator and government presence even in the CS of such countries as the US, UK, Germany, and France. This legitimizes the possibility that in the long run, the share of the public sector in the economy and CS of any WTO member will increase. Many economists believe this will mean the end of the "old" WTO era.

## Conclusions from Chapter 2

1. The CS potential relies on its ability to utilize its intrinsic system quality and ESR for its operation and development in response to the changing national objective setting and economic policy, as well as to external shocks. The degree of actualization of this potential can be indicative of CS efficiency.

CSs with a high system quality and high  $ESR_{CS}$  operating in an economy with a high  $ESR_{st}$  and implementing an economic policy that is optimal in a given situation have the highest efficiency.

2. The CSF at time point "t" is directly affected by (a) market forces in the period preceding time point "t"; (b) the economic policy in the period preceding time point "t"; (c) economic policy elements directly influencing the CS system characteristics at time point "t". Furthermore, the SEI factor affects the dynamics of the CS system characteristics, since it affects the economic policy in a broad sense.

3. If the global economy is an economy of autonomous national economies, the international economic policy depends only slightly on the SEI factor as the impact of rivaling SEI groups on the international policy is counterbalanced or mutually "compensated". With a small number of economies with similar CSFs and a similar SEI content dominating in the global economy, the international economic policy may serve the interests of one or several SEI groups. This will inevitably bring about a decline in the efficiency of the world economy and in the efficiency of its segments controlled by SEI groups.

4. At any given moment the CS system characteristics have either already adapted to the set of its operation framework conditions or, through market interaction mechanisms and corporate strategy changes, are in a state of gradual adaptation to the CS operation framework conditions and, hence, in a state of gradual change. Exactly for this reason have all changes in economic legislation

significantly increasing the openness of specific economies been accompanied by considerable changes in the national CSs servicing these economies.

5. Although the CSF heavily depends on the dynamics of reproduction loop processes and, hence, on market factors, at any given moment it affects market interactions and reproduction processes. Since the system securing CSF formation and reproduction is one with reverse links, even relatively small changes in the CS operation framework conditions may result in noticeable CSF variations.

6. CS system characteristics failing to meet their basic operation framework conditions are gradually modified so that this inadequacy is eliminated. In practice, purely market factors can substantially slow the process of eliminating the above inadequacy. It can be considerably accelerated by adjusting the CS system characteristics to achieve its system optimization.

7. If the EOSS (hence, the economic policy) fails to match, even partially, the set of CS basic operation framework conditions, the CSF (since it is affected by the economic policy) and the CS basic operation framework conditions become imbalanced. This invariably decreases the CS efficiency and, therefore, that of the entire economy, and the latter fails to achieve an affordable efficiency level.

8. Growth ceilings for the system of LRCMs composed of mutually complementary specialized LRCMs are relatively small and in any case are lower than those for a system of LRCMs functionally similar to and competing with each other. This generates LRCMs that are functionally duplicating each other and mutually competitive.

The same is also true for specialized and multibusiness national CSs. A national CS has a specialization level above which opportunities for economic growth dwindle. The greater the aggregate economy potential (territorial base, resources, population size), the lower, other things being equal, the specialization level above which the capabilities for the national CS to boost production decrease.

9. In recent decades, it has been typical of national CSs and the GCS to sharply increase the degree of conventionality. The ideological concepts of the so-called mainstream international economic policy in the sense of the neoliberal version of neoclassical economics has had the strongest impact on this increase in conventionality. The conventionalization of the economic policy substantially decreases the ESR of national states and the CS of their economies and enhances the crisis-generating potential of the world economy.

10. Foreign capital inflows generally increase the current CS efficiency and its dynamic potential in the short term. But this does not mean that it invariably increases its efficiency in the medium and, moreover, long term. In order to do that, foreign capital inflows and outflows and the foreign exchange policy should be managed to balance the positive and negative consequences of foreign capital inflows so that they exceed outflows. A significant decline in the ESRCS due to its absorption of foreign capital almost always entails substantial adverse consequences.

11. WTO membership leads to asymmetric exchanges of the ESR between the national CSs and states so that the ratio of ESRs over time shifts toward countries and CSs with a relatively large startup amount of the ESR. This process is accompanied by a reduction in the sensitivity of CSs losing economic subjectness to regulatory actions emanating from the national economy management system.

UNCONTROLLED AND CONTROLLED  
TRANSFORMATIONS  
OF THE CORPORATE BASIS OF THE ECONOMY:  
PATTERNS, TOOLS, AND IMPACT  
ON DEVELOPMENT PROCESSES

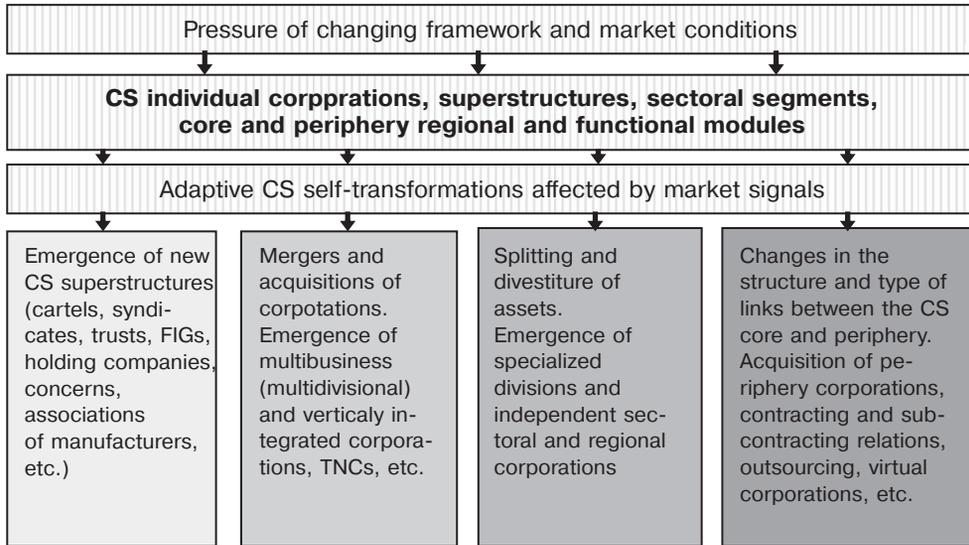
3.1. Uncontrolled changes in the corporate base of the economy:  
their nature and implications

*Results of changes in the CS during its uncontrolled evolution:  
international experience*

The market mechanism, as outlined above, under any of its options adapts the economic system to its operation framework conditions. The same applies to the corporate base of the economy. If the framework conditions change, so does the CSF (i.e., the set of parameters determining its structure and system quality) (Fig. 3.1).

In practice, uncontrolled processes of CS reformatting driven by changes in the operation framework conditions and by market signals can take place both in the regime of anticipatory changes in the CS structural quality (its sectoral structure, transformations of superstructure institutions, etc.) and the regime of anticipatory changes in the CS system quality (accelerated adaptation of the existing CS structure to the variable operation framework conditions and new market signals).

Multiple repetitions of the self-transformation cycle or CS cycles (if self-transformation cycles can autonomously unfold in parallel or with time shifting in various CS segments) can result in rather substantial changes in the CSF and performance. This is evidenced by the transformation of amorphous CSs, which existed in the advanced sector of the world market around 1870, into organized CSs permeated by horizontal and vertical links in the early 20th century.



**Fig. 3.1. Main types of adaptive CS self-transformations aimed at improving their performance in response to market signals**

Uncontrolled changes in the CS servicing the advanced sector of the world market economy brought about a series of quality changes between 1879 and 1905–1910. Not only had the average size of corporations grown, but conceptually new entities like cartels and syndicates had emerged (trusts in the US, which were originally established as companies holding other company assets in trust, and concerns in Germany). Companies with high vertical production integration also appeared. Drastic changes took place in the banking sector, resulting from bank capital concentration, and in the system of interaction between the banks and real sector corporations.

In the long run, these transformations reduced the input of the competition factor into economic interactions both within some developed, especially American and German, markets and within the global CS as a whole. This was evidenced by the saturation of the European economy with cartels and syndicates and the US economy with trusts and giant companies, turning some markets into oligopolistic or near monopolistic ones. Already before 1914, the US responded to that process by adopting antitrust legislation.

The “big self-transformation cycle” that spans the period roughly between 1870 and 1910 revealed that uncontrolled evolution governed by market forces alone was not enough to optimize the corporate base of the economy. It became apparent that CSs evolving uncontrolled caused the operation area of market forces to shrink increasingly. In addition, CSs develop partially controlled where the largest market agents coordinate their economic behavior on a nonmarket basis, irrespective of whether the state interferes in this process or not. It is this fact that gave rise to the term “organized capitalism” coined by Rudolf Hilferding.

World War I (1914–1918) had stopped the big self-transformation cycle in national CSs and the GCS that began about 1870. During the war, the CSs of most economically mature nations switched over to the regulated operation regime.

In 1921, after former militarized CSs had been deregulated, they entered a new phase of their weakly controlled evolution and self-transformations. The growing economic importance of financial markets (partly due to servicing post-war debts) and stronger interacting local financial markets (primarily, in the US, the UK, and continental Europe), which had been extremely weak before 1914, had a strong impact on GCS self-transformations.

Under the above operation framework conditions the self-transformations of the postwar GCS led to its relatively fast financialization; i.e., the importance of the financial sector skyrocketed. The uncontrolled financialization process of national CSs and the GCS was cut short by the 1929 crash.

The third attempt to launch the mechanism of GCS self-transformations was undertaken within the neoliberal economic project after 1980, when the financialization of the GCS segment operating in the deregulated regime was growing. Ultimately, it again ended with a world financial crisis, which immediately turned into a global crisis of the highly liberalized GCS segment (countries with efficiently regulated CSs like China, India, Iran, and Vietnam were least affected by that crisis).

Thus, the uncontrolled evolution of the CS affected by market economy intrasystem factors always decreases the input of competitive interactions into the economic process dynamics. Experience shows that this decrease in nonfinancial markets is caused mainly by:

- 1) oligopolization and monopolization;
- 2) substantial dependence of nonfinancial markets on financial market conditions with a tendency to grow.

Nonregulated economies, provided that conditions fostering the development of financial markets are in place, move fast toward a situation where variations in nonfinancial market trends are determined almost entirely by variations in financial market trends. Then, if the economy operates in an unregulated regime, a reduction in the system quality of the CS financial segment and a decline in financial markets cause a decline in the system quality and performance of the CS nonfinancial sector and the entire CS. This is precisely what the experience of global crises suggests.

***Response of a CS to a stepwise change in its operation framework conditions:  
its nature and effects***

The system of operation framework conditions of a CS may abruptly change, for example, when the economic policy changes abruptly, or the output suddenly drops, or the world market conditions change abruptly. This results, first, in a decline in the CS system quality and performance, because the CS structural quality and its operation framework conditions become less harmonized. Only when the CS starts to adapt to the new operation framework conditions does the CS structure and system quality improve.

Until such adaptation is over, the CS performance will stay below a potentially achievable level. Any abrupt change in the CS operation framework conditions, consequently, lowers its performance for some time.

This explains why a change in the operation conditions in an economy, irrespective of their nature, generally reduces (immediately or some time later) its efficiency within a short time.

For this reason a stepwise change in the operation framework conditions of most EU countries due to the almost concurrent replacement of national currencies with the euro, when most European economies were obviously unprepared for this move, by no means had a positive effect on the EU economy. Low growth rates demonstrated by EU economies during the last decade and the failure of most of them to balance budget income and expenditures, even with debt financing taken into account, are directly linked to the above developments.

Likewise, the restructuring of a significant part of the global economy performed under tight schedules in accordance with WTO requirements fell short of expectations. For example, the adaptation of the world trade and economy to China's export expansion has become a problem, which is obviously worsening and far from resolution.

### *Impact of market and investment risks on the system-critical parameters of a CS*

The sensitivity of a CS and its subsystems to market and investment risks, other things being equal, is the higher:

- a) the greater the capital intensity of the CS production basis;
- b) the higher the market competitiveness;
- c) the greater the gap between the need for capital investments in upholding competitiveness (including investments in R&D) and the actual amount of these capital investments;
- d) the less the system of credit support to producers is developed;
- e) the less efficient the stock market;
- f) the less efficient is business community servicing the CS in question.<sup>95</sup>

The sensitivity of some corporations to market and investment risks is reduced:

- a) where the vertical integration level of a corporation increases (companies using semifinished products in large-scale production tend to be transformed into vertically integrated companies of full cycle production and be permeated by marketing units);

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<sup>95</sup> Russian corporations and Russia's CS appear to be highly exposed to market and investment risks related to the current global crisis. Factors involved include factor "c", exhibiting a wide and chronic gap between the need for investments into the CS and the actual amounts; factor "d", which implies a lack of credit support to producers; factor "e", which suggests that the state of the Russian stock market even in the precrisis period was inadequate; and factor "f", meaning that the Russian business community, apart from other drawbacks, shows a willingness for inflation models of economic behavior and a low willingness for investments in production.

- b) where the scale of production increases and the production is diversified to a certain degree;
- c) where the territorial base accommodating the corporation's production and sales centers and its other units expands and the corporation becomes a TNC (with part of the production facilities and sales networks deployed beyond a metropolis); this has contributed directly to the mass replication of TNCs (at present, the majority of them are small corporations) in recent decades.
- d) where corporation activities involve subcontractors and subsidiaries, and the corporation forms a group on their basis.<sup>96</sup>

More than 100 years ago, secondary corporate entities joined CSs, like various kinds of groups, including concerns and precursors of modern FIGs, as well as cartels and syndicates. Market participants regarded their arrival as a response to excessive economically significant risks of various kinds, including those relating to unfriendly takeovers, on one hand, and a way to reduce these risks for them to an acceptable level, on the other.

The above conditions directly affect the formation of the CS core of any large economy from corporate giants with a significant share of multibusiness companies and conglomerates in them, as well as the formation of oligopolistic types of sectoral segments in the CS. The above changes in the corporate base of the economy were oriented toward decreasing CS sensitivity to market and investment risks.

When the size of the market exceeds some critical value (corresponding roughly to a medium-size market) and the market level of openness is comparable with that of a medium-size national market in the 1960–1970s, the system of market corporate agents can reach a substantial degree of stability provided that 100–300 corporations account for 50–70% of production and 5–20 concern-type entities or FIGs account for 25–50% of capital. This concentration level of production may be defined as normal for an advanced market economy.

If, later, the market expands through merging with a similar market or markets, the number of market agents will increase positively in the first expansion phase. In this case, market competitiveness also increases, resulting in higher market and investment risks and corporate mergers intensify as a response to the risks.

Then, things gradually return to their previous state. Irrespective of the size of the new market, the system of corporations operating in this market becomes essentially stable (unless mergers are restricted by administrative means), where 100–300 corporations concentrate 50–70% of production and capital and 5–20 concern-type entities or FIGs operating in the market concentrate 25–50% of the total capital.

At the same time, as the concentration of production and assets grows, the new consolidated market generates less market and investment risks, until the concentration of production and financial assets achieves a standard level for this market.

Primarily, the market response to the market and investment risk factor gave birth to oligopolistic markets; i.e., purely objective factors lie behind the oligopolization of some markets. Joseph Schumpeter and John Galbraith were the first to demonstrate that market oligopolization was not as bad for market economy performance as had been believed.<sup>97</sup>

<sup>96</sup> Dynkin and Sokolov, 2002.

<sup>97</sup> Galbraith, 1959; Schumpeter, 1942.

Over the last 30 years, economic boundaries have been eliminated, or in any case, as markets have opened, they became transparent. At the same time, production was also concentrated at the level of national, macroregional, and global CSs. This concurrency can be understood from the above.

### *Changes in the CS linked to business cycle phases*

Low market and investment risks are common in the recovery phase. For this reason, the recovery phase in comparison with the recession phase is more favorable, on the one hand, for boosting business activities in CS segments that are more sensitive to market and investment risks, including the CS periphery, and for capital-intensive CS segments, on the other.

The recovery phase is also more advantageous for knowledge-intensive CS segments and R&D financing in general, since it is easier to raise funds for R&D in the recovery phase than in the recession phase. Furthermore, risks associated with investments in the knowledge-intensive sector of the CS are smaller in the recovery phase, other things being equal.

Generally, the CS adapts to economic advancements together with the CS financial sector and local regional corporate modules deployed in the economic periphery growing in economic importance and, at a certain above-critical CS development level, with some domestic corporations transforming into TNCs.

The recession phase runs in parallel with high market and investment risks. It is this factor that determines changes in the corporate base of a market economy (CSF) in the recession phase. In terms of content, they diminish CS sensitivity to market and investment risks.

According to the common view, the growth in economic environment competitiveness in the recession phase favors upgrading of the CS technology base. In fact, growth in economic environment competitiveness in this case has a greater effect on the CSF toward lowering its sensitivity to market and investment risks rather than the technology level of the economy. Generally, this occurs due to corporate mergers and an increase in the ability of superstructure corporate entities to lower the sensitivity of the system of corporations proper to market and investment risks. The bigger investments need for technological restructuring of the economy, the less the recession phase promotes such a restructuring.

### *Factors necessitating management of the characteristics of the corporate base of the economy*

Generally, the need to manage the characteristics of the corporate base of the economy arises because a corporate base of the economy that evolves uncontrolled and driven by market signals, pushes, as illustrated above, the CS performance toward a persisting crisis-led CS operation. However, this is not the only reason to control the CS characteristics.

*First*, this need arises due to the limited ability of the CS to adapt, within a short time, to changes in its operation framework conditions. Meanwhile, essential changes in the CS operation framework conditions adversely affecting its performance can come one after another. As a result, an unguided CS will exhibit a chronic lack of efficiency (for example, a lack of competitive power, or the ability to finance expanded reproduction and the technological upgrading of capital assets).

*Second*, there are situations (for instance, during a crisis or sharp changes in international markets) under which a CS is unable to adapt to changed market operation conditions within an acceptable time frame or it is unable to do it at all. This happened in almost all warring countries after World War I and World War II broke out. The same happened in most countries after the onset of the 1929 crash and the current global crisis.

*Third*, generally, or at least very often, a CS obviously needs to compensate for negative operation framework conditions, like development level inefficiency, capital deficit, adverse international market conditions, inefficient business community, etc., with relevant regulatory actions, for instance, by encouraging mergers or statizing some corporations, which had been done in many modern developed economies in their modernization stage after World War II.

*Fourth*, essential changes in the system of economic objective-setting priorities do not always have a positive effect on the CSF. Therefore, such changes often necessitate compensatory adjustments to the CS parameters to maintain its performance at an acceptable level during the transition from one EOSS to another, for example, in the period when the economy becomes more open.

Therefore, there are many reasons to control the CSF and performance during its operation.

### 3.2. Generalized representation of CS transformation management

As illustrated above, in the course of its evolution and operation, a CS continually, sometimes rather substantially, changes its system-critical characteristics (CSF).

From a formal point of view, this process can be represented as a CS passing through a series of phases exhibiting typologically (hence, institutionally) important features. Consequently, it is possible to regard any significant change in the CS as a transition from one format phase to another and the aggregate of such changes as a CS phase path in the space of its system-critical parameters.

While moving along the phase path, a CS can substantially change and usually does. This also relates to CSs servicing national economies and to the GCS.

An economic policy, and, hence, economic objective-setting priorities, being potent CS operation governing framework conditions, gravely affect the CS system parameters and, hence, its phase path characteristics.

If the system of objective-setting priorities ensure the best economic advancements, then at any given moment the economic policy seeks to match the CSF and the set of existing operation framework conditions as much as possible (a policy of maximizing the CS system quality to meet economic advancement challenges) and to fully utilize

the available state and CS economic subjectiveness resources. Accordingly, the objective-setting priorities and the economic policy must be construed so as to achieve, at any specific moment, the highest CS performance under the given conditions.

The CS phase path formed under an economic policy prioritizing economic advancement will be referred below to as a *normal CS evolution phase path*.<sup>98</sup>

In practice, an economic policy does not always prioritize economic development. This policy can set entirely different priorities. So, it is typical that within an EOSS conforming to the neoliberal economic paradigm (economic mainstream concepts<sup>99</sup>), high economic growth rates are by no means considered to be more critical than the economy's high level liberalization, openness, and privatization.

Often, economic policy priorities depend on the political environment or the special interests of currently dominant political, economic, and social groups. In cases where the economic policy gives top priority to development, the real CS phase path may deviate from the normal one.

Normally, within a long time span (several decades), no matter what the causes of CS transformations, there are always periods when the CS phase path may follow or significantly deviate from the normal path. When economic advancement is given high priority, the main objective of management is to keep the system-critical CS parameters to, or at least close to, the normal development path.

It should be noted that CS movement along the phase path depends heavily on both the CS operation framework conditions and the international institutional environment. Therefore, the CS phase path cannot be arbitrary.

### 3.3. Targets and tools of regulatory actions transforming the corporate base of the economy

#### *Targets and scope of regulatory actions transforming CS parameters*

Any market economy is sensitive not only to spontaneous market signals, but also to various direct and indirect nonmarket governing signals. Therefore, as outlined in Chapter 2, any free market economy has an EOMS with necessary sub-systems affecting specific segments of the economy, including its CS, and specific types and tools of regulatory actions.

<sup>98</sup> Since the parameters of a normal CS evolution phase path are derived from its development framework conditions, there is neither a universal CS phase path nor an ideal CS format applicable to all situations.

<sup>99</sup> For example, the economic policy may focus on public debt servicing. Thus, the prescriptions for the economic policy proposed by the authors of the Washington Consensus program named public debt servicing, privatization, and granting equal rights to domestic and foreign investors and businessmen as priorities for less developed countries. The globalization program in its known formulations does not give high priority to development for underdeveloped economies. However, it is believed that this program promotes such development, though the real economic practice casts doubt on this assumption.

The functioning of a market economy involves, in one way or another, regulation of:

- a) the CSF as a set of CS system-critical characteristics and its main subsystems affecting its structural quality;
- b) the CS functional characteristics (competitiveness, export capacity, dependence on imports, goods-to-services ratio, investment opportunities, sensitivity to external market risks, financial stability, degree of integration into the GCS, ESR);
- c) the parameters of CS production facilities (technological level, main structural characteristics);
- d) moreover, parameters showing how much the CS is liberalized or regulated and to what extent it or its individual segments are open or closed, since these parameters have a significant impact on intercorporate interactions and, ultimately, on the CS system characteristics.<sup>100</sup>

The above parameters taken together will be further referred to as a ***CS parameter profile***.

Each of the regulatory actions directed at the CS parameter profile features a certain regulatory potential, which depends on the regulatory action, its intensity, and the target of regulation (a specific CS or its subsystems). All actions, synchronous and alternating within a certain time frame, make up a system of regulatory actions directed at the CS (SRCS), whereby the CS transformation is controlled within the given timeframe.

### ***Types of elementary regulatory actions whereby controllable changes to the CS characteristics are made***

Generally, controllable CS transformations can be planned and implemented as a “one-off action. Controllable CS transformations usually look like a multitude of elementary transformation actions, each making only slight changes in a part, usually minor, of the CS system characteristics. Taken together, such transformation actions eventually create a considerable cumulative effect and, hence, have a significant impact on the CSF and parameter profile.

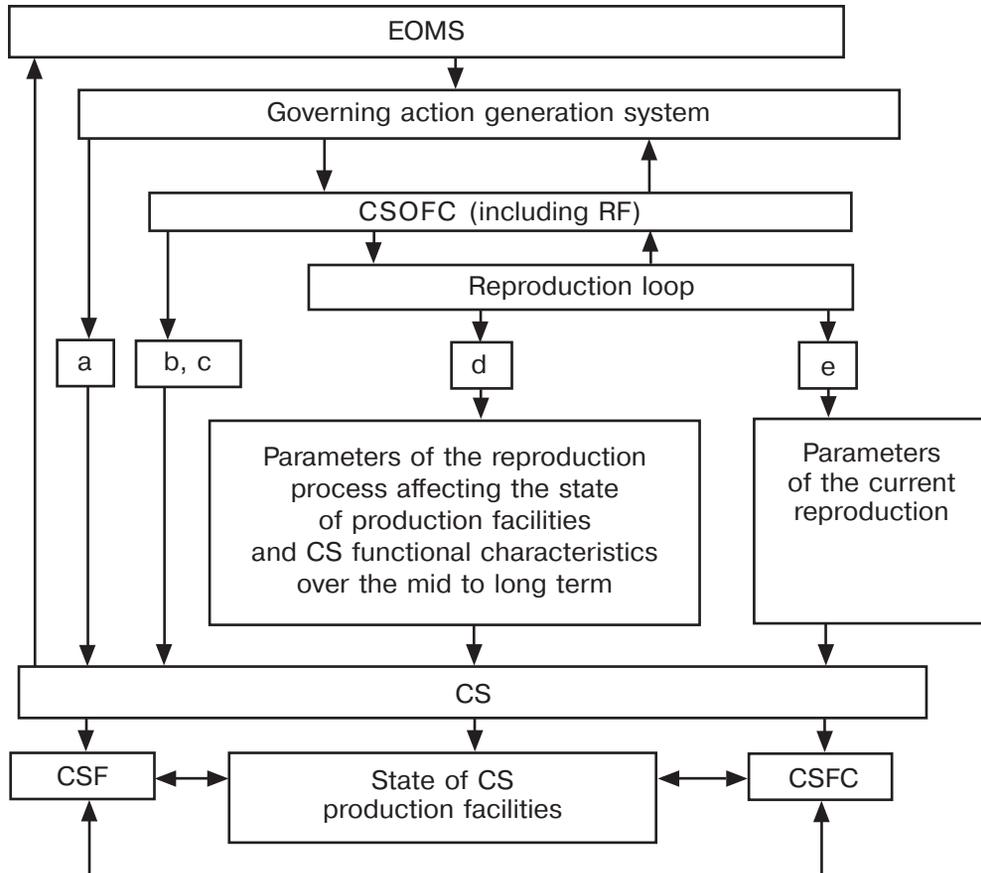
In other words, substantial changes in the CS result from certain (sequential and parallel) regulatory actions, each governing the CS parameters. Therefore, there is a relevant system of regulatory actions for any controllable CS transformation process to implement the latter.<sup>101</sup> In the same way, any substantial change

<sup>100</sup> At any given moment, the liberalization parameters of the economy in fact are determined by a set of indicators reflecting the liberalization level of various areas of economic activity and various market transaction categories, i.e., by a certain “liberalization profile” or “liberalization quality”. A change in the liberalization level prompts a change in the liberalization profile, and vice versa. Any restructuring of the liberalization profile, since it governs the content of the market transaction system, also automatically affects the CS parameters, or its parameter profile.

<sup>101</sup> A package of regulatory actions has system properties since there are certain limitations on combining regulatory actions and, if they differ in quality, on their implementation sequence. So, if “a”, “b”, “c”, and “d” actions can be successively implemented, that does not mean that the same is true for any “a”, “x”, and “y” actions.

in the CS parameters matches a set of elementary regulatory (governing) actions that have triggered this change (Fig. 3.2).

As stated above, there are various regulatory actions implementing the controllable CS transformation process. An outline of main five types, or categories (“a”, “b”, “c”, “d”, and “e”) of regulatory actions directed at the CS and all together affecting the entire, or almost the entire, regulatory potential of the actions is given below.



**Legend:**

CSF – CS format

CSFC – CS functional characteristics

CSOFC – CS operation framework conditions (including basic and regulated framework conditions)

RF – economic regulatory framework (economic laws and regulations)

a, b, c, d, e – regulatory action types (see below)

**Fig. 3.2. Generalized representation of links affecting regulatory actions whereby the controllable transformation of CS parameters is implemented**

### 1. *Regulatory actions of category “a”.*

Regulatory actions of category “a” comprise those directly directed at the CS, including:

- a) any changes in the parameter profile of the CS sector comprising state-controlled companies as a result of relevant actions taken by the state as a strategic owner;
- b) any changes in the CS public sector forced by institutions like the IMF or the World Bank;
- c) any changes in the CS nonpublic sector resulting from its administrative regulation in accordance with the principle of “hands-free administration”.

With high investment risks and market scarcity, most changes to the CS (like most regulatory actions directed at the CS) after exceeding a certain level of risks and market scarcity are generally effected by administrative tools.

The CSs of countries with market economies involved in World War I and II were managed in exactly this way at the height of the 1929 crash. At the early stages of economic modernization, the CSs of developing countries that were implementing an economic strategy that gave priority to development were managed in the same manner (for example, the CSs of South Korea, Taiwan, and India – see Appendices). In practice, the regulatory framework at least does not forbid administrative actions, if any, directed at the economic processes and economic system.

### 2. *Regulatory actions of category “b”.*

Regulatory actions of category “b” mean actions directly directed at elements of economic laws and regulations whose changes, irrespective of other factors, cause changes in the CS.<sup>102</sup>

Category “b” actions also include:

- 1) antimonopoly legislation;
- 2) banking legislation in the part defining the scope and operational conditions of banking organizations of various types;
- 3) regulations defining various aspects of special economic zone (as a special type of LRCMs) activities;
- 4) some parts of environmental legislation, since it can materially affect the horizontal expansion of some types of corporations.

Regulatory actions of category “b” also include any changes to the legal and regulatory framework resulting in changes in the CS liberalization profile<sup>103</sup>, i.e., changes in the liberalization level of the economic behavior of some groups of corporations and relevant CS segments.

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<sup>102</sup> Changes in the economic liberalization level do not fall under regulatory actions of category “b”, since a change in the liberalization level by itself does not automatically change the CS parameters (such as its liberalization profile), at least in the short term.

<sup>103</sup> Changes in the CS liberalization profile signify changes in the liberalization level of the operational environment of certain functional or institutional corporation groups and, consequently, automatically influence the CS parameter profile. If, for example, at a certain development stage of a modernizing economy, the sector of small and medium-sized enterprises enjoyed certain preferences that were later abolished, meaning that the CS liberalization profile had changed, it is obvious that such a change can be rather swift.

Specifically, regulatory actions of type “b” include the ban on cartels instituted by mature economies after World War II. However, at least the European economy before World War II had been dominated by cartels, while in the same period a group of transnational cartels, like OPEC today, played a considerable economic role in global markets. In the situation under review, the ban on cartels radically changed the GCS structure.

The policy of privatizing government-owned companies (generally adopted under external pressure) in many developing economies after 1980 is another example of substantial changes in the CS triggered by regulatory actions of category “b”. Much of the blame for the low competitiveness of a significant part of Russia’s manufacturing industry after 1992 should be placed on the demonopolization policy in its Russian variant (See Ch. 6), i.e., a typical regulatory action of category “b”.

It is evident that changes in the system of economic laws and the respective regulations promulgated thereunder are one of the most powerful tools of regulatory actions directly directed at the CS.

### *3. Regulatory actions of category “c”.*

This category covers all types of regulatory actions directed at CS parameters and promoting development of certain corporate structures, including superstructures of the group type and FIGs, or promoting a restructuring of a CS system through merging or, vice versa, spinning off the existing corporate entities, or by forming, on their basis, secondary corporate entities of various business group types and conglomerates.

Normally, the policy of encouraging and promoting an increase in the share of corporate structures of a certain type in the economy suggests preliminary changes to the regulatory framework servicing operation of the economy. However, this policy can also employ the state administrative resource.

The latter is possible where the regulatory framework servicing operation of the economy does not strictly ban the use of the administrative resource. Such situations are typical not only of countries waging large-scale wars (which requires the mobilization of all available resources), but also of many modernizing economies at the early stages of their modernization (for example, in Taiwan and South Korea, see Appendices 2 and 3), as well as for acute economic crises. For example, Franklin D. Roosevelt’s administration when embarking on the New Deal had administrative capacities with a scope of application to anticrisis economy regulation defined loosely and vaguely in the regulatory framework.

If the regulatory actions of category “c” are not backed by appropriate changes to the regulatory framework, it would be difficult to separate them formally from the regulatory actions of categories “a” and “b”.

### *4. Regulatory actions of category “d” that perform a programming function.*

Ultimately, regulatory actions of category “d” target the adjustable CS parameter profile elements (programming) that govern its structure and system quality in the mid- to long term, including:

- 1) the condition of the CS production base (structure, facilities, infrastructure, technological capabilities, allocation of production facilities across the country);

- 2) CS structural characteristics (like the share of major corporations in it), at least partially;
- 3) such CS functional characteristics as competitiveness, share of the export-oriented sector in CS industrial output, its independence from or dependence on world markets, etc.

The main *intermediate* targets for regulatory actions of category “d” are:

- 1) the GDP reallocation system;
- 2) the system of regulated financing of the investment sector and its main components.<sup>104</sup> In this case, regulatory actions usually directly target:
  - (2.1) budget investments;
  - (2.2) investments of state-controlled corporations;
  - (2.3) investment loans extended by the state-controlled sector of the banking system;
  - (2.4) the regulated component of investment programs of the nonpublic CS sector, including the mechanisms of public-private partnership;
  - (2.5) the system of benefits and incentives as far as it influences the investment behavior of the relevant corporate entities and their investments to develop the production base and improve its technological level.

Normally, a regulatory framework is required to implement regulatory actions of category “d”. Therefore, before launching mid- to long-term programs to restructure the economy’s investment system (and hence the CS), the regulatory framework is modified to adopt development programs and, if necessary, other changes are made to the legal framework supporting operation of the economy.

##### 5. Regulatory actions of category “e”.

Regulatory actions of category “e” directly target the regulated CS operation framework conditions affecting the current phase of the production process, i.e., the system of legal and regulatory support for CS operation, excluding regulations that provide for mechanisms of the regulatory actions of categories “b” and “c”.

Regulatory actions of category “e” comprise regulatory actions directed at:

- 1) monetary policy;
- 2) foreign exchange policy;
- 3) credit policy;
- 4) tax policy, since it targets corporations;
- 5) policy on legislative control over depreciation charges, widely used in the US;
- 6) policy on budget expenditures;
- 7) rice control;
- 8) tariff policy;
- 9) policy on regulation of capital exports and imports.

Regulatory actions of category “e” are distinguished by a high degree of potential reversibility. In other words, the effect of a category “e” action in most cases may be substantially compensated for by a comparable, but reverse regula-

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<sup>104</sup> This concerns both investments to expand the CS production base or change its structure and investments to heighten technological competitiveness.

tory action if the time gap between these two actions is not wide; for example, the monetary, foreign exchange, and tax policies are likely to take a reverse direction.

Regulatory actions of category “e” demonstrate high potential reversibility, while the effect of each such an action, if it is performed within a short time interval, is usually minor.<sup>105</sup> Their impact on the CS parameter profile may be noticeable where changes resulting from the relevant actions accumulate (cumulative effect). If the effect of a specific regulatory action of category “e” fails accumulate, as often happens, then its impact on the CS parameter profile will be short-lived and insignificant.

However, usually, the accumulation of regulatory actions of category “e” is sizeable enough to produce in the long run a notable effect on the CS parameter profile. For example, the departure of currencies from gold and transition to the system where exchange rates are determined by the market (after the Jamaica Conference) eventually had a very strong impact on the CS of developed and most developing countries and the GCS alike.<sup>106</sup>

Such regulatory actions of category “e” as changes in the openness of the national economy to imports, capital movement liberalization policy, continuous growth in foreign debt, and even, as we are witnessing now, actions regulating the requirements on mortgage loans can materially affect the CS parameter profile and other characteristics. The liberalization of requirements for mortgage loans undertaken at the end of the last century in the US is known to have triggered a financial crisis there, which transformed into a global one.

WTO membership in the short term does not generally have a significant impact on the CS parameter profile of WTO member nations. Yet in mid- to long term, this impact becomes significant in most cases,.

At any given moment, the regulatory potential of the system of regulatory actions directed at the CS (SRCS) is determined by the regulatory potential of the above categories of regulatory actions (“a”, “b”, “c”, “d”, “e”) directed at the CS parameter profile. The SRCS regulatory profile is primarily determined by the

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<sup>105</sup> Nevertheless, sufficiently potent regulatory actions of category “e” are capable of materially affecting the entire economy and the CS parameter profile. For example, an overcontraction of the money supply can result in a liquidity crisis and, hence, have extremely negative consequences, pushing most corporate entities to a state of bankruptcy like that which happened in Russia in the mid-1990s. Conversely, an overexpansion of the money supply can cause an inflation-driven crisis like it did, again in Russia, in the early 1990s. With uncompetitive corporate entities, the opening of markets can cause a catastrophic decline in production in the relevant CS sectoral segments like what happened in Russia in the 1990s, when the market of light-industry products was fully opened. With considerable budget expenses (as a percentage of GDP), their catastrophic decline has almost always had an extremely adverse impact on the CS dynamics. This is even truer for a catastrophic decline in public investment provided that its starting level was sufficiently large.

<sup>106</sup> The currencies of most developing countries have exchange rates that are highly undervalued as opposed to their real purchasing power as a direct consequence of exchange rates being determined by the market. An undervalued exchange rate invariably, other things being equal, raises the competitiveness of industrial goods manufactured in developing countries. Over the last decade, this was probably the main reason why industries were transferred from developed nations to developing ones with domestic corporations of the developed nations being concurrently transformed into TNCs.

contributions of regulatory actions of categories “a”, “b”, “c”, “d”, and “e” to the aggregate regulatory potential of the SRCS.

Any changes to the system of regulatory actions directed at the controllable CS transformation process are implemented through:

- 1) changes to the regulatory activities of the relevant regulatory subsystems initiating the actions (“a”, “b”, “c”, “d”, “e”);
- 2) changes in their relative contribution to the regulatory potential of the SRCS.

### ***Functions of regulatory actions that ensure controllable transformation of the corporate base of different types of economies***

#### *The operation of underdeveloped economies giving low priority to development*

The CS, if any, of underdeveloped economies of the type under review reveals a high degree of amorphism. In practice, an underdeveloped economy actually lacks a CS despite the presence of a certain number of corporate-type entities (by and large controlled by public or foreign capital), due to a feeble system of interactions between these entities.

In the case under review, regulatory actions are usually directed at creating framework conditions aimed at attracting foreign capital and expanding the export component of CS products as much as possible where public investment in the infrastructural base to develop the exports sector is limited, rather than to regulate the existing amorphous set of corporations.

#### *Modernizing economies*

Modernizing economies are underdeveloped economies giving high priority to economic modernization.

The CS parameter profile always materially affects economic performance. Modernizing economies embarking on a policy that gives top priority to economic development actively adapt the CS parameter profile to the set of operation framework conditions, including the specific features of economic objective setting.

Active adaptation implies dynamic regulatory actions directed at the CS (SRCS) and its main subsystem components: SRCS/a, SRCS/b, SRCS/c, SRCS/d, and SRCS/e.

At the initial stage of modernization, a SRCS related to a modernizing economy features:

- 1) high regulatory potential and activity (a sizeable SRCS regulatory resource);
- 2) a relatively small input of the SRCS/e subsystem into the SRCS regulatory resource (i.e., slight impact of monetary, tariff, tax, and other policy adjustments on the CS parameters) as opposed to the high regulatory activity of the other four SRCS subsystems.

As economic modernization advances, the input of subsystems SRCS/a, SRCS/b, SRCS/c, and SRCS/d into the SRCS regulatory potential decreases,

while that of the SRCS/e increases. Against this background, the overall SRCS regulatory potential gradually decreases.

The actions of subsystem SRCS/e can radically change the output and efficiency ratios of the CS sectors controlled by various groups of institutional entities (minor and major shareholders, legal persons, foreign capital, etc.) and its organizational structure. As mentioned earlier, purely market forces were behind the emergence of business groups of various types and, in the long run, FIGs, or, at a certain stage of advanced development of the economy, cartels.

### *Developed economies*

In a developed economy like the US, if there is no crisis, the regulatory activity of subsystems SRCS/a, SRCS/b, SRCS/c, SRCS/d is usually low. In this case, the activity of regulatory actions, which are usually low, of subsystem SRCS/d basically determines the ability of the SRCS to affect the parameter profile of an advanced CS.

Accordingly, the SRCS's ability in general to govern the CS parameter profile of an advanced economy under usual conditions – when there is no crisis – is also low.

Generally, substantial changes in the operation framework conditions of any economy necessitate accelerated adaptation of the CSF to new conditions and thus enhance the SRCS regulatory activity.

Factors capable of substantially boosting the SRCS in an advanced economy may include:

- 1) a crisis;
- 2) stepwise growth to an above-critical level of risks of any, including political, type, if it has a bearing on the economic policy;
- 3) a stepwise increase in scarcity in some markets;
- 4) a decline, within a short time, to a certain level below critical, in the competitiveness of some important category of corporate entities (hence, in the competitiveness of the entire economy);
- 5) changes in foreign exchange and tariff policy, and decisions to liberalize or control capital flows;
- 6) changes in the EOSS irrespective of their causes; normally, such changes result in changes in the regulations governing the operation of corporate entities and eventually in more or less major changes in the CS.

When the economic policy changes to boost competitiveness, the SRCS regulatory activity can increase stepwise for some time irrespective of the economy's level of development (and even irrespective of its liberalization level in the period before the competitiveness problem arose).

Changes in the level of SRCS regulatory activity in this case are generally backed by changes to the economic policy. However, they can also stem from agreements between main market agents. For example, such agreements had always been in place before cartels were established. In the 1920s, large-scale mergers in the British economy had also been preceded by agreements between the

relevant market agents.<sup>107</sup> In recent decades, the same appears to have been true for numerous mergers in mature economies.

Any crisis in a more or less advanced economy (and, moreover, in an advanced economy) causes a discrepancy between the operation framework conditions and CS parameter profile (and, above all, CS system characteristics). This discrepancy can be eliminated by:

- a) affecting the framework conditions;
- b) transforming the CS parameter profile.

In practice, in the case of a major crisis (like that in 1929–1935 or the current crisis) both methods are used. The framework conditions are changed. For example, using monetary and budgetary policy tools to create anticrisis demand, closing the market like what happened in the US and most crisis-ridden countries in 1929–1935, imposing limits on capital outflows, changing foreign exchange and tariff policies, etc. Regulatory and administrative measures are taken to directly affect the CS (restrictions for financial operation entities in the markets, measures of state support to corporations, nationalization of crisis-ridden assets, pushing for mergers, etc.).

Generally, the deeper and worse the crisis, the higher the SRCS regulatory activity of an advanced economy.

### 3.4. The mechanism of downgrading the system quality of a CS in a crisis and restoring its performance when the economy emerges from the crisis

#### *How a crisis originates, evolves, and affects the CSF and functional characteristics*

Substantial disharmony between the system characteristics of the entire CS or a major CS segment and CS operation framework conditions gives rise to a grave crisis causing a substantial decline in output.

In modern market economies, the financial segment of the CS whose imbalances trigger crisis processes in other CS segments and the entire economy is the first to be hit by a crisis due to such disharmony. Traditional crises of overproduction are known to originate directly from a mismatch between industrial output and demand. Tugan-Baranovsky pointed out that this mismatch, at least since the mid-19th century, has reduced the ability of banks to lend in the economy, which eventually caused a decline in market demand.<sup>108</sup>

The Great Depression, which began in 1929, stemmed directly from:

- 1) a big gap between the market capitalization of corporations whose shares were traded on the US stock market and their real value;

<sup>107</sup> During World War I and II, corporate mergers in the economies of warring countries were initiated, by and large, under administrative pressure. However, after the wars, this factor lost its importance and mergers were mainly based on agreements between the shareholders and key managers of the involved corporations.

<sup>108</sup> Tugan-Baranovsky, 1997.

2) the inability to stabilize stock prices at a level acceptable to stockholders under a tight money supply policy pursued in 1929 by the Federal Reserve System.

However, the experience of 1930, with the crisis in full swing, when a huge amount of money was channeled into the economy, suggests that the crisis most probably would have also hit even if the Fed had pursued a policy of excess money supply to the economy.

The mismatch between the market capitalization of corporations and their real value also caused the 1999–2002 financial crisis, since the latter had decreased the market value of US and Europe stock capital by about 2.5 times (in the phase of the lowest crisis-led decline in stock exchange quotes). However, this time the financial crisis did not grow into in a large-scale world depression.

However, it was not avoided in 2008. The 2008 crisis in the US stemmed directly from:

- 1) a large amount of bad loans and a considerable amount of bank bonds that were paid from the bad loan proceeds;
- 2) large amounts of circulating fictitious capital, including that associated with derivatives based on bad loans that automatically increased the sensitivity of the financial system to the effects created by bad loans.

As a result, the credit sector of the US, EU, and even Russia nearly ended up in a crash; the government and central banks (the Fed in the US) averted it by making massive cash infusions.

Large economic crises seem to unfold in a domino effect. Market “ $x_1$ ” is disorganized first, then (because of disorganized market “ $x_1$ ”) market “ $x_2$ ,” then (because of disorganized markets “ $x_1$ ” and “ $x_2$ ”) market “ $x_3$ ,” and so forth. In 1929, first, the stock market was disorganized, then the credit market, followed by all other markets. In 2008, the mortgage market was first to be disorganized, then the overall credit market, some time later the stock market, then other markets.

As increasingly more markets were involved in the crisis, secondary, tertiary, and other crisis-generating factors came to the fore.

In the current world economic crisis:

- bad mortgage debts became a primary crisis-generating framework condition, i.e., a factor triggering expansion of the crisis;
- the failure of the banking system as a whole, with the mortgage market crisis taken into account, to balance earnings and payments was a secondary condition;
- the sharply declining ability of banks to provide credit services and the credit crisis in banking institutions (the near bankruptcy of some financial and insurance institutions) was a tertiary condition;
- the stock market crash and a decrease (up to a zero level) in the market value of many corporations was a quaternary condition;
- the decrease in consumer and investment demand was a quinary condition.

Thereafter, the crisis moved to the production base of the economy.

In the era of advanced CSs, a crisis is unfolding accompanied by growing disharmony between the CS operation framework conditions and its system characteristics.

### *Response of the CS to a crisis*

The crisis automatically results in a change in the CS parameter profile. Under the pressure of the crisis its functional characteristics change first (for example, the amount of loans extended, market capitalization of corporations, financial performance of corporation, etc.), and then do its CS structure characteristics.

These processes in the part, in which they take place driven by CS intrasystem factors, are materialized through bankruptcies, mergers and takeovers or, conversely, through splitting off corporations, as well as by changing the share of CS functional segments in the CS resources, capital and profits. The current crisis, for example, is distinguished by a decrease in the share of the segment servicing financial markets in the CS of mature economies.

The bulk of changes in the CS system characteristics under the pressure of a crisis ultimately encourages its transformation into a format less sensitive to market and investment risks and various potential crisis-generating factors.

However, in a crisis, the CS restructuring pattern stemming from crisis-driven changes in the CS functional characteristics and affected by intrasystem factors is such that it alone cannot eliminate or even essentially weaken, at least within a limited time, the effect of factors triggering a crisis. For example, the consequences of the crisis experienced by Russia's economy in 1991–1994 had not been completely eliminated even in the period immediately preceding the current economic crisis, and those experienced by the engineering, instrument-making, and light industries and agriculture have not been eliminated at all.

### *System conditions needed by the CS and entire economy to exit a crisis*

The mechanism of an economy plunging into a crisis also determines the actions affecting the economy essential to curb expansion of the crisis and then bring the economy out of it. Necessary system conditions for curbing expansion of the crisis or diminishing its scope are:

- a) neutralization or compensation (as much as possible) of the effect of direct crisis-generating factors, first of all, primary crisis-generating factors and those that exhibit the highest crisis-generating potential under the given conditions;
- b) a decrease in CS sensitivity to crisis-generating factors and in the CS's ability to create secondary crisis-generating factors<sup>109</sup>;
- c) stimulation of investment activity and consumer demand.

<sup>109</sup> G20 decisions adopted in spring 2008 aimed, if not at completely dismantling the offshore zone system, at least at substantially limiting its ability to affect world financial market processes. Thus, essential changes will be made to the global CS, and specifically to its financial segment. As a result, its ability to generate risks and enhance effects created by risk generators external to offshore zones will decline dramatically. After the G20 summit based on an OECD decision had adopted an antioffshore declaration, banks from some countries started to phase out all or part of their offshore zone transactions. So, French banks jointly decided to phase out their activities in countries on the so-called OECD gray list. The decision was effective from the first quarter of 2010. (<http://www.offshore-mp.ru/news/index.php?ID=262>).

In the US, the UK, and continental Europe, large-scale infusions of credit in the CS banking and insurance sectors, as well as their effective partial nationalization, have become the main tool in curbing expansion of the current crisis. State control over relevant financial markets and corporate entities was tightened to lessen the sensitivity of the CS financial segment to crisis-generating factors. Thus, the sensitivity of financial institutions (banks, insurance companies, financial agencies, etc.) to market risks and crisis-generating factors has declined. Although the measures taken did not help to exit the crisis as of the beginning of 2011, they prevented the crisis from entering the most acute uncontrollable phase.

Russia also used large-scale infusions in the CS credit segment as the main tool to decelerate expansion of the crisis. The banking system managed to avoid a crash. However, the crisis expansion, at best, was suspended, but not blocked. Partially because of the inefficient use of funds received by banks and the related large-scale direct exports of capital and the conversion of rubles into hard currency (in the fall of 2008 and early 2009, Russia's economy was effectively providing financial aid to the US and EU economies). In part, this happened due to the low efficiency of the Russian business community and persistent mutual mistrust that developed among the majority of market agents.

The decline in the ruble exchange rate during the crisis had a certain positive impact on the dynamics of the Russian CS and the entire economy, because it:

- reduced capital flight from Russia;
- eased the pressure of falling world oil prices on Russia's oil-producing sector;
- increased the competitiveness of Russian producers.

Negative implications of the falling ruble exchange rate are partly associated with speculation in the ruble, partly with its proinflation effect. Infusions of large amounts of funds into the credit systems of mature economies failed almost completely to produce proinflation effects. Matters in Russia looked different, mainly because of the substantially lower efficiency of the Russian credit system and Russian business community, which was still oriented toward the inflation models of economic behavior.

Necessary conditions for curbing expansion of the current economic crisis, as seen from the above, include a restructuring, with regard to the available capacities, of CS operation framework conditions by weakening or neutralizing the effects of primary crisis-generating factors (including through massive infusions in the CS credit segment), as well as a restructuring of CS segments (again with a focus on the segment of financial institutions, and particularly the credit system) capable of creating secondary crisis-generating factors as a response to primary ones.

Similar conditions are required to curb the expansion of any economic crisis.

Generally, appropriate restructurings may be implemented only through regulatory actions carried out by the nonmarket system of anticrisis economy regulation.

### *Necessary system conditions for postcrisis economic recovery*

Postcrisis economic recovery is impossible in general as long as a CS operating in a crisis-led regime is not efficient enough to ensure efficient operation of the economy. Therefore, postcrisis economic recovery requires that CS inefficiency be eliminated.

This calls for harmonizing the set of CS operation framework conditions and its systemic characteristics, as well as restoring the ESRst and ESRCS to an acceptable level. To meet the above challenges, both the CS system characteristics and operation framework conditions external to the CS should be managed to mitigate crisis-related negative effects.

When the economy is being brought out of a crisis, compensation efforts should first focus on:

- a) the ability of the CS and, particularly, its financial sector when operating in an unregulated regime to produce excessive market and investment risks, whose negative effect on the economic behavior of corporate market agents is large;
- b) the ability of the social environment disorganized by the crisis to generate excessive market and investment risks in a crisis;
- c) the ability of the external economic environment to generate excessive market and investment risks producing a substantially negative effect on the economic behavior of market agents;
- d) the insufficient ability of the CS to generate investment demand under an unregulated operation regime, and
- f) the inability of the economy to generate consumer demand under an unregulated operation regime.

The Roosevelt administration in implementing the New Deal adopted a policy of anticrisis regulation mainly to compensate for the effects of factors “a”, “b”, “c”, and “d” concurrently addressing the economy’s inability to generate consumer demand.<sup>110</sup>

The policy of anticrisis regulation pursued in the 1930s by the British Government was basically aimed at compensating for the effects of factor “b” (by heavy spending on unemployment benefits) and factor “c” (by surrounding the British Empire with a “tariff fence” under an imperial preference policy) and encouraging overall investment and consumer demand, approximately in accordance with Keynesian recipes.

The policy of anticrisis regulation pursued after World War II in major Western European countries was aimed at compensating for the effects of all the of the above-listed factors by implementing the model of a socially oriented mixed economy. The ability of the external economic environment to create excessive market and investment risks substantially governing the economic behavior of market agents was blocked by introducing effective control over capital movements and foreign exchange flows.

In most cases, with a small public sector (and, moreover, if there is none), an anticrisis policy pursued to cope with a major crisis is incapable of creating sufficient anticrisis investment and consumer demand to lead the economy out of the crisis without compensating for the effects of factors “a”, “c”, “d”, and partly factors “b” and “c”. This results in “stretching” of the crisis (in terms of modern

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<sup>110</sup> Though the Roosevelt Administration proclaimed a free trade policy, customs duties at the time of the New Deal exceeded 40% of the import value (McConnell and Brue, 1992. Vol. 2, p. 334). In the US, social security contributions increased by more than seven times between 1933 and 1939 (Ibid., Table “National income and other statistical data, 1929–1964”).

economic theory, a U-shaped crisis curve with a long bottom). The experience of developed countries combating the crisis in the 1930s and the postwar crisis (after 1945), when industrial output plunged, suggests that economic recovery within a limited time requires:

- 1) a controllable regime of CS operation;
- 2) capital flow regulation, abandonment of excessive foreign exchange and tariff liberalization as a factor inhibiting growth in anticrisis demand and inviting market and investment risks;
- 3) reallocation of a significant part of the investment resource through controlled channels, including public sector channels.

The postwar experience of Western Europe indicates that capital-intensive production branches and concentration of a significant part of banking sector assets in state-controlled corporations, i.e., the transition to the regulated CS model with a core filled mostly by state-run companies, substantially alleviate the crisis.

In the UK, even in 1980, the public sector included all electric power, coal mining, and natural-gas industries, telecommunication companies, a significant part of the steel and shipbuilding industries and airlines, and half the automotive industry.<sup>111</sup> In 1980, the state presence in the economies in France, Germany, Italy, Sweden, and Austria was around the same level.<sup>112</sup> It is evident that after 1945, major European countries radically – and economically successfully – restructured their CSs. After 1980, they were again restructured toward the 1929 model, which was no less radical, but less successful.

Combating the 1929 global crisis was not successful until the CS of leading countries had been essentially restructured in accordance with the above principles. That took no less than 6 to 7 years; i.e., the crisis continued and deepened until the system characteristics and operation framework conditions of the CSs had been positively harmonized.

### 3.5. Functions of the public sector performing as a tool to manage CS performance and factors determining the feasible size and form of state presence in the economy

#### *Structure of the public sector and its boundaries*

The public sector is a state-controlled CS sector which covers companies and units that are functionally equivalent to them, like fully government-owned enterprises or municipal undertakings (i.e., all state-controlled economic entities, regardless of whether they have the status of a corporation or not). The public sector under this definition suggests that the state acts toward the public sector

<sup>111</sup> Savas, 1992. P. 223.

<sup>112</sup> Ibid.

(irrespective of the status of the relevant economic agents) as a management company or asset management group whose holders are all citizens of the state in question.

State-controlled CS sector boundaries cannot always be determined in a simple and clear-cut manner. The point is that sometimes it is enough to hold a small stake in the corporation to control it if its shareholding is heavily split. Hence, in principle the state or any other institutional investor in some cases can control a corporation without holding a controlling or a blocking interest in it.

The above gives rise to the problem of so-called subsidized companies, which receive government subsidies in one form or another. In the US, according to applicable law, a bank extending a considerable long-term investment loan becomes entitled to control its use. Companies subsidized – no matter how or through which financial mechanism – by the government become dependent on the government, since a subsidy is always targeted or involves explicit or implicit commitments of the company to the government.<sup>113</sup>

Through a subsidy, the government can influence the subsidized company. In reality, the behavior of a subsidized company differs little from the behavior of a similar, in terms of functions, company in which the government holds a controlling interest. A set of subsidized companies formally controlled by private capital is functionally an analog of corporations controlled by public capital or a semi-public CS sector of some kind.

Apart from subsidized companies proper, it is worthwhile to mention companies protected by the government that effectively, though not always formally, receive various privileges, primarily in the form of the right to conduct certain economic activity.

Therefore, the sector of economic entities controlled by the state at any given moment contains:

- 1) a core filled with companies/enterprises over whose economic behavior the government is entitled to exercise full control as a sole or core owner (fully state-controlled companies);
- 2) a periphery filled with companies whose economic behavior is controlled, partially or indirectly, by the government.

In this case, even accomplished privatization does not invariably signify that the government loses the ability to directly influence the economic agent system in general and the CS in particular. One can imagine a situation when scaling back of the CS public core is accompanied by the expansion of its effectively state-controlled periphery. This process also took place in Taiwan and South Korea in the 1960–1980s (Appendices 2, 3).

Furthermore, there are examples in economic history when a state-controlled CS sector undergoes rapid expansion. This occurs when a peacetime economy switches over to a wartime economy or price control is instituted, regardless of

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<sup>113</sup> It is characteristic that many major US banks that received government aid during the current crisis, after stress tests conducted by the authorities, had to increase their own capital in advance under government pressure.

the reasons, like what happened in the US in the crisis during the Nixon administration.

Below, the public sector, if there are no reservations, includes only companies/enterprises where the government is involved as a core or sole owner. A fully and partially state-controlled CS sector also means the periphery of the state-controlled CS sector, i.e., companies whose economic behavior is heavily influenced by the state.

***State presence in the CS is not concerned only with profits the private sector loses due to presence of the public sector: Variations in the public sector parameters as a factor affecting CS performance***

It is a widespread view that the level of state involvement in the economy (hence, the position of the state in the CS as a strategic owner) depends predominantly on noneconomic conditions and, in the first place, purely political factors. Advocates of the above view believe that at best the government can play a role in the so-called areas of market failure.

Under the above approach, state involvement in the economy is generally reduced to profits in the nonpublic sector in accordance with the following formula: the bigger the public sector, the smaller the private sector profits, and vice versa.

That appears to be true or almost true if economic development is given low priority (or, in any case, not top priority) and the economy demonstrates certain sustainable growth. However, things are different when economic development is given high priority.

The performance of the CS as a whole, as well as its nonpublic sector, under certain circumstances (always if the economy is underdeveloped), is highly sensitive to variations in the parameters of the state-controlled CS sector.

It would be wrong to assume that the public sector has no relation to the nonpublic sector and the level of government involvement in the CS at any given moment affects only the size of enterprise profits. In reality, the public sector performs certain system-critical economic functions. Generally, the performance of the CS and economy as a whole over a more or less extended time interval can be higher or lower depending on how efficiently the public sector performs these functions.

If the CS lacks a public sector, it means a public sector performing system-critical functions with zero efficiency. Normally, zero functional efficiency of the public sector, where it is lacking, also has a certain value. This value can be higher or lower depending on the CS operation framework conditions.

Generally, developed economies are those whose CS performance is the least sensitive to variations in the parameters of the state-controlled CS sector.

Developing economies are usually economies whose performance is rather sensitive to variations in public sector parameters. The lower the economic development level, the higher, all other things being equal, this sensitivity.

***Main factors governing the dependence of CS performance on public sector parameters and main economic functions of the public sector***

The economy is sensitive to variations in parameters of the state-controlled CS sector because this sector always, or almost always, performs some main (basic) and additional (superstructure) functions that have (directly or indirectly) a significant impact on CS performance.

*Basic functions of the public sector* include:

**F1.** *Function of compensating for the inability of the CS nonpublic sector to finance production investment programs*, and especially investments in major capital-intensive projects (including heavy industry branches, major enterprises in the electric power, metallurgy, and chemical industries, transportation and communications facilities).<sup>114</sup>

Function F1 generally mates with function F1a, whereby state-controlled corporations produce strategically critical industrial products (electric power, metals, other strategically critical materials) and services, as well as with the related function F1b of developing (even greenfield) and supporting the infrastructure of the economy (transportation, communications, water supply systems, etc.).

**F2.** *Function of compensating for the inability of the nonpublic sector of the credit system to mobilize and reallocate financial resources* by establishing state-controlled banks, financial corporations, and related investment funds. Usually, actualization of function F1 involves the actualization of function F2. That is, if the CS contains a more or less advanced state-controlled sector, the CS financial sector usually includes state-controlled major banks, financial corporations, and investment funds.

**F3.** *Function of compensating for the inability of the market of nongovernmental producers and supplies to fix effective prices for strategically critical industrial products and services* by setting up corporations that manufacture, purchase, and market relevant products.

The actualization of function F3 mates with the actualization of functions F1, F1a, and F1b. Function F3, in turn, mates with function F3a of streamlining the price system and lowering the inflationary potential of the economy by establishing controlled prices in the public sector and due to the pressure on nonpublic sector prices exerted by state-run producers and sellers.

It should be emphasized that in modernizing economies, the price policy of state-run producers competing with private producers generally does not aim to squeeze the latter out of the market, but instead to:

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<sup>114</sup> The inability of the nonpublic sector of the CS to finance production investment programs can be explained by the low efficiency of the business community, high market risks, limited amount of accumulations in the nonpublic sector, the insufficient ability of the credit system to extend investment credit, the low attractiveness of the economy for foreign investors, etc. Where the infrastructure system (especially the transportation system) supporting the operation of the economy is underdeveloped, the main elements of this system enabling economy modernization can be created within an acceptable timeframe only by the state and state-controlled corporations and organizations. This is also applicable to the electric power industry.

- 1) reduce or eliminate market scarcity by increasing the output of short-supply items;
- 2) curb price rises at nonregulated nongovernmental producers by establishing relatively low, fair prices at state-run enterprises.

**F4.** Functions F3 and F3a when they target price-system streamlining also mate with the *function of enhancing the competitiveness of nongovernmental producers by establishing at state-run corporations relatively low prices for staple goods and services, including credit services.*

**F5.** *Function of reducing market and investment risks for nongovernmental market agents.* The higher the proportion of ordinary fiscal revenues in the GDP (i.e., excluding revenues from seigniorage, lending, shares, bonds) the lower, other things being equal, the level of market and, partly, investment risks. By the same token, the higher the proportion of the public sector in the total output of goods and services, the lower the level of market and investment risks for nongovernmental producers (unless, of course, the economic policy aims at squeezing nongovernmental producers out of the economy).

**F6.** *Function of building up the technological capacity where the relevant CS segments and economic system as a whole are incapable of doing that.*

**F7.** *Function of translating the accumulated technological potential lacked by the CS nonpublic sector to the latter through a system of cooperation ties.*

It is evident that the actualization of functions F6 and F7 is linked.

**F8.** Since the public sector performs all the functions listed above, it performs the function of *fostering development.*

**F9.** *Function of raising the  $ESR_{CS}$ .*

The privatization policy pursued by weak economies with inefficient business communities and with immature institutions supposed to support the operation of local markets does not always improve economic performance. However, it always lowers its  $ESR_{CS}$ , especially when privatized enterprises are transferred to foreign investors.

Since privatization undertaken in many countries in the last quarter of the 20th century and the early 21st century was triggered by external pressure, the main economic goal was to reduce the ESR of national CSs. Apparently, it was believed that, thus, prerequisites were created to accelerate globalization. It was overlooked that after the government had discontinued its involvement in the economy and the proportion of foreign owners in CS assets had increased, a decline in the ESR of national CSs almost always enhanced the criminalization of the system of economic agents.

Under such conditions, local entrepreneurs generally seek to raise their competitiveness in the domestic market by joining the underground economy and using criminal practices, thus inevitably increasing market and investment risks in the CS and economy as a whole.<sup>115</sup> This reduces the CS performance and, to a certain degree, appears to drive foreign investors out of the economy, ultimately discouraging integration of the economy in question with mature economies.

<sup>115</sup> Chernoy, 2004 pp. 200–203.

By combining the basic functions listed above, the public sector also performs more sophisticated economic functions, which act as a superstructure function (SF) in relation to the above basic economic functions.

**SF1.** *Function of harmonizing CS parameters with its operation framework conditions.* Since the public sector is highly controllable, its presence in the CS essentially improves the harmonization of CS parameters with its operation framework conditions. The actualization of the above functions F1–F6 directly improves this harmonization, thereby enhancing the performance of the national CS.

**SF2.** *Function of laying the foundation (creating preconditions) for accelerating the development of the CS nonpublic sector.* The local private sector with its insufficient willingness for investments in production and low technological level, with scarcity in major markets, and high market and investment risks, almost always fails to lay the foundation for its own development without attracting inward investments.

External private investors and the public sector may act as a source of inward investments in the local private sector. As illustrated above, to attract inward investments in the manufacturing industry, investment risks must be lowered and an infrastructure system for such investments must be in place. Developing economies at the early stage of their modernization usually lack these conditions.

In practice, in the early stage of modernization of developing economies, foreign investors display a reluctance to invest in any capital-intensive investment projects with a considerably long investment–invested capital depreciation cycle, excluding investments in the development of easy-to-access mineral deposits, given they are unique in terms of expected return.

When there is no infrastructure and production base to support the local private sector (let alone the technological base), foreign investments cannot aid in establishing such a base within an acceptable time. In addition, at the time when a national economy targets priority development, global markets may lack free investment capital of the required amount.

For this reason (with economic development given high priority), all advanced economies in the 1950–1960s had to rely on the public sector to lay the foundation for CS nonpublic sector development. Not all countries followed this path (for example, India), but others did (like South Korea and Taiwan, and even the UK, France, and Italy soon after World War II).<sup>116</sup>

The public sector assigned to lay the foundation for CS nonpublic sector development at the initial stage of modernization of developing economies also had to perform basic functions F1, F2, F3, F3a, F4, F5 and partly functions F6 and F7 as well.

**SF3.** In developing economies with an enormous development inefficiency, which was indicative of most former colonial and semicolonial economies in the first years after decolonization, the public sector automatically played the role of the main modernization agent. The public sector performing *modern-*

<sup>116</sup> Schmidt, 2002; Appendices 2 and 3.

*ization agent functions* at the early stage of modernization of developing economies performs basic functions F1, F2, F3, F5 directly and other basic functions indirectly (for details, see Chapter 4).

The modernization potential of the CS public sector, i.e., its ability to act in regard to the entire CS as an economic modernization agent, is higher, the lower the modernization potential of the CS nonpublic sector (including its sectors accommodating corporations controlled by local and foreign investors).

Under certain circumstances, it is the CS sector controlled by foreign capital that carries the bulk of modernization potential for the entire CS (see Chapter 4 and Appendix 3). However, the above was not characteristic of the early stage of modernization of developing economies in the 1950–1960s.

**SF4.** *Function of creating an efficient competitive environment.* The presence of public corporations hampers the establishment of an efficient competitive environment in a specific market only under:

- 1) the presence of nonstate corporations effectively competing in the market;
- 2) the absence of foreign monopolist suppliers;
- 3) approximate equality between the exchange rate of the national currency and its PPP.

Let us assume that the market is protected from foreign suppliers with inefficient producers tending to set up formal or informal cartels to raise prices (which was typical of national CSs in continental Europe before and even after World War II). In this situation, the presence of a sufficiently efficient state competitor can be very instrumental both from an economic viewpoint in general and the need to create an efficient competitive environment.

Let us further assume that with an exchange rate of the national currency undervalued in comparison with its PPP, foreign producers have a monopoly in the market. In this case, the selling price of goods supplied to the market in which foreign producers are monopolists will be higher than the average price by the ratio of PPP to the exchange rate. For most weak economies, this ratio ranges from 2 : 1 to 3 : 1. In such a situation, the presence of state-run companies producing relevant goods (for example, equipment) is again desirable to create a competitive environment.

**SF5.** *Function of reducing the need for regulatory actions affecting the CS nonpublic sector.* In practice, functions performed by the CS public sector (or, to be more exact, functions that the public sector is able to perform), can be, to some extent, performed by other economic subsystems through which the regulatory actions affecting the economy are delivered, including:

- 1) the budget system;
- 2) the monetary regulation system;
- 3) the system of managing market sector processes by legal and regulatory tools;
- 4) the system of direct control over CS nonpublic sector processes (for example, through price control directives).

Public sector functions are complementary to those of the regulatory subsystems listed above. Therefore, the public sector always acts as a tool reducing the need for direct regulatory actions affecting the CS nonpublic sector.

Privatization, other things being equal, always involves (provided that CS performance does not decrease) intensifying regulatory actions that affect the economy and the CS, specifically the CS nonpublic sector.

The mutual complementarity of the public sector and budgetary sector functions is noteworthy. The higher the share of the budget in GDP, the lower the level of market risks and, hence, investment risks. Similarly, the higher the share of the public sector in CS assets, the lower the level of market and investment risks. The insufficient ability of the CS nonpublic sector to invest in capital-intensive projects can be compensated for by financing relevant programs through the state budget or the system of state-controlled corporations. The bigger the financing of relevant investment programs through the state budget, the smaller the need to finance them through state-controlled corporations, and vice versa.

Furthermore, the price system can be affected by the state budget (since the government is involved as a purchaser of goods and services), and, almost with the same result, by the system of state-controlled corporations. Similar correlations of complementarity between the state budget and the CS public sector are also typical of other government actions directed at the CS.

Therefore, it was by no means accidental that the state was losing its presence in the CS of mature economies, while the share of the budget in GDP increased. A similar tendency is also characteristic, other things being equal, of developing countries. Exceptions are few and include countries with an inefficiently operating economic mechanism, like in Russia.

Privatization can deepen economic liberalization (under other constant conditions) only where economic development is not given priority. For this reason, privatization usually involves the deliberalization of taxes and regulations. And again, precisely for the above reasons, modernizing economies with a considerable proportion of the public sector in CS assets are distinguished by a relatively small share of taxes and the budget in GDP. China represents one of the starkest examples of such a policy.<sup>117</sup>

By and large, there are two options: more public sector or more taxes, including entrepreneurial income tax. It has not been fully realized so far that this dilemma stems from privatization. Lowering of the tax liability along with the public sector's loss of its presence is feasible only if the budgetary policy (and the economic policy in general) places less emphasis on social commitments, as well as when development and modernization have lost high priority.

**SF6.** *Function of determining economically reasonable prices for noncompetitive capital-intensive systems supporting the economic infrastructure.* Such prices imply those for the services (products) of such systems supporting the economy's infrastructure as water supply, sewerage, a large portion of transportation, large-scale urban district heating systems (typical of Russia), as well as

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<sup>117</sup> In China, where the state directly or indirectly controls more than 50% of productive assets and about 50% of total investments, budget expenditures, even taking into account their growth during the current crisis, did not exceed 28% of GDP (China Statistical Yearbooks for 2006, 2008, and 2009).

the electric power industry. Common features of these systems are high capital intensity and virtually no competition in providing services (or, in any case, significantly restricted competition in relevant sectors of the economy).

In the non-capital-intensive and competitive economy sector, depreciation costs account for a relatively small percentage in the product selling price. In capital-intensive sectors of the economy, the percentage, given equal depreciation periods, is, on the contrary, very high. At the same time, the rate of return on and the depreciation period of invested capital are equally important to a private (nonstate) investor. Hence, when planning investment in a capital-intensive sector, a nongovernmental investor compares the depreciation periods of invested capital with those in low capital-intensive sectors.

However, this constraint is not applicable to the economic behavior of a public investor. The depreciation period acceptable to the public investor for capital invested in a capital-intensive infrastructure facility is comparable with the depreciation period of the relevant asset and is always much longer than depreciation periods acceptable to a private investor for capital invested in the same facility.

For exactly this fundamental reason, prices for services (goods) of a capital-intensive infrastructure system, when it is owned by the government, are generally lower than when it is owned by a nongovernmental investor, even if noncompetitiveness is ignored as a factor promoting higher prices for services (products) in the sector in question when it is run by the private sector.

Let us consider the following case study:

1. Suppose there is a capital-intensive sector of the economy infrastructure system “IOx”. With the amortization period of investments in “IOx” acceptable to a nongovernmental investor, the price for the product of this sector is  $N$  times higher than when the sector is owned by a public investor.
2. Demand for sector services is inversely proportional to their price.
3. The sales of an “IOx” sector product limits the output in a major economic sector (MES), for example, in the materials production sector.

If sector “IOx” is owned by a public investor, the price level in the sector (in conventional units) is denoted as “1”, demand for its products as  $Dpr_1$ , output in MES as  $OMES_1$ .

If sector “IOx” is owned by a nongovernmental investor, the price level in the sector (in conditional units) is  $N$  ( $N > 1$ ) and demand for “IOx” products in physical terms will be  $Dpr_N = (1/N) \times Dpr_1$ , where  $Dpr_N < Dpr_1$ . Accordingly, total output ( $OMES_N$ ) in an MES with price “ $N$ ” for “IOx” sector products will be lower than price “1” ( $OMES_N < OMES_1$ ).

If  $N$  is sufficiently large, situations may arise when (1) the output of the strategic economic sector MES is significantly less than when “IOx” is owned by a public investor, and (2) the nongovernmental investor fails within the time frame acceptable to him to recover the costs of the “IOx” sector creation.<sup>118</sup>

<sup>118</sup> Throughout in this text, a nongovernmental investor means a collective entity, i.e., a multitude of specific nongovernmental investors.

That is why, even with no price control, private investors do not rush to invest in infrastructure sectors.

In the case under review, it is clear that monopolization of sector “IOx” by nongovernmental investors is economically unsound, and in general any notable participation by the latter in investments in capital-intensive sector “IOx” facilities (except for ancillary ones) appears unreasonable.

The above example, substantially simplifying the actual situation, nevertheless, explains:

- 1) why private investors are reluctant to invest in major capital-intensive infrastructure facilities;
- 2) why in most countries the government is the main investor in these facilities;
- 3) why the government, being a strategic owner in the economy infrastructure system, as well as in some other strategic sectors, is economically sound, in terms of the entire economy or major branches of it;
- 4) why the discontinuation of public investment in this sector can and does give rise to big economic and social problems (for example, municipal housing facilities or road infrastructure).

Generally, when facilities of the economy infrastructure system are transferred to the private sector of the CS after they have been privatized at a grossly underestimated value, the price for services provided by these facilities (when they are run by nongovernmental entities) is comparable to that for services provided by these facilities when they were government owned. Yet even the above model aimed at attracting the private sector to assets within the economy infrastructure system gives rise to certain problems.

*First*, the mere fact of underselling sufficiently large assets always has an adverse impact on the stock market and, consequently, on asset prices in general, leading to losses for the private sector. These losses can multiply exceed proceeds from infrastructure assets privatized at low prices.

*Second*, since most services are provided by the economy infrastructure system in a noncompetitive “quasi-market”, with no price control in this sector, for the most part, they will be overpriced (due to noncompetitive prices) with all ensuing consequences. With state control over prices for services of the relevant capital-intensive economy infrastructure systems, the willingness of private investors for making new investments in these systems is paralyzed. In addition, one should expect attempts to increase profits by low depreciation charges and a high level of wear and tear of fixed assets, causing their malfunction.

Apparently, there were economic reasons in the past for the state to take care of capital-intensive and noncompetitive infrastructure sectors as a strategic investor and owner. To date, these practices are still in place. Conversely, the abandonment of these practices may cause notable adverse effects, which are already partly in place (as exemplified by a slump in electric power production growth rates in mature economies that privatized their electric power systems).

At first glance, the higher the prices for services provided by privatized infrastructure sectors, the higher the total mass of nonpublic sector profits.

However, profit maximization, for example, in the water delivery system or natural gas transport instead of an increase in gross profits in the private sector leads to their reallocation, which harms the end producers of goods and services, thus losing their competitive advantage.

This is precisely why the state is the first to arrive in the economy infrastructure system, and infrastructure facilities are the last to be privatized under an all-out privatization policy.

**SF7.** *Function of dynamizing the real sector of advanced economies.*

The presence of a CS public sector having significant size and influence on the investment process is always associated with a deficiency in investment capabilities of the CS nonpublic sector. In immature economies, this deficiency is higher; in advanced economies, smaller. The lower the economic development level, the more selective are nongovernmental investors when contemplating investment. The more advanced the economy, the less selective they are.

Nonetheless, advanced economies also demonstrate the same effect: the higher the level of market and investment risks, the smaller the willingness of the CS nonpublic sector to invest, and the more selective this willingness. It is no wonder that the arrival of the state in the economy of developed countries was always triggered by growing market and investment risks.

Except for the periods of World War I and II, in the 1930s (during the Great Depression of 1929–1932) and after 1945, the state concerned itself with the economy to meet the challenges of economic recovery within acceptable timeframes, with regard to the social and political situation.

In nearly all mature economies (including the US), the state after 1945 until the 1980s had been developing capital-intensive infrastructure sectors and often capital-intensive industries. During the same period, and even later, the state became firmly entrenched in the credit system of some Western European countries (including France and Italy), as well as Japan, using its position in the credit system to provide loans to finance investment programs undertaken both in the CS private and public sector. That resulted in a dramatic increase in the growth rates of the economy in developed countries and especially in their real sector.

On the contrary, as the public sector gradually lost ground in developed countries due to changes in the economic paradigm after 1980, the growth rate of the real sector in these countries was slowing down significantly in spite of the high system quality of their CS nonpublic sector. As expected, investments in the most capital-intensive industries of the real sector (metallurgy, the electric power industry, and infrastructure) suffered the most. As the share of the private sector in the economy infrastructure system increased, the growth rates of capital-intensive assets in this sector also substantially decreased.

In this connection, it should be noted that the present financial and economic crisis with its stepwise increase in market and investment risks has brought the state back to the economies and CSs of developed nations.<sup>119</sup>

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<sup>119</sup> As at the beginning 2009, the US and European countries, including the UK, had nationalized, fully or partially, several dozen major banks, investment funds, and insurance companies. By summer 2009, active nationalization processes had begun in the automotive industry.

In developing economies, the level of investment risks is always high enough to affect the behavior of nongovernmental investors rather adversely. But in advanced economies (especially after 1980), high market and investment risks also have a rather negative impact on the behavior of nongovernmental investors.<sup>120</sup>

At present, China's economy and CS is as technologically advanced as mature economies were in the 1980s, and as competitive as the CSs of contemporary mature economies. However, today's China is distinguished from the mature economies of the 1980s by huge investments in the CS public sector. In 2007, the public sector still accounted for more than 40% of the investments in capital assets, but in 2009–2011, the role of the CS public sector in investment became even more significant.<sup>121</sup>

Investment functions are also split between the state, which invests in capital-intensive sectors (like what was done on a large scale in developed countries in the 1930–1970s), and the CS private sector, which invests in less capital-intensive sectors. The tremendous growth rates of China's economy are directly linked with the above-mentioned circumstances.

The Chinese experience suggests that under contemporary conditions, the CS public sector is able to dynamize not only weakly and moderately developed economies, but advanced economies as well, especially their real sectors. Foreign investors are known to have made huge investments in China's economy. Had the Chinese state not made still greater investments in the economy infrastructure system as a whole and the industry export sector in particular, foreign investments in China's economy would have been much less than they are now. However, in this respect, China just drew on Taiwan's experience (see Appendix 3).

**SF8.** *Function of maintaining the economic and political subjectness of a national state.* In a modern transnationalized global economy, companies are quite capable of voting against undesirable decisions (tax, tariff, environmental, etc.)

<sup>120</sup> The privatization processes began concurrently with a new growth phase in market and investment risks on a global scale. Factors that fueled market and investment risks after 1976, when the Jamaica Conference defined a new format for the world financial system, in mature economies, like in many other countries that do not fall into this category, included:

- 1) the departure of currencies from the gold standard and transition to a system where exchange rates are determined by the market;
- 2) a policy of openness and granting of equal rights to local and foreign investors;
- 3) creation of a set of new financial instruments and the multiplication of financial market turnover concurrently with their internationalization.

All these factors undoubtedly had a negative impact on the willingness of nongovernmental investors to invest in the real sector of advanced economies.

On the contrary, it so happened that the exposure of private investments in the services sector, excluding capital-intensive infrastructure sectors, to the above factors was less due to the specifics of services, because some kinds of services are hardly ever possible to import or export, for example, services related to municipal housing, the public health system, or road infrastructure facilities.

<sup>121</sup> In 2009 China embarked on a special four-trillion-yuan anticrisis program of direct government investment in infrastructure, industrial, and agriculture projects implemented primarily in economically backward regions. In the same year, state-controlled banks granted about 4.6 trillion yuan of anticrisis loans to enterprises, organizations, and individuals. About 60% of the above investment funds, which amounted to no less than US\$2.5 trillion, if estimated on the basis of the PPP of the yuan, were channeled to the investment programs of public sector enterprises.

by the authorities by scaling back their business in the country. They can easily transfer assets from the host country elsewhere, leaving behind a big “hole” in the budget, social sphere, employment sector, etc., which the host country is not able to plug.

Therefore, the authorities, seeking to preserve socioeconomic and political stability in the country, often apply cautiously any painful regulatory sanctions to such businesses even where such sanctions are formally required by law. The state is especially reluctant to apply sanctions in regard to the largest “system-critical” corporations that seek to meet their special interests even by evading the law.

However, if the state’s economic role and its capabilities are insufficient to plug the “holes” left after system-building assets have been transferred abroad and the state is afraid to punish law-breaking corporate entities according to law, this may result in several types of negative institutional and economic consequences.

*First*, the state cannot continue with its role as an “honest supervisor” in the application of law enforcement and loses public confidence.

*Second*, the law (including the economic regulatory framework) in such a state eventually shifts toward satisfying the special interests of transnationalized businesses, thus deoptimizing the EOSS and economic policy; it ultimately reduces CS performance and entails economic losses.

*Third*, as a result of the above law and law enforcement transformations, the state loses a considerable proportion of its economic subjectness up to the catastrophic loss of the ability to govern key economic, social, political processes.<sup>122</sup>

The above developments contribute most significantly to the fact that in recent decades, the economic potential of the state in all mature economies grows concurrently with consolidation and transnationalization of corporations. Specifically, according to the IMF, the proportion of public expenditures in GNP of the most advanced economies over the 40 years preceding the current global crisis has risen on average from about 30 to 50%.<sup>123</sup>

In this case, an increase in the percentage of the budget in GNP pursues (in addition to the objectives outlined in the previous sections) two other important objectives.

*First*, to maintain the economic basis for the real autonomy of the state from private businesses, including the ability to generate autonomous government demand.

*Second*, based on this autonomy, to create the potential for a national strategy, i.e., to design a national development policy and finance, implement, and correct it. And also to implement vital anticrisis measures to prevent the total collapse of the national economy the need for which becomes especially apparent in times of crisis, including the current financial and economic crisis.

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<sup>122</sup> It should be noted that, lately, US websites have displayed many publications warning about this peril stemming from the mortgage and general financial crisis. Some of these publications maintain that the US national economic subjectness has been lost long ago as the consortium of private banks controlling the Federal Reserve System and pursuing their own interests plays a crucial role in the national economy.

<sup>123</sup> World Economic Outlook, 2007. P. 196.

***Factors defining the reasonable scope of state presence in the economy  
as an owner, and parameters of the state-controlled CS sector***

The impact of the public sector on the processes unfolding in the economy is determined not only by its proportion in the economy, but also, and more importantly, by the structural role (hence, the proportion) of some categories of state corporations in the total economic activity of the relevant corporation group. Under a more or less optimized CS public sector structure, the structure of its assets and output of goods and services never matches the structure of assets and output of goods and services of the entire CS and national economic system.

Where economic development is given high priority, the economic policy always aims to maintain the CS performance at a high enough level. Therefore, the harmonization of CS system characteristics and the operation framework conditions (both basic and regulated) is one of its key objectives.

The presence of the state-controlled CS sector substantially facilitates the achievement of this objective. Accordingly (as economic development is given high priority), the state-controlled CS sector is always involved as a tool for managing CS system quality and performance, and its parameters are always determined not only based on the CS operation framework conditions, but also on the CS nonpublic sector parameters.<sup>124</sup>

Public sector parameters must adapt to the available set of basic and regulated framework conditions to maintain the performance of the CS and economy as a whole at an acceptable level. Therefore, the CS public sector must compensate, to a certain degree, for the inefficiency of the CS nonpublic sector and market mechanism (DCF function). Hence, it must compensate for specific factors causing the above inefficiency, such as low efficiency of the corporate community, high level of aggregate economic risks, market scarcity (which is common in developing economies and imbalanced economies, irrespective of their development level), etc.

In practice, the system of compensatory direct and indirect regulatory actions directed at markets and the CS nonpublic sector (REGCOMP), along with the public sector, also acts as a tool for compensating for gaps in the market mechanism. The higher the compensatory potential of REGCOMP, the less, other things being equal, the CS public sector needs to perform the ICF function. Variations in public sector parameters and, in the first place, its share in the CS assets, always match REGCOMP variations at the same level of CS performance.

At a given time, economically sound public sector parameters are thus directly determined by:

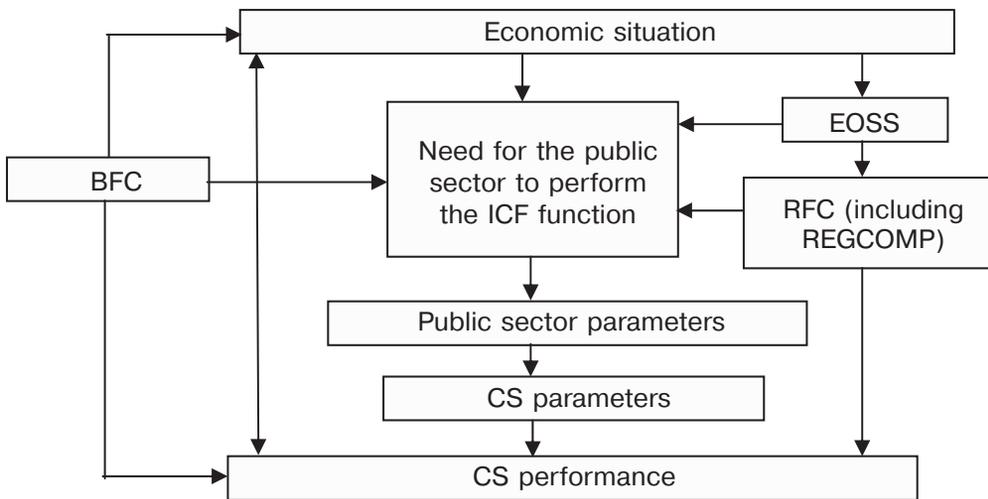
- a) the state of the economic system as a whole (including its production base and CS system characteristics);
- b) the need for the public sector to perform the function of compensating for inefficiency in the CS nonpublic sector (ICF function) given the current state of:
  - (b1) CS basic operation framework conditions;
  - (b2) the EOSS;

<sup>124</sup> Kleiner, Petrosian, and Bechenev, 2004.

(b3) ICF inefficiency compensating systems as relevant systems of regulatory actions (REGCOMP), as well as other regulatory systems directed at the processes unfolding in the economy (Fig. 3.3).

The set of parameters conforming to the economic feasibility principle and describing the state of the CS public sector are determined by the CS's ability to perform efficiently given the current condition of BFC and RFC (including the REGCOMP component), and the function of compensating for the inefficiency of the CS nonpublic sector and the market mechanism (ICF).

Basic framework conditions (BFCs) (less the superstable ones unaffected by market forces at all, for example, the size of the economic area or climate) are inertia framework conditions that are more or less susceptible to the development factor.



**Legend:**

EOSS – economic objective setting system

BFC – CS basic operation framework conditions

ICF – function of compensating for inefficiency in the CS nonpublic sector

RFC – regulated framework conditions (the economic policy and the system of regulatory actions implementing it)

REGCOMP – RFC component performing the function of compensating for ICF inefficiency

CS – corporate system.

**Fig. 3.3. Factors determining parameters of the state-controlled CS sector**

Generally, changes in the BFC as modernization progresses boost CS performance.

Usually that does occur, but not always, since, under certain conditions, the development factor is capable of strengthening the presence of the public sector in the CS by increasing its presence in the assets of capital-intensive

industries and the economy infrastructure system that are unattractive for private sector investments, like what happened in South Korea and Taiwan (see Appendices 2, 3).

Finally, changes in the CS basic operation framework conditions not directly associated with the development of the economy in question can affect the dynamics of state-controlled CS sector parameters that are optimized considering the economic, social, and political situation. This implies, for example, the state of world markets, world prices (for example, oil prices), conflicts in the social and political environment, etc. In addition, substantial changes can occur in the EOSS even when economic development is invariably given high priority, for example, when switching to an export-oriented development model. That almost always affects the CS public sector parameters.

As the economy evolves and its susceptibility to the various categories of actions affecting its process changes, substantial changes (in most cases toward liberalization) usually occur in the regulated CS operation framework conditions.

Though it is commonly believed that liberalization and privatization go hand in hand, in practice (as long as development is given high priority), a decrease in the state presence in the CS may be accompanied by compensatory deliberalization (for example, by increasing the budget share in GDP reallocation). Liberalization can prevent, to a certain degree, the state from losing its presence in the economy (like what happened in Taiwan in the 1980–1990s, see Appendix 3).

Thus, the public sector generally tends to shrink in optimized (hence, successfully advancing) modernizing economies. However, under certain conditions, the presence of the public sector in the CS assets of modernizing economies may stabilize – as has often happened – or even increase. Such an increase in the presence of the public sector in the CS is possible both when development is given higher priority and the social and political risks faced by the economy increase.

Where the development level is rather low and development is given low priority – which was typical of most underdeveloped economies before World War II – the presence of the public sector in the CS is always minor, or it can be totally lacking. The EOSS of an economy with a very low development level modified to place high priority on economic development almost always leads to statization of the economy and its CS (nationalization, investments in the public sector).

Then, state-controlled corporations and the public sector, which serves the economy as a whole and, above all, its nonpublic sector as the main modernization agent, come to the fore in the economy and CS. Such modernization agents as state-controlled economic complexes emerged in the 1950s in most former colonies and semicolonies.<sup>125</sup>

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<sup>125</sup> It is possible that the degree of underdevelopment is so high that it does not permit creating within the economy in question a state-controlled economic complex capable of playing a significant economic role without external aid in kind, like what the Soviet Union practiced in the form of free financial aid and cheap loans. This was the situation faced by many former colonies after their decolonization.

### *Negative implications of driving the CS public sector out of the economy*

The view that total privatization is economically sound is based on the assumptions that:

- 1) the inefficiency of the business community is not important;
- 2) the economy's nonpublic sector is no more inefficient, moreover, (2a) corporations (enterprises) controlled by private owners are always more efficient than those controlled by the state;
- 3) market and investment risks have approximately the same impact on the economic (and specifically investment) behavior of corporations controlled by both the state and private owners.

However, the above assumptions are far from reality. This brings to the fore the issue of harmonizing the CS parameters with CS operation framework conditions and, hence, the need arises to compensate for inefficiency in the CS nonpublic sector and the market mechanism (ICF function).

Generally, the ICF function can be implemented by:

- a) directly affecting the economic behavior of market agents (R-1 function);
- b) indirectly affecting the economic behavior of market agents by budgetary, fiscal, and monetary policy tools (R-2 function);
- c) managing the public sector and its parameters (R-3 function). When the CS public sector is decreasing, to maintain manageability of the economy, the potential of the R-1 and R-2 management systems must be increased.

As the market mechanism efficiency (MME) grows, the public sector tends to decrease (subject to the MME increment and the factors fueling it).

However, with a stable MME, the decreasing public sector lowers the CS and overall performance of the economy and incurs certain losses. These losses are greater, the lower the MME and the less developed the system of compensating for CS and market mechanism inefficiency through direct and indirect regulatory actions aimed at the CS nonpublic sector.

In practice, in underdeveloped economies, a considerable scaling back of the CS public sector always incurs losses caused by a slowdown in growth rates or by a long-depressed economy are inevitable if it is heavily destatized. Some Latin American economies are typical examples.

If the state involvement in mature economies diminishes, generally growth rates in the real sector (due to its partial disinvestment), and often GDP growth rates, are negatively affected. These adverse implications can be partially compensated for by stimulating the development of non-capital-intensive services using economic policy tools. Yet there are certain limitations in this respect associated with the nature and potential size of demand for relevant service categories.

The desire of the private sector to earn as much profit as possible directly encourages the driving of the public sector out of the CS, except for when the state needs privatization proceeds. However, privatization is not always accompanied by growth in the amount of profits in the private sector.

*First*, if segment "x" of the CS public sector builds its pricing strategy on the profit minimization principle (which often happens), then the privatization of this

segment does not lead to growth in the absolute amount of profits earned in the CS private sector; instead it is accompanied by its reallocation, but not in favor of the CS nonpublic sector as at the onset of privatization. For example, the privatization of the electric power industry accompanied by a rise in price for its products lowers the earning power of electric-power-intensive branches, like the chemical and aluminum industries, and in general weakens the competitiveness of industrial goods.

*Second*, if segment “x” of the CS public sector builds its pricing strategy on the profit minimization principle and this segment is privatized by a foreign entity, streamlining of the pricing strategy may decrease the gross profit of the CS sector controlled by local entrepreneurs (which happened in Argentina).<sup>126</sup>

*Third*, if after privatization of the basic capital-intensive sector “x” of the CS (for example, the electric power industry or railroad system), its growth rates decline (as they usually do), the gross profit of the private sector CS in the medium and long term will substantially fall short of its achievable level, given that sector “x” retained state status.

There may be situations when the government presence in certain CS segments is clearly redundant. In such cases, its downsizing, even down to zero, may be desirable. However, the available data suggests that the privatization of basic capital-intensive sectors almost always and everywhere has negatively affected growth rates in these sectors and the economy as a whole.<sup>127</sup>

### 3.6. Main subsystems and tools for managing CS performance

As illustrated above, CS performance is also managed by changing the general (budgetary, tax, monetary, etc.) economic policy both by initiating actions directly affecting CS corporations and subsystems and changing CS public sector parameters.

In this case, the economic policy to manage the CSF and performance under its extreme options may be universal or selective, though in practice all countries combine universal and selective regulatory economic measures and tools and create, within the EOMS, relevant “governing modules”.

*A universal economic policy* creates a single statutory framework and operational environment for all economic entities, and then, driven by market factors, gives freedom of action and self-organization to these entities, including CS corporations and other entities of it.

The main advantage of a universal economic policy is that it requires minimum design, implementation, and control efforts, and a relevant management and supervision apparatus.

The main drawback of a universal economic policy is that its potential to enhance the CS structure and system quality and performance is limited, since the

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<sup>126</sup> Lobantseva et al., 2002.

<sup>127</sup> Chernoy, 2003. P. 322 (See Table 12.1).

formal equality of the “rules of the game” generally preserves the CS structure and system defects.

Therefore, countries with sufficiently high CS performance (without a strong need for its enhancement), or countries without political, financial, intellectual, human, and other resources to produce and implement a selective economic policy, generally choose a universal economic policy.

A selective economic policy uses special tariff and tax treatment for CS priority segments and subsystems, provides privileged credit or investment support for them through relevant target programs and extrabudgetary funds, establishes base infrastructure and supporting facilities to boost the growth of priority CS segments and subsystems, promotes mergers and acquisitions of corporations and banks to strengthen the CS core, arranges public private partnership projects in priority sectoral CS segments and modules, etc.<sup>128</sup>

*A selective economic policy* requires a relevant EOMS module. The module must feature ramified reverse links with controlled CS subsystems. Regulation actions should be designed and “dynamically adjusted” taking into account the content and activity of specific CS subsystems. Analytical, administrative, and controlling facilities should also be in place to implement the above actions.

The primary advantage of a selective economic policy for managing CS performance is its much more powerful regulatory potential, high variability, and operational efficiency. Thus, it secures faster achievement of economic objectives, including development of the CS proper and the entire economy.

For this reason, most countries that made forced modernization a priority (the Asian Tigers is a prime example) extensively used such an economic policy. Taiwan, Singapore, South Korea, Malaysia, Indonesia, and some other countries built their successful modernization efforts on a sophisticated selective economic policy continually adjusted to the current CS and the state of the entire economy.

Generally, in a crisis, mature market economies also broadly complement the universal economic policy with selective CS management actions. So, after World War II, the UK introduced special measures under multiple exchange rate policies and tariff preferences to boost the competitiveness of corporations and defend national CS segments weakened by the war from speculative attacks and takeovers from foreign (primarily, American) competitors. In the US, the Nixon administration in a time of crisis introduced special preferences for certain CS segments and restricted prices for some goods and services. Recent stark examples of these are acquisitions, approved by the US government, of banks in crisis by their more successful “colleagues”, Merrill Lynch and Washington Mutual by JPMorgan Chase, and Wachovia by Wells Fargo.

The main disadvantage of a selective CS performance management policy is its complexity, which involves a relatively extensive management and supervision apparatus, as well as high requirements for analytical, regulatory, and controlling personnel. Furthermore, this type of management is more sensitive to such aspects as the effect of SEIs, clan groupings, and corruption on the economic policy.

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<sup>128</sup> Chernoy, 2009, No. 7.

Finally, the above “world economic policy standards” essentially restrict the selective management of CS performance. It appears that these circumstances have become one of the main causes of failure of “catch-up modernization” projects in many of African and Latin American countries.

As stated above, in most economies, including highly developed ones, the state, apart from CS management using universal and selective economic policy tools, plays the role of a major proprietor and strategic investor in the CS, often far beyond the CS segments that provide so-called “public benefits”.

In so doing, the state alone is authorized and able, via relevant legislative measures and special budgetary and extrabudgetary programs, to refocus CS system quality and performance management to the universal or selective economic policy and the use of public entrepreneurship tools.

Therefore, the EOMS comprises the following managing modules (Fig. 3.4):

Tools of the universal and selective and public entrepreneurship economic policy are used to conduct, at a different pace, **CS transformations** required for boosting its performance, including strengthening its production and financial core. Prime examples are the adoption of economic legislation encouraging mergers and acquisitions, state pressure on corporations and banks to merge in order to establish a strong CS core. This happened in the UK after World War I and in South Korea at the early stages of implementing a forced modernization program. Another example is large CS public sectors created in most postwar European economies and in most postcolonial modernizing Asian and Latin American economies.

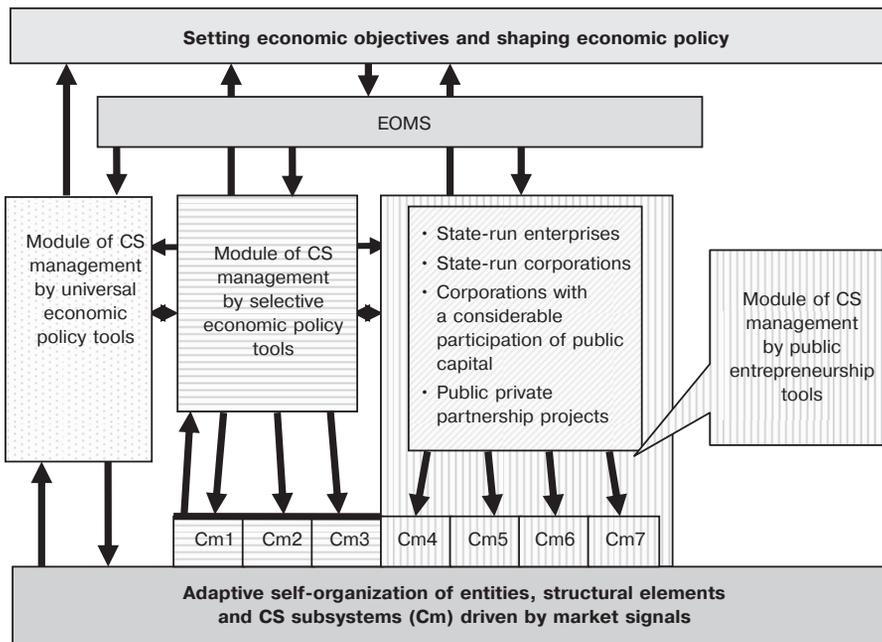


Fig. 3.4. A generalized chart of CS performance management by universal and selective economic policy and public entrepreneurship tools

The positive policy of “public entrepreneurship” enables, as shown above, the above-mentioned mechanisms to be complemented by tools of forced *CS defect compensation*.

No less stark examples are mass renationalizations and the creation of mega state-run corporations and state-run banks to compensate for the structural and functional weakness of the CS “market” core in France after World War II and the recent actual nationalization in the US of AIG, the largest insurance company, and Fannie Mae and Freddie Mac, the main national mortgage financing companies.

The set of universal, selective, and public entrepreneurship mechanisms employed to manage economic development determines the *regulatory potential of the EOMS*, which can be used to manage the CS structural and system quality, as well as performance.

The above subsystems and tools of administrative actions directed at the CSF and performance are mutually complementary components of the regulatory potential of the EOMS. Thus, the CS transformational potential (CSTP) can be expressed by the following formula:

$$\text{CSTP} = \text{CSRPT} + \text{MSRP} = \text{CSRPT} + \text{TPUP} + \text{TPSP} + \text{TPSE}, \quad (3.1)$$

where:

CSRPT is the potential of adaptive self-transformations of corporations and the entire CS driven by market signals;

MSRP is the regulatory potential of the EOMS;

TPUP is the regulatory potential of CS transformations achieved by universal economic policy tools;

TPSP is the regulatory potential of CS transformations achieved by selective economic policy tools;

TPSE is the regulatory potential of CS transformations achieved by public entrepreneurship tools.

Formula (3.1) suggests that the need for CS transformations to improve its performance and to compensate for short- or long-term inefficiency of the CSRPT required to meet its requirement necessitate changes to the economic policy by utilizing certain MSRP elements on a broader basis.

With sufficiently active CS transformations, due to the “international economic policy” prohibiting many actions of the universal and selective national economic policy, public entrepreneurship becomes one of the most important factors for implementing necessary CS transformations and the role of the TPSE component in the MSRP (and EOMS as a whole) increases.

### 3.7. System specifics of the normal evolution scenario for CSs in developing countries

The standard evolution scenario of the CS associated with an advanced economy is distinguished by:

- 1) the evolution affected primarily or exceptionally by intrasystem factors;
- 2) allowing large-scale labor conflicts as a method to balance the interests of labor and capital;

- 3) the tariff and exchange rate policy taking into account, at least, the need for balancing exports and imports;
- 4) the dimensions of GDP reallocation through regulated, essentially budgetary, channels correlated with the goal to maintain social peace;
- 5) pursuing a policy seeking to minimize market and investment risks.

The CS of a mature economy, staying within the standard evolution option, passes through a series of associated phases outlined below.

#### ***Phase 1 (before 1880)***

Corporations do not dominate in advanced economies yet. The system of secondary corporate entities (groups-concerns, cartels, syndicates) is immature. The CS credit sector is also underdeveloped. The CS core is immature and amorphous. The CS integration level is low, the system of legal restraints on the economic behavior of market agents, including corporate and noncorporate ones, is immature.

The dimensions of regulated GDP reallocation (an important framework condition) are small. The development of the colonial system promotes outflows of capital and the arrival of companies controlled by foreign capital in colonies and semicolonies. The TNC system mushrooms. Nevertheless, in the period under review, a typical CS is weakly export-oriented, with Britain being an exception since the early 19th century.

#### ***Phase 2 (between 1890 and World War I)***

Corporations predominate in the modern economy sector. The capital participation system strengthens. The system of secondary corporate entities (groups-concerns, cartels, syndicates; in the US, trusts) develop intensively. The CS core becomes more sophisticated and distinct. The credit sector expands significantly. The ties between the financial and nonfinancial sector of the CS core strengthen. The formation of FIGs commences. However, stock markets are still predominantly confined to national boundaries.

The system of legal restraints on the economic behavior of market agents develops, and attempts are made to restrain concentration of capital and economic power. Capital outflows turn into a permanent institution, expanding both in relative and absolute terms. Transnationalization becomes typical of advanced national CSs, giving birth to a ramified TNC system with affiliates and subsidiaries established abroad.<sup>129</sup>

The global CS is fully established between 1900 and 1914.

Nonetheless (partly owing to the high-level system of tariff regulation of exports and imports and national stock markets operating domestically), the CSs of mature economies until 1914 enjoys a high ESR.

#### ***Phase 3 (between the end of World War I and the 1929 crash)<sup>130</sup>***

During this period, intrasystem factors affecting the CSs of mature economies and their operation framework conditions bring about:

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<sup>129</sup> Russia's economy before World War I had been permeated by TNC affiliates, and mainly foreign banks controlled Russia's financial and credit system.

<sup>130</sup> Changes in the CSs of developed nations caused by the specific conditions of World War I are not considered here. For details on these changes, see Chernoy, 2003.

- 1) an increase in the economic importance of the CS financial sector, including due to the active development of the equity and bond market and essentially strengthened interaction between national financial markets;
- 2) weaker adherence of currencies to gold and a chronic gap between the exchange rate and PPP of the national currencies in some countries;
- 3) further concentration of production and capital as exemplified by Britain's CS, which was radically restructured in the 1920s.

The impact of intrasystem factors on the development of mature economy CSs in the 1920s is essentially paralyzed by extrasystem factors, including:

- a) effects of war;
- b) a rather painful restructuring of the wartime economy into a peacetime economy occurred in 1919–1921;
- c) the burden of World War I debts and Germany's reparation payments;
- d) the resulting imbalanced system of international financial flows.

On the whole, in the 1920s, the liberalization level of the global economy, and especially of its financial sector, does not match the level of various market and investment risks that ultimately will lead to the 1929 crash.

#### *Phase 4 (1929–1939)*

High market and investment risks are one of the main causes contributing to production and capital concentration in major industrialized countries after 1880. The arrival of cartels and syndicates – and trusts in the US – is directly associated with this. At the same time, immediately before World War I, it is clear that further production and capital concentration, by no means making it possible to significantly lower the sensitivity of the economy to market and investment risks, have adverse effects associated with a decline in the competitiveness of primary markets and a trend toward oligopolistic and even monopolistic markets driving out competitive markets.

US lawmakers responded to the emerging oligopolistic and even monopolistic markets with antitrust laws and by establishing the Federal Reserve System to address financial risks increasingly generated by the credit system. The European economy, being in a lower development stage, failed to respond likewise. As a result, after the economic management mechanisms used during World War I had been dismantled, capacities to manage the operation of the CS of developed countries and their economies had been brought again to the 1914 level.

The 1929 crash showed that the economic mechanism of advanced economies in 1929 concurrently featured a high ability to generate economically significant risks and high sensitivity to market and investment risks. The crisis also showed that mature economies could not operate normally anymore (if the crisis-led problems are put aside) without complementing the system of pure market regulation of the economy and CS operation with a more or less efficient nonmarket regulation system.

Soon the following main tools were adopted to affect the economic processes:

- 1) a monetary policy (a now almost forgotten fact: in 1930 the Federal Reserve System injected a total of 10% of GDP for 1929 in the US economy);

- 2) stimulation of demand by the state budget;<sup>131</sup>
- 3) nationalization;<sup>132</sup>
- 4) a tariff policy;<sup>133</sup>
- 5) a policy of creating investment demand by direct public investments in the economy<sup>134</sup>.

The uncontrolled market strategy gave way to a controlled market strategy, and CSs operating in an uncontrolled regime gave way to those operating in a controlled regime. The CS statization process commenced.

All these processes were set off directly by the 1929 crash. However, actually they were caused by changes that occurred in the CS system characteristics of advanced economies and their operation framework conditions long before 1929 (i.e., the effect of intrasystem factors in the relevant CSs and economies). Therefore, the changes that occurred in the 1930s both in the system of CS operation framework conditions and CSFs should be treated as changes conforming to the standard evolution path of the CSs of advanced economies.

#### *Phase 5 (Between the end of the World War II and the second half of the 1970s)*<sup>135</sup>

Phase 5 of the CS evolution in developed economies is a natural continuation of Phase 4. It is typical of a developed economy CS in this phase to have:

- 1) a sizeable percentage of the core in the CS and public sector in the CS core;
- 2) in some countries (for example, in France and Italy), a sizeable percentage of state-controlled and specialized banks in the CS financial segment;
- 3) a controllable CS operation regime;
- 4) a sizeable percentage of investments made through controlled channels of CS total investments;
- 5) a high level of harmonization of CS system characteristics and their operation framework conditions;
- 6) a high degree of CS system integration;
- 7) a sizeable ESR<sub>CS</sub>.

<sup>131</sup> By that time Keynes had not yet written his famous book *General Theory of Employment, Interest and Money*. However, public procurement of goods and services as a percentage of US GDP rose from 8.9% in 1929 to 14.8% in 1933, and, if taken together with transfer payments, from 12.6 to 21.4% (McConnell and Brue, 1992. Table “National Income and Other Statistical Data, 1929–1964”).

<sup>132</sup> Italy’s state presence in the CS surged in 1930s when the government nationalized certain bankrupt companies.

<sup>133</sup> In the US, customs duties in the 1920s accounted for about 40% of total dutiable imports. In 1930, under the Smoot–Hawley Tariff, they rose to 64–65% of dutiable imports (McConnell and Brue, 1992. P. 334).

<sup>134</sup> Even in 1939 when the crisis was over, the government percentage was 39% of gross investments in the US. (Viskovskaya et al. 1973, p. 287).

<sup>135</sup> Changes in the CSs of developed nations caused by specific conditions of World War II are not considered here. For details on these changes, see Chernoy, 2003.

After World War II, developed nations banned cartels and syndicates. This materially affected the CS characteristics of these countries and specifically the CSs of continental European countries.

Typically, a developed corporate base of the economy in Phase 5 displays:

- 1) at the initial stage, growth in the proportion of state-controlled corporations and its gradual decline afterwards;
- 2) a gradual increase in the openness of CSs and economies as a whole due to lowering of customs tariffs and attraction of foreign investment (mainly from advanced countries), and a rise in the proportion of corporations that transformed to TNCs in the CS.

Even before World War II, the CS of mature economies displayed essential systemic differences. The CSs of developed European nations were considerably permeated by cartels, while the European CS as a whole, by international cartels. World War II (like World War I) broadened the system diversity of the CS of warring countries.<sup>136</sup>

The economic recovery of Europe and Japan that ended by the mid-1950s had failed to achieve any close similarity between the CS system characteristics of the US, developed European nations, and Japan.

In the first place, this was hampered by the differences in the size of the economy, their initial system characteristics (as in 1945) and EOSSs. The EOSS underlying US economic policy did not place a very high priority on development. At the same time, between 1946 and 1976, the EOSS underlying the economic policy of most European countries and Japan gave priority to recovery, development, and economic modernization.

The economic policies of today's advanced European nations and Japan envisaged a high degree of adaptation of CS system characteristics to their operation framework conditions, but since the latter varied, also a strong variability in the CS system characteristics.

The above factors inevitably caused substantial differences in quality between the CSs of the US, Japan, and developed European nations as in 1946–1976 and even much later.

The end of Phase 5 under the standard evolution scenario of the CS of mature economies was marked by the 1976 Jamaica Conference, which introduced a new system of currency valuation built on the demonetization of gold and currency rates determined by the market. Ultimately, the system of currency value determination legitimized by the Jamaica Conference led to major changes in the GCS, promoting integration processes first at the level of financial markets, then at the level of economies as a whole.

### *Phase 6 (after 1976)*

After 1976, the CS system characteristics of mature economies evolving under intrasystem factors have also been heavily affected (which never happened before if the periods of World War I and II are ignored) by external extrasystem factors driven by various special economic interests.

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<sup>136</sup> See Chernoy, 2003.

Intrasystem factors influencing advanced economies after 1976 promoted:

- 1) balanced CS development;
- 2) maintenance of the public sector positions in the CS held in the late 1970s, where corporations controlled by private capital were limited in their capacity to replace corporations controlled by public capital;
- 3) intensification of investment exchange between the CS of mature economies;
- 4) a broader presence of TNCs in the CS, including TNCs whose operations were located primarily in developed countries;
- 5) due to factors 3 and 4 (as the development level of advanced countries is becoming comparable), the systemic unification of the CS of mature economies and also;
- 6) their system integration; and
- 7) as a consequence, mergers leading to corporate consolidations.

The stronger influence of extrasystem factors on CS development in mature economies over the last 30 years has brought about:

- a) an expansion of the CS financial sector, which in the US in the precrisis period of 2007 accounted for half the gross profit in the economy;
- b) a rise in the share of enterprise profit and conditional enterprise profit in the economy (in the form of various yields on securities investments), regardless of mid- to long-term consequences;
- c) driving out the state from the CS and investment sector without taking into account its function as a system stabilizer (to achieve a one-time increase in enterprise profit due to privatization and profit growth in the midterm by cutting taxes and social expenditures, without taking into account the ability of the recipients of this profit to use it productively);
- d) the setting-up of offshore zones and accumulation of considerable masses of “gray” (not quite legitimate) capital and criminal capital;
- e) scaling back of the system regulating interactions between national CSs and the external economic space, again regardless of mid- to long-term consequences;
- f) scaling back of the system reallocating investment resources through regulated channels without taking into account the ability of the CS private sector to make appropriate investments;
- g) actual reorientation of the economic policy toward zero growth in the real sector (as recommended in reports to the Club of Rome<sup>137</sup>) to be compensated for by expanding services and especially financing services;
- h) excessive acceleration of economic integration both within the community of mature economies and within the system of WTO member nations, since inte-

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<sup>137</sup> Reports to the Club of Rome published since 1970 indicated that nonrenewable natural resources (primary, environmental and other) of the Earth at the current rates of their exploitation would very soon, within a few decades, be irreversibly depleted. Some of the reports recommended that the global economy should switch over to resource-saving strategies of “zero” or even negative growth (see, for example, the Club of Rome, 1997).

gration processes targeting the fastest creation of an integrated global CS were treated as an end in itself, irrespective of their ability to generate market and investment risks and, hence, without taking into account their impact on the dynamics of the economy.<sup>138</sup>

The above processes have produced the following results:

- 1) exceptionally high competitiveness of primary markets
- 2) a dramatic increase in the CS need for investments to boost competitiveness;
- 3) a concurrent decline in investment support for the CS real sector of most developed economies;
- 4) in the mid- to long term, insufficient investments to maintain the development level, at least in some of modern developed countries, which is evidenced by job cuts steadily increasing in industry;
- 5) the impossibility of balancing product and financial flows without increasing debts and credit expansion;
- 6) imbalance of prices for goods and services, and if measured at current prices, an overload of the economy with services;
- 7) an increase in market and investment risks, specifically risks generated by financial markets.

All these processes ultimately ended in the current global crisis, which is likely to further weaken the positions of the group of modern mature economies in the international economy.

Phase 5 of the CS evolution of developed economies during the first three decades after World War II was distinguished by a high level of harmonization between the system characteristics of CSs with their operation framework conditions. After 1976, this harmonization gradually faded away. Eventually, the CS performance of developed economies decreased significantly, evidenced by a series of dramatic drops in growth rates in the real sector of these countries that occurred since the end of the 1990s, the permanent crisis conditions under which their financial markets have been operating, and the current global crisis.

The actual evolutionary path of the CS system characteristics of mature economies has noticeably deviated from the normal path.

### 3.8. Conclusions from Chapter 3

**1.** The CS during its evolution passes through a series of phase states with typological differences in format. Any significant variation in the CS can be regarded as a transition from one format phase to another, and the set of such changes can be regarded as a CS phase path in the space of system-critical parameters. The CS

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<sup>138</sup> The setting up of the EU was especially instrumental for unifying the CSs of European economies. Nonetheless, the Anglo-Saxon CS model and the CS model of the continental Europe had differed considerably until recently. Japan's CS also retains its peculiar quality.

phase path formed under an economic policy prioritizing economic development is a standard CS path. If during its evolution the CS keeps to the standard phase path, it means that the CS is evolving according to the standard option, otherwise it deviates from it.

2. More than 100 years ago, secondary corporate entities arrived as various groups, including concerns and precursors of modern FIGs, as well as cartels and syndicates. Market participants regarded their arrival as a response to excessive economically significant risks of various kinds, including those related to unfriendly takeovers, on the one hand, and as a way to reduce these risks for market participants to an acceptable level, on the other. The formation of the core in any large economy from corporate giants with a sizeable proportion of multibusiness companies and conglomerates in them, as well as the formation of oligopolistic types of CS sectoral CSs, is directly related to the above facts.

3. The ability of the CS to transform by self-adapting corporations and superstructures to the operation framework conditions under the pressure of market signals alone is limited. State regulation tools are required to support the transformations of CSs to enhance their performance.

4. Since the maintenance of high CS performance is given high priority, major changes in the operation framework conditions almost always call for compensatory actions that affect the system characteristics of the CS to adapt them to the available set of framework conditions as soon as possible.

5. Blocking the development of an economic crisis invariably entails a restructuring of the CS operation framework conditions by weakening or neutralizing the effects of crisis-generating factors, including by massive infusions to the CS credit sector, as well as a restructuring of the CS segments producing secondary crisis-generating factors in response to primary crisis-generating factors. In this case, they are, first, the sector of financial institutions and, in particular, the credit system. A postcrisis economic recovery requires the elimination of CS inefficiency by harmonizing its format and operation framework conditions. Hence, this necessitates management of both the CS system characteristics and the operation framework conditions that are external to the CS and adjustable.

6. The presence of the CS public sector significantly simplifies harmonization between the CS system characteristics and its operation framework conditions. When economic development is given high priority, the CS public sector performs as a tool to manage CS system quality and performance. In this case, its parameters are determined taking into account not only the factors that are external to the CS, but also the CS nonpublic sector parameters. In this context, the public sector performs a certain part of the ICF of the CS nonpublic sector.

7. Apart from the public sector, the system of direct and indirect compensatory regulatory actions aimed at the markets and the CS nonpublic sector can compensate for system deficits and CS inefficiency. In this case, the greater the compensatory role of the public sector, the lower the need to compensate for CS system deficits through regulatory actions directed at the markets and the CS nonpublic sector.

8. As the need to compensate for CS inefficiency decreases, so does the need for the public sector as a tool to compensate for this inefficiency. Consequently,

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other things being equal, the need for state involvement as a strategic owner in the economy as a whole and in the CS in particular decreases. At the same time, a scaling back of the public sector with a persistently inefficient CS automatically lowers the overall performance of the economy and leads to certain losses.

**9.** Tools of universal and selective economic policy and public entrepreneurship (CS public sector) are employed to manage CS performance. Although it is difficult to manage CSs using selective economic policy tools and through the public sector, which are highly affected by SEIs and corruption, there is no alternative for these governing tools when priority is given to economic development and enhancement of CS performance.

**10.** In the first three decades after World War II, the CSs of developed economies moved along the phase path with highly harmonized CS system characteristics and operation framework conditions. After 1976, when the Jamaica Conference legalized demonetization of gold, this harmonization gradually faded away. Eventually, the CS performance of developed economies after 1976 significantly declined, evidenced by a series of dramatic drops in growth rates in the real sector of these countries that occurred since the end of the 1990s, permanent crisis conditions under which their financial markets have been operating, and the current global crisis. The actual evolutionary path of the CS system characteristics of mature economies has noticeably deviated from the normal path of their evolution.

# MANAGEMENT OF CORPORATE SYSTEM PERFORMANCE IN DIFFERENT STAGES OF A MODERNIZATION CYCLE

## 4.1. Institutional specifics of modernization agents and their input into the CS modernization process

A modernization agent is an institutional investor capable, under the given conditions, of activating the economic modernization processes of other economic entities, institutions, and the entire economy. The state (public capital), local private capital, and foreign capital can perform the functions of an economic modernization agent. Foreign investors may act as economic modernization agents provided that they, directly or through the intermediation of local modernization agents, invest in the economy and import new technology. In this case, the economic behavior of local private capital and foreign capital acting as a modernization agent may or may not be regulated.

### *Initial Modernization Stage*

In old mature economies (the Netherlands, England, Germany, the US, France, small developed countries of Europe, and, with reservations, Japan) at the stage of their economic modernization, local private capital acted as the main modernization agent.

The involvement of private capital acting as a modernization agent in an unregulated regime was characteristic of the English model of economic modernization before World War I.

Private capital operating in a regulated regime as the main economic modernization agent is a characteristic feature of the Japanese economic modernization

model (another extreme approach). The Japanese economic modernization model found almost no place for foreign capital<sup>139</sup>.

In old Russia before 1917, public, foreign, and local capital played the role of modernization agents. In the economic history of old Russia, the input of the above agents in the modernization process varied significantly from stage to stage. In the era of Peter the Great, when Russia embarked on economic modernization, the state was the leading modernization agent, while local private capital operating in a regulated regime played an auxiliary role.

The reforms undertaken during the reign of Alexander II included abolishment of serfdom, judicial reform, etc. Since then foreign and local capital were the main agents of Russia's economic modernization operating in a deregulated regime. The role of local capital in the economic modernization process has grown steadily ever since.<sup>140</sup>

Between 1861 and 1914 inclusive, the Russian state was modernized primarily by management of the operation framework conditions of a burgeoning CS. These comprised customs duties, foreign exchange, and financial policies to attract foreign capital. The policies were embodied in the reforms undertaken by Sergei Witte, a prominent Russian politician. The modernization efforts also increased the willingness of domestic capital for investments in production. As a modernization agent, the Russian state was mainly involved in railroad construction projects.

It should be noted that economic modernization, due to its comparatively rapid pace, unfolds unevenly in different territorial, functional, and institutional divisions of the economy. For instance, modernization at its initial stage almost always develops unevenly across the country. A modernization process at a certain stage usually deepens differences in economy and CS development levels rather than reducing them in different regions where modernization often unfolds in a patchwork manner.

Similarly, gaps in the modernization level of CS sectoral segments tend to widen at the initial stage of modernization. Agriculture, the small-scale production sector, and the bulk of services sector lag in terms of the pace of modernization, as often do all capital-intensive sectors where the state is a passive modernization agent.

Eventually, the above processes split the economy into more modernized and less modernized sectors. The lower the starting development level of the economy, the more pronounced this tendency. Therefore, most developing economies with a low starting development level are split into modernized (organized) and conventional (nonorganized) sectors.

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<sup>139</sup> See Kuznetsov et al., 1988. The basic elements of McArthur's Plan comprised Japan's demilitarization and restructuring of its political and economic system to reduce the aggregate subjectness by implementing a military occupation administration policy. Economic aid to Japan under McArthur's plan was channeled through GARIOA (Government and Relief in Occupied Areas) and EROA (Economic Rehabilitation in Occupied Areas) funds in the form of staple goods. Within six years, until 1951 inclusive, Japan had received goods worth US\$1.8 billion through GARIOA and EROA funds.

<sup>140</sup> Data book ..., 1914.

Usually, all the above tendencies are most pronounced where the main modernization agent is foreign capital and public capital plays a comparatively minor role. Usually foreign capital reaches a few sectors of the host economy and its CS, primarily sectors with high export potential. At least at the initial stage, modernization progress varies from sector to sector. The economy exhibits a layered pattern, where highly modernized corporations in the export-oriented branches coexist with archaic production in the nonorganized sector.

It appears that no economy has been modernized with foreign capital alone. This happens mainly because foreign capital reaches an underdeveloped economy to earn the highest profits from operations in domestic markets or from the manufacture of export-oriented products rather than to modernizing the host economy. The modernization of an economy serviced by foreign capital is a by-product of the latter's activity. As a matter of fact, foreign capital in regard to investment almost always behaves in a highly selective manner. The lower the economic modernization level, the lower, other things being equal, the willingness of foreign capital to invest in this economy, the higher the level of its investment selectivity, and the higher is its demand for privileges. In the long run, all these make the "modernization services" of a foreign institutional investor more costly.

Where the economy is at the initial modernization stage, foreign capital usually exhibits a willingness for investment almost exclusively (here and below only direct investment is implied) in the CS sectoral segments related to the raw materials extraction industry.

That happens only if:

- there is demand for relevant raw materials in the world market;
- raw material extraction and transportation costs are relatively small;
- investment risks are also relatively small.

At the intermediate stage of economic modernization, foreign capital demonstrates lesser investment selectivity, but only if certain conditions are met, namely:

- an acceptable level of investment risks;
- when investing capital in CS sectoral segments targeting predominantly or exclusively the domestic market, profits can be expatriated without any significant losses stemming from an undervalued exchange rate of the national currency;
- conversely, when investing in CS sectoral segments targeting the international market, exports are implicitly subsidized through an undervalued currency rate.

This is typical of primary economic modernization when local capital, because of the underdeveloped economy, is incapable of performing the functions of an economic modernization agent, while foreign capital has no willingness to perform these functions beyond a minor part of the host economy and often, in fact, lacks the necessary financial capacity for accelerated economic modernization.

This was exactly the situation experienced by most formally independent developing countries before World War II (1939). However, at that time it was, to a certain extent, taboo for the state to be actively involved in the economic life of developing countries. There were attempts to eliminate this taboo even then, but outside the Soviet Union they were sporadic.

After World War II, the taboo was lifted on state participation as an economic modernization agent in economic life. In a situation where the local private sector

was inefficient as an economic modernization agent and modernization goals were unachievable with the aid of foreign capital, most developing countries chose the public sector as the main economic modernization agent.

The following circumstances, apart from those mentioned above, contributed in the 1950–1960s to transform the state into the main modernization agent in most developing countries:

- 1) significant fiscal and external (foreign aid, loans) resources controlled by the state;
- 2) a lack of any efficient credit system in developing countries capable of extending investment loans to private borrowers;
- 3) from the viewpoint of potential foreign lenders, low, almost zero, credit ratings of almost all potential borrowers in the CS private sector of developing countries.

The public sector emerged on the economic scene in most developing countries at the beginning of the modernization process of their economies (the 1950–1960s), because under the given economic conditions, no alternative strategic investor and economic modernization agent existed. It had no rivals. A very similar situation existed during the first stages of reforms in Russia implemented by Peter the Great.

As an agent of economic modernization, the public sector initiated modernization processes in the CS nonpublic sector of developing countries or at least created conditions fostering modernization processes in the CS nonpublic sector. As a result, a segment capable of performing modernization functions had originated within the nonpublic sector of the economy, primarily in the CS nonpublic sector. Thus, the public sector, while operating as a modernization agent, was fostering its own competitors in the private sector capable of performing the same functions.

From the start, the emergence of public enterprises and companies controlled by public capital on the economic scene of developed countries had been prepared by the lengthy evolution of the nonpublic sector, especially the evolution of the CS nonpublic sector of these countries.<sup>141</sup>

In most cases, the development of the public sector had given birth to a CS segment within the nonpublic sector of developing economies that was capable of performing economic modernization agent functions independently. If an economy operates in a market regime and no policy is pursued to drive out the CS nonpublic sector, as was done in the former socialist countries, then the public sector will always act toward the local nonpublic sector as a factor encouraging CS public sector development and as a sort of nutrient broth.

The CS sector controlled by foreign capital does not always encourage the development of the SC sector controlled by local capital. This is understandable

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<sup>141</sup> Sectors of the economy featuring high capital intensity and high investment risks emerged due to the evolution of the CS nonpublic sector driven by intrasystem factors. Under certain conditions, like high market and investment risks, such sectors fostered the replacement of nongovernmental investors by governmental ones and nonstate owners by the state, which played the role of a strategic owner.

The state assumed the functions of an investor in the most capital intensive CS sectors marked by high investment risks.

because the sector controlled by foreign capital acts toward the sector controlled by local capital as a rival usually having technological, organizational, and commercial supremacy.

### *Secondary Modernization Stage*

The need for recovery and remodernization of the economy first arose in the Soviet Union after the Russian Civil War. It took five to six years to meet this challenge and with its extended option – GOELRO (the nationwide electrification) plan – more than a decade. Efforts in the Soviet Union in the first half of the 1920s to employ private and foreign capital – the latter used mostly through concessions – to meet the challenges of economic recovery and modernization were unsuccessful.

In market economies, the problem of secondary modernization first emerged on a large scale after World War II, which drastically undermined the ability and willingness of the private sector to invest. Private capital in European countries during that period lost a significant part of its ability to play the role of a leading agent of the modernization process. As a result, public capital started to play a significant role in postwar CS secondary modernization in almost all Western European countries, including France, Italy, Great Britain, and West Germany.

Great Britain is a good example of this. Since, after World War II, the ability of the British private sector was apparently inadequate to perform as a modernization agent in capital-intensive CS sectoral elements, the state assumed this role. In other words, the British state almost for the first time since the 16th century (if no account is taken of its function as a strategic investor in the war industry during World War I and World War II) added to its other functions that of a major investor and economic modernization agent, substantially complementing the CS private sector in this respect.

In France, government activity as a strategic investor when implementing postwar economic recovery and remodernization programs was even higher than in Britain.<sup>142</sup> Both France and Britain implemented major recovery and remodernization programs within a short time after the state's proportion as a strategic owner dramatically increased in capital-intensive CS sectoral segments. That was the main cause of major nationalizations in these countries in the postwar period.

It appears that the current economic crisis will also bring about a wave of secondary modernization in the CSs of some economies, including the US. Moreover, a modernization program of the US economy was already proposed in the 2004 elections by John Kerry, the Democratic presidential candidate. This program envisaged a number of radical steps and, specifically, the repatriation of a significant amount of American TNC capital to the US.

Without a doubt, a remodernization program of the CS of Russia's economy can hardly be implemented without state participation.

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<sup>142</sup> Chernoy, 2003. P. 218.

## 4.2. Factors determining specific requirements for CS performance management at the modernization stage

High variability is a principal feature of a developing modernizing economy. At the initial stage of the modernizing cycle, this usually implies an economy with an undeveloped, often deficient CS, whose input into GDP is small compared with the input of a nonorganized sector composed of individual ownership entities. At the final stage of the modernization cycle, it is basically a different economy with a developed CS comparable in terms of efficiency with developed economies.

At the same time, slowly changing CS operation framework conditions undergo radical changes.

Thus, at the initial stage of the modernization cycle, the business community servicing the economy always demonstrates rather low efficiency. In the course of modernization, its efficiency increases and usually becomes quite high at the end of the cycle. Such framework conditions as the CS development level, including the technological level, export capacities, dependence of the CS on imports, the level of accumulation, etc., are substantially changed in the course of the modernization cycle. Concurrently, the structural and system quality, economic subjectness level, and usually the CS efficiency increase.

Economic modernization goals are in principle reached only when the economy and the CS servicing it develop in a catch-up regime and at a pace faster than in developed economies, which is the “modernization benchmark”. Modernization goals can be achieved by pursuing an economic policy that places a higher priority on development and economic modernization than on other goals. Hence, in terms of content, a modernization-oriented economic policy differs significantly from an economic policy not oriented toward catch-up development.

The implementation of any option of the economic policy presumes the use of certain tools adapted to the main content of the economic policy.

Under a modernization-oriented economic policy, these tools must be instrumental in addressing the following key objectives:

- 1) raising funds necessary to meet development challenges when an immature market mechanism is conceptually limited in its capability to do this;
- 2) harmonizing the operation conditions of the national CS and economy as a whole, seeking modernization with the external economic environment. In this case, the actual performance of the existing market mechanism is taken into account together with the capacity to extract resources from the external economic environment to meet development challenges;
- 3) compensating for the inefficiency of an underdeveloped market mechanism and various subsystems ensuring its operation, including compensation for the influence of a low structure and system quality of the CS on its performance – a conceptually important feature;
- 4) maintaining at any given moment the efficiency of the CS at the highest possible level under the given conditions, which presumes a high level of the economic subjectness of the state ensuring a policy aimed at adapting the CSF to the CS operation framework conditions.

An efficient option of a modernization-oriented economic policy that ensures adaptation of the CS parameters to an economic environment that changes significantly over the modernization cycle shows considerable variability. The same is applicable to the targets of relevant regulatory actions and the tools of this policy.

A high level of CS performance can be achieved by harmonizing its system characteristics with the operation framework conditions, where the best use is made of the  $ESR_{CS}$  and  $ESR_{St}$ , which vary from CS to CS and change over the modernization cycle. Therefore, there is no such universal CSF option and economic policy option that would ensure the best CS performance at all stages of the modernization cycle.

Each stage of the modernization cycle matches its relevant optimum CS and economic policy option. As the economy moves along the modernization path, the CS also moves along a certain phase path and passes through a number of interrelated conditions.

At different stages of the modernization cycle, the CS is managed by harmonizing, as much as possible, the parameters of the CS phase path and the modernization path parameters of the economy passing through the modernization cycle. As mentioned above, this challenge can be met by managing the system of CS operation framework conditions to compensate for the effects of framework conditions that negatively affect the economy. Such management also includes compensation for inefficiency in different subsystems ensuring the operation of the market mechanism and reproduction loop.

As mentioned earlier, the following tools are used in various combinations in compensation efforts:

- 1) a monetary policy;
- 2) a policy regulating the exchange rate of the national currency;
- 3) a policy of reallocating financial flows through regulated channels, including the state budget;
- 4) tariff and nontariff regulation of exports and imports;
- 5) a policy of regulating capital imports and exports;
- 6) a policy of affecting price dynamics, level, and structure;
- 7) a policy of influencing processes unfolding in the economy through public sector channels;
- 8) a policy of directly regulating certain categories of market transactions.

The regulating resource of the EOMS and, accordingly, a specific economic policy option is greater, the wider the tools used for regulatory actions directed at the economy and its CS and the higher the intensity of some categories of regulatory actions. Since the system of economic objective setting is built in conformity with the principle of economic development priority, the feasible size of the EOMS regulatory resource, other things being equal, is greater, the stronger the effect of factors negatively affecting CS performance.

The need for regulatory actions affecting the CS is greater:

- the higher the inefficiency of the business community;
- the lower the CS structural and system quality;
- the higher the inefficiency of the economy;
- the higher the market and investment risks;

- the less efficient the market mechanism operation (irrespective of the causes of its inefficiency) ;
- the less efficient the market pricing system;
- the higher the economy's inclination toward inflation caused by intrasystem factors, excluding the excess money supply factor;
- the bigger the gap between the need to finance investments in development and economic modernization and the ability of the CS market sector to accumulate investment resources to this end;
- the bigger the gap between export and import requirements, etc.

At the start of the modernization cycle, the need for optimization regulation of CS operation is apparently higher than at its end.

Chapters 2 and 3 state that any market economy has a system of CS market operation regulation and complementary systems of nonmarket regulation of CS operation. Therefore, the final efficiency of economic processes in the CS of the economy ( $REEP_{fin}$ ) at any given moment is a function of the efficiency of the market regulation system ( $REEP_m$ ) and nonmarket regulation system ( $REEP_{nm}$ ). Thus, the efficiencies of the market and nonmarket regulation systems in a first approximation are summed up as

$$REEP_{fin} = REEP_m + REEP_{nm}. \quad (4.1)$$

Hence, if the efficiency of market regulation of the CS transformation in the course of economic modernization increases, while the aggregate efficiency of regulation during the modernization cycle is stable, then the need for CS nonmarket regulation gradually decreasez. Hence, the adequate size of the regulatory resource for the nonmarket regulation of CS operation during the modernization cycle also decreases (Scenario 1).

If the need for CS regulation during the modernization cycle decreases (which usually happens when development becomes a lower-priority goal) then the need for CS nonmarket regulation during the modernization cycle decreases faster than when the ultimate regulation efficiency is stable. (Scenario 2).

Thus, during economic modernization, conditions are created for gradually decreasing the intensity of regulatory actions affecting the CS, i.e., for its gradual liberalization and resulting privatization. In addition, during economic modernization, conditions arise for changing CS operation framework conditions and its format due to the stronger presence of the nonpublic sector.

If during economic modernization the growing efficiency of CS operation market regulation is offset by a reduction in the regulatory resource of the CS nonmarket regulation system, conditions are created for essential stabilization of economic growth rates. The economic modernization paradigm does provide for such "compensation balancing".

In practice, as the economy develops, resource limitations, capital intensity, and research intensity growth factors of production and other constraints step in that sooner or later slows down economic growth rates. Nonetheless, the experience of Taiwan, South Korea, India, China, and Iran suggests that high rates of economic growth can be stabilized throughout the modernization cycle.

This occurs when the growth processes of CS market regulation efficiency are balanced and the regulatory resource of the CS nonmarket regulation system is reduced. The market regulation efficiency of the economy and the related CS increases gradually. When the regulatory resource of the CS nonmarket regulation system dramatically decreases, the economic inefficiency created by this in principle cannot be fully compensated by the growth in efficiency of the CS market self-regulation (always inertial) system (see Formula 4.1). A dramatic decrease in the regulatory resource of the nonmarket regulation system will be accompanied by a dramatic decline in the ultimate CS regulation efficiency with inevitable negative economic implications.

This is evidenced by some countries that have implemented IMF recommendations, which are actually mandatory eligibility conditions for loans provided under IMF stabilization programs. These recommendations are aimed at deregulating the economy within a short time. Compliance with IMF recommendations has expectedly had an unduly adverse impact on the CS performance and dynamic potential of relevant economies. In some cases they have brought about a substantial, albeit temporary, decline in GDP.

For the same reasons, the restructuring of the developing economies in compliance with the Washington Consensus has brought about similar consequences. Under the Washington Consensus, the regulatory resource of nonmarket regulation of the operation of the CS and the entire economy was to be reduced within a short time irrespective of the maintainability of the acceptable aggregate level of the ultimate efficiency of regulation by market and nonmarket mechanisms.

The actual accomplishment of the economic modernization process is usually a downgrading of the economic development priority. However, the development priority may continue to be high after the end of the modernization cycle, evidence that the economic policy conforms to the economic modernization paradigm. The remodernization process in developed economies that was launched after World War II had ended by the mid 1960s. However, the economic policy of nearly all developed countries, excluding perhaps the US, until the end of the 1970s had conformed on the whole to the economic modernization paradigm. The latter had been squeezed out in developed countries by the economic neoliberal paradigm (giving priority to a high level of economy liberalization, privatization, and openness) only in the 1980s.

The economic policy of India, whose economy already has a large-scale modernized sector, so far largely conforms to the economic modernization paradigm (see Appendix 1).

The modern Chinese economy differs from a typical modernizing economy only by a comparatively high level of formal openness. However, if the size of this economy, and the position of state-controlled companies and banks in China's CS and economy as a whole, the undervalued exchange rate of the Chinese yuan and the phenomenon of so-called domestic protectionism (in the form of formal and informal barriers to the movement of goods and services from one Chinese region to another) are taken into account, there are strong grounds to regard the modern Chinese economy as a modernizing

economy. This is so at least because its real openness is hardly higher than the economy of France in the 1970s or that of South Korea in 1996, immediately before it had been reformed under pressure from the IMF. The Chinese economy as a modernizing economy is similar to the economy of South Korea in 1996 and most European economies, including France and Italy, in the period around 1975. It is quite significant that, although China's economy has already passed through the modernization cycle, its economic policy is based on an EOSS with a high degree of priority on economic modernization and development.

The above examples show that as long as economic modernization takes priority over liberalization, privatization, and integration, it appears economically feasible to maintain the regulatory activity of the state at a level at which the investment problem is at least effectively addressed and CS parameters, including its structural and functional characteristics, are effectively influenced.

The considerable state presence in the CS, including the banking sector, in France and Italy in the 1970s, South Korea and Taiwan about 1990, and China at present are not accidental, since the need, if any, for the involvement of the public sector with its functions is considerably governed by highly efficient state-controlled corporate entities as tools affecting CS parameters and the processes unfolding in the economy.

The success of economic modernization that is still given high priority after the modernization cycle is over and the objectives of catching up development are mainly or fully achieved depends on:

- 1) a continuation of the policy of adapting the CS system characteristics to the existing set of its operation framework conditions;
- 2) a continuation of the policy of neutralization of or compensation for the effects of factors negatively affecting the CS;
- 3) a considerable residual state presence in the core of CS nonfinancial and financial sectors, specifically in the core of the CS credit segment.

### 4.3. Adequate size of the state-controlled CS sector at different stages of the modernization cycle and factors determining it

A developed market sector of the CS usually itself reproduces a base for its development. However, there is a level of underdevelopment of the CS market sector (or, to be more exact, of the part of it controlled by local private capital) that does not allow producing a base for its own development in a modern way, or it is done extremely slowly.

In the latter case, an economy can be modernized rapidly by injecting in it and, especially, in capital-intensive basic sectors, including the infrastructure, outside capital, foreign or public. In the mid-20th century, the CS private sector of modernizing economies could achieve development goals with the available set of

basic operation framework conditions within an acceptable time only with the aid of the public sector.<sup>143</sup>

Accordingly, developing countries, including India and such efficiently export-oriented economies like South Korea and Taiwan (see Appendices), urgently needed public sector functions in the CS at the initial stage of modernization.

In the 1950s and partly in the 1960s, the state-controlled CS sector of developing economies performed the following *basic functions* at the initial stage of modernization:

- 1) the function of the main – in the 1950s, virtually the sole – modernization agent;
- 2) the function of creating a production and infrastructure base for developing the private sector;
- 3) the function of promoting the development of the CS private sector.

The public sector performed the above basic functions along with some *additional functions*, including:

- 1) the function of remedying the inability of the nonpublic CS sector to finance investments in production, especially in capital-intensive sectors (the electric power sector and heavy industry, infrastructure) and in major production and infrastructure facilities with a long construction cycle and invested capital depreciation cycle;
- 2) the function of remedying the inability of the credit system of the nonpublic sector to mobilize free financial resources and use them efficiently to finance economic development;
- 3) the function of remedying the inability of an inefficient market of non-governmental producers and suppliers to establish economically reasonable prices for strategically critical goods and services by setting up state-controlled corporations that manufacture, procure, and distribute relevant products that are especially scarce or whose need is covered, mainly or fully, by imports<sup>144</sup>;
- 4) the function of streamlining the present system and lowering the inflationary potential of the economy by the establishment of a system of controlled prices in the public sector and by pressure on the prices of the CS nonpublic sector exerted by state-run producers and sellers of relevant goods and services.
- 5) the function of enhancing the competitiveness of nongovernmental producers in the foreign market by establishing low prices by state-run corporations for produced and sold basic goods and services, for example, electric power, oil

<sup>143</sup> Aid and loans primarily of American origin were channeled in the 1950s–1960s to certain developing economies in significant amounts. However, private foreign direct investment, due to high risks and limited free capital in international financial markets, were not high during that period. So, the total amount of foreign direct investment in Taiwan's economy, including the input of Chinese emigrants, in 1952–1959 was a mere US\$20.27 billion as opposed to US\$15.47 billion in 1960 alone during the first investment boom.

<sup>144</sup> So, in Taiwan until the end of the 20th century, imports of oil and oil products and production and marketing of oil products had been actually monopolized by Sinopec-China Petroleum (see also below).

products, or water supply system services, as well as by managing the exchange rate<sup>145</sup>;

- 6) the function of reducing economic uncertainty and, hence, market and investment risks, which increases the willingness of the CS private sector to invest and extends CS activities;
- 7) the function of accumulating technological resources when the CS private sector is unable to do this;
- 8) the function of transferring technological resources to the CS nonpublic sector.

The ability of the CS public sector to efficiently perform the above functions at the initial stage of modernization of developing economies was limited by inadequate production facilities of the existing public sector in terms of output and range of goods and services.<sup>146</sup> Therefore, an effectively solved modernization problem in the initial stage of economic modernization – like there was in India, South Korea, and Taiwan in the 1950–1960s – meant a rapid rise in the economic mass of the public sector and its production capacity, bringing its modernization to a level enabling efficient performance of the above functions.

Hence, the modernization problem at the initial stage of modernization of developing economies in the 1950–1970s was tackled in the following sequence:

- 1) first, structural and technological modernization of the CS public sector based on rapid growth in production in this sector;
- 2) later, structural and technological modernization of the CS nonpublic sector;
- 3) lastly, structural and technological modernization of the noncorporate sector.

At its initial stage of modernization, an economy generally shows a very high degree of disequilibrium (like in India, South Korea, and Taiwan in the 1950s<sup>147</sup>). Therefore, an increase in their equilibrium was a necessary condition for dynamizing the economies. This goal could be achieved both by increasing exports and, accordingly imports, and by developing the import-substituting CS industrial sector. In the 1950s, to achieve this goal, emphasis was placed on the development of import-substituting industries using the available capacity of the public sector. It was indicative that Taiwan's exports had been increasing in 1953–1960 more slowly than GNP and industrial production.<sup>148</sup>

The EOSS in the modernization stage of developing economies is based on development priority. For this reason a modernizing-type economic policy generally does not focus on driving private capital out of the economy, or, conversely,

<sup>145</sup> For example, electric power and fuel prices in Taiwan for several decades had been among the lowest in Asia (Taiwan: Reference Book, Moscow, 1993. P. 39) because the producers and distributors were public companies. At the same time, the national currency exchange rate of most modernizing economies, including India, South Korea, and Taiwan, for several decades had been maintained at a level much lower than the PPP (see Dolotenkova, 2001).

<sup>146</sup> For example, Taiwan's electric power industry facilities were entirely controlled by the government throughout the modernization period. But immediately after 1949, these facilities were too insignificant. In 1952, Taiwan's electric power facilities in total produced only 284,000 kW.

<sup>147</sup> See Appendices. Before Japan's capitulation in 1945, Taiwan's was part of the Japanese Empire and Japan was its main economic partner. In 1945, economic ties were broken.

<sup>148</sup> Taiwan's exports in 1954–1960 had grown only by 28% (Economic Yearbook of the People's Republic of China, 1977).

on driving public capital out of the economy, in principle.<sup>149</sup> It generally targets optimization of the positions of both these sectors across the economy and in the CS.

Another important challenge tackled during modernization in India, South Korea, and Taiwan was to optimize the presence of private and public capital in the CS and the system of economic entities as a whole and to rationally split the economic functions between them.<sup>150</sup> Under this optimization policy, the state-controlled CS sector first advances faster than the CS as a whole and over time the CS sector controlled by private capital outstrips the public sector and CS as a whole.<sup>151</sup>

However, the rapid pace of development of the SC nonpublic sector tends to erode the public sector positions in the CS and entire economy only when the ability of the CS private sector to finance investment programs of all categories is comparable with that of the public sector.

Even if the private sector has funds to finance the development of capital-intensive sectors, it may lack the willingness to invest, as evidenced by modern Russia. Development goals given high priority can be efficiently tackled when there is a large CS public sector and it is modernized before other sectors. This implies that the absolute output in the state-controlled CS sector increases rather than decreases.

For this reason, the modernization of different, at first glance, economies like India, Iran, Turkey, South Korea, Taiwan<sup>152</sup>, and China has been accompanied for a long time with growth in public sector output in absolute terms. The development of the CS public sector creates conditions for faster development of the CS public sector and those CS sectoral segments and subsystems where private capital shows better results than public capital. Therefore, the public sector is functionally necessary and its growth is economically justified not only in a general economic, but also in a purely entrepreneurial sense.

Had the presence of a large CS public sector substantially inhibited foreign direct investment, choosing between the public sector and the CS sector with foreign capital participation would have been inevitable. Had foreign capital been

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<sup>149</sup> Since during the agrarian reform part of the land was bought out using shares in state-run enterprises, in the early 1950s Taiwan's public sector contained mixed enterprises with predominance of public capital. In the early 1950s, Taiwan's corporate sector of economy was totally controlled by the government.

<sup>150</sup> It was mentioned in Chapter 3 that the lower the market and investment risks, the higher the technological level of the economy, and the higher the efficiency of entrepreneurs, the broader, other things being equal, the range of sectors that private capital is able to service more efficiently than public capital.

<sup>151</sup> In 1975, in Taiwan state-controlled companies produced 9.8 times more industrial products than in 1952. In the same year, private sector enterprises produced 5.6 more industrial products than the island's entire industry in 1952. India (see Appendix 1) and most modernizing economies showed a similar production ratio in the CS public sector to that of the private sector.

<sup>152</sup> Development programs for the electric power industry and the infrastructure of the CS and nonpublic sector operation of the economy were to be implemented first throughout the development stages of India, Taiwan, and South Korea and they created conditions for developing the CS nonpublic sector.

preferred, the public sector would have shrunk rapidly or been driven out of the economy entirely.

The examples of Taiwan and South Korea and later India and China evidence that a large CS public sector in the economy does not adversely affect the willingness of foreign investors to invest in this economy. Moreover, the presence of a large CS public sector in the economy can help attract foreign capital if:

- 1) the public sector provides infrastructure support for CS private sector operation at low prices;
- 2) state-run corporations supply relatively cheap electric power, oil products, materials, etc., to the entire economy, including the CS private sector;
- 3) state-controlled banks are capable of providing working capital and even low interest investment loans to foreign investors.

Paradoxically, it appears that with high priority placed on development, foreign capital attracted to the economy and CS can help retain public capital in them. This happens because foreign capital weakens the need for privatization as a method of generating budget revenues and upgrading the economy's technology level. Exactly this happened in the course of economic modernization in Taiwan and partially in South Korea and China.

The higher the technological level of the economy, the less profitable and attractive for private investors are investments in capital-intensive CS sectoral segments. Consequently, the higher the technological level of the economy, the higher, under the fixed investment potential of the CS private sector, the demand for public financing of development of capital-intensive sectors and the need for state involvement in the CS. This is one of the key factors promoting the retention of state involvement in Taiwan, India, Malaysia, South Korea, and some other countries and their CSs at the stage following primary modernization.

For example, the need for enterprises using state-of-the-art technology, and thus being very large and capital-intensive, triggered the arrival of the state in the second half of the 1970s in such CS sectoral segments of Taiwan as the iron-and-steel and shipbuilding industries.<sup>153</sup> A switch to the use of nuclear power in modernizing economies also generally prolongs the presence of the state in the electric power industry and, consequently, in the CS, since under the given economic and financial conditions, only the state was capable of building a nuclear power plant. This happened in South Korea, Taiwan, and India, as well in France when its economy in terms of parameters resembled a modernizing economy.

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<sup>153</sup> After World War II, the state in many moderately developed and even mature economies arrived in such capital intensive CS sectors like the electric power and coal mining industries, and metallurgy. Two economic reasons were behind this move:

- 1) The need for enormous spending on the technological upgrading and development of the relevant branches.
- 2) This spending in the first 10–15 years after World War II was too heavy for the CS nonpublic sector. This was typical of the majority of the European countries. At the initial stage of modernization, in Taiwan and South Korea some industry sectors, including the iron and steel industry, lacked big enterprises, and they had to be created on a “greenfields” basis. Because of the financial weakness of the CS private sector, only the government could cope with the challenge. And it did (see Appendices).

Eventually, as a result of the above factors, conditions for economically feasible contraction of the CS public sector under a privatization program are created only after economic modernization and when the CS private sector financial capacity reaches a level enabling economically efficient privatization of public assets. This pattern was employed in Taiwan, South Korea, and China, and it is now being employed in India.

However, it is characteristic that South Korea and Taiwan embarked on mass privatization only under external pressure with a downgraded economic development priority. As long as the EOSS in a modernizing economy places high priority on economic development, there are no conditions for removing the state from capital-intensive CS sectors and from the credit system sector financing capital-intensive and low profit CS sectors.<sup>154</sup>

#### 4.4. Conditions for efficient use of the economic potential of small and medium businesses at various stages of the modernization cycle

Often small (all categories) and medium enterprises (firms) are not distinguished from each other. As a matter of fact, small and medium enterprises (SMEs) comprise several categories of enterprises whose system qualities vary significantly in size and form of ownership.<sup>155</sup> International statistics breaks down small and medium firms into micro-, small, and medium.

In this respect, the statistical classification employed in South Korea is typical. Under this classification, microfirms employ nine or fewer people<sup>156</sup>; small, 10–49; and medium firms, 50–300.

In 2004, in South Korea there were 230,000 small firms and 84,000 medium firms employing in total 10.41 million people.<sup>157</sup> Furthermore, the nonagricultural sector of South Korea in 2004 comprised 2.68 million small businesses, primarily of the family type, which employed about 10 million people.<sup>158</sup> Thus, microenterprises in South Korea employed about as many people as did SMEs.

Microenterprises are those with individual ownership, small enterprises are mainly those with individual ownership with some of them incorporated, while medium businesses are generally incorporated.

At the early stage of economic modernization, the nonmodern sector and micro- and small businesses predominate in the nonagricultural sector of a typical developing economy. At this stage, the development of the segment of economic agents comprising SMEs is low on the agenda. Generally, during this period, the

<sup>154</sup> Chernoy, *Economic Sciences*. 2008. No. 1. Pp. 193–198.

<sup>155</sup> Below, unless special reservations are made, small, medium, and large enterprises imply small, medium and large businesses of all categories.

<sup>156</sup> In 1992, a law on stimulating small and medium enterprises was passed (Lee Hyun Jae et al., 2008. P. 86).

<sup>157</sup> *Ibid.*

<sup>158</sup> In 2004, microenterprises accounted for 43% of total employees (*ibid.*, p. 158).

development of the modern economy sector consisting of large and medium enterprises is encouraged.

At the early stage of modernization, developing economies focus on building up the CS core of the corporate sector. Therefore, the setting up of economic entities that can be economic modernization agents for other categories of economic entities (for almost all small and most medium enterprises) is high on the agenda.

A typical developing economy concentrates its modernization efforts undertaken in the nonagricultural sector first on the CS core containing large enterprises (at this stage, they are usually government-owned), then on the periphery of the economic system, consisting of micro-, small, and medium businesses. A controlled modernization process that involves the CS periphery starts with incorporated SMEs of the real sector and ends with individually owned microenterprises, including those in the services sector.

The policy of accelerating industrial development by encouraging the development of the sector of SMEs can be successful in a liberalized economic environment only if two conditions are met:

- 1) the presence in the economy in question of major corporations capable of performing the functions of the core of business groups, including a relevant company (companies) and SMEs (firms) cooperating with it (them);
- 2) the possibility of forming in the economy a large segment of SMEs financed by foreign investors.

If these conditions are not met, SMEs (companies) can contribute considerably to the dynamic potential of the economy (especially of the manufacturing industry) only if their operation is strictly regulated from the national level and if they receive substantial financial and organization support from the state. The latter was especially distinctive for the Taiwanese economic system model at the stage of its rapid economic modernization (see Appendix 3).

In the absence of a developed manufacturing industry and with a low technological level of the economy, SMEs of the services sector cannot drive economic development and modernization either. As for microenterprises, because they employ only one to nine people, they cannot drive economic modernization in principle.

In practice, the development of microenterprises, as long as it is allowed and encouraged, generally targets the absorption of excess workforce that cannot be used in a more modern sector of the economy and the CS servicing it because of their relatively low labor intensity. In this regard, the examples of India and, especially, South Korea in the middle of the last decade can be rather instructive.

South Korea, on the one hand, had a fully modernized economy and efficient CS; on the other hand, beyond the agriculture sector, about 40% of workforce was concentrated in the unorganized nonmodern sector, services, and petty trading (see Appendices 1, 2).

It is a widespread view that small and medium businesses can advance on their own without state involvement, that an economy saturated with small businesses is always a deeply liberalized economy, and that its liberalization tends to grow driven by intrasystem factors.

Reality appears to be different.

In this respect, the experience of South Korea is characteristic. Thus, the system encouraging SMEs in South Korea some time after 1980, when the country became more or less advanced, included:

- 1) the system of legislative (regulatory) support for promoting SME operation and development<sup>159</sup> contained (1a) a system of regulatory acts directly aimed at stabilizing or expanding SMEs and establishing various privileges for them;<sup>160</sup>
- 2) a separate system of financial support for actions for promoting SME development<sup>161</sup>;
- 3) a system of organizational support for for promoting SME development.

<sup>159</sup> In December 1975 a law on the encouragement of subcontracting small and medium firms was passed (Trigubenko and Toloraya, 1993. P. 54). In the first half of the 1980s, a law on purchase of products manufactured by small and medium firms and a law on support to small and medium firms were passed (ibid.). These laws provided for preferential lending to small and medium enterprises, as well as tax benefits. In 1989, a law on stabilizing business activities of SMEs and a law on structural adaptation were passed, which provide for new measures of financial and institutional support to small and medium business (ibid.).

<sup>160</sup> The reviewed category of regulatory acts also includes:

- a) a law prohibiting large Korean companies and foreign investors from having more than 50% of shares in small and medium companies (Trigubenko and Moiseyev, 1992. P. 46);
- b) a system of statutory “splitting of business branches with privileges for small and medium enterprises in choosing the most suitable areas of activity”, effective through 2006 (Lee Hyun Jae et al., 2008, p. 128);
- c) a law on measures to accelerate business registration – this law was abolished in 2000 because it put small and medium firms in an advantageous position within the system of competitive relations (ibid.).

The system of reserving part of the orders from government organizations for small and medium firms is still effective, albeit with some modifications (ibid., pp. 101–104).

After 1998, a package of regulatory acts building a framework for specific actions to promote the development of innovative SMEs was adopted (ibid., pp. 17–28).

There are also many regulatory acts protecting the interests of SMEs that are subcontractors of major companies. Among the statutes is the Law on Measures Creating Conditions for Mutually Beneficial Cooperation between Large and Small and Medium Enterprises adopted after 2005 (Lee Hyun Jae et al., 2008. P. 126).

<sup>161</sup> The system of financial support to promote the development of small and medium firms includes tax and other privileges, specialized banks and funds granting relevant loans, and organizations (banks and funds) guaranteeing loans granted to small and medium firms by ordinary commercial banks.

Apparently, the first lending institution assigned to lend to small and medium firms was the Small and Medium Business Bank (SMB Bank) established in 1961. The same functions were later assumed by Kook Min Bank in 1963, and Daegu Bank and Pusan Bank in 1967 (ibid., pp. 85 and 86). In 1965, the above banks were to extend to SMEs at least 30%, in 1976 at least 40%, and in 1986 at least 80% of total loans (ibid., p. 86).

In 1967, SMB Bank started to extend government-guaranteed loans (ibid.). Early in this decade, 75% of SME government financing was channeled to support ordinary SMEs, while 25% was channeled to support venture companies, i.e., those seeking technological innovation. In 2004, the “Technology. Confidence. Guarantee” fund was established to lend a guaranteed US\$10 billion within 3 years to venture companies (ibid., p. 28).

Since 2005, the government has been downsizing lending to small and medium firms, primarily in favor of promising firms that have become cash-strapped due to investments in equipment or due to force majeure (ibid., pp. 89 and 90).

The latter, as in the early 1990s, included:

- a) the Korean Corporation of Assistance to Small and Medium Business (a para-governmental organization);
- b) the Fund of Assistance to Small and Medium Business under the Korean Corporation of Assistance to Small and Medium Businesses;
- c) the Federation of Microbusiness (nongovernmental organization)
- d) the Microbusiness Promotion Fund under the Federation of Microbusiness;
- e) a number of industry associations and federations coordinating, to a certain degree, the activities of its member small and medium firms and specialized lending and banking institutions.<sup>162</sup>

A special body for SMEs, the Administration of Small and Medium Businesses, was established to carry out government policy to support SMEs only in February 1996.<sup>163</sup>

Thus, the number of organizations assisting, in one way or another, in developing SMEs in South Korea had been increasing until the beginning of the last decade. These organizations were aimed at not only boosting production in SMEs, but also at enhancing their technology level and competitiveness.

The promotion of small and medium businesses in South Korea for the CS (i.e., excluding unincorporated producers) resulted in:

- 1) strengthening cooperation between small and medium firms, on the one hand, and large firms, on the other; building, on this basis, stable business groups and increasing their share in CS production and assets;
- 2) far advanced splitting of small and medium industrial producers into firms directly targeting the end consumers and, primarily, domestic markets, as well as firms producing chiefly intermediate goods (semifinished products, elements) under contract with large companies<sup>164</sup>;
- 3) differences arising in the operation framework conditions of the core and periphery of the CS nonpublic sector because the periphery of the CS nonpublic sector (since it consists of small and medium firms) receives greater support from the state, including subsidies;
- 4) the ability to maintain the  $ESR_{CS}$  at a high level even when the economy is operating in an open regime.<sup>165</sup>

<sup>162</sup> Trigubenko and Toloraya, 1993. Pp. 19, 20, 55.

<sup>163</sup> Lee Hyun Jae et al., 2008. C. 194.

<sup>164</sup> Early in this decade this second category covered 60% of small and medium firms operating across the industry (ibid., p. 126). This category in the automotive industry of South Korea covers 70% of suppliers of components and spare parts against 40% in the US and Europe (ibid.). For example, during 2007 Hyundai and KIA car makers received 20,000 component types from 5,000 suppliers (ibid.).

<sup>165</sup> Foreign portfolio investors first look at large companies, because the financial standing and competitive position of micro firms that are subcontractors of large companies are always uncertain. Correspondingly, the growing proportion of small and medium firms in the CS (the more so, when there are legal restraints on investments of foreign investors and large companies in the above firms) is a factor that lowers the dependence of the CS, and the entire system of economic agents alike, on the world economic system.

Until recently, the presence of public or state-controlled institutions lending to small and medium firms was required to efficiently finance development programs for small and medium businesses in South Korea. For this reason, the state has remained in the South Korean banking system under a policy of promoting small and medium firms.

The above suggests that the policy of promoting SME development by itself hardly contributed to the liberalization of the South Korean economy. This experience (like the similar Taiwanese experience, see Appendices 2, 3) shows that in an open market, the CS industrial segment sector of small and medium businesses outside of business groups controlled by local capital are capable of functioning efficiently only when the state provides systematic support. The support must be in such amounts and in such a way that it compensates for the high sensitivity of small and medium firms to market and investment risks.

Therefore, it is no wonder that when in 2006 South Korea decided to scale back government lending to SMEs, the latter responded to that decision very negatively. However, government financing of small and medium businesses was not discontinued altogether.<sup>166</sup>

The experience of India and South Korea (see Appendices 1, 2) shows that the development of SMEs helps in varying degrees:

- 1) to create jobs, because SMEs require higher labor intensity;
- 2) to increase, to a certain extent, the total economy mass, mainly due to the input of small and medium firms to the development of the services sector;
- 3) to enhance the competitiveness of large companies if they use semifinished products and components manufactured by small and medium firms, since, other things being equal, the labor costs and capital intensity of production of these firms are low;
- 4) to create certain institutional obstacles to the penetration of foreign capital into the economy. South Korea, for example, limits the investment of foreign corporations in small and medium firms, but in India, until recently, mainly for employment reasons, microenterprises were allowed only into a few economic sectors.

The policy of promoting small and medium firms fosters the development of the CS periphery. But at the same time, with labor divided between large, small, and medium firms, it can encourage growth in efficiency and competitiveness of major corporations contained in the CS core. At the same time, fostering microfirms generally fails to contribute to the development of the CS periphery and, if done on a large scale, lowers the system quality and efficiency of the entire system of economic agents.

The Taiwanese example (see Appendix 3) shows that when at least some small and medium firms operate in the regulated regime, clusters with a considerable export capacity can be established within its framework. The clusters will contain export product manufacturers and diverse supportive firms and

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<sup>166</sup> Lee Hyun Jae et al., 2008. P. 91.

nonbusiness entities (including government organizations and associations of manufacturers) that support the manufacture of export products and their promotion to global markets.

In this case, the higher the proportion of the services sector in the economy, the higher, other things being equal, the share of small and medium (especially micro- and small) firms in it.

Incorporated small and medium firms (employing several dozen to several hundred people) actively supported by the state are capable of addressing all types of challenges in most economic sectors.

Their share in the economy, other things being equal, is higher, the higher the level of state support for small and medium businesses, the more accessible and affordable the loan, the higher the share (especially in the manufacturing industry) of business groups with cores consisting of large companies in the economy and CS, and the weaker the foreign competition.

The IMF conditions for obtaining stabilization loans generally required a dramatic increase in the openness of the receiving economy. And again, as a rule, competitive and investment risks soared in technologically advanced sectors of the economy with a high concentration of production in large enterprises. This, in turn, at least temporarily reduced the scope of the latter's economic activity and increased the economic importance of small and especially microfirms.

Compliance with IMF conditions for obtaining stabilization loans often led to massive bankruptcies of major local firms, where a sharp decrease in their market capitalization and problems with external debt servicing caused by a drop in the exchange rate of the local currency also played a role.

In South Korea, for example, compliance with the 1997 IMF agreements caused a workforce reduction in large companies by several tens of percent as opposed to the 1996 level.<sup>167</sup> At the same time, these agreements had almost no adverse effect on South Korean micro- and small businesses. By 2004, employment in this sector in comparison with 1997 had substantially increased mainly due to a decrease in employment in large enterprises.

In the middle of the last decade, SMEs in South Korea accounted for 86.5% of the total national workforce. The same indicator in Taiwan was 77.2%; in Japan, 79.9%; in the UK, 58.5%; and in the US, 50.7%.<sup>168</sup> In South Korea in the middle of the last decade, small and medium firms accounted for about 60% of employment in sectors other than agriculture and for about 50% (almost like in the US) of the total corporate sector workforce.

This appears to be approximately the optimal share of small and medium firms of corporate type in the overall employment in the CS of a modern developed economy.

According to statistics, early in this decade, innovative enterprises on average accounted for about 50% (33% in Japan in 2003) of total industrial enter-

<sup>167</sup> The 1997/1998 crisis led to a CS restructuring policy and, as a result, reduced the number of employees in large companies, who joined SMEs (Lee Hyun Jae et al., 2008. P.192).

<sup>168</sup> *Ibid.*, p. 67.

prises in developed countries. For the services sector, the corresponding figures were 40–45% and 22%.<sup>169</sup>

There are few large enterprises even in developed countries. This suggests that 40–50% of their enterprises fall into the category of innovative businesses. And even in Latvia, whose economy is nearly bankrupt because of noncompetitiveness, 35% of industrial enterprises are considered innovative.

The above data appear to suggest that SMEs can contribute (and already do) considerably to innovative activity and, consequently, are efficient modernization agents. However, this picture is far from reality. Small businesses almost never spend much on innovation. Their innovative activity generally relates to the assimilation of off-the-shelf technology (usually by buying new equipment) and, at best, to minor improvements in it.

Criteria used in statistics to attribute enterprises to innovative-active or, conversely, innovative-passive ones, are apparently not clear-cut and vary from country to country. For this reason, 35% of industrial enterprises in Latvia are allegedly innovative-active, whereas in Japan, only 33%.

In fact, the capacity of small and even medium companies to develop new technology are rather limited simply because the development costs of state-of-the-art technology generally exceed the companies' entire annual turnover. Apparently for this reason, serious steps to turn small and medium firms into venture companies (hence, into an innovative-active factor) taken at the turn of the 21st century in South Korea had not been very successful, though relevant businesses raised their technological level.<sup>170</sup> In addition, it was revealed that if a small or medium firm developed (significantly improved) new technology, often this firm could not efficiently market it for its dependence on large corporations.

The changes taking place in the economic environment generally fail to enable small and medium businesses to drive economic development and, moreover, to become the main tool of the innovative type of economic modernization.

According to South Korean experts, it is primarily caused by swift changes in the global business environment like:

- a global outsourcing strategy employed by major companies;

<sup>169</sup> Russia and the Rest of World, 2006. P. 313.

<sup>170</sup> In late 2004, after the “boom” in setting up venture companies in South Korea, the country listed 10,000 venture companies and expected to have 30,000 in 2008 (Lee Hyun Jae et al., 2008. Pp. 28, 56). As a matter of fact, they are firms spending much of their revenues from sales to create new technologies and promote them to production. It was expected that the promotion of venture companies would make a noticeable contribution to growth in exports. However, this did not happen. In 2004, South Korean exports amounted to US\$254 billion (Russia in Figures, 2007. P. 322). The share of venture companies in the exports in 2005 amounted to a mere US\$10 billion (Lee Hyun Jae et al., 2008. P. 32). By and large, the policy of spawning small and medium firms of venture type fell short of expectations.

There were strong reasons behind this failure. It was apparent that a large company could easily seize technology developed by a small or medium subcontracting firm or even take over the firm itself. That makes R&D expenses, unless there are covered by the state, a priori meaningless for most small and medium firms.

- Chinese companies entering global markets;
- a reduction in the technological life cycle of innovations and intensification of competition caused by the opening of markets.<sup>171</sup>

#### 4.5. The need to maintain the ESRCS at an above-critical level as a necessary condition for its accelerated modernization

Generally, modernization (in particular, accelerated modernization) calls for a maximum, in terms of range and activity, set of tools for managing the operation of the economy and the CS servicing it. In other words, it calls for an economic policy that challenges both the “neoliberal mainstream of the international economic policy” outlined above and certain SEIs.

The implementation of such an economic policy requires a high  $ESR_{st}$  and the  $ESR_{cs}$  that ensures a considerable degree of autonomy of the national CS from the global CS and “nonmodernizing” special interests. In this case, in modern economies, as shown in Chapter 1, the  $ESR_{st}$  and the  $ESR_{cs}$  are closely inter-linked.

#### *Factors governing the size of the ESR*

The  $ESR_{st}$  and  $ESR_{cs}$  are functions of manifold factors.

Among them are:

- 1) the size of land and population;
- 2) climatic conditions and availability of mineral resources;
- 3) the educational level of the population and availability of a skilled labor force and specialists in the economy;
- 4) the efficiency of the business and administrative community;
- 5) the condition of production facilities;
- 6) the technological level and competitiveness of the economy;
- 7) the CSF and its state;
- 8) the state of public finance;
- 9) the amount of public and corporate debt;
- 10) the capacity to meet the need for investments in production by using domestic sources;
- 11) the development level of financial markets;
- 12) the size and functions of the public sector;
- 13) the activity of the state as a regulator of economic processes;
- 14) the percentage of foreign capital and its functions in the production capital of the economy;

<sup>171</sup> Lee Hyun Jae et al., 2008. P. 193.

- 15) the openness of the economy to exports and imports of commodities;
- 16) the degree of openness of the economy to export and import of capital;
- 17) the level of development of the system for controlling currency movement;
- 18) the fulfillment of the need for foreign exchange from sources other than borrowing.

Among the above factors, factors 1–13 and the factor of foreign direct (non-portfolio) investment determine the CS's own ESR ( $OESR_{CS}$ ), but factors 14–18 combined determine the factor of the openness of the economy influencing the resource subjectness, or simply the factor of openness (FO). The economic policy and the  $ESR_{St}$  level decisively affect the level of openness of the economy.

Then, the  $ESR_{CS}$  can be written as:

$$ESR_{CS} = F(OESR_{CS}, FO). \quad (4.2)$$

It is evident that under the influence of FO, the  $ESR_{CS}$  value can vary widely as opposed to the same  $OESR_{CS}$  value. The opposite is also true: the same  $ESR_{CS}$  value can match, subject to openness of the economy, several  $OESR_{CS}$  values. When the  $OESR_{CS}$  value is very high, the  $ESR_{CS}$  value will almost always be high. Economies with different  $OESR_{CS}$  levels with the same level of openness, in turn, can differ significantly in the  $ESR_{CS}$  value.

At present, among WTO member nations, the state and the CS in the US, China, and the EU (the latter taken as a single economy) have an especially high ESR. As for Russia, the  $OESR_{CS}$  of this country is relatively small and its  $ESR_{CS}$ , taking into account the low  $ESR_{St}$  and high openness of the economy, is even smaller.

With a large CS public sector (and a state-controlled credit system) and high economic activity of the state, the  $OESR_{CS}$  can be quite large, even if size of the economy is fairly small. The CS of Vietnam is a good example.

If the  $ESR_{CS}$  of the economy falls below the threshold level for this economy, the latter automatically loses stability. It either disintegrates or integrates, wholly or partly, with a larger economy (economies). Integration processes stemming from a decreasing  $ESR_{CS}$  of some countries are intensively occurring, for example, in the EU economic space.<sup>172</sup> Since the  $ESR_{CS}$  of Russia's economy is small, Russia's ascension to the WTO will be strong incentives for its further decline and unleash disintegration processes in the national CS and domestic economy.

The specific  $ESR_{CS}$  value of an economic system is determined by the balance of the factors listed above with some of them encouraging or diminishing growth in the ESR. The effect of a specific factor on the ESR often depends on the operation conditions of the economy and other factors affecting the ESR.

When a certain level of openness of the economy is retained, the  $ESR_{CS}$  starts to decline even in a developed economy.

<sup>172</sup> See Chernikov and Chernikova, 2006.

If an economy uses, instead of its own currency, a currency servicing a supranational economic entity (like what happened in the EU), the  $ESR_{CS}$  of the economy drops gradually. This happened in all European economies when the euro was introduced, while the ESR of the supranational entity – in this case, the EU – soared. The abandonment of national or regional currencies in favor of an international currency (under contemporary conditions, a purely hypothetical assumption) would automatically lead to a decrease in the  $ESR_{St}$  and  $ESR_{CS}$  of all countries that earlier had their own currencies. However, in most cases, a substantial increase in openness of the economy (achieved by scaling back tariff barriers and control over currency and capital movement and by liberalizing financial markets) result in a gradual (and at first hardly perceptible), rather than single-step, decline of the  $ESR_{CS}$ . Balance-of-payments problems spiraling upward in the US are a direct consequence of the significant decline in the  $ESR_{CS}$  of this country as opposed to its level 20–30 years ago.

A free trade policy, since it eventually involves effective netting of customs duties, automatically reduces the  $ESR_{CS}$  of most countries pursuing such a policy. Usually it takes a while before this effect becomes manifest. The lower the economy's competitiveness by the time tariffs are lifted, the more pronounced this effect.

Since WTO membership entails not only the removal of tariffs, but also gives equal rights to investors from all WTO member nations, by and large, under contemporary conditions, it substantially decreases the  $ESR_{St}$  and  $ESR_{CS}$ . The smaller and weaker the economy and the less pronounced the regulatory actions of the state (including those implemented through the public sector and GDP budget reallocation) affecting the processes unfolding in the economy, the more pronounced this effect.<sup>173</sup>

The above suggests that the  $ESR_{CS}$  of developing economies (and generally all economies in need of economic modernization) with a compatible liberalization and privatization level is normally much lower than that of efficient developed economies.

“Normally” implies that the bigger the territorial and demographic base of the economy, the bigger, other things being equal, its  $OESR_{CS}$  and the larger is its effective (the FO taken into account)  $ESR_{CS}$ . The  $OESR_{CS}$  (hence, the  $ESR_{CS}$ ) of India's economy, for example, was huge as early as the 1950s. At present, in spite of relatively modest size of India's economy, its  $ESR_{CS}$  appears higher than that of the EU. This is demonstrated by the relatively low sensitivity of India's economy and CS to the global crisis. This is even truer for China's CS, which is more advanced than India's.

The higher sensitivity of Russia's economy to the crisis even in comparison with that of the most open advanced economies and most developing countries is due to the extremely low values of the  $ESR_{St}$  and  $OESR_{CS}$  of the national economy. The liberalization and privatization policy undertaken by weak economies in need of modernization almost always reduces their  $ESR_{CS}$  to a level

<sup>173</sup> Chernoy, *Society and Economy*. 2008. No. 2. Pp. 64–83

lower than that in advanced economies, just because of the low  $OESR_{CS}$  of the weak economies.

At least in the short to midterm, the  $ESR_{CS}$  of any weak economy, including developing economies, is higher, the larger the size of the public sector, the broader the functions performed by it, and the higher the state's activity both as a regulator of economic process in the economy in question and as a regulator of exchange between this economy and the international economy (including exports, imports, capital flows, and exchange rate).<sup>174</sup> It should be mentioned that the above is applicable only when the  $ESR_{St}$  is high enough to implement national objective-setting priorities and when the state's regulatory activity gives priority to the development of the national CS and the related economy.

Generally, the simplest method to address this problem, when the  $OESR_{CS}$  is deficient and needs boosting, is to increase the state involvement in the economy, extend the state's controlling and other functions, reinforce the entire economy's controllability, and, in particular, raise the controllability of external economic interactions as well as restructure the CS (if it is already in place) to best adapt it to the operation framework conditions.

An alternative method to raise the  $ESR_{CS}$  of a weak economy with an inefficient market implies increasing the actual and potential competitiveness of available economic agents filling the CS. But the market competition factor is unable to solve this problem within a short time. For this reason, if economic modernization is among objective-setting priorities and there is the need to boosting the  $OESR_{CS}$ , the relevant objective is achieved usually by strengthening the state's position as a proprietor and economic process regulator (i.e., by creating, as illustrated above, efficient "command corporate mixers").

### *The ESR and conditions for the efficient use of development potential*

The bigger the  $ESR_{CS}$ , the easier, other things being equal, and the more fully the available development potential of the CS and entire economy is mobilized. The smaller it is, the more difficult, other things being equal, the mobilization of the available economic development potential, and hence the lower the CS performance and economic growth rates. The economy's potentially achievable growth rates depend on the  $ESR_{CS}$  value and, consequently, are a function of the own  $OESR_{CS}$  of the economy and FO.

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<sup>174</sup> However, in the long term, matters appear more complicated. There is always a level of state involvement in the economy as an owner and regulator that in the long term inhibits the enhancement of its competitiveness and, consequently, negatively affects the  $ESR_{CS}$ . In this case, a situation may arise (and in some cases did) when predominant state involvement in the economy and CS increases its subjectness resource, on the one hand (for example, due to an increase in the economic mass), but simultaneously lowers the ESR, on the other (in the first place, due to a decrease in competitiveness in comparison with a potentially achievable value). This happened, for example, in the Soviet Union and some other centrally planned economies.

At the same time, the growth rates of an open, weakly statized economy with a small  $OESR_{CS}$ , under certain circumstances, can be relatively high and exceed the growth rates of the international economy. This happens when:

- the economy in question is in the postcrisis recovery phase;
- global market prices are especially favorable for the development of economies of the given type;
- the economy in question is particularly attractive for foreign investors (for example, because of cheap and skilled labor or unique mineral deposits).

In all other cases, if the economy's  $OESR_{CS}$  is small, but the level of openness is high, then its growth rates generally do not exceed the growth rates of the economic module integrating it and exhibiting a considerable  $ESR_{CS}$  value (for example, the EU, NAFTA, or the international economy).

Developing economies, at least in the 1950–1970s, gave very high priority to economic modernization. Correspondingly (in view of the above), they also gave high priority to maintenance of the  $ESR_{CS}$  at a high level. The economies of India, South Korea, and Taiwan are quite typical in this regard.

### *Dependence of the dynamic potential of the CS in a developing economy on factors governing the ESR and affecting its integral quantity*

A large  $ESR_{CS}$  does not imply that economic growth rates are high. This only means that the economy in question has the potential to advance rapidly. For this reason, if the modernization priority level exceeds a certain threshold highly enough, then enhancement of the  $ESR_{CS}$  also becomes a priority and is usually achieved soon in one way or another.

An economy's dynamic potential, other things being equal, is greater, the larger the  $OESR_{CS}$ . At the same time, the dependence of an economy's dynamic potential on the FO is ambiguous, since this factor is capable of having a positive or negative impact on the  $ESR_{CS}$  and its dynamic potential (and therefore on the economy's dynamic potential). So, for instance:

- 1) Net inflows of resources encourage the growth of an economy's dynamic potential or inhibits its decline, at least in the short term.
- 2) Net outflows of resources from the economy, conversely, lower the economy's dynamic potential and  $ESR_{CS}$ .
- 3) The impact on the modernizing economy's dynamic potential of inflows of financial resources as loans depends on the credit terms and loan utilization efficiency. If credit resources are regulated and used efficiently, then, as shown by Taiwan's experience (and even better by South Korea and India)<sup>175</sup>, external debt financing of the economy is capable of essentially increasing the economy's dynamic potential, provided the exchange rate of the national currency is efficiently controlled. However, economic modernization financed through inefficiently used credit resources can eventually reduce the  $ESR_{CS}$

<sup>175</sup> See Appendices.

and the economy's dynamic potential when external debt servicing problems arise.

- 4) The impact of portfolio investments on an economy's dynamic potential and  $ESR_{CS}$  is almost the same. If portfolio investment flows are regulated, this impact is always positive. If they are not regulated, the influence can be especially negative. Basically, portfolio investments in developing economies at their initial stage of modernization are generally minimal, and their impact on the  $ESR_{CS}$  of these economies and their dynamic potential is also minimal.
- 5) An export-oriented economy is a necessary condition for intense economic modernization of most developing economies and weak economies and can also lead to a decline in the  $ESR_{CS}$ .

The economic modernization objectives of relatively small developing economies, and especially their primary modernization objectives, can be achieved, as seen from the above, if there is a need to maintain a high level of the  $ESR_{CS}$  and, at the same time, a rather high level of openness of these economies, which alone creates a risk of lowering the  $ESR_{CS}$ .

Compensation for the negative impact of an increment in openness on the  $ESR_{CS}$  by increasing the  $OESR_{CS}$  is a condition for maintaining a high level of the  $ESR_{CS}$  and, concurrently, of the developing economy's dynamic potential at the initial stage of modernization. This, in turn, requires quite a high  $ESR_{St}$ .

The modernization experience of the South Korean and Taiwanese economies (see Appendices 2 and 3) shows that such compensation is quite possible and that developing economies even of small size and with considerable dependence on exports can have a large  $ESR$  and considerable dynamic potential that significantly exceeds that of the world market economy and the  $CS$  of mature economies.

In practice, the above compensatory goal in the early stage of modernization of developing economies is usually achieved by:

- increasing state involvement in the economy;
- reinforcing the controllability of the economy as a whole and, specifically, the controllability of the system of external economic interactions (including by establishing control over the exchange rate and currency and capital movement) to a level allowing, under the given conditions, optimization of the interaction between the economy in question and the external economic environment.

Modernizing economies at the initial stage of primary modernization are generally characterized by an immature corporate base of the economy. In that case, when the economy is essentially open, to develop at the fastest pace it must have a core of state-controlled corporations, like in the corresponding development stages in India, South Korea, and Taiwan. In addition, the entire  $CS$  must operate in a regulated regime differentiated by rigidity of regulation across individual  $SCS$ s and corporation categories.

In connection with public sector efficiency in a modernizing economy, it should be again noted that companies controlled by foreign capital are generally incapable of replacing public sector companies at the early stage of mod-

ernization. This happens because foreign investors are highly selective when contemplating investments in underdeveloped economies. In particular, they refrain from investing in the capital-intensive sectors of an underdeveloped economy that make up its production base. But the economies in the category in question need to prioritize development for this base, including the electric power industry, public infrastructure, the transportation and communication system, and heavy industry. As the efficiency of the CS segment controlled by private capital increases, so does, other things being equal, the economy's  $OESR_{CS}$ . And this, in turn, reduces the need for regulatory actions directed at the private segment of the CS to maintain the economy's  $ESR_{CS}$ , under the given level of its openness, at a high enough level.

***The decrease in the  $ESR_{CS}$  of a weak economy and its impact  
on the economy's pace of development when it is restructured in line  
with the neoliberal economic paradigm***

$OESR_{CS}$  of developing economies and weak economies is generally lower than that of advanced economies. The neoliberal economic paradigm dictates a high level of openness of all economies. Therefore, it implies a decrease in the  $ESR_{St}$  and  $ESR_{CS}$  of developing and weak economies, and hence, their desovereignization. This results in gradual convergence of the growth rates of most developing economies (and other economies with a low utilization rate of development potential) with those of advanced economies.

The implementation of the neoliberal economic program has led to convergence of the growth rates of practically all economies that have been restructured based on neoliberal principles (including most Latin American economies) and those of mature economies, in spite of huge differences in development level. It is significant, for example, that the ratio of Brazil's economic mass to that of the US has hardly changed over the last 30 years. This means that Brazil's economic growth potential has been "underused" not only in absolute terms, but also in comparison with how it had been used before Brazil's economy was restructured based on neoliberal principles in the 1950–1970s.<sup>176</sup>

Generally, a restructuring of the economic policy in conformity with the neoliberal economic paradigm involves substantial changes in the EOSS and, implic-

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<sup>176</sup> In 1960, the ratio of Brazil's GDP to US GDP was 6.7%, in 1980 13.5%, in 2000 11.0% (Bolotin, 2001. P. 97). At the same time, Brazil's economic restructuring based on neoliberal principles by no means helped Brazil resolve old debt problems. In 2000, it still was the largest debtor among Third World countries that had to comply strictly with IMF conditions to be eligible for new loans needed for debt servicing (Bulatov, 2007. P. 686). In 2005, the ratio of Brazil's GDP to US GDP was 12.8%, less than in 1980 (Russia in Figures, 2008. Pp. 507 and 510). Economic restructuring based on neoliberal principles hampered Brazil for a long time in its efforts to become a dangerous competitor to the US economy. Only in the second half of the last decade did Brazil, having dramatically reinforced state regulation elements in the economic policy, begin to catch up with the US.

itly, the removal of development from the priority list. Further slowdown in growth rates stems directly from this.

Conversely, if development continues to receive priority and the economic policy is based on principles conforming to the economic modernization paradigm, then the growth rates of the economy (and in particular those of its real sector) exceed those of the international economy sector restructured based on neoliberal principles. This assumption can be exemplified by countries with a high enough  $ESR_{St}$  that also adhere to the economic modernization paradigm, such as India, China, Iran, and Vietnam. The low sensitivity of these economies to the global crisis is due to relatively high levels of their  $ESR_{St}$  and  $ESR_{CS}$ . China's economy, in spite of its very high export burden, does not seem to be notably affected by the global crisis because the China has a huge  $ESR_{St}$  and  $ESR_{CS}$ .

Potentially achievable economic growth rates are a function of the  $ESR_{St}$  and  $ESR_{CS}$ . Therefore, a successful economic policy, since economic development is given high priority, almost always chooses an option providing growth in the  $ESR_{CS}$  or maintaining it at the highest possible level. The higher the development priority and the lower the economy and its CS modernization level, the stronger, other things being equal, the emphasis is on increasing the  $ESR_{CS}$ .

#### 4.6. The normal evolution path of the CS in a modernizing economy

If during a lengthy period, the elements of the objective-setting system, in accordance with which critical parameters of the economic policy are determined, exhibit essential stability, and if SEIs and externalities (like the IMF's influence) have a limited effect on the economic policy, then the CSF will be mainly determined by the EOSS and intrasystem factors.

As long as the above conditions are met, a CS evolving under intrasystem factors and administrative actions acquires the properties of a system aggregate, which in the course of its development passes through certain phase states (phases) exhibiting marked features (it moves along a phase path). We will treat this path as "normal", as was done earlier in regard to advanced economies, if the related EOSS prioritizes economic growth and modernization.

In practice, the movement of a modernizing CS along a phase path always involves more or less significant deviations of the actual path from the normal one. These deviations are smaller, the less the actual EOSS deviates from the normal option based on development priority, and the lower, accordingly, the influence of external actions and internal special interests on the economic policy.

The CSs of India, South Korea, and Taiwan are among CSs whose system evolution over a long period of time (about 50 years) unfolded as opposed to development given a high priority and a relatively weak influence of various special interests on the system characteristics of the CS (it moved, consequently, along a

path close to the normal one). After 1997, the CSs of South Korea and Taiwan, whose priority systems and economic policies were restructured in the neoliberal sense, quit the normal development path or, at least, heavily deviated from the latter. In contrast, India's CS has so far deviated from the normal evolution phase path relatively insignificantly.

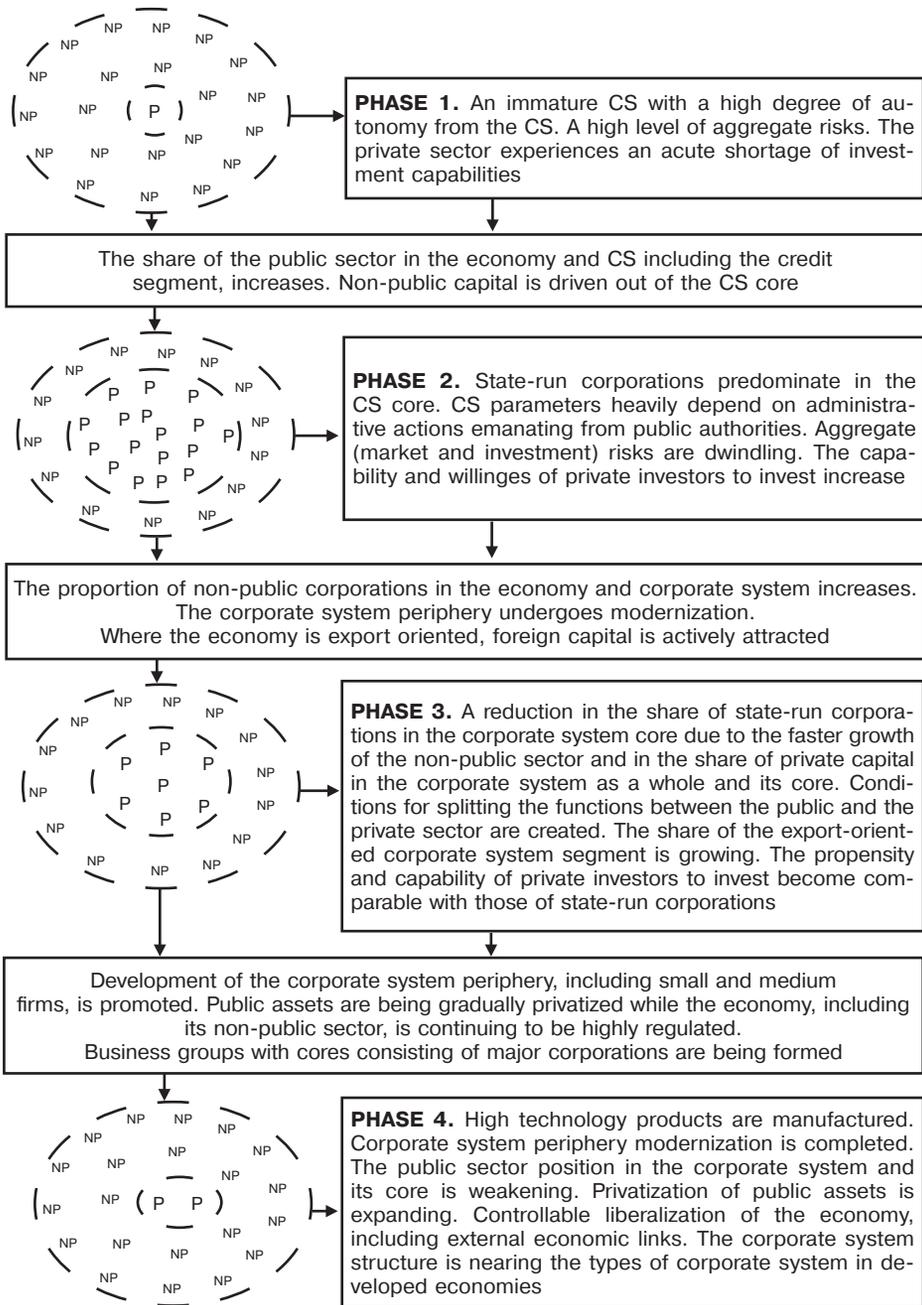
In the course of controlled movement along the normal phase path, unless this movement is interrupted by extrasystem factors, the CSs of modernizing economies pass through the following sequence of generalized phase states (Fig. 4.1).

**Phase 1.** (The CS modernization model starts to take shape.) The CS and especially its nonpublic sector are immature and exhibit a high degree of autonomy from the GCS (it is virtually "closed"). State-run corporations are established. The credit sector is statized. Nonpublic corporations are driven out of the CS core. CS parameters display a very strong dependence on the administrative actions emanating from the EOMS.

**Phase 2.** (The formation of the CS modernization model is over.) Public corporations continue to predominate in the CS core. Modernization of the CS periphery is launched. An export-oriented economy attracts foreign capital. The CS sector targeting foreign markets is established the more quickly, the smaller the actual and potential size of the economy, and the smaller the foreign capital inflows in the form of aid and soft loans. The CS parameters still exhibit a very strong dependence on actions emanating from the EOMS.

**Phase 3.** (The performance of the CS modernization model and CS functional and technological quality are enhanced.) Generally, public corporations continue to predominate in the CS core, but their share in the core begins to dwindle. The CS nonpublic sector shows better growth rates than the public sector. Public and nonpublic corporations come to divide economic functions between them. The development of the CS periphery, including medium and small firms, is encouraged. Business groups with cores consisting of major corporations burgeon. The proportion of the CS sector targeting foreign markets increases. The system of special economic zones expands. The EOMS retains a high regulatory potential. Intensive regulatory actions are extended to cover the CS nonpublic sector. The national CS retains a high degree of autonomy from the GCS.

**Phase 4.** (The CS modernization model is adapted to meet the challenges of competitiveness and system stability enhancement in a situation when foreign economic ties are liberalized.) The CS public sector continues to lose its positions. The CS core is transformed to increase the proportion of corporations controlled by private capital. Generally, companies controlled by foreign capital become a factor of essential economic importance (the position of foreign capital in an economy depends on the specifics of the economic policy). High-tech products are manufactured. CS periphery modernization ends. Part of the public assets are gradually privatized. The system of special economic zones is operating at its peak. The CS parameters acquire a substantial degree of autonomy from EOMS influence and are determined by market forces to a much greater extent. At the same time, the autonomy of the CS from the GCS rapidly decreases. However, the level of liberalization of economic links is controlled so as to avoid the negative effects of excessive deregulation of the economic processes on CS performance.



**Fig. 4.1. Main movement phases of a developing economy and its CS along the modernization phase path**

In Taiwan, for example, the CS, while moving along the normal phase path, passed through Phase 1 in the 1950s, Phase 2 in the 1960s, Phase 3 in the 1970s, and Phase 4 in the 1980s and the first half of the 1990s (see Appendix 3).

Governmental supervision and stringent regulation (Phases 1 and 2) are required for turning, within a relatively short time (about 20 years), an originally low competitive CS into its highly competitive counterpart.

Deregulation and liberalization of foreign economic ties in economies retaining the modernization quality start only after the CS becomes competitive and efficient. In this regard, the evolution of Taiwan and South Korea's CSs (see Appendices 2, 3) on the whole replicated the evolution of Japan's CS and most Western European countries after World War II.

The reallocation of assets between the CS public and private sector in favor of the latter, as long as the economy retains the modernization quality, also begins only after efficient corporations and an efficient community of business people and managers have been formed in the CS nonpublic sector.

The specific content of controlled movement of a modernizing economy CS along the normal path depends on the framework conditions of this process. In fact, as evidenced by India, South Korea, and Taiwan, the normal path of CS evolution may exhibit certain variations (see Appendices).

However, these variations do not reduce common features in modernizing CS evolution processes, as long as they retain the modernization quality and the EOSS is based on the development priority. The affinity of EOSSs ultimately leads to the affinity of CS development phase paths in the course of their modernization and the affinity of the evolution of the CS system characteristics, even if the initial development conditions differ greatly.

The normal evolution of the CS of world economic development leaders (including England, France, the US, and Germany) starts with an amorphous CS containing an immature core, a nearly zero public sector, and a predominance of corporations controlled by a limited number of strategic owners.

The end point of CS evolution affected by primarily intrasystem factors of the relevant economies, as long as these economies exhibit considerable mutual autonomy, is:

- 1) either a CS with a core consisting of cartels and syndicates (which was typical of Europe before World War II, or
- 2) a CS with a core consisting of giant companies and groups, including FIGs proper, or
- 3) a CS with a core also including state-run companies functionally complementing companies controlled by private capital (which also was typical of the CSs of advanced Western European economies, but after World War II).

Conversely, the normal evolution of the CS of a weak economy, after the country has adopted an economic modernization policy as a priority objective, starts with a CS having an underdeveloped periphery and core consisting mainly (or even entirely) of public companies. The end point of evolution of the CS of a modernizing economy, as long as it retains the modernization quality, is a CS with a core in which nonpublic companies predominate, but public companies are also notably present (in a proportion similar to that in the CS cores of Western European countries in the 1950s–1970s).

#### 4.7. Impact of neoliberal economic paradigm transformations on modernizing CSs. Conditions for subsequent growth in efficiency in the corporate base of the economy

Economic transformation in line with the neoliberal economic paradigm (i.e., toward increasing the liberalization and privatization level and openness of the economy and restructuring the foreign exchange system) can advance quickly or slowly, stage-by-stage. In the latter case, the CS system characteristics and its operation framework conditions, including deregulation and privatization parameters dictated from outside, are harmonized at each transformation stage.

This process in each case features a set of obligatory transformations. They involve an increase in liberalization and privatization level and openness of the economy. Other transformations are “optional” and depend on the given economic and social conditions (like changes in the budget spending on social welfare in different economic restructuring stages). Moreover, the pace of restructuring itself has an enormous impact on the outcome of economic restructuring in the neoliberal sense.

In practice, the CSF continues to undergo more or less major changes after the economy has been transformed in line with the neoliberal economic paradigm.

The final format of a modernizing CS transformed in the neoliberal sense emerges after the active phase of these transformations is over at the stage of its adjustment as an effect of CS intrasystem factors and as a result of CS adjustments driven by economic necessity.

#### *The Western European model of economic transformation in line with the neoliberal economic paradigm and its influence on CS parameters and performance*

An economic policy gradually transformed in line with the neoliberal economic paradigm can be exemplified by the relevant transformations in the Western European economy (before the Soviet Union and the Socialist Camp broke up).

It should be kept in mind that in the 1950–1960s most Western European economies were clearly of the modernizing type (mixed economies pursuing an economic policy oriented primarily toward economic modernization and development of the real sector).

Even in the late 1970s, most Western European economies – by and large modernized – showed certain signs that were typical of developing economies and represented a more or less clear-cut mixed economy. So, the French economy systemically (while exhibiting high level development) was close to a modernizing economy, at least until 1984, when France’s CS was undergoing large-scale privatization to offset, first of all, the economic and social impact produced in the early 1980s by the large-scale nationalization of banks and real sector corporations.

Transformations conducted in European economies after 1945 in line with the neoliberal economic paradigm exhibit the following *features*:

1. National economies were restructured in the presence of a highly efficient community of entrepreneurs and managers, highly competitive CS performance, and a large CS segment composed of TNCs.
2. Already at the start of neoliberal restructuring in Western European economies, the exchange rate of their national currencies matched well their PPP. No significant efforts were needed to maintain an acceptable exchange rate of national currencies.
3. The debt factor had no material effect on economic policy.
4. The openness of Western European economies and the EU as a whole toward the external economic space of imports and exports already in the late 1980s was high and, by and large, complied with the requirements of the neoliberal economic paradigm.
5. The accessibility of Western European economies to foreign capital (excluding companies of the former public sector) in the course of their neoliberal transformations had barely changed, since it had been high before these transformations started.
6. The public capital in CS public sector companies is replaced by private capital rather gradually and virtually without prejudice to investment programs implemented by relevant companies, and to the CS system quality as a whole.
7. The balance of the economic role and the economic mass between large, medium, and small corporations in the course of neoliberal restructuring of the CSs of Western European economies had not undergone substantial changes, though the proportion of especially large corporations and TNCs in the CS of European countries increased due to the transformations.
8. The structure of possessory rights to shares, at least in continental Europe, in the 1980s–1990s had not changed significantly, though later it showed a tendency toward americanization.
9. Assets slated for privatization were not sold at knockdown prices.
10. In the course of neoliberal restructuring, Western European economies showed a tendency to increase rather than lower budget expenses; cuts in social welfare were limited and selective, and social shocks were excluded.
11. Transformations in the Western European economic system conducted within “Old Europe” (before inefficient Eastern European economies in transition joined the EU), had not led to a considerable rise in the criminalized sector of the European economic system. However, after “Europe 15” became “Europe 25” (2004), which was an obviously nonuniform system in spite of the formal comparability of its member CSs and economies in terms of liberalization, privatization, and openness criteria, European economies began to exhibit distinct growth in criminalization and to experience the mounting pressure of relevant categories of economic risks.
12. The restructuring of Western European economies and their CSs had taken almost 20 years mainly due to the long privatization cycle and specific processes associated with economic integration within the EU.

However, there is no noticeable sign that the restructuring had a positive effect on the European economic dynamics and CS performance of European countries. However, there are grounds to believe that it had an adverse effect on the growth rates of the real sector of EU economies and reduced the efficiency of their CSs, demonstrated by crisis-led events in 2001–2002 and 2008–2011.

At the same time, the neoliberal restructuring of European economies promoted:

- 1) corporate mergers and, hence, saturation of the European economy with trans-European companies; i.e., it paved the way for an integrated pan-European CS;
- 2) an increase in the proportion of American TNCs in the European economy and European TNCs in the US economy; the European economy thus became more exposed to processes of the US economy;
- 3) liquidation of national CS segments controlled, fully or mostly, by the state;
- 4) assignment of the ESR of local (i.e., primarily, national) CSs in favor of the pan-European CS; in particular, this was fueled by the privatization of public capital companies and indirectly by monetary reform that replaced national currencies with the euro;
- 5) transfer of a significant part of the ESRCs of European countries and the pan-European CS to offshore zones and “tax shelters” (including those within Europe). That per se is a factor lowering the sensitivity of relevant CSs to administrative actions; in addition, it is capable of generating considerable market and investment risks, highlighted by the current world economic crisis;
- 6) an increase in the relative value of the financial sector both within national CSs and the pan-European CS. As a consequence, an increase in the capacity of these systems to generate market and investment risks, since national financial markets are highly capable of generating risks heavily depend on the condition of the world financial system;
- 7) less controllability of the CSs of European countries due to an overall deregulation trend within the EU;
- 8) due to the introduction of the euro, a decline in the capacity to regulate the EU economy using Keynesian (budgetary) and monetary policy tools<sup>177</sup>;
- 9) less sensitivity of the CS of EU countries and the EU economy as a whole to regulatory actions, due to the effect of factors 2, 3, 5, 6, and 8;
- 10) an increase in the capacity of the European economy to generate market and investment risks, due to factors 2, 3, 5, 6, 7, 8, and 9;
- 11) a rise in the level of transaction costs and risks associated with mergers and improved market competitiveness;

<sup>177</sup> The euro currency system can be efficient if the allowed budget deficits of eurozone countries are rigidly controlled. That automatically narrows the applicability of Keynesian recipes to boost the economy. On the other hand, since European economies are essentially nonuniform geographically and some territorial modules making up the European economy respond quite differently to the unified (for the eurozone) monetary policy, monetary policy tools are limited in their capacity to efficiently influence the eurozone economy. This partly explains the stagnation of the EU economy in the last (precrisis) decade.

- 12) a decrease in the economy's investment burden, as a result of the dwindling public sector, the effect of factors 9, 10, and 11, and capital outflows;
- 13) an increase in the share of nonfinancial services in investments due to a relatively lower level of openness to the global economy, which is characteristic of this sector, and hence a smaller level of market and investment risks; this enhanced the proportion of the CS services segment;
- 14) investing less in the real sector (due to the effect of factors 10, 11, 12, and 13) and a slowdown in the growth rates of the real sector and its technological upgrading.

It should be noted that without Europe's economic restructuring in line with the neoliberal economic paradigm, the switch from national currencies to a common one and the establishment of the modern EU and, concurrently, a pan-European CS would be extremely difficult, if not impossible.

The modern EU CS features:

- 1) incomplete absorption of national CSs;
- 2) accordingly, a relatively a low integration level of the EU CS across the continent;
- 3) a stronger ability to generate market and investment risks;
- 4) reduced system stability evidenced by a catastrophic decline in stock prices on European stock markets in 2000–2002 and 2008–2009 and by a decline in production in the current global crisis;
- 5) a comparatively high level integration at the corporate level with the US economy and a glaring shortage of economic subjectness against the US economy;
- 6) a higher potential for economic power reallocation and reduced dynamic potential.

Against the backdrop of strong American influence and incomplete integration processes in the European space, even today there is no clear indication of the ultimate balance between centrifugal and centripetal processes within the European CS if the EU economic policy will continue to adhere to neoliberal principles. A dramatic narrowing of mechanisms and capacities for regulating the national economies in the Eurozone has already led to an near-default or predefault condition in Greece, Ireland, Portugal, and Spain.<sup>178</sup> It is no accident that since the beginning of 2010, many prominent economists have been discussing the high probability of an imminent collapse of the Eurozone and a return of most of its member countries to national currency systems.<sup>179</sup>

This European (and parallel American) experience suggests that the neoliberal economic paradigm is a tool for switching the CSs and the economies serviced by them from one unstable condition to another rather than for raising or lower-

<sup>178</sup> The New Times, 27.12.2010.

<sup>179</sup> Thus, Nouriel Roubini, a professor at New York University, warned at the Davos World Economic Forum in January 2010 that a eurozone breakup was more than real (Bloomberg, 26.01.2010). On December 27, 2010, Die Welt, a German newspaper, published the results of a survey of more than 3000 German businesspersons conducted by the auditing firm Ernst & Young. The survey showed that a eurozone breakup was viewed as a credible threat in the midterm by 47% of respondents.

ing their performance. The present crisis of the European economy is indicative of the above unstable condition as are the crisis-led adjustments of the European economic model to lower the level of liberalization, privatization, and openness of both individual CSs of the European CS and the entire EU CS.

Both in Europe and the US, The state has returned to a policy of actively regulating the CS financial segment and financial markets. A drastic reduction in the economic importance of offshore zones is high on the agenda. The latter effort is quite significant because the transformation of the international economy in line with the neoliberal economic paradigm started with the establishment of a host of offshore zones and turning them into a “normal” economic institution. It is also clear that a partial return to protectionist practices has occurred.

In assessing the outlook for reverse changes in the EU CS, it should be kept in mind that the crisis is still far from over and its cumulative negative effects will inevitably manifest themselves over time.

***Impact of a fast increase in the liberalization, privatization,  
and openness of a developing economy on its corporate base:  
Conditions for further growth in the efficiency of national CSs***

In most cases, the neoliberal transformations of underdeveloped economies were externally forced (by mature economies and such organizations as the IMF) and accelerated while based on the principle “financial aid, including that to support the exchange rate, in exchange for commitments to perform radical economic changes”. This is exactly the way some Latin American economies (including Chile, Brazil, Argentina, and Mexico) and, to a certain degree, Thailand and Indonesia have been restructured.

In the period immediately preceding system restructuring in line with the neoliberal economic paradigm, the above economies displayed the following system qualities:

- 1) considerable inefficiency of the local community of entrepreneurs and managers;
- 2) an underdeveloped CS nonpublic sector core and, as a consequence, its considerable amorphism;
- 3) underdeveloped financial markets, including credit and stock markets, and relevant CS sectors;
- 4) strong demand for public sector functions<sup>180</sup> ;
- 5) low intrinsic CS performance and hence, its relatively low competitive performance without taking into account the enhanced competitiveness achieved due to the undervalued exchange rate of the national currency;
- 6) underdevelopment and related economically significant risks;
- 7) considerable (near-critical) charges for servicing foreign debt (which is in itself a factor capable of creating high market and investment risks);

<sup>180</sup> The causes of such demand are outlined above.

- 8) high nonmonetary inflation stemming from the orientation of entrepreneurs and managers toward inflation models of economic behavior;
- 9) insufficient foreign exchange reserves to guarantee stability of the national currency exchange rate (even when the currency rate is significantly undervalued against its PPP) when the foreign exchange is essentially liberalized, which fuels exchange rate instability and generates additional market and investment risks;
- 10) a high level of criminalization in the social and economic environment (as a result of underdevelopment and low living standards), which also promotes market and investment risks;
- 11) overall high market and investment risks (resulting from factors 1, 6, 7, 8, 9, and 10);
- 12) reduced efficiency of the economy's market regulation (due to factors 1, 3, 5, and 11);
- 13) reduced willingness of the CS private sector to invest in production and especially for those in capital-intensive projects with a long payback period (due to factors 1, 3, 11, and 12);
- 14) low sensitivity of the CS private sector to indirect administrative actions, including actions involving monetary policy tools (due to factors 1, 2, 3, 10, 11, and 12);
- 15) a currency exchange rate determined by the market is severely undervalued against this currency's PPP; consequently, both exports of goods and services and capital imports are latently subsidized.

Any economic transformation in line with the neoliberal economic paradigm involves:

- a scaling back of the system, harmonizing the processes in the economy and its CS with the processes in global markets, by eliminating tariff regulation, exchange control, and control over exchange rates and capital flows;
- a scaling back of the system compensating for inefficiency of the market mechanism and its component subsystems (including financial markets);
- a scaling back of the CS public sector;
- giving equal rights to local and foreign investors.

Moreover, loans extended by the IMF under IMF stabilization programs to weak developing economies were usually conditional on downsizing public spending and social spending, in particular.

On the whole, the negative results of the above transformations in weak developing economies are more pronounced the faster they are implemented and the less advanced the economy. Specifically, relevant transformations result in:

- 1) a reduction in the CS efficiency and the economy as a whole, since no efficient option of the policy of harmonizing domestic and world market processes was adopted;
- 2) deep, at least temporary, deregulation of the economies of the class under review, since all types of the economic regulation actions are actually banned, apart from the permitted monetary and budgetary policy tools, which are inefficient;

- 3) in view of the circumstances outlined above in (1) and (2), compensation for numerous gaps in the market mechanism, which are characteristic of economies of the class under review (see above), is impossible and, as a consequence, a reduction in the CS efficiency and its dynamic potential; for this reason alone, there is a dramatic increase in market and investment risks;
- 4) a rise in market and investment risks invoked by deregulated capital movement;
- 5) since foreign investments are actually subsidized (due to the undervalued exchange rate of the national currency), inflows of international capital and its role in the economy as a whole and particularly in its strategic sector increase;
- 6) when privatization is accelerated, a scaling back of the CS public sector irrespective of the ability of the CS private sector to perform the modernization functions of public companies; transfer of a significant part of public assets to foreign investors.<sup>181</sup>

The above primary changes in the system characteristics of an economy cause a number of *secondary changes* in the system-critical parameters of the CS and economy as a whole, including:

- 1) a reduction in the  $ESR_{CS}$  and  $ESR_{st}$ ;
- 2) a rise in market and investment risks and, in particular, investment risks for local investors (nearly all factors decreasing the  $ESR_{CS}$  increase the level of risks that are economically significant for local investors);
- 3) often a decline in the efficiency of credit services provided to the economy as a consequence of growing credit risks;
- 4) the local business community is driven out to the economy's shadow sector, which increases the role of the shadow and criminal sectors; this process, if it deepens, may paralyze the operation of the administrative and juridical system, and the willingness of foreign investors to invest in the economy<sup>182</sup>;
- 5) a reduction in investments in capital goods as a percentage of GDP and a reduction in the self-financing and expanded reproduction capacity of the CS<sup>183</sup>;
- 6) eventually, a reduction in the CS efficiency and a slowdown in economic growth rates.

<sup>181</sup> When a weak open economy undergoes accelerated privatization, foreign investors find themselves in a privileged position, because any foreign investment is effectively subsidized due to the undervalued exchange rate and because the local entrepreneurial sector has scarce free financial resources and a low capacity to borrow from the local, relatively immature, credit system. The situation is likely to change if legislation provides for certain preferences to local businesspersons or some of their categories engaged in privatization (for example, ethnic Malay businesspeople in Malaysia enjoyed such preferences). But the neoliberal economic paradigm does not provide for such preferences.

<sup>182</sup> Chernoy, 2003. Pp. 438–439; Fituni, 2003. P. 89 and on.

<sup>183</sup> The examples of South Korea and Taiwan (see Appendices 2 and 3) are typical in this respect. In fact, local private investors combined with public investors rather than foreign ones are able to sustain the investment burden of the economy.

Neoliberal transformations of a weak developing economy affect its CS structure as *follows*:

- 1) the CS core becomes eroded due to its saturation by TNC affiliates and companies controlled by foreign investors (often rather vague in terms of legal person identification); this, in turn, decreases the sensitivity of the CS core to regulatory actions;
- 2) local entrepreneurs are driven by foreign investors out of the CS core to its periphery, including to service industry segments that are unattractive for foreign capital;
- 3) part of the CS is criminalized as local entrepreneurs are moved under the pressure of foreign competitors into the shadow, if not the criminal, sector of the economy.
- 4) usually, CS amorphism increases (including due to outsourcing), which lowers its sensitivity to administrative actions implemented through monetary and budgetary policy tools<sup>184</sup>;
- 5) the ESR<sub>CS</sub> is reduced due to the higher percentage in the CS of TNCs and companies with branches based abroad, and, generally, due to a decrease in its capacity for self-financing and expanded reproduction;
- 6) eventually, a decrease in the economy's dynamic potential.

Under neoliberal restructuring of a developing economy, the CS resistance also usually decreases. It becomes less stable both as a system and as allocation of shares among shareholders. This hampers the implementation of long-term capital investment projects and, consequently, the enhancement of CS performance.

The deficient stability of a neoliberal economy's CS is linked with deficient economic subjectness. Whenever the CS ESR increases so does its degree of stability. Conversely, whenever the CS resistance improves, conditions for ESR<sub>CS</sub> enhancement are created.

The ESR<sub>CS</sub> problem is linked to the problem of its mass and dynamic potential. An increase in the ESR<sub>CS</sub> paves the way for fuller utilization of the available economic capabilities and, consequently, increases the dynamic potential of the CS and economy. Growth in the mass of a weak developing economy generally increases the ESR<sub>CS</sub>.

A significant decline in the ESR<sub>CS</sub> as a result of short-term neoliberal transformation of a modernizing economy reduces its growth potential. The faster the relevant transformations, the greater the reduction. Then, as the economy develops, driven by intrasystem factors, the ESR<sub>CS</sub> and the economy's dynamic potential gradually begin to be restored. The CS system quality and performance improve. Data on Latin America (Table 4.1) confirms this.

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<sup>184</sup> The restructuring of a modernizing economy in line with the neoliberal economic paradigm results in an increase in its CS of:

- 1) the proportion of enterprise targeting world markets and enterprises (largely export-oriented) controlled by foreign investors;
- 2) the proportion of firms controlled by local capital with enterprises operating abroad;
- 3) the proportion of firms broadly engaged in shadow operations. Concurrently, the proportion of public companies in total economic output is decreasing. Such a restructuring, therefore, increases CS amorphism.

Table 4.1

**Changes in GDP growth rates of major Latin American countries, %**

Country	1961–1970	1971–1980	1980–1990	1990–2005
Argentina	3.8	2.4	–1.0	3.2
Brazil	5.4	7.7	1.9	2.8
Mexico	4.1	5.8	1.2	3.1
Chile	4.0	1.8	2.4	5.7
Latin America, total	4.9	5.1	1.1	3.2

*Source:* Bulatov, 2007. P. 679.

In effect, the CS of the Latin American economies under review, which were transformed in the neoliberal sense, experienced profound reverse changes toward convergence with the model existing before World War II. By the time the neoliberal restructuring was completed, the CS efficiency of these economies had sharply declined as the result of an essential increase in amorphism and decrease in  $ESR_{CS}$ . Then, the above efficiency, driven mainly by the economic growth factor (albeit decelerated), again started to rise.

The CSs of Indonesia, Thailand, and even South Korea underwent similar transformations under pressure from the IMF. Their  $ESR_{CS}$  and performance dropped dramatically in 1998–1999. Thereafter, the above economies continued to build up their  $ESR_{CS}$  and improve CS performance.

It should be especially emphasized that the modernization of an economy and its CS at its initial stages is limited to certain areas and sectors, thus creating a risk of splitting the CS, including its core, into regional and sectoral segments loosely interlinked within the system. These risks increase if corporations controlled by nonresidents and integrated with the CS systems of other countries play a significant role as modernization agents.

Such risks are reduced by introducing public companies and corporations in the modernized CS segments, by government participation in the capital of joint ventures with nonresidents, or by establishing special conditions for admitting foreign capital, including by deploying primary production (raw stock, materials, components, services) in the host country.

The economic integration of some developing economies of the neoliberal type, even without any additional adjustments, raises their dynamic potential, since its result is an economic module larger in size and economic mass in comparison with any of the economies making it up. Such a module has a larger ESR and dynamic potential.

The implementation of a free trade zone (FTZ) project in Southeast Asia (based on ASEAN countries and China) is directly linked with the above-mentioned fact. The same can be said of various economic integration plans in Latin

America (MERCOSUR, the Bolivarian Alliance) and FTZ integration projects in the post-Soviet space.<sup>185</sup>

These plans are high on the agenda largely because of inefficient CSs emerging from the neoliberal restructuring of modernizing economies and the urgent need to neutralize, at least partially, the negative consequences of these restructurings.

***The South Korean model of neoliberal transformations of a CS  
with adjustments to its parameters***

In the mid-1990s, the South Korean economy reached almost the same level of liberalization, privatization, and openness as most Western European economies did a decade earlier. In 1997, the South Korean economy entered a crisis (due to capital outflows) just because of the lack of control over capital flows, including short-term, which per se is indicative of high openness of the economy.

However, the IMF considered that this was not enough. In exchange for a US\$57 billion stabilization loan, in 1997 the IMF required that South Korea:

- 1) within a short time push privatization of the economy further and lower the share of the state in the CS assets;
- 2) scale down state involvement in the banking sector;
- 3) lift restrictions on foreign investments;
- 4) restructure, by splitting in terms of specialization, multibusiness chaebols (conglomerates) making up the national CS core along with public companies.

The above requirements was aimed at lowering the ESR of the South Korean state and CS rather than at enhancing the capacity of South Korea to service foreign debt.

The restructuring materially affected South Korea's CS core and the entire CS, since it resulted in:

- 1) a reduction in the personnel of major corporations over five years (in 2000–2004) by 1.2 million people, concurrently increasing the number of employees in small and medium firms by 1.54 million people<sup>186</sup>;
- 2) a substantial increase in the presence of Western TNCs in the South Korean CS core by concurrently decreasing the presence of the public sector<sup>187</sup>;

The transformations undertaken in the South Korean CS under agreements with the IMF eventually ended in weakening of the CS core, and the ESRst and ESRCS decreased. However, it appeared that South Korea failed to fulfill

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<sup>185</sup> An FTZ established by Russia, Kazakhstan, Belarus, and other CIS members could have essentially increased the economic subjectness of the CIS economy corporate base, could have lowered its susceptibility to negative processes in the international economy and hence could have raised the dynamic potential of FTZ member nations.

<sup>186</sup> Lee Hyun Jae et al., 2008. P. 192.

<sup>187</sup> The 1997–98 crisis caused a sharp, albeit temporary, market depreciation of South Korean companies, entailing the arrival of TNCs in the South Korean economy. The South Korean giant Samsung was sold piecemeal. The engineering branch of the conglomerate Daewoo worth US\$6 billion was sold off for US\$400 million (Klein, 2009. P. 357).

the agreement with the IMF in full. In effect, as of 2005, the South Korean government retained control over the national railway system and electric power industry.

Moreover, under the agreement with the IMF, South Korean leaders enjoyed freedoms in policy matters concerning SMEs. Taking advantage of these freedoms, the South Korean leaders adjusted the economic policy of promoting the development of SMEs on a comprehensive basis following the Taiwanese approach of the 1970s–1980s (see Appendix 3). Business groups were set up within big companies and small and medium firms cooperating with them under long-term contracts and subcontracts. In addition, steps were taken to promote the development of small and medium innovative companies.<sup>188</sup>

The above steps encouraged growth in the ESR, dynamic potential, and performance of the national CS and apparently created certain obstacles to further invasion of foreign capital in the South Korean economy.<sup>189</sup> The obstacles included statutory limits imposed domestically on the shareholding of large companies and foreign investors in small and medium firms.

Due to the above transformations and effects created by growth in the economic mass and competitive performance of the South Korean CS, regressive changes in the national CS after 1997 were limited and, ultimately, effectively reversed. Though the personnel of large companies controlled by local capital substantially decreased in number in 2000–2004, they continue to dominate in the South Korean CS.

South Korea is distinguished by a very high level of efficiency of the business and administrative communities. The example of South Korea shows that under the given circumstances, the reduction in CS efficiency due to its accelerated transformations in line with the neoliberal economic paradigm is limited and amenable to a reversal, including by adjustments to the CS, which are in principle compatible with the neoliberal economic paradigm.

The above suggests that:

1. A restructuring of the economy and national CS in line with the neoliberal economic paradigm (i.e., in accordance with Washington Consensus recommendations and IMF conditions), contrary to mainstream opinion, by no means substantially increases the share of developing economies restructured in this way in global exports.<sup>190</sup> In all other respects, such a restructuring has in most cases a negative impact on the modernization and CS growth of developing economies and lowers their ESR and dynamic potential. For this reason, such restructuring activities were generally carried out only under high external pressure exerted by mature economies and entities controlled by them.
2. A neoliberal restructuring of a developing economy results in regressive system changes in national CSs, concurrently lowering their stability and performance.

<sup>188</sup> Lee Hyun Jae et al., 2008.

<sup>189</sup> After 2000, direct foreign investment flows to the South Korean economy began to dwindle (Bulatov, 2008. P. 553).

<sup>190</sup> Russia and the Rest of the World, 2006. P. 325.

3. Stability of CS system characteristics supporting the operation of neoliberal economies is achieved when the neoliberal economy is much larger in comparison with economies whose level of liberalization, privatization, and openness is governed by development priorities.

For this reason, restructuring of national economies in line with the neoliberal economic paradigm is a factor that fosters the integration of regional CSs. In practice, a regional or transregional CS is generally formed around a “stiffening core” consisting of one or several CSs with a large ESR (like the CSs of the US, Old Europe, and China).

## 4.8. Conclusions from Chapter 4

1. The functions of an economic modernization agent and the related CS can be performed by local private capital, foreign capital, and the state. At the early stages of modernization, local private capital lacks investment and technological potential to perform this role. Generally, foreign capital reaches CS sectoral segments of the host country in which it can earn the highest profits (with unfettered profit repatriation) and therefore creates only local and side effects of modernization in the receiving CS. Since the second half of the 20th century, the state has played a key role in the CS modernization of developing countries, as well as in the secondary postcrisis CS remodernization of developed countries.

2. As an economy moves along a modernization path, the CS also moves along a certain phase path and passes through a series of interlinked conditions. However, there are no options for CS system characteristics and economic policy that would ensure the most efficient CS operation along the entire phase path at all stages of the modernization cycle. Each stage of the modernization cycle is matched by its optimum CS and economic policy option.

3. As market regulation of economic processes in the modernization of the economy becomes more efficient, the need for their nonmarket regulation gradually decreases. This also reduces the size of the regulatory resource needed for nonmarket regulation of the economy and CS operation in the modernization cycle. Economic modernization thus creates conditions for a gradual reduction in the intensity of economic regulation actions, i.e., for its gradual liberalization, entailing privatization.

4. Normal CS evolution after it has achieved its modernization quality starts with a CS having an underdeveloped periphery and core consisting mainly, or even exclusively, of public companies. The evolution of a modernizing CS as long as it retains modernization quality ends with a CS having a core dominated by nonpublic companies. At the same time, the core contains a host of public companies similar to those that composed the CS core of Western European countries in the 1950s–1970s.

5. As long as the state economic policy places a high priority on modernization and economic development, no factors will work to drive the state as a strategic owner out of the CS. The higher the technological level of the economy, the less

profitable and attractive the investments in capital-intensive sectors appear to private investors. Accordingly, the higher the technological level of the economy, the higher (under a fixed investment potential of the private sector) the demand for the state to finance the development of capital-intensive sectors and the need for state involvement in the CS. This is one of the main factors that retained state involvement in the CSs of India, South Korea, Taiwan, and some other countries at the stage following their primary modernization; it is now helping to retain state involvement in the CS of China.

6. Development of the sector of SMEs (firms) is an efficient tool to address employment problems at nearly all stages of the modernization cycle. However, on its own, it is not a factor of economic development acceleration. This is true primarily for small and, moreover, for microenterprises. Economic development may be successfully accelerated by support of the SME sector in a more or less liberalized economic environment only if two conditions are met. Firstly, the economy must have large companies capable of functioning as a core of business groups comprising relevant companies as well as SMEs cooperating with them. Secondly, the economy must be capable of building up a large segment of SMEs established by foreign investors.

7. Potentially achievable economic growth rates are a function of the  $ESR_{St}$  and  $ESR_{CS}$ . Where economic development and modernization is given a high priority, the economic policy is almost always successful if it is based on the option sustaining growth in the  $ESR_{CS}$  and  $ESR_{St}$  or maintaining them at the highest level possible. The higher the development priority and the lower the economic modernization level, the more pronounced, other things being equal, the drive to raise the  $ESR_{St}$  and  $ESR_{CS}$ .

8. The neoliberal economic paradigm is a tool that transforms the CS from its relatively stable condition into a less stabilized condition rather than a tool that increases or decreases CS performance. It is not clear how in general this process will end as long as the economic policy is based on the principles of the neoliberal economic paradigm.

9. Therefore, when a developing economy is restructured in line with the neoliberal economic paradigm, the CS stability usually also decreases systemically and in terms of allocation of shares among the owners. This inhibits corporate entities from implementing long-term capital investment projects and by no means promotes CS modernization and performance enhancement. Inadequate CS sustainability of a neoliberal economy is associated with an inadequate  $ESR_{CS}$ . The stability of the CS system increases together with growth in the ESR. The buildup of CS system stability, in turn, paves the way for increasing its  $ESR_{CS}$ .

10. The stability of the CS system characteristics supporting the operation of neoliberal economies is achieved when the neoliberal economy is much larger in comparison with economies whose level of liberalization, privatization, and openness is governed by development priorities. Therefore, a restructuring of national economies and CSs in line with neoliberal requirements is a factor that fosters the integration of macroregional CSs. In practice, a regional or transregional CS is generally formed around a “stiffening core” consisting of one or several CS with a large ESR.

# CONDITIONS FOR MAXIMIZING EXPORT EFFICIENCY IN THE MANUFACTURING INDUSTRY SEGMENT OF A CORPORATE SYSTEM

## 5.1. Factors affecting the export efficiency of a CS

The export capacity of a particular CS at time  $T^{191}$  is determined, other things being equal (output of export products, their range, capacity of relevant markets), by the CS export efficiency (CSEE). The latter, in turn, is a function of:

- 1) the CS effective export competitiveness (EEC)<sup>192</sup>;
- 2) the EEC of competitors (i.e., above all, the effective competitiveness of rival CSs);
- 3) the relationship between supply and demand in the CS output markets, or the demand factor.<sup>193</sup>

Any CS manufacturing export products under the given conditions and given strategy of export supply exhibits certain proper export competitiveness (PEC).

The CS EEC ( $EEC_{CS}$ ) is not identical to its PEC merely because the  $EEC_{CS}$  depends on such a parameter as the financial multiplier of price competitiveness (FMPC) influencing the export price and reflecting financial, tariff, and currency policies directly affecting the offer price of export products.

For example, changes in the exchange rate can have a strong impact on price competitiveness. Tax holidays can significantly raise the price competitiveness of export products. Conversely, an increase in export tariffs automatically lowers the price competitiveness of exports. In addition, the CS position, which is actually

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<sup>191</sup> Strictly speaking, the values of export efficiency, export capacity, and other similar parameters outlined below are meaningful only in relation to a certain extended time interval. Here and below, export capacity, export efficiency, etc., at time  $T$  mean relevant indicators within a limited time interval around time  $T$ .

<sup>192</sup> EEC, when contemplating the competitiveness of all products of the given CS (including, products 1, 2, 3, 4 and so forth), is a function of the effective competitiveness of export supply of products (1, 2, 3, 4, etc.).

<sup>193</sup> If demand for the product of a particular CS exceeds supply, its export efficiency will be high irrespective of the competitors' competitive power. This provides grounds for regarding the demand factor and the related market competitiveness factor (since it is associated with the relationship between supply and demand) as one of key factors determining CS export efficiency.

not a tangible asset, in the international trade system (PITS) has a noticeable impact on the EEC of individual corporations and the entire CS, since it is determined by such factors as business connections, goodwill, and established brands.<sup>194</sup>

Then the following is valid:

$$EEC_{CS} = F(PEC, FMPC, PITS). \quad (5.1)$$

Due to the influence of the FMPC and PITS factors, the EEC can at times be substantially lower or higher than the PEC.

The PEC value of any CS at any given time is a function of:

- 1) price competitiveness of export products (PrC) estimated without the influence of the current exchange rate factor on the export price;
- 2) technological competitiveness (TechC);
- 3) range competitiveness (RanC), whose value is determined by the range of export products;
- 4) proper marketing competitiveness (PMC), which is dependent on how efficiently export products of the related CS are promoted to global markets<sup>195</sup>:

$$PEC = F(PrC, TechC, RanC, PMC). \quad (5.2)$$

The dependence of the current PEC and EEC values of the given CS on its system-critical characteristics (structure and system quality) is not obvious. Nonetheless, it does exist.

In fact, the more the CS assets contain corporations with specialized units for assimilating and developing new technologies and the greater the spending of the corporations on R&D and promotion of new manufacturing technologies as opposed to sales, the greater, other things being equal, the technological competitiveness of export products.

Meanwhile, other things being equal, spending on R&D and promotion of new manufacturing technologies is higher, the broader the presence of large and super-large corporations and FIGs in the CS and the greater the proportion of the core of such corporations in the CS. Therefore, large-scale manufacturing of high-tech products (without those produced by enterprises with participation of foreign capital) is concentrated mainly in the segment of major corporations and FIG-type entities. Therefore, the PEC of the CS with a mature core consisting of major corporations, other things being equal, is higher, the greater the proportion of this core in CS assets and production.

There are also other factors governing the dependence of the CS PEC and EEC on its structural characteristics.

<sup>194</sup> The PITS factor produces a perceptible impact on the EEC of any CS that exports products to competitive markets with excess supply.

<sup>195</sup> The system promoting export products to global markets (the FCM supporting exports) includes specialized export (or export–import) trading companies, other distribution networks, banks crediting exports, insurance enterprises, advertising agencies, and other marketing institutions whose services are used by specific exporters to push products to potential customers.

1. The presence of large multibusiness corporations, other things being equal, broadens the range of export products and hence enhances the CS range competitiveness and export capacity.
2. An efficient credit system providing loans to finance CS adaptation to market environment changes is a factor enhancing CS PEC over the mid- to long term.
3. CS core TNCs emerging from domestic companies, other things being equal, represent a factor enhancing CS PEC.
4. CS sector corporations with foreign capital that manufacture mainly export products represent a factor, other things being equal, enhancing CS technological competitiveness.
5. If the exchange rate of the national currency is undervalued, the advanced domestic manufacturing of components is a factor enhancing the price competitiveness of the export products in which these components are used.
6. Immature CSs usually feature a weak vehicle to promote export products to global markets. In contrast, in advanced CSs with a distinct export orientation, this vehicle is strong (FCMs supporting exports) and the input of this system and organizational units performing relevant functions into the CS PEC is greater.

Any factors that lower the susceptibility of some corporations (and hence the entire CS) to the level of market and investment risks associated with investments in the export sector and R&D encourage growth in exports and, indirectly, their technological competitiveness. Hence, specifically, other things being equal, CS PEC is relatively higher:

- 1) if the CS contains major corporations;
- 2) if the government is the main contributor to the development of the infrastructure base of the CS export sector;
- 3) if the government shares with nonpublic companies risks associated with the development and promotion of new manufacturing technologies.

In addition, the CS export efficiency depends heavily on the efficiency of the business community servicing its export sector. The transformation of the economies of South Korea, Taiwan, Singapore, Thailand, and Malaysia into efficient export-oriented economies is directly connected with the improved performance of business communities servicing their export programs and the ultimate transformation of the communities into high-performance business communities.

If the efficiency of the business community (EBC) servicing the CS export sector is low, the EBC deficiency has to be compensated for in one way or another. In this connection, attention should be drawn to the fact that the import of foreign capital as direct investment into the export sector also always involves the import of efficient entrepreneurs (managers performing entrepreneurial functions also fall into this category). This is one of the important reasons for the relatively high export efficiency of this category of foreign investments.

The dependence of PEC on the CS characteristics becomes more obvious when examining the conditions for maintaining high-level CS export efficiency (CSEE). This problem arises because the competitiveness of actual and potential competitors, as a rule, gradually increases, while global market conditions change from time to time.

Accordingly, the line of export products must be continually modified and their technological level continually raised to stabilize the CSEE at an acceptable level. In

other words, the maintenance of the CSEE level requires considerable regular capital investments to support competitiveness, even if export growth is not targeted.

Consequently, the CS ability to invest in the maintenance of competitive power using its own funds or borrowings or public financial resources of various types is a must to retain the CSEE at an acceptable level. In practice, if the export supply of a certain CS segment consists of manufactured products, the export efficiency of this CS segment can be retained at an acceptable level by loan or government (in one form or another) financing of capital investments to maintain the competitive power of the manufacturing industry.

CS system-critical characteristics (CSSCs) and, in particular, its export sector (including the condition of the relevant SCSs, functional corporate export modules, and specialized corporations that promote products to export markets), as can be seen from the above, can essentially govern all the components of CS PEC, i.e., technological, range, marketing, and, to a lesser extent, CS price competitiveness.

CS PEC also depends, apart from its system characteristics, on some other factors. These include the state of the CS resource and production base, the system interaction between the CS export sector and its other sectors, tax burden, economic law, etc. In any case, CSSC variations have a huge impact on PEC variations and, consequently, on EEC variations. In the given external economic environment, they also affect those of the CSEE.

The relationships between the key factors whose interaction determines the CSEE are shown in Fig. 5.1.

Since the CSEE depends not only on the CS PEC, but also on the FMPC, the PEC deficiency may be, to a certain degree, compensated for by the latter (for example, by lowering the currency exchange rate). However, such compensation is usually possible only when the PEC deficiency is caused mainly by a price competitiveness deficiency.

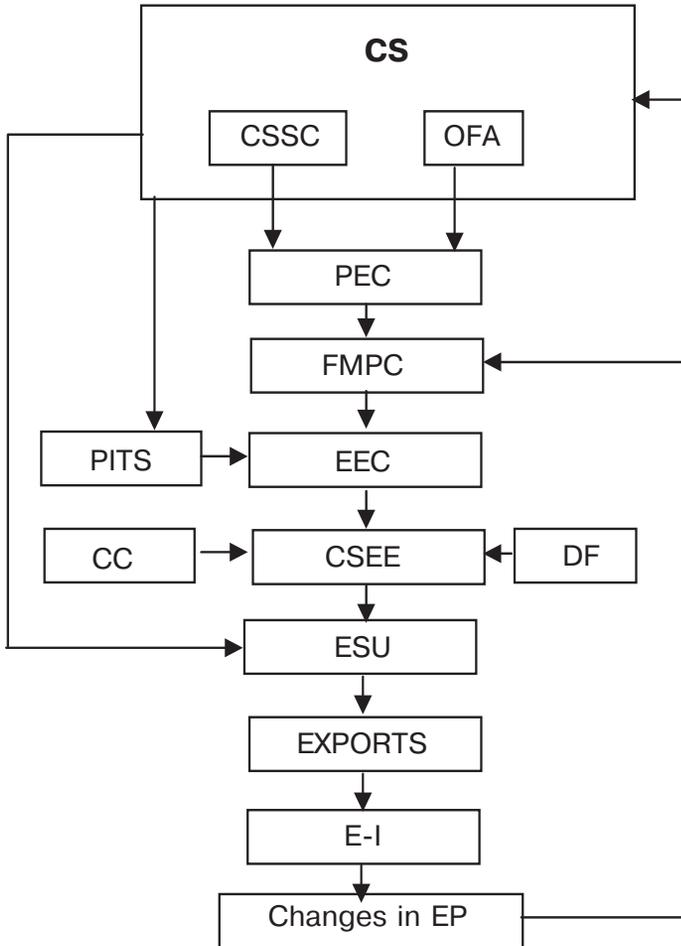
A technological competitiveness deficiency, if it is relatively low, can be also compensated for, fully or partly, by increasing the actual (taking into account the effect of the FMPC) price competitiveness. However, if it is high, it is generally not amenable to compensation by increasing the actual price competitiveness of the relevant products.

The same in many ways is valid for marketing competitiveness. If a product, because of defects in the system of its promotion to consumers, is almost inaccessible to a potential consumer, it is noncompetitive, irrespective of the price.

It should be kept in mind that increasing product competitive performance by lowering the exchange rate of the national currency against its PPP (to compete with outside producers, no matter whether in a domestic or foreign market) is more effective, the fewer imported components and semifinished products the manufactured goods contain. Conversely, the higher this proportion, the less applicable the method of lowering the exchange rate, since it inevitably increases the purchasing cost of imported components and semifinished products.

Thus:

- 1) all PEC components depend on the CS system characteristics and their harmonization with the framework conditions (i.e., on the CS system quality);
- 2) generally, a PEC deficiency can be only partly compensated for by the mechanisms of raising price competitiveness using the multiplier effect of the FMPC;
- 3) if the PEC deficiency stems from the CS system characteristics, it can generally be unamenable to any notable compensation.

**Legend:**

CSSC – CS system characteristics

OFA – other factors linked to the CS that affect PEC

PEC – CS proper export competitiveness

FMPC – financial multiplier of price competitiveness

EEC – CS effective export competitiveness

CSEE – CS export efficiency

PITS – CS positions in international trade underpinned by business connections, goodwill, established brands

CC – effective export competitiveness of competitors

DF – demand factor (relationship between supply and demand in export markets)

ESU – CS export supply (usually exceeding exports)

E-I – balance between exports and imports

EP – economic policy

**Fig. 5.1. Basic elements of the reproduction loop whose interaction determines the CSEE and capacity**

However, if the PEC and EEC deficiency of the given CS occurs in a situation when competitors seeking to boost the competitiveness of their industrial products also apply the FMPC (for example, undervalued exchange rates), this at best produces only a temporary effect to be lost in the mid- to long term. Hence, the dependence of effective export system competitiveness (and CSEE) on the CS system characteristics is higher in the mid- to long term than in the short term.

Let us assume that CS (economy) “x” is competing with CS (economies)  $x_1$ ,  $x_2$ ,  $x_3$ , etc. Let us further assume that all the listed economies are pursuing an export promotion policy and use the same tools (for example, an exchange rate policy and tax holidays) to enhance price competitiveness. In this case, a reduction in the negative effects produced by certain system qualities of the export competitiveness of “x” on “x” to the level of negative effects produced by the system qualities of CSs  $x_1$ ,  $x_2$ ,  $x_3$  on their export competitiveness is needed to maintain the export efficiency of CS “x” at an acceptable level.

It would be wrong to say that the “system quality vector” of the given CS (a set of indicators reflecting the condition of its key system characteristics) can be determined arbitrarily irrespective of the system quality vectors of competing CSs. If this CS “x” exhibits high export efficiency, the system quality vectors of CS “x”, to a certain degree, will always match the system quality vectors of the competing CSs. The required degree of this matching is the higher, the closer the export profiles of the competing CSs.<sup>196</sup>

For this reason, the convergence of the export profiles of the South Korean and Japanese economies has led to a high degree of similarity between the CS system characteristics of these countries.

## 5.2. Factors limiting the input of small and medium firms into the economy export capacity; conditions for neutralization of these factors

The input of small and medium firms into the export capacity of the economy is restrained by the following framework conditions:

- 1) world market demand for competitive (in terms of pricing and technology) products manufactured by small and medium firms;
- 2) the effect of economies of scale on costs (if the effect is minor, SMEs, other things being equal, can, by and large, compete with large corporations);
- 3) the output threshold level to be reached to stay competitive in a specific market; in sectors where this level is high enough, large and superlarge corporations tend to monopolize production and, hence, exports.

In addition, the input of SMEs (and thus, small and medium firms of corporate type) into exports is affected by:

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<sup>196</sup> The export profile is determined by the export offer and structure.

- 1) the state of credit service supplied to the sector of small and medium firms;
- 2) the availability and scope of incentives for small and medium firms manufacturing export products;
- 3) the economic policy in the part where it encourages the upgrading of production facilities of export-oriented small and medium firms (also by setting up enterprises with participation of foreign capital).

Weak positions in the global trade infrastructure make small and medium firms vulnerable as exporters if they do not have branches abroad (they usually do not). Specialized export-oriented trading companies, for example, those replicating the Japanese model, can noticeably raise the share of small businesses in the economy's export capacity. These companies promote the products of small and medium firms to global markets and perform better when structurally united into functional corporate export modules.

The effective competitiveness of small and medium firms (and, hence, their input into the economy's export capacity) depends heavily on different framework conditions. Part of these conditions depends on the international market demand for competitive (in terms of pricing and technology) products manufactured by small and medium firms.

Another part of these conditions depends on the economic and fiscal policy and the actual state of those SME-sector production facilities that have the potential to manufacture export products.

Where export production in the SME sector and exports of its goods are encouraged, the SME exports and input into the economy's export capacity will rise.

Encouraging, in one form or another, SME-based export production, exports of goods manufactured by these enterprises requires a specialized state management system ( $SSMS_{sm}$ ) to support the export production of SMEs and their exports. This involves certain public spending on financial support for  $SSMS_{sm}$  activity.

Then the export capacity of SMEs  $EXP_{sm}$  can be expressed as

$$EXP_{sm} = F(EPB_{sm}, RPSSMS_{sm}, GMC), \quad (5.3)$$

where

$EPB_{sm}$  is the state of the part of SME sector production facilities that has the potential to manufacture export products;

$RPSSMS_{sm}$  is the regulating power of the state system fostering export production and exports in the SME sector;

$GMCs$  are the global market conditions.

At any given moment, the input of SMEs into the economy's export capacity is directly linked to the effect the  $SSMS_{sm}$  has on the SME system at a given moment and has had for a long enough time before it.

SMEs facing export competitiveness deficiency  $DefC_{sm}$  in comparison with large companies can achieve an acceptable level of export competitiveness by compensating for  $DefC_{sm}$  by  $SSMS_{sm}$  administrative actions directed at the SMEs system and the infrastructure system of their operation, involving:

- 1) various financial benefits;
- 2) state participation in investment and technology upgrading programs;

- 3) encouragement of the development of infrastructure and services ensuring the marketing of SME export products;
- 4) various organizational assistance to producers of export-oriented goods and exporters proper.<sup>197</sup>

The above suggests that if the regulating power of the  $SSMS_{sm}$  is large enough to eventually compensate (for example, in 5–7 years) for  $Def_{CS_{sm}}$ , the SME system controlled by local nonpublic capital can effectively turn into an efficient exporter and substantially increase the economy's export capacity (Strategy 1 for increasing the export capacity of the SME sector).

However, it is also quite possible that when there is a strong need for export growth, building up a sufficiently strong export sector within an economically acceptable timeframe by implementing Strategy 1 alone may not be easy or it may call for excess costs.

Building up a sector consisting of small companies with considerable export capacity (Strategy 2) within the CS might be seen as an alternative strategy under which foreign companies, or external parent companies in that case playing the role of TNCs, manufacture export-oriented products in the given country and promote their export.<sup>198</sup> In Strategy 2, the set of such companies in regard to the export-oriented sector of the CS periphery, if it is taken as a whole, plays roughly the same role as the  $SSMS_{sm}$  in Strategy 1.

In modern conditions, the periphery of any CS consisting of small and medium businesses alone has a rather limited export capacity (or, strictly speaking, limited proper export capacity). This CS periphery can turn into a large exporter in the presence of the multiplier of the proper export capacity of the given CS periphery, which is external to small and medium businesses, and hence, when there is a “support agent” external to the given set of small and medium businesses.

The state or external investors or both can perform as such. Certainly, foreign investors invest not only in small enterprises, but here, since small and medium businesses are under review, foreign direct investment precisely in this segment is meant.

### 5.3. Options of export capacity distribution between the CS core and periphery

There are various strategy options to build up an export-oriented sector based on the given CS. So, the Taiwanese strategy option to increase the economy's export capacity, at least in the 1960s–1970s, was aimed at increasing as quickly

<sup>197</sup> Here, specialized trading companies engaged in foreign trade operations are meant. Such companies were typical for the CS of Japan and South Korea when their exports were cracking global markets.

<sup>198</sup> Specifically, they perform the following functions:

- (a) investing;
- (b) technological support;
- (c) most often suppliers of components;
- (d) promotion of selling or marketing products in foreign markets.

as possible the export capacity of the SME system of the CS periphery by highly active administrative actions directed at the SME sector and performed through the SSMS<sub>SME</sub>.

In the 1960s–1970s, when Taiwan had a shortage of foreign currency (and therefore an urgent need to boost exports), an efficient export CS segment was created based on SMEs. The state:

- 1) created a virtually turnkey infrastructure base to develop such enterprises and supply them with necessary commodities, raw materials, and investment goods;
- 2) assumed functions aimed at promoting exports to international markets;
- 3) established a special selective management module for the periphery export CS segment distinguished by diverse, target-oriented, and active administrative actions.<sup>199</sup>

In the same period, South Korea was increasing its export capacity by rapidly raising the export capacity of large companies and FIGs making up the CS core (chaebols).<sup>200</sup> SMEs in this system mainly played the role of subcontractors of major corporations of the CS core in implementing export programs. Only at the end of the 1970s did South Korea begin to take systematic measures to increase the proper export capacity of SMEs and their proportion in overall exports. However, these efforts failed to score any notable success.

However, it should be noted that both Taiwan and South Korea easily handled many issues of technological and marketing competitiveness when building up a CS export segment. The reason behind this was the specific political situation at that time, when both countries were receiving from the US and NATO nations (strategic military and political allies against the Soviet Union and China) considerable privileges related to the import of technology and export of products to global markets.

#### 5.4. Impact of openness of the economy on the CS export capacity

Before the GATT and WTO era economy “x” was open to exports from economy “y” roughly as much as economy “y” was open to exports from economy “x” (i.e., according to the principle of mutual openness “parity”). At present, the mutual openness policy boils down to minimizing import tariffs and, in view of WTO membership requirements, to assigning the status of national investors to foreign investors.

If an economy is largely closed to foreign exporters of goods, services, and capital, the CS servicing this economy, under contemporary conditions, is unable to export any significant quantity of manufacturing industry output. In reality, the mutual openness principle is a must.

Any fixed export volume is matched by a certain level of pricing and technological competitiveness. If the pricing and/or technological competitiveness of exports rises, so does the export volume, other things being equal.

<sup>199</sup> Appendix 3.

<sup>200</sup> Appendix 2.

The simplest way to increase price competitiveness is to undervalue the currency rate against its PPP. For this reason, the export capacity of most developing economies exporting low-tech (or, at best, medium-tech) products is directly linked to the ratio between the exchange rates and PPP of national currencies. The more the exchange rate is undervalued in relation to the PPP (estimated in dollars or euros against the national currency), the greater the implicit export subsidy and the greater the potentially achievable export level.<sup>201</sup>

The competitiveness of developing economies is often viewed as directly depending on the remuneration level. In effect, at present, with comparable technological competitiveness, in most cases it is determined by the ratio between the exchange rate and the PPP.

### 5.5. Factors affecting CS export specialization

Generally, the export supply potential and exports increase concurrently with increasing industrial output. Apart from increasing export supply, a general increase in output in most cases reduces (because of economies of scale) the cost of a product and therefore raises its export price competitiveness.

Thus, it is evident that the higher the overall “national” manufacturing industry output and especially that of its end user industries (light, engineering, and some other industries), the larger, other things being equal, the potential size of exports.

It is less evident that the CS export capacity also depends on the range of manufactured products. The broader it is, the greater, other things being equal, the potential demand for export products and the potential volume of exports.

The policy of export specialization is more or less advantageous as long as the size of the economy is relatively small and the capacity to invest in competitiveness (especially technological competitiveness) is also small.

Consequently, growth in the size of the economy dimensions must be accompanied (when the focus is on growth in exports) not only by an increase in the absolute value of exports, but also by broadening of the range of export products, i.e., diversifying the export programs and moving toward more sophisticated and

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<sup>201</sup> In this case, it is necessary to emphasize again that the policy of direct export subsidy is more advantageous than its implicit subsidy by undervaluing the exchange rate, which makes it possible to avoid subsidizing those categories of exporters that do not need it.

In Russia, for example, the exchange rate of the ruble is substantially undervalued in comparison with the PPP. Accordingly, Russia implicitly subsidizes both the export of low competitive industry (for example, the engineering industry) products and highly competitive products (oil, oil products, natural gas, metals, lumber, and fertilizers), whose exporters earn huge profits. Economically, this is far from the optimal option of the export promotion strategy.

South Korea and Taiwan during the greater part of their economic history practiced a more economical scheme of export encouragement by employing a moderately undervalued exchange rate of the national currency and selective subsidization (though not explicitly) of those categories of exporters that really needed subsidies, including by scaling back import tariffs on semifinished products and components used in the manufacturing of products for export, by zeroing export duties, offering tax holidays, etc. (See Appendices 2, 3).

high-tech goods, which require more spending compared with low-tech goods for improving technological and overall export competitiveness<sup>202</sup>.

The examples of Taiwan and South Korea (which are model export-oriented economies) show that the above relationship is real. As the economies of Taiwan and South Korea were modernizing and the performance of the related CSs was improving, not only exports grew in volume, but their range rapidly broadened (in terms of groups of essentially similar goods) by simultaneously moving toward advanced technology goods.<sup>203</sup>

China's export sector shows how its export range is expanding as its absolute value increases. It is significant that China, while perfecting the manufacturing of high-tech products for export, has not reduced its exports of medium- and low-tech goods to world markets. This happens because, as the technologically advanced old centers of export production were scaling back the manufacturing of medium- and low-tech goods for export, new centers, less technologically advanced, including those based in rural districts and villages, took over the manufacturing of these goods.<sup>204</sup>

This is of conceptual importance, since it diminishes the benefits of division of labor, at least in the sectors found at the end of the manufacturing cycle (light, the engineering, and, partially, the chemical industry) between China and the rest of the world.

It should be emphasized again that broadening of the range of export products as the output grows or their shift toward high-tech goods is necessary for raising the export efficiency of the CS and the national economy as a whole.

It is no wonder that in this respect, newly industrialized countries in the course of their economic evolution followed Japan's pattern, while Japan followed the pattern of advanced Western economies.

Anyhow, it is apparent that it is imprudent to manufacture only a narrow range of products for export in the framework of the CS when its manufacturing industry segment reaches a certain above-critical development level.

It is noteworthy that the correlation between the exchange rate and PPP of a national currency (rate of exchange/PPP) affects not only the overall price com-

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<sup>202</sup> The manufacturing of any sophisticated and high-tech products entails the manufacturing of a certain quantity of auxiliary parts (even if a significant part of them were first imported) and relevant semifinished products. Therefore, the shift of export product manufacturing toward more advanced and sophisticated products expands the range of manufactured goods and stimulates the sectoral diversification of the industry.

<sup>203</sup> See Appendices 2 and 3.

<sup>204</sup> In terms of its internal structure, the Chinese economy is a combination of LRCMs exhibiting essential mutual autonomy and different levels of development. The LRCMs of the maritime provinces are much more technologically advanced (and where remuneration and the competitiveness level is also higher) than those in the interior provinces. The so-called rural industry (which employed 75 million people as far back as 1995), in terms of remuneration and the technological level, is still among the least developed export-oriented economies.

At present China produces in significant amounts for export most of the manufactured goods that are in demand in the international market. In five to ten years China will produce almost all manufactured goods that are in demand in the international market (for example, the large-scale export production of sophisticated machine tools, aircraft, etc., is already expanding).

petitiveness of exports, but also their range. The lower this correlation, the greater the scope of implicit export subsidy and the broader can be the range of competitive price goods offered for export. When the currency exchange rate is undervalued against the PPP exchange rate, the range of products for export tends to broaden. When the exchange rate is overvalued, it tends to narrow.

The above suggests that to achieve high export efficiency, the economy and the related CS should not undergo any (raw material or even high-tech) deep export specialization of the CS. Such a specialization produces strong dependence of the CS and the economy on the operation framework conditions and, particularly, on external economic factors, including fluctuations in niches and external shocks, and this inevitably diminishes the  $ESR_{CS}$ .

## 5.6. The functional completeness of a CS as a condition to boost the development of an export-oriented economy

Modern globalization processes started to unfold between the end of the 1970s and the early 1980s. At that time it was anticipated that economies stepping up their interaction would ultimately deepen their specialization, lowering the  $ESR$  and narrowing the range of manufactured products. Indeed, national economies tend to lose their subjectness within macroregional blocs (for example, in connection with the establishment of the EU and NAFTA). Nevertheless, even on a macroregional scale the tendency toward economic specialization is weak, even if some countries partially lose their  $ESR_{CS}$ .

At the global level, the economies of China, India, Iran, and ASEAN countries show no distinct tendency toward higher specialization of their national CS. The reality is such that economic growth (even the growth of the export base and exports alone) is a factor that to a certain degree blocks the tendency toward economic specialization.

This conclusion is true for such classic export-oriented economies as Taiwan and South Korea. Yet it can be extended to other export-oriented economies that have passed through the phase of primary modernization and are exporting (predominantly or exceptionally) manufactured products. The primary reason is that export-oriented economies, at least after their primary modernization, require for their development (and economic development in general) an investment support system, including a system providing investment support for export sector development.

As long as industrial exports are insignificant in volume, this can be done without such a system and import from abroad needed to create an export base. But if there are plans to create a large-scale export production base, a different approach is needed. As a comparatively large CS export sector is phased in, capital investments should to be made in:

- 1) infrastructure supporting the operation of export sector enterprises;
- 2) enterprises whose products are consumed by the export sector (semifinished products, components);
- 3) enterprises manufacturing products for export.

Logistic support for such investments becomes a challenge. It has to be met by fabricating building structures, construction and industrial materials, and diverse equipment and machinery.

The tremendous success of Taiwan and South Korea in building up an export base is directly associated with launching the facilities capable of servicing heavy investments in capital assets (enterprises, structures). In South Korea and Taiwan, this base had been built before establishment of the resource base of the CS segments directly involved in export production and infrastructure conditions for their deployment. The industry export sector is expanding together with its base, consisting of sectors manufacturing investment products.

To develop rapidly, a large export-oriented economy develop needs the presence in its CS of:

- 1) an export sector;
- 2) a sector manufacturing semifinished products and components for the export sector;
- 3) a sector manufacturing investment products, which are consumed only partially during export sector growth;
- 4) a fuel and energy sector;
- 5) sectors manufacturing consumer goods (the food and other industries).

No matter whether the economy is modernized by minimizing relations with the global economy or, conversely, by maximizing them, economic modernization cannot be achieved through deep specialization in industry. In both cases it cannot be achieved without essential universalization of the structure of CS industrial sectoral segments and its gradual approximation to a mature economy standard.

An industry (and, consequently, the CS) without a sector manufacturing investment products automatically narrows the export sector growth base and its scope. The scaling back of the industrial sector manufacturing investment products (and in particular, machinery and equipment) always creates certain obstacles not only to addressing development challenges in general, but also to expanding the export base of the manufacturing industry and maintaining it afterwards (after expanding) in a competitive condition (Russia is a negative example in this respect).

Thus, export-oriented economies, when they come closer to advanced economies in terms of development level, show growth in CS functional completeness expressed in the development of CS sectors and subsystems that work to broaden the range of products and services provided and raise their technological competitiveness.

An economy's export capacity over the mid- to long term can be maximized by creating in it a sizeable (in relative terms) sector manufacturing investment products. In practice, this challenge can be met only by introducing major corporations in the CS and boosting relevant spending on R&D. Corporations include those that first manufacture simple equipment and then switch to more sophisticated and state-of-the-art equipment.

The success of Taiwan, South Korea, India, China, and some other countries in the development of export-oriented CS segments stems directly from the credit

and financial, manufacturing, research and technology facilities created for them. These facilities in all of the above countries were based on state entrepreneurship and selective economic policy measures and had been in place before the export production received material and infrastructure support.<sup>205</sup>

## 5.7. Conclusions from Chapter 5

**1.** The value of CS PEC at time (T) is a function of:

- 1) price competitiveness estimated without the current exchange rate factor influencing the export price;
- 2) technological competitiveness;
- 3) range competitiveness, whose value is determined by the range of export products;
- 4) marketing competitiveness depending on how efficiently CS export products are promoted to global markets.

**2.** Other things being equal, CS export competitiveness is relatively higher if the CS is filled with major corporations, if the state is the main contributor to the development of the CS export sector infrastructure base, and if the state shares with CS nonstate corporations the risks associated with development of new technology and its promotion to global markets. In addition, the CSEE depends heavily on the efficiency of the business community servicing its export sector. The transformation of the economies of South Korea, Taiwan, Singapore, Thailand, and Malaysia into efficient export-oriented economies is directly connected with the increasingly improving performance of the business communities servicing the export programs of those economies.

**3.** The CS system-critical characteristics and its export sector in particular (including the state of specialized corporations that promote CS products to export markets) can essentially govern all the components of the CS PEC, i.e., proper CS technological, range, marketing, and, to a lesser extent, price competitiveness. The dependence of the effective competitiveness of the export system on the CS system characteristics is higher in the mid- to long term than in the short term.

**4.** If the given CS “x” exhibits high export efficiency, its system quality vector will always match, to a certain degree, the system quality vectors of the CSs competing with the given system. The required degree of this matching is higher, the more the export profiles of the competing CSs resemble each other.

**5.** Their weak positions in the global trade infrastructure make small and medium firms vulnerable as exporters if they do not have branches abroad (usually they do not). Specialized export-oriented trading corporations (FCMs) can noticeably increase the proportion of small and medium businesses in the economy’s export capacity by pushing their products onto global markets.

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<sup>205</sup> See Appendices.

6. The export niche specialization of economies and CSs that manufacture goods for export, where the economy is above a certain critical size, is always inefficient. An economy targeting growth in exports must not only increase exports in absolute terms, but also broaden their range (diversify the CS export program), including toward more sophisticated and high-tech goods.

7. For a relatively large export-oriented economy to develop rapidly, the industrial segment of its CS needs:

- 1) an export sector;
- 2) a sector manufacturing semifinished products and components for the export sector;
- 3) a sector manufacturing investment products that are consumed only partially by the growing export sector.

Therefore, an export-capable CS segment generally evolves accompanied by an increase in its functional completeness.

8. To achieve high export efficiency, the economy should avoid any (raw material or even high-tech) deep export specialization of the CS. Such specialization, among other things, will result in a strong dependence of the CS export capacity and the economy on the conditions of a few global markets and, hence, most likely will face market shocks. In addition, such specialization creates a strong dependence of the CS on the operation framework conditions, in particular, on external economic influence, i.e., inevitably reducing the  $ESR_{st}$   $ESR_{CS}$ .

# THE CORPORATE SYSTEM OF MODERN RUSSIA: ESTABLISHMENT, STATUS, CAPACITIES AND MECHANISMS FOR ENHANCING PERFORMANCE

## 6.1. The Russian CS: the impact of the economic policy factor

### *The effect of the EOSS in the reform period on Russia's CS performance: an overview*

In the marketization of the Russian economy and the establishment of its CS (CS), the economic objective-setting and economic policy were influenced mainly by the neoliberal economic paradigm, reflected in the recommendations of the above-mentioned Washington Consensus and IMF conditions for receiving stabilization loans (maximum privatization, liberalization, CS competitiveness, and economic openness for flows of goods and capital, minimum GDP budget reallocation, nonintervention of the government in the economy, etc.).

The lack of any stable system links between the corporate agents in the burgeoning CS in Russia after the administrative control of its economy had been eliminated, as well as the specific of the set of framework factors governing the Russian CS operation conditions, was ignored. The factors of the ESRst and ES-RCS were not taken into account.

The experience of mature economies in the CS transformation after the 1929 crash and World War II were ignored, as well as the experience of newly industrialized countries in the creation of efficient CSs in the second half of the 20th century.

It was presumed that the self-organization of market agents (its “invisible hand”) would secure the sustainable operation of the burgeoning CS and the economy as a whole and that there would be no need for an advanced and efficient system of operation of the economy management.

Any normal option of the EOSS always involves a certain degree of the economy's development priority aimed not only at boosting output, but also to raise its technological and functional level. However, Russia has adopted a different approach. The EOSS adopted in Russia at the initial stages of reforms and left

thereafter unchanged prioritized the establishment of the most highly privatized, competitive, liberalized (unhampered by state interference), and open market in the country, within the shortest time possible and irrespective of losses.

The EOSS and economic policy employed in Russian economic reforms were notably marked by neoliberal conventionality with erroneously (or subordinated to the special interests of main economic and political groups) prioritized targets.

Therefore, the creation of a CS in Russia was driven by two goals:

- 1) squeezing the state within the shortest time possible out of the CS irrespective of consequences;
- 2) the formation of competing corporate agents, as many as possible, for every market along with raising, as much as possible, the overall competitiveness of the entire CS.

At the same time, not much importance was attached to other CS characteristics. It was believed that a CS saturated with a sufficient number of competing private producers of goods and services would automatically improve the CS and of the performance entire economy, including the situation with inflation.

These hopes were shattered.

The above economic policy pursued during Russia's reform time resulted in<sup>206</sup>:

- 1) inadequate competitive performance of most corporations and CSs in general;
- 2) failure of most corporations and CSs in general to finance the full reproduction of fixed assets and, moreover, their essential modernization;
- 3) instability of the CS, which tends to split into subsystems with an essential level of autonomy both across the sectoral "vertical" and across the country;
- 4) a heavy dependence of CS on externalities, including global market conditions, under low sensitivity to control signals emanating from public authorities.

Therefore, Russia's structure and system quality, as well as its ESR and CS performance, are low. This problem gives rise to the following questions.

1. In what respect did the CS servicing the modern Russian economy differ from a "standard" efficient CS and, in particular, in what respect did it differ from the CS of old Russia, which had performed at an economically acceptable level?
  2. What are the structural and systemic defects of the CS servicing Russia's economy today?
  3. What will happen to Russia's CS if the economic policy option pursued until recently is retained?<sup>207</sup>
  4. What will happen to Russia's CS when Russia is a WTO member, if changes in it occur only under the pressure of market forces and only relevant market agents respond to that pressure?
  5. What must be done to raise the system quality and functional completeness of Russia's CS and turn it in an effective tool to modernize the Russian economy?
- Let us examine these questions one at a time.

<sup>206</sup> Chernoy. Materials of Scientific Workshop on "Corporate Governance in Russia: Problems, Decisions and Prospects", 2006. Pp. 23–26.

<sup>207</sup> The economic policy in the part that affects Russia's CS structure demonstrates certain changes that manifest themselves in the establishment of a group of large holdings. However, the majority of its parameters have not undergone noticeable changes yet.

*Policy of splitting the economic entities inherited from the Soviet period  
and its influence on Russia's CS performance*

The simplest way to create an efficient CS in Russia in the early 1990s was to copy a successful international model of the CS core composed of major corporations. In the past, an efficient CS in Soviet Russia was also created by copying a model when transforming the Military Communism economy into a semimarket economy under the New Economic Policy (NEP).

In total, at that time (at the beginning of 1923), 172 trusts were established in Soviet industry at the national level and 258 trusts at the republic level together with 17 trading syndicates.<sup>208</sup> It was presumed that these trusts would functionally resemble American trusts. Trusts targeting the market were ultimately converted into purely administrative regulators much later, in the 1930s.

The "American model" was applied in new Russia's market reforms because Russia's economic structure in the early 1990s had much in common with the US economy in the early and mid-1960s. The main difference was that the Russian automotive and radioelectronics industries were weak. Therefore, in Russia's conditions it was possible just to copy at least the design of the American CS core as of the early 1960s. However, such an opportunity was missed and, apparently, was not contemplated at all.

It should be noted that at the start of Russia's market reforms, some economists were looking at the available Russian experience and, in particular, at the experience of old Russia, as well as Soviet Russia of the New Economic Policy period.<sup>209</sup> However, this experience was not taken into account, either.

Attention should be drawn to differences in capital and production reallocation in the course of CS development in old and new Russia.

In the course of CS development in old Russia (as in case of the CSs in the US and Germany), the proportion of major corporations and enterprises was increasingly growing as well as the vertical integration of production within available major corporations. Meanwhile, industrial corporations (as well as large enterprises owned by natural persons and functionally equivalent to corporations) were setting up their own marketing organizations.<sup>210</sup> This process logically ended in cartels created, following the German model, by producers in key industries and later used as a base for syndicates.

For example, in old Russia, the syndicates Prodaugol and Prodamet controlled the bulk of the coal and iron market, respectively, while competing with foreign producers of coal and rolled steel rather than with local outsiders. By the way, the former's share in the Russian market was considerable, so the Russian coal market, as well as the iron and rolled steel market before 1914, had by no means been noncompetitive.<sup>211</sup>

<sup>208</sup> GSE. Vol. 42, 1935. P. 215.

<sup>209</sup> Biyushkina, Grachev, 1989.

<sup>210</sup> Gregory, 2003.

<sup>211</sup> Tsyperovich, 1927.

One would think that restructuring of an enterprise system when the CS is burgeoning (already in the market environment), and later when the CS is formed, should proceed in new Russia approximately as it did in old Russia. Of course, without such specific entities like cartels and syndicates, this could not be set up under the new conditions. However, as a matter of fact, a significant part of large industrial facilities of post-Soviet Russia had been split already at the incorporation stage.

Basically, the rationale was that relevant markets needed to be more competitive. This rationale is unsound because the market that is open to foreign competitors (at least, the Russian market of manufactured products has been open to the foreign competitors of Russian enterprises since as early as 1992) is competitive by definition. Therefore, there was no need to split large enterprises to increase the number of competing market agents.

Most probably, the “splitting policy” pursued in the 1990s and the policy of accelerated privatization were mainly adopted under external pressure, in particular, from the IMF.

The splitting policy in its original version was carried out in three basic scenarios.

Under the first scenario, one enterprise was split into two functionally similar enterprises, which was practically possible only in a few cases.

Under the second scenario, where the target for splitting was a production association (there were several thousand of them in the Soviet economy) consisting of functionally complementary enterprises, the latter were granted full economic freedom. Since the enterprises within a production association complemented rather than duplicated each other, this method could only increase the number of independent self-financing units, but failed to increase market competitiveness.

Finally, under the third, the most widely used, scenario, enterprises under the policy of splitting were transformed by spinning off auxiliary units, especially marketing units, and often part of primary production facilities (irrespective of practicality), into independent economic units. This procedure was initiated by persons who managed the enterprises (or, to be more exact, controlled them) by setting up subsidiaries receiving part of the assets.

At the bottom line, the above transformations in the industry resulted in the following.

In 1990, industry comprised 26,900 enterprises (“entities”); 137,000 in 1995; and 161,000 in 2000.<sup>212</sup> These enterprises employed 21 million people in 1990, 16 million people in 1995, and 13.3 million people in 2000.<sup>213</sup> In 2000, the industrial workforce of all categories averaged 14.2 million people.<sup>214</sup> In precrisis 2007, Russia’s industry comprised 271,000 enterprises (entities), on average annually employing 12.1 million people.<sup>215</sup>

From 1990 to 2007, the labor force (annual average) per Russian industrial enterprise decreased almost ten times.

<sup>212</sup> Russia’s Industry, 2002. P. 20.

<sup>213</sup> *Ibid.*, p. 28.

<sup>214</sup> Russia in Figures, 2009. P. 201.

<sup>215</sup> *Ibid.*, p. 593.

The policy of splitting production units especially negatively affected the engineering industry. By 1999, the eight largest companies in the Russian engineering industry accounted for only 18.5% of total output and fewer than 400,000 employees.<sup>216</sup> In 1999, in Japan, the seven leading engineering companies employed 1,538,000 people<sup>217</sup> Afterwards, Russia's largest engineering companies increasingly lost manpower.

So, even in terms of size, Russian engineering corporations have failed to meet international competitiveness criteria. Russia's light industry has fared even worse.

Further, industrial corporations in mature economies generally combine production and marketing.<sup>218</sup> For example, shipments of US manufacturers to their wholesale arms have for a long time accounted for about 2/3 of the total shipments of goods to wholesalers. Note that more than half of goods are shipped directly to consumers and retailers.<sup>219</sup>

A typical example: In the mid-1980s, the top ten US footwear companies had 10,000 specialized outlets and sales areas in department stores.<sup>220</sup> However, Russian enterprises in the footwear industry, like in other light industry branches, before their privatization and transformation into market corporations, in most cases had none of their own outlets at all. The collapse of Russian light industry stemmed directly from this.<sup>221</sup>

One would think that manufacturers should have set up their own marketing arms during the privatization and corporatization of the Russian industry. However, the industry restructuring, when it was controlled, for a long time was directed at separating the manufacturing corporations from the marketing ones that incurred trading losses for the manufacturers.

Thus, not only their financial standing deteriorated, but any advancement of their products to the market was also hampered (because wholesalers preferred to deal with foreign exporters). Moreover, producers deprived of commercial profit were practically deprived of investment resources needed to adapt to the changing market trends and replace fixed assets.

In practice, during Russian reforms an attempt was made to establish a highly competitive economy composed of production units exhibiting not only low competitiveness and high susceptibility to market and investment risks, but also, due to their financial weakness, rather limited capacities to enhance competitiveness.

The policy of splitting has been pursued until recently. So, relatively recently RAO UES was unbundled to separate power generation companies (power plants) from electrical energy transmission and distribution companies under the "new RAO UES" acting as a holding company.

<sup>216</sup> *Expert*, 1999, No. 36. Pp. 64–100.

<sup>217</sup> Bok Zi Kou, 2002. P. 41.

<sup>218</sup> Revenko, 1981. P. 59.

<sup>219</sup> Komlev, 1987. Pp. 195, 106.

<sup>220</sup> *Ibid.*, p. 130.

<sup>221</sup> During the reforms, light industry lost 25–35% of its facilities and the average age of equipment in the industry in 2003 was 21 years (*Russian Statistical Yearbook*, 2004. P. 372). In 2004, the total output in the sector was 14% as opposed to the 1990 level (*Russia in Figures*, 2005. P. 187).

The motivation behind this again was the need to create a competitive environment and competitive markets. From the very beginning it was unclear how these generation companies would compete with each other for the sympathy of consumers when they had neither excess capacities nor direct access to consumers, since each of them had to deal with an electric power transmission and distribution company, which is a monopolist intermediary.

Certainly, the unbundling of RAO UES was followed by privatization, and again at a price by no means reflecting the real value of the privatized assets. As the result of the unbundling of the old RAO UES, the market capitalization of the United and Territorial Generation Companies emerging from RAO UES began to drop long before the current crisis. This was no coincidence.

A company's market capitalization, other things being equal, is the greater,

- 1) the higher its earning power;
- 2) the lower the sensitivity to market and investment risks and hence, the higher the stability of its financial standing;
- 3) the higher the competitive potential;
- 4) the bigger the company's ability to raise funds for capital investment projects from profits, borrowings, and stock and bond trading on the stock exchange.

Any restructuring by separating marketing units from the company automatically lowers the rate of return (since the company suffers trading losses) and, hence, lowers the company's market capitalization.

Any restructuring increasing a company's sensitivity to market and investment risks (in Russia's conditions, this implied almost any restructuring under the splitting policy separating auxiliary and, in particular, marketing units from the company and establishing company subsidiaries) also lowers the company's market capitalization.

Any decrease in the company's market capitalization, in turn, automatically transforms into a decline in the ability to borrow and increase the investment fund by selling shares and bonds. Some time later (unless adequate measures of a compensatory nature are taken), this leads, in turn, to a new decline in the company's market capitalization.

The policy of splitting due to the above causes has had an especially negative effect on the overall market capitalization of Russian industrial companies. Ultimately, it turned out to be disadvantageous for Russia's business community, too. Due to the splitting policy, domestic businesses lost several hundred billion dollars in market capitalization alone.

It is natural that the splitting policy has stalled Russia's stock market development, too. As of 2010, only about 900 companies out of about 73,000 open joint-stock companies were listed on the Moscow Interbank Currency Exchange and RTS Stock Exchange.<sup>222</sup> A vast majority of companies in terms of their size are too insignificant to trade their shares on the stock exchange. Had "Soviet industrial monsters" not been liquidated under the splitting policy, the number of companies trading their shares on the stock market would have been significantly greater than at present.

<sup>222</sup> Ustyuzhanina, Yevsiukov, and Petrov, 2010. P. 49.

***Changes in the nonfinancial sector of Russia's CS in recent decades  
and their influence on CS system quality***

The market forces partially neutralized the policy of splitting. The companies started to set up marketing and auxiliary units. Their vertical integration was becoming stronger. Soon a system of secondary corporate entities in the form of various trusts, including holdings, began to take shape.

Some positive changes occurred after 2000 in the state-controlled CS sector, too. Great efforts were made to consolidate assets, mainly by grouping, first, large holdings and then public corporations. So, originally 400 enterprises in the military-industrial complex were slated as a base for establishing 74 holdings and concerns. Then the target figure dropped to 42 and increasingly dwindled further.<sup>223</sup> However, the splitting of assets continued, too, which was evidenced by the restructuring of RAO UES.

In the previous decade, the integration level of Russia's CS alternately increased or decreased, with the latter trend apparently prevailing. Specifically, the unbundling of RAO UES considerably diminished the degree of integration of Russia's CS across the country.

At present, the nonfinancial sector core of Russia's CS contains only a small number of integrated companies, i.e., ordinary major corporations. Entities like holding companies predominate. Holding companies (mega holdings) include Gazprom, Rostekhnologii (comprising a group of defense manufacturing companies), Rosatom, Rosneft, the United Aircraft Building Corporation, the United Shipbuilding Corporation, and the restructured RAO UES.

An integrated company, i.e., an ordinary corporation, is distinguished from a holding company by its greater ability to reallocate financial resources, let alone other resources, among its units in comparison with a holding company doing the same among the companies under its control.<sup>224</sup> From this viewpoint, a system of large integrated corporations emerging from the market agent system restructured after 2000 would be more advantageous for Russia than a system of holding companies.

There were also other reasons for this.

The point is that a holding company has more advantages than an integrated company (presumably due to decentralized decision-making) only when the level of market and investment risks is low, and loans are accessible and relatively cheap. However, if cheap and long-term loans are inaccessible or not accessible at all, and the level of market and investment risks is high, an integrated company capable of more freely managing its own resources and, hence, less susceptible to market and investment risks will be more efficient than a holding company having the same assets.

Meanwhile, Russia's economy is an economy with high market and investment risks and expensive loans. Therefore, in Russia (as long as the current risk and loan situation persists), a company with a high level of vertical integration

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<sup>223</sup> Ibid., p. 67.

<sup>224</sup> Holding Companies in a Free Market Economy, 1992.

of production and an advanced system of service departments and units, including marketing ones, will always have a more stable financial standing and better financial support for investments than a holding company with the same assets. And hence, its market capitalization, other things being equal, per asset value unit will be relatively higher. In any case, the Russian experience does not contradict this conclusion.

Unlike an integrated company, companies in a holding can be privatized one after another.

In contrast, in an integrated company, shares rather than units (divisions) or enterprises are privatized. Privatization does not ruin the integrity of such a company. Accordingly, the quality of its interaction with the entire CS remains unchanged.

If half of the CS core consists of government-owned integrated companies, 100% privatization will not change anything: the CS core will continue to perform all its functions, including the function of nationwide economic space integration.

The situation becomes entirely different, if the CS core consists of holdings half of which are also government-owned. The 100% privatization of these holdings, in a piecemeal fashion, can give rise to a situation where assets actually controlled by holdings will decrease many times and the CS will be left without a core.

State involvement in Russia's CS in the near future will be significantly reduced. In this case, since at present, Russia's CS core consists mainly of holding companies, the amorphism of the national CS can significantly rise, but the functional completeness and ESR can substantially drop. And the higher the share of foreign investors in the privatized assets, the more distinct this process will be.

The above suggests that the industry restructuring strategy implemented in Russia after 2000 by transforming autonomous companies and state-run unitary enterprises into holdings can hardly be regarded as optimal.

A strategy to merge major corporations like what was done in the US at the turn of the 20th century, when the level of market and investment risks was about the same, would have been more rational.

The weakness of the banking system, as well as restrictions on the value of shares a particular bank could purchase, was among factors that by no means encouraged the growth of Russia's CS quality.

*First*, banks are allowed to acquire shares in companies using only their own funds. *Second*, they are allowed to spend for these purposes 25% of their own funds at most. And, *third*, a bank may set aside relevant reserves to cover risks from its equity when acquiring shares.

Since Russia's banking system has been extremely weak during almost the entire reform period, it is apparent that "bank capitalism" similar to German bank capitalism (distinguished by close cooperation between banks and nonfinancial corporations) could hardly have emerged during that period.

In old Russia, the competitiveness of the economy, including its corporate sector, increasingly rose a great deal because the sensitivity of the entire CS and individual corporations to market and investment risks in the course of evolution was

decreasing while their investment potential was increasing. In new Russia, during the restructuring of CS enterprises and the resultant CS the issues related to the sensitivity of corporations to market and investment risks as well as to CS investment potential enhancement were practically ignored.

Generally, the administratively initiated restructuring of Russia's CS for almost two decades was heading in a direction opposite to that taken in old Russia or abroad, in advanced and developing countries (see Appendices).<sup>225</sup> It is no wonder that Russia's industrial competitiveness over two decades has dropped significantly.

The situation is clearly demonstrated by enterprise equipment increasingly becoming obsolete (Table 6.1).

*Table 6.1*

**Growth in proportion of Russia's industrial production equipment older than 15 years between 1990 and 2005, %**

Years	1990	1993	1996	1999	2002	2005
Equipment older than 15 years	26	31	39	53	66	76

*Source:* Russian Statistical Yearbook. Moscow, Rosstat, 1995, 1999, 2006.

***The evolution of the credit sector in Russia's CS and the economic policy factor***

Throughout the post-Soviet reform, the efficiency of the credit system servicing the Russian economy was perceptibly lower than that of the nonfinancial sector of the Russian CS. For many years Russia's economy advanced in an almost credit-free regime (a unique fact in world history), except for borrowings abroad. The weakness of the credit sector of Russia's CS had not improved in the period immediately preceding the current world economic crisis, either.

The weakness of the financial sector of new Russia's CS is clearly seen when compared with the financial sector of the old Russia's CS.

Throughout the modernization period of the Russian economy after serfdom was abolished (1861) and until 1914 (World War I), the development level of old Russia's credit system matched that of the entire CS. The assets of St. Petersburg banks alone during that period exceeded 8 billion rubles (at the ruble rate of 1914, this was equivalent to about US\$80 billion, in terms of the current purchasing power of the dollar) out of which almost half was invested in the functioning capital of heavy industry.<sup>226</sup>

<sup>225</sup> Chernoy, Society and Economy. 2006. No. 3. Pp. 117–137.

<sup>226</sup> Agahd E. "Grosbanken und Weltmarkt. Die Wirtschaftliche und politische Bedeutung der Grosbanken im Weltmarkt unter Berücksichtigung ihres Einflusses auf Ruslands Volkswirtschaft and die deutsch-russischen Beziehungen". Berlin, 1914. Cited: Lenin, 1989. Pp. 46,47.

Russia's net national product in 1914 was 16.4 billion rubles and almost the same amount in 1913.<sup>227</sup> The corresponding figure for GDP, taking into account the likelihood of services being undervalued, amounted to 19–20 billion rubles. In 1913, bank assets in Russia accounted for at least half of GDP, while bank investments in the functioning capital, for at least 30% of GDP.

In new Russia, after a decade of market reforms, like at the beginning of 2001, and with an annual GDP of about 8 trillion rubles, the national credit system was less able to service the economy than in 1913. Bank loans to enterprises and organizations (less interbank credits) at the beginning of 2001 amounted to a mere 763 billion rubles, i.e., less than 10% of GDP, out of which loans in rubles accounted for just 507 billion rubles, or 6% of GDP.<sup>228</sup> In 2001, the banking system had lent less to the economy than in 1913, even in absolute terms.

Due to this, the CS structural quality of old Russia in 1913 was incomparably higher than in new Russia in 2000. By 2005, the ability of the credit system to service the national CS rose to a certain degree, but was still lower than in 1913. In 2005, loans to enterprises and organizations in Russia accounted for about 20% of GDP, with an insignificant share of long-term loans and with effective loan rates being incomparably higher. The situation was the same in precrisis 2007, too, when loans (again predominantly short-term) to nonfinancial enterprises and organizations accounted for about 19% of GDP<sup>229</sup>.

Below the main causes of the weakness of the present Russian credit system are outlined.

*First*, this was the inflationary wave of 1992–1993. It disrupted the circulation of funds customary for an efficient credit system: deposits available as of 1990 had gone bust; bank accounts were not credited, while hyperinflation continued. Bank deposits as a method to save money had given way to hard currency hoarding. For a number of years, the amount of rubles converted into foreign currencies exceeded many times the amount of bank deposits made in rubles. The credit potential of the banking system decreased accordingly.

*Second*, the 1994–1999 liquidity crisis had an extremely negative impact on the influx of funds to banks. At the height of the liquidity crisis, the money supply, both cash and noncash, the so-called aggregate M1, was more than two times less than the minimum needed for 100% transaction monetization.

The Russian Central Bank contracted the money supply to minimize inflation. However, this contraction had almost no impact on the inflation rate, since inflation in Russia, at least since 1994, has been mainly nonmonetary. However, the demonetization of Russia's economy had the most adverse impact on the banking system.

*Third*, the issue of high-yielding Short-Term Government Treasury Bills (GKOs) had a strong negative effect on deposit influx to the banks, since money instead of being held as bank deposits was used to buy GKOs, along with hard currency.

<sup>227</sup> Strumilin, 1979. P. 292.

<sup>228</sup> Russia in Figures, 2005. Pp. 29 and 320.

<sup>229</sup> Russia in Figures, 2009. Pp. 30 and 386.

*Fourth*, since the 1998 default nullified a significant part of bank deposits, it severely hampered the influx of new deposits to banks and, consequently, had the most negative effect on the credit potential of the banking system.

*Fifth*, the huge capital outflow also negatively affected the credit potential of the banking system.

*Sixth*, the lack of a bank deposit insurance scheme for several years had a strong negative impact on the financial potential of the Russian credit system. A bank deposit insurance agency has recently been established to offer coverage only for small amounts of the insurable deposits of individuals.

In 1913, the Russian economy already had a sufficiently advanced, by the average European standard, credit system. So far, modern Russia's economy has no adequate credit system to meet its needs. As of March 2010, Sberbank, the biggest Russian bank, did not even rank among top ten banks in the world, which were spearheaded by Chinese and US banks whose capitalization ranged between US\$150 and 250 billion<sup>230</sup>. As of the mid-2010, the aggregate assets of Russia's entire banking system were less than the resources of any top bank in the world like ICBC, CCB, HSBC, and JPMorgan.<sup>231</sup>

It is no wonder that by the 2008 crisis the Russian bank lending system had been in a state where it was able to meet a mere 15–20% of the investment needs of national nonfinancial corporations. That was one of the main reasons why they borrowed massively abroad and found themselves caught, as the crisis progressed, in a deep debt trap.<sup>232</sup>

Due to the low efficiency and inadequate size of the Russian banking system, the amount of external credits owed by Russia's nonfinancial and financial corporations by mid-2008 exceeded US\$510 billion and in fact was as high as the aggregate foreign exchange reserves of the country.

Russia needs a credit sector development program aimed, first of all, at catching up. However, international experience suggests that the establishment of a highly liberalized credit sector consisting predominantly of full service banks can take several decades. This process may not be finalized at all if foreign banks drive domestic banks out of Russia's economy, which may happen if Russia joins the WTO.

It appears that a switch to a banking sector model similar to that used in the 1980–1990s in some modernizing economies (including France, Italy, South Korea, Taiwan, and Japan) can rapidly improve the efficiency of the Russian credit system. This model involves the establishment of a system of banks each predominantly servicing a sector of the economy and performing specific functions (primarily investment lending).

The problem seems also to be high on the agenda, because in recent years a

<sup>230</sup> Koksharov. Expert. No. 12 (698)/29 March 2010.

<sup>231</sup> According to the Bank of Russia, as of June 1, 2010, the total assets of the Russian Federation banking system amounted to 29.7 trillion rubles. (about US\$970 billion at the prevailing exchange rate). In the same period, the total assets of ICBC, a Chinese bank, exceeded US\$1,900 billion at the prevailing exchange rate. (RBC, July 13, 2010, Bloomberg, June 11, 2010).

<sup>232</sup> Yershov, 2008. P. 14.

significant part of Russian banks have displayed a much greater willingness for international foreign currency transactions than for lending activity in domestic markets.<sup>233</sup>

### *State of Russia's stock market and its influence on CS performance*

The market value (market capitalization) of a corporation's assets is by no means determined by its original and net book value, nor even by its earning power (both actual and potential). Effective demand for corporate equities is a key factor.

This demand depends not so much on the corporation's value and earning power, but more on such factors as:

- 1) the total effective demand for corporate assets (shares, bonds);
- 2) the total volume of corporate assets offered;
- 3) the offer price for and volume of rival company assets;
- 4) dynamics of share price of various categories (called the "stock market environment");
- 5) the volume and price of offered government bonds and similar securities;
- 6) the state of the economic system as a whole;
- 7) the level of market and investment risks in the short, medium, and long term.

Since most shares are purchased using bank loans, the state of the credit system (including the cost of credit and the ability of the credit system to extend different term loans) heavily influences the share price. The weaker the credit system, the lower, other things being equal, the share price. It is equally true that the weaker the protection of shareholders' rights and the higher the probability of bankruptcy fraud and hostile takeovers, the lower the share value.

During the first decade of reforms, the conditions for creating in Russia an efficient stock market capable of realistically (without excessive undervaluation) assessing the value of corporate assets were more than disadvantageous.

*First*, effective demand in effect did not exist, especially in 1992–1995. Such demand from natural persons could have been met with their savings and vouchers distributed among Russia's population. However, personal savings were lost during an artificially created inflationary wave, while the scheme of exchanging vouchers for shares led to too rapid a depreciation of the latter.

*Second*, and conceptually important, during the privatization (as was done in fact until recently) shares were issued virtually irrespective of demand. In privatizations it was allowed, and still is, to sell shares at knockdown prices that drastically reduced their price.

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<sup>233</sup> According to the Central Bank of the Russian Federation, net capital outflow from Russia in 2008 amounted to US\$133.9 billion; in 2009, US\$56.9 billion; in 2010, US\$38.3 billion (official press release of the Central Bank, lenta.ru, Jan 13, 2011). The bulk of capital outflow during that period was associated with the conversion of rubles received from the Central Bank into hard currencies.

*Third*, the catastrophic decline in production that started in 1992 was deeper than that in the US during the Great Depression in 1929–1932. The result was that almost all new companies (corporations) emerging from Soviet enterprises became loss-generating. Losses increased due to the 1994–1999 liquidity crisis, which for some time turned Russia’s economy in a completely bankrupt economy.

*Fourth*, during the liquidity crisis, high-yielding GKO’s were issued, which aimed at least partially at compensating for the taxes lost to the demonetization of Russia’s economy. It was natural that high-yielding GKO’s floated in the financial market affected share prices and the market capitalization of the Russian stock market the most adversely.

*And, finally*, in 1998 the government went bankrupt, accompanied by a bank crisis that further eroded the investor confidence in Russia’s stock market.

In 1999, the fixed assets of the Russian CS still had a net book value of several trillion dollars. Their market capitalization calculated on a ruble/dollar exchange rate basis was within hundreds of billions of dollars.

As of September 1, 1999, the market capitalization of RAO UES together with all its power plants and distributing mains was US\$3 billion calculated on a ruble/dollar exchange rate basis<sup>234</sup> or US\$14 billion measured in rubles at PPP, though the effective book value (i.e., wear and tear taken into account) was ten times higher. The market capitalization of Gazprom as of September 1, 1999, calculated on a ruble/dollar exchange rate basis, was only US\$ 4.0 billion, while the real value was over US\$150 billion.

This situation entailed extremely negative economic results. It should be kept in mind that the value of corporate assets is determined by the market. But until 1999 and some time thereafter, the market valued them ten times lower than their real value. Under these circumstances, the economy could have been converted into a 100% private economy to the last nail and last parcel of Russian land, at the same time without creating any large (in terms of market capitalization) private sector.

Something of the kind happened, at least, to Russia’s real sector. Here the “privatization mountain” as of 1999 gave birth to a “capitalization mouse”.

With a normally operating stock market and just 10% of the real sector (as in 1990) assets privatized, the market value of the privatized assets as of 1999 would have been much greater than the actual value.

It is necessary that an efficient stock market be already in place for the privatization of large enterprises to succeed and make economic sense. In this case, corporate assets would not have been offered for sale in the market at knockdown prices. However, a huge number of assets had been privatized in 1992–1999 at knockdown prices. This still has an extremely negative effect both on Russia’s stock market and the national business community.

For this reason, developed and most developing countries ban privatization at knockdown prices. However, Russia continues the practice of such privatization, which has had a number of implications.

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<sup>234</sup> Expert, 1999. No. 36.

*Implication 1:* Russian entrepreneurs anticipating new “privatization gifts” are still reluctant to invest in basic production assets. However, such investments are being made, generally in the amounts too small even to compensate in most industries for the retirement of fixed assets due to wear and tear. Indeed, why, for example, should one invest \$10 million in upgrading a plant when an entire plant with a real value of \$50–100 million can be bought for the same amount?

Russia has been challenged by this situation for many years. Therefore, the value of Russian economic assets has been undervalued many times by the stock market. This resulted in a significant decline in the amount of investment in depreciation below the minimum required level and inevitable obsolescence, and even physical retirement of fixed assets; in the long run, it has deindustrialized many Russian regions.

*Implication 2:* The failure of Russia’s stock market to assess (without huge undervaluation) Russian corporation assets realistically does not allow the latter to borrow any significant amounts using shares as security.

*Implication 3:* The same failure does not allow the overwhelming majority of Russian corporations to obtain sizeable investment resources by share and bond trading in the domestic market.

*Implication 4:* The failure of Russia’s stock market to realistically evaluate Russian corporation assets has compelled the trading of shares in foreign stock markets, i.e., the selling of them to foreign natural and, predominantly, legal persons. Such trading has weakened the position of Russian property owners in Russia’s CS capital and, ultimately, affiliated them with relatively more advanced CSs.

A workable stock market in Russia has yet to be established. Only a small number of securities of domestic (predominantly, oil and gas and, in general, raw materials) corporations are traded on national stock exchanges. Even in the period preceding the current global crisis, the stock market had by many times undervalued the shares in most Russian companies. At the height of the crisis, their value decreased by about five times.

Probably, the most acute crisis phase is over. Nevertheless, the practice of gross underestimation of real share values continues, even for companies making high profits. So, by 2011, with ultrahigh oil prices nearing \$100/barrel and the fast growth of Russian stock indexes, the average ratio of capitalization of Russian companies listed on the exchange to the projected net profit was about 6, i.e., 2–2.5 times lower than in Brazil, China and India, and 2.5–3 times lower than in developed countries.<sup>235</sup> This situation is typical.

The weak financial foundation of the Russian CS explicitly decreases both its ESR and efficiency. Such a foundation of the national CS will hardly make Moscow or any other city in Russia a more or less prominent global “financial center”.

The demodernization of Russia’s CS over the last two decades is directly related to the weakness of the Russian credit and stock market. As long as the stock market significantly underestimates Russian corporate assets, profound modernization, at least, of the real sector of Russia’s CS will not receive a full-fledged investment base.

<sup>235</sup> Gaidayev. Kommersant. Jan 13, 2011.

### *Impact of the tariff and exchange rate policy on Russia's CS parameters*

Prior to World War I, almost all countries used advanced tariff systems to protect their national markets. So, in US customs duties (a % of the dutiable imports) in 1865–1914 on average were about 45%.<sup>236</sup> England was an exception to the policy of customs duties, since it was pursuing a free market policy (which did not extend, however, to its colonies).

Generally, customs duties prior to World War I were differentiated and aimed at protecting new and weak industries. Tariffs also protected, as a matter of course, the products of national enterprises predominantly or entirely controlled by foreign capital. In every above-mentioned respect, old Russia was a typical medium-developed country of that time. Imports were also dutiable, but not excessively and on a case-by-case basis.

The system of tariffs to protect domestic markets practiced in most countries prior to World War I, between the two world wars and long after World War II, was directed at giving time to weak domestic producers to stand on their own feet.

An optimal tariff does not eliminate foreign competition. It only reduces the competitive advantage of foreign competitors to an acceptable level.

However, a tariff system has another function, apart from protecting the market of local producers (including foreign manufacturers). A differentiated tariff system limiting the imports of some items in an expanding market automatically encourages investment in relevant industries both by domestic and foreign investors.

Under the currency system based on the gold standard that existed before World War I, this mechanism worked very efficiently.<sup>237</sup> In old Russia it worked efficiently, too. It attracted rather than scared away foreign investors.

The tariff system undoubtedly promoted fast growth in the technological level of old Russia's economy, helped its industry manufacture increasingly sophisticated products, and hence enhanced the overall performance of the CS servicing the Russian economy. Had the tariff system in post-Soviet Russia been employed as it was in old Russia, light industry (almost entirely ruined by foreign competition within a few years) would have been saved, as well as most of the engineering industry, which has also been badly hurt by foreign competition.

Nevertheless, the tariff system in new Russia was eliminated almost entirely at the early stage of reform. In 2005, duties on imports in Russia accounted for only 1/10 of their value (imports amounted to US\$84.7 billion, and the relevant duties amounted to 265 billion rubles, or about US\$9 billion)<sup>238</sup>, i.e., like in the US in 1980, when the average level of import tariffs was also 10%.<sup>239</sup>

Apparently, the reform strategy adopted in Russia originally did not provide at all for any special measures to protect the Russian market (except small, "residual", import duties). Nevertheless, such a protection system emerged as a matter of

<sup>236</sup> McConnell and Brue, 1992. Vol. 2. P. 334.

<sup>237</sup> Chernoy, 2003. Pp. 315–316.

<sup>238</sup> Gurvich, 2006. P. 21; Kinelman and Andriushin, 2006. P. 60.

<sup>239</sup> McConnell and Brue, 1992. Vol. 2. P. 334.

course in the transition to a system where the ruble exchange rate was determined by the market, since some factors contributing to the undervaluation of the ruble exchange rates by many times against its PPP had been active in Russian economy from the very beginning of reforms.

The undervaluation of ruble exchange rates against its PPP was encouraged, in particular, by:

- 1) inflation (automatically creating demand for foreign currency intended for hoarding);
- 2) spasmodic growth in the need for market agents for foreign currency due to spasmodic economy marketization;
- 3) overall low competitiveness of Russian corporations in both the foreign and domestic markets.

The latter factor still inhibits the achievement of equilibrium between the ruble exchange rate and PPP. Since 1992, the undervalued exchange rate of the ruble has been the main factor protecting Russia's domestic market.

However, the undervalued exchange rate of the ruble protects the Russian market from imports only from such countries where the exchange rate and PPP of the currency are approximately in equilibrium (i.e., mature economies); it does not protect against imports from developing countries and China, where the exchange rates of currencies are also grossly undervalued. As a result, the openness of the Russian market to the East and South is much higher than to the West.

As former developing countries turn into newly industrialized countries, and the technological level of China's industry approaches that of mature economies, the potential presence of Western exporters in the Russian market decreases, while that of exporters from China and Asian countries increases. Russia's accession to the WTO will only fuel this process.

The ability of Russian corporations still capable of manufacturing medium- and high-tech goods to compete with countries manufacturing the same goods and pursuing an undervalued currency exchange rate is extremely problematic because of the extremely modest output of relevant goods in Russia. The fact of the matter is that the production potential of Russia's corporate manufacturers is much lower than that of their chief (primarily Chinese) competitors.

The data shown in Table 6.2 below gives an idea about investment equipment manufacturing.

*Table 6.2*

**Machine-tool manufacturing in Russia and China in 1990–2008, thous. items**

Country	1990	1995	2000	2005	2008
Russia	76	18	10	6	5
China	132	202	187	505	617

*Source:* Russian Statistical Yearbook. Moscow: Rosstat, 1994, 2000, 2003, 2006, 2009; National Bureau of Statistics of China.

It is evident that in the given SCS (like in some other sectoral segments of the manufacturing industry), the production potential of Russia and China are simply incommensurable, since Chinese products, which are continuously technologically upgraded, have been outstripping Russian products in terms of price competitiveness for a long time.

It is quite predictable that over time key SCSs, because of low competitiveness, will be steadily driven out of the Russian CS (while what is left of the segments will continue to operate on a much smaller scale), as was the light industry by competitors from China and developing countries.

Chinese competition in the Russian market poses a challenge not only for domestic manufacturers. It can be presumed that the arrival of Western capital in the Russia's industry is hampered also because Western TNC branches operating in the Russian domestic market will inevitably have to deal with Chinese competitors, which enjoy knowingly better positions as they take advantage of the exchange rate of the ruble to the yuan favorable for them and the lack of a tariff system protecting the Russian market. At the same time, the industry of any Chinese province is protected, to a certain degree, from external competitors, as well as from other Chinese provinces, by the so-called domestic protectionism.

According to an opinion still widespread in Russia, its national economy may be successful if based on the primary, above all gas and oil, sector. But this view ignores the fact that oil, gas, and other exportable raw materials are produced only in a few regions (2/3 of oil and 9/10 of natural gas are produced in the Urals Federal District).

Taken as a whole (with companies engaged in transportation, marketing, and oil refining) Russia's oil and gas complex so far generates a surplus profit (see below). Nevertheless, profits in the chain "oil recovery—refining—transportation and marketing" are distributed such that the field operators of oil corporations have scarce funds for development drilling and especially exploration drilling to maintain the oil production at the current level in the future (Table 6.3).

*Table 6.3*

**Footage of exploration (deep) and development drilling  
for oil in Russia in 1990–2009, million linear meters**

Operation	1990	1994	1998	2002	2006	2009
Exploration drilling	5.1	1.6	1.6	1.5	1.3	1.4
Development drilling	33	11	5	8	10	13

*Source:* Russian Statistical Yearbook—Moscow: Rosstat, 1994, 1999, 2005, 2010 Russia's Industry, Moscow: Rosstat, 2003, 2006, 2008.

But even if the problem of rehabilitating explored reserves and field facilities of the oil extraction industry is solved, extractive industry corporations, in view of their functional peculiarity and operation in a limited number of regions, cannot be an adequate replacement in an economic sense for manufacturing corporations.

The latter under the present national market protection system are steadily losing their positions in Russia's economy.

This implies that as long as the current drop in the share of the manufacturing industry in the national economic complex persists, the fragmentation of Russia's CS will continue. The weakness of the banking system and the lack of large trans-regional marketing companies controlled by Russian capital is already fueling this process today.

***Impact of the Russian option of a priority development strategy for the export sector on Russia's CS structure and its functional completeness***

The economic policy of the Russian Empire radically differs from that of new Russia in that it from the start, it primarily targeted the domestic market, while the latter targeted the foreign market, with the domestic market practically open. There were several reasons for this:

*First*, the characteristics of the EOSS. It was believed (and still is) that new Russia's economy is supposed to be open as distinguished from the closed Soviet period economy, and to position itself, primarily, as part of the global economy. VAT returns to exporters practiced in Russia and many other countries should be viewed exactly in this context, thus disadvantageous to manufacturers targeting the domestic market.

*Second*, the catastrophic decline in home demand in general and investment demand in particular in the early reform period that boosted the economic importance of exports in comparison with goods targeting the domestic market. Since investment demand was far from being restored before the current world economic crisis, this factor encouraged growth in export supply at practically all stages of economic performance in new Russia.

*Third*, undervalued ruble exchange rates fueled and continue to fuel growth in the share of exports in Russia's industrial output (as in many other weak economies). When the market determines exchange rates, ruble exchange rates will always be undervalued due to the weakness of Russia's economy.

When Russia's market economy was burgeoning (in 1992), the ruble exchange rate was for a time even lower than its purchasing power by a factor of several dozen. However, even up until 2005 (except for a short period before the 1998 default), the ruble exchange rate on average exceeded its purchasing power by several times. In 2005, in dollar terms, the PPP of the ruble (7.9 cents) still exceeded by 2.22 times its rate against the dollar (3.55 cents) and 2.5 times its rate against the euro.<sup>240</sup>

If the currency exchange rate is undervalued, production targeting foreign markets is subsidized to a varying degree and, therefore, other things being equal, becomes more profitable than production targeting domestic markets. The lower the exchange rate as compared with the real purchasing power of the currency, the more distinct this tendency.

<sup>240</sup> Russia in Figures, 2009. P. 523.

The huge gap between PPP and the ruble exchange rate in 1992–1994 was critical in prompting Russian producers to switch from domestic to foreign markets. Later, this tendency deepened and expanded.

Without a doubt, no export is possible without demand for exports. Russian engineering and light industry goods were in low demand from the international market. At the same time, demand for Russian gas, oil, and petrochemicals from the international market was practically unlimited and rather high for products of the materials production sector (mainly, the iron and steel and chemical industries).

The export supply structure of Russia's industry is outlined below. In 2006, before oil and gas prices soared, Russia exported industrial products (without minor exports of food products) worth US\$295 billion, out of which mineral commodities accounted for US\$199 billion, iron and steel products for US\$48 billion, chemicals for \$US17 billion, engineering products for US\$17 billion, and wood, pulp, and paper goods for US\$10 billion.<sup>241</sup>

Exports from some strategic sectors of Russia's industry are given in Table 6.4.

Table 6.4

**Exports of low-process-stage products (energy carriers, metals, fertilizers)  
as a percentage of Russia's overall production in 1991–2010**

Product	1991	1994	1998	2002	2006	2010
Oil and petrochemicals	30	50	62	70	73	75
Coal	n/a	10	11	18	27	30
Mineral fertilizers	42	65	76	83	88	n/a
Aluminum	13	80	92	90	94	n/a
Nickel	n/a	70	90	100*	87	n/a

\*In 2002, the government reserves of nickel were exported.

*Estimates are based on the following sources:*

Russian Statistical Yearbook. Moscow: Rosstat, 1994, 2000, 2003, 2006, 2009; website of FASS of Russia, [http://www.gks.ru/bgd/regl/b10\\_13/IssWWW.exe/Stg/d6/25-16.htm](http://www.gks.ru/bgd/regl/b10_13/IssWWW.exe/Stg/d6/25-16.htm)

In 2006, about 50% of the gas-and-oil-producing and oil-refining industries, as well as about 50% of the iron and steel and chemical industries were directly targeting foreign markets.

It appears that Russia's electric power industry is almost entirely aimed at the domestic market. However, if the electric power consumed to manufacture export products is taken into consideration (primarily, in energy-intensive products in the iron and steel and chemical industries), then Russia's electric power industry targets largely foreign markets. Exports of energy carriers taken together with energy

<sup>241</sup> Russia in Figures, 2009. P. 498.

consumed to manufacture export products (including petrochemicals) imply that in fact Russia exports more than half the energy produced in the country. Generally, this was not taken into account in assessing energy consumption of Russia's GNP. If the energy consumed to produce exportable energy carriers and the energy to manufacture energy-intensive export products are deducted from Russia's overall energy consumption, with GDP calculated in PPP terms, the energy intensity of Russia's GDP appears very small.

The share of exports in Russia's aggregate industrial output in 2006 in US dollars was 25–30% (Russia's industrial output estimated at world prices amounted in 2006, in terms of PPP of the ruble, to US\$1.1–1.2 trillion against US\$5 trillion in the US), and between 35 and 40% in final industrial output. But if we take the industry without the three branches heavily focused on export products (the oil and gas sector with oil refining, and the iron and steel and chemical industries), the share of export products in output will only be about 5%, and less than 10% in the final output.

The three branches manufacturing almost all of Russia's export products represent a sort of “an economy within the economy”. Major corporations differing from the vast majority of Russian companies not only by size, but also by some other important features, dominate in all these branches and especially in the oil and gas industry. These features also include:

- 1) a considerable degree of production integration geographically and across the production vertical, and the presence of advanced marketing arms;
- 2) due to borrowings from foreign banks, a loose dependence on Russian sources of leverage;
- 3) a tendency toward capital outflows and establishment of strategic alliances with large foreign corporations (even mergers).

Moreover, Russian property owners in corporations of the three branches, taken as a whole, are replaced by foreign ones (fostered by trading in shares on foreign stock markets). The withdrawal of the state from the above export branches encourages gradual and steady “internationalization” of the relevant corporations; i.e., their links with the national CS are disrupted. The large export sector that emerged in Russia's economy not only failed to raise the structure and system quality of the national CS, but caused its to split into two segments, each operating under its own rules and differing not only in functional, but in system qualities as well. In fact, the upstream oil sector (including oil used to produce petrochemicals for export) is internationalized (see Table 6.4). Therefore, its dynamics depends on global market conditions rather than on domestic demand for oil and gas.

The pricing model adopted in Russia for mass-consumption export products, in particular, oil and petrochemicals, substantially weakens the ties between the export sector and the rest of Russia's economy. This model presumes that, ideally, oil and petrochemicals (and in general any export commodity abundantly supplied to the global market) in the Russian market must be sold at the world price converted into rubles at the prevailing exchange rate. However, such conversion fails to produce a world price, since the rate of exchange fixes the ruble purchasing power only in the foreign market, but not in the domestic one.

In the domestic market, the purchasing power of the ruble is expressed by the PPP of the ruble.

The oil price for its purchasers in Russia in the past decade was nevertheless below the world price. But the situation with gasoline prices in the middle of the current decade was different. In 2005, the acquisition price of 1 L of gasoline was RUB 16.98.<sup>242</sup> The ruble/US\$ exchange rate in 2005 was 28/1, the PPP was RUB 12.7.<sup>243</sup> In terms of the exchange rate, a Russian purchaser bought 1 L of gasoline in 2005 for 16.98: 28 = US\$0.61; however, in terms of PPP for 16.98: 12.7 = US\$1.34. In 2005, in the US the price of 1 L of gasoline was US\$0.42, and even after a jump in oil prices in 2007, US\$0.54.<sup>244</sup>

Even if calculated in terms of the exchange rate, rather than the PPP of the ruble, the price of gasoline in the US in 2005 was almost 1.5 less than in Russia! At the same time, Russia consumes three times less oil and petrochemicals than it exports, while the US is their largest importer in the world. The actual “American price” of gasoline in Russia as of 2005, based on the PPP of the ruble, should have been RUB 5.3/L. Since then, this price distortion has changed insignificantly.

This problem is considered in detail because of the above confusion with ruble conversions of world prices, which makes Russian consumers (industrial, household, etc.) chronically overpay for oil, petrochemicals, and natural gas. And this is one of the critical reasons why some of Russia’s CS sectoral segments gradually degrade for lack of funds for charging depreciation.

We can see that jumps in prices on energy feedstock in the global market caused by pure market conditions by no means related to the market situation in Russia invariably lead to a rise in Russian domestic prices on energy carriers. This is one of the reasons why growth in world prices on oil and gas raw materials, being an absolute benefit to our nation under a reasonable approach to the problem, is often regarded in Russia as a disaster. The point is that this leads to a jump in domestic prices throughout the production chain where energy feedstock is consumed, aggravates the economic conditions of all energy-consuming corporations, and causes an inflationary surge.

Since the above rationale of pegging domestic energy prices to world prices converted into rubles at the prevailing exchange rate appears reasonable to many people, it is necessary here to recall once again that a normal market mechanism is one where prices are established to match the realities of a particular market.

Taken as a whole, the oil and gas complex (including oil refining, transportation, and marketing operations) is rolling in money. But this does not concern the extraction segment proper of the complex.

As can be seen from Table 6.5, almost the entire profit generated in the oil and gas complex is reaped by transportation and marketing units rather than producers. Therefore, it is no wonder that field operators in oil companies lack money for drilling operations.

<sup>242</sup> Russian Statistical Yearbook, 2009. P. 692.

<sup>243</sup> Russia in Figures, 2009. P. 523.

<sup>244</sup> Russian Statistical Yearbook, 2009. P. 720.

Table 6.5

**Ratio of average acquisition prices to producer prices**

Product	1994	1995	2000	2005	2007	2008
Oil	1.3	1.4	2.7	1.4	1.5	0.9
Motor fuel	1.7	2.2	1.5	1.9	1.5	2.8
Diesel fuel	1.7	1.9	1.4	1.4	1.2	2.0
Natural gas	12.3	17.6	5.4	4.4	4.3	4.3

*Sources:* Russian Statistical Yearbook. Moscow, 2003. P. 525; Moscow, 2006. P. 716; Moscow, 2009. P. 692.

Anyway, Russian consumers would have paid slightly less for hydrocarbons and their refined products than for their imports had the ruble exchange rate and PPP been close. As a result, profits are redistributed in favor of the fuel and energy sector (FES) branches (predominantly downstream FES branches responsible for transportation and marketing) and a dramatic drop occurs in the earning power of most industries, entailing all negative consequences for the structure, system quality, and performance of the national CS. The tendency outlined above will soon split Russia's CS into two sectors: foreign-market-oriented and domestic-market-oriented.

As illustrated above, in a classic export-oriented economy (Taiwan or South Korea), the development of the CS export-oriented sector helps develop its sector, predominantly targeting the foreign market, and build up the functional completeness of the national CS. Things in Russia look different. The development of the CS export-oriented sector, instead of promoting, significantly inhibits the development of the CS sector, predominantly targeting the domestic market, and lowers the functional completeness of the national CS.

***Changes within the system of LRCMs and the system linkage of Russia's CS across the country***

Domestic LRCMs differ significantly in development level, and their differentiation in this regard in the course of reforms on the whole steadily worsened rather than lessened.<sup>245</sup>

One of the main causes of this situation is that the set of LRCMs functioning in Russia displays a gradual weakening of their mutual economic links and hence

<sup>245</sup> So, in terms of quality of life measured by the Regional Development Institute (based on gross regional product per capita, migration attractiveness, personal safety, services market development, personal income, and job availability and accessibility), the gap between the leader (Moscow) and an outlier (Karachaevo-Cherkesia) has widened between 2006 and 2010 by 13 points (from 76.9/82.3 to 80.3/63.9) – RBC, 26 July 2010

enhances the economic importance of their foreign connections. This process, which began almost immediately after market reforms were proclaimed, continues today.

Factors weakening the economic links between LRCMs operating in Russia specifically are:

- 1) a growth in transportation rates and, indirectly, a rise in prices on oil and gas feedstock and electric power;
- 2) a decrease in products intended for domestic consumption in the gross industrial output (both due to growth in the LRCM export burden in absolute terms, and by withdrawal of products that fail to find a foreign market, primarily, light- and engineering industry products, from the range of industrial products manufactured in most regions;
- 3) deindustrialization in any form, since it weakens economic links between LRCMs and increases Russia's economy disintegration across the country;
- 4) an increase in equipment manufactured abroad, in particular, in countries other than the former Soviet Union in the overall equipment used for capital development and replacement of fixed assets;
- 5) a gradual increase in semifinished products and spare parts manufactured abroad used in industry and transportation;
- 6) growth in imports in total foodstuff production while Russian food producers are refocusing on imported feedstock;
- 7) penetration of foreign capital into Russia's CS, including penetration of foreign banks and insurance companies into Russia's financial system;
- 8) a gradual decrease in public sector involvement in the economy (which automatically reduces its system integration nationwide);
- 9) a gradual decrease in the percentage of integrated economic entities in Russia's economy.

Splitting of integrated economic entities, regardless of whether it is done by spinning off auxiliary or certain primary production facilities, or by transforming an integrated economic entity into a "loose" holding, always leads to the mutual isolation of LRCMs. In any event, such splitting weakens interactions between LRCMs and lowers Russia's CS system integration nationwide.

At present, the process of mutual isolation of LRCMs making up Russia's CS has already advanced quite far and continues to do so. Over time, this process, if it is not reversed, will replace a comparatively single national CS with some virtually autonomous CSs approximately matching the CSs of the federal districts.

Already today there are certain grounds to contemplate Russia's CS as three territorial subsystems exhibiting substantial autonomy: the unique CS of the Ural Federal District (almost 70% of oil and almost 90% of gas produced in Russia), the CS of the Far Eastern Federal District (which is gradually being integrated into the CS of China and other countries of the Asia-Pacific region), and the weakly integrated (and exhibiting a tendency toward higher disintegration) CS of the rest of Russia.

### *Changes in the technological potential of Russia's CS*

As outlined in Chapter 1, the national CS distinguishes a subsystem of SCSs and a subsystem of FCMs with most of the FCMs linked, by and large, to the relevant SCSs by their support functions.

It is evident that the system quality and efficiency of each particular SCS and the FCMs supporting its operation depend to a great extent on the package and level of technology employed.

In 1990, Russia had most of the technologies required to support the expanded reproduction of almost all SCSs and FCMs of the national economy. The domestic economy, accordingly, exhibited high-level functional completeness. It should be noted that in the prereform decade, Russia had been importing comparatively large quantities of equipment for investment purposes, at the same time manufacturing and exporting huge quantities of such equipment.

The present situation is different. Russia's CS has lost a significant part of SCS and FCM technologies. The loss of technologies for production of components and semifinished products, as well as technologies and capacity for reproduction and development of modern efficient FCMs, was especially high.

Generally, such losses would not have been as painful for the national CS and domestic economy had the technological quality of the functioning SCSs and FCMs grown in tandem. However, Russia's industry continues to use the technologies largely dating back to 1990. Therefore, in general, the technology gap between Russia and advanced and even some developing countries is widening.

For exactly this reason, Russian corporations in most cases have to deal directly with foreign corporations or international intermediaries when the need arises for investment goods and services (engineering products, components, part of raw materials, marketing services in global markets, etc.).

Even the most advanced and investment-happy SCSs of the Russian FEC practically lack modern FCMs capable of providing efficient geophysical services for exploration and production of hydrocarbons, conducting complex drilling operations, and using state-of-the-art methods to boost reservoir recovery, etc.

In 1990, the technological quality of manufactured products was a challenge for Russia. Now a deficiency in CS functional completeness caused by failure of many SCSs and FCMs to produce goods and services that are in demand in the Russian and world market is an increasingly pressing issue. Russia's economic modernization cannot be fully accomplished without broadening the range of goods and services that Russia's CS is able to provide.

### *Public corporations and their role in Russia's economy*

At present, most public corporations established recently in Russia are being liquidated. Therefore, the question whether this approach complies with global experience is crucial as never before<sup>246</sup>.

<sup>246</sup> Chernoy, 2011.

In market economies, public corporations were set up when both the private capital and the public sector for one reason or another were incapable of addressing certain priority challenges of the national economy development. Exactly then, as US President Franklin D. Roosevelt said in 1933 when he proposed establishing the Tennessee Valley Authority (TVA), a public corporation, the need arose for “*a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise*”.<sup>247</sup>

International practice suggests that sovereign public funds corporations are used to manage free public financial assets with a view toward implementing national development priorities. Precisely in this capacity, national sovereign funds and development banks exist and operate in many countries, both developed and developing (the US, Japan, Germany, Canada, South Korea, China, India, Brazil, Mexico, Argentina, etc.).<sup>248</sup>

Government-run production corporations use public financial resources to directly implement development programs and projects, including socially necessary programs in so-called “areas of market failure”.

So, in recent years, about 20 public corporations in the US have been operating at the federal level and about as many at the state level. Some of them (like the US Postal Service, Federal Deposit Insurance Corporation, State of Alaska Permanent Fund) have been operating on a permanent basis. Others (like the Pennsylvania Avenue Development Corporation or National Veterans Business Development Corporation) have been closed or their status has been changed after achieving their goals.

The institution of public corporations in the US, France, the UK, Spain, Italy, Portugal, and Greece was especially active when their economies were recovering and modernized after World War II. In the largest European countries, such public corporations as Italian Finmeccanica, British BAE Systems, French Thales, and KEA, have played a huge role in the postwar industrial recovery and modernization.<sup>249</sup> In particular, in the UK, a considerable part of industrial assets after the war functioned legally as public corporations for almost four decades<sup>250</sup> Government-run corporations in Italy, Austria, and Greece had been actively used as long.

Only when the private sector in the above-mentioned economies had achieved high level global competitiveness, accumulated sufficient investment potential, and built up the capacity to withstand long-term market risks (i.e., the ability to address major development challenges independently, without the active support of the state), were public corporations in relevant CS segments liquidated.

The majority of public corporations that achieved their goals were liquidated in European economies in the 1980s–1990s, but in some countries, like France, they still play an important economic role.

<sup>247</sup> Cited: B. Alyokhin, A. Zakharov. 31.01.2005, <http://stra.teg.ru/lenta/innovation/2057/print>.

<sup>248</sup> State development institutions..., 2008.

<sup>249</sup> Solovyov, 2009.

<sup>250</sup> See Zeldner, 2007. In postwar Britain, the American-type government corporation was chosen as the main form of incorporation for nationalized industries. Government corporations existed there from 1945 to the early and mid-1980s.

In Japan after World War II, in South Korea since the end of 1950s, and in China since the early 1980s, public corporations have become major industrialization agents (establishing practically from scratch such industries as machine-tool, shipbuilding, automotive, electronic engineering, etc.), as well as technological modernization agents. For example, in Japan and Korea, public corporations established at the early stage using public funds were actively used as a tool to implement national indicative plans. Their targets included such quite specific indicators as achievement in 7, 10, and 15 years a certain percentage of sales in relevant global markets.<sup>251</sup>

The Japanese experience in setting up public corporations as a tool for national economic industrialization and modernization was broadly used (sometimes literally replicated, as many researches believe) in Taiwan, Singapore, Indonesia, Malaysia, and, particularly, South Korea. In fact, the chaebolization of the South Korean economy in the 1970s–1980s was carried out in the format of public corporations, under the stringent guidance and control of the government<sup>252</sup> and almost entirely through public funding.

Until recently, more than 130 public corporations have been operating in China, which (like earlier in Japan, South Korea, and Taiwan) became the backbone of modernization of the national economy. Recently, the Chinese leadership has begun to reduce the number of public corporations by merging them into mammoth financial and industrial conglomerates rather than by liquidating them. Their goal is to implement strategic modernization programs in key national industries and increase the competitive edge of products sold in global markets.<sup>253</sup>

Government-run oil corporations exist in many oil-producing countries (Norway, Venezuela, the United Arab Emirates, and China, to name a few).<sup>254</sup> The practice of setting up public corporations (like in Brazil, Mexico, Japan, France, and India)<sup>255</sup> persists, boosting the development of depressive regions in these countries. Many countries (Australia, Egypt, Canada, Brazil, etc.) have set up public grain procurement corporations.<sup>256</sup> Some of them not only arrange and support grain exports and imports, but also perform special production functions, including investment support for the production of grain, oil, and other crops.

In all countries where public corporations have been successfully utilized for development and modernization, they operate within a clear and well-established legal framework under strict control of administrative authorities and lawmakers.

Thus, as far back as 1945, the US passed a special Government Corporation Control Act, which set out general rules on finances, auditing, and debt manage-

<sup>251</sup> Kuznetsova. *Nezavisimaya Gazeta*. 21.03.2008.

<sup>252</sup> Shestakov, <http://www.liberty.ru/groups/economists/>.

<sup>253</sup> Solovyov, 2009.

<sup>254</sup> For example, government-run oil corporations StatoilHydro (Norway), Abu Dhabi National Energy Co. (the UAE), and Sinopec (China).

<sup>255</sup> <http://instituciones.com/general/1386-institutuy-razvitiya.html>.

<sup>256</sup> Among them are the Egyptian General Authority for Supply Commodities (GASC), the Brazilian National Food Supply Agency (CONAB), the Canadian Wheat Board (CWB), the Grains Council of Australia (GCA), etc.

ment for all government corporations. Moreover, any public corporation in the US is established under a separate act that sets out in detail not only the goals and basic conditions of its activity, but also the criteria for assessing operating efficiency and a procedure for monitoring compliance with plans and budgets. Thus, the budgets and financial reports of federal government corporations in the US must be endorsed by the president and approved by Congress. France, Japan, Norway, Canada, Australia, Brazil, India, etc., use similar methods for setting goals and measuring the performance of public corporations.

All of the above suggests that there are no grounds for the mainstream opinion expressed among Russia's economic and government circles that public corporations are fundamentally less efficient compared with private corporations. The absence of visible major operating results of a few Russian public corporations are directly linked to blunders on the part of authorities in the course of their institution.

The goals of public corporations established in Russia have not been broadly discussed on a professional level at all. However, the hastily adopted new laws on public corporations have failed to set out goals clearly, or criteria and mechanisms for ascertaining their achievement.

When goals and the criteria for their achievement are set out vaguely, two major negative effects may arise.

*First*, public corporations perform at best inefficiently and, at worst, simply destructively (including misapplication of funds, corruption, "dead projects", etc.).

*Second*, some may wish to assess the operating efficiency of public corporations – since there are no other criteria – by purely market indicators.

However, in most cases, the government and private corporation stockholders have quite different ideas about performance criteria.

Stockholders, with few exceptions, focus on increasing the present share value and dividends as priority targets and performance criteria and not always on increasing the capitalization and earning power of the corporation over the long term.

The government may have entirely different ideas about priority targets and performance criteria for public corporations: accelerated infrastructure development, social needs, establishment of new or modernization of old branches, etc.

The Alaska Permanent Fund Corporation in the US is a low-profit and, in some years, even a loss-making institution.<sup>257</sup> But it is effective, otherwise Alaska could not have been efficiently developed by market corporations. Norway could not have established a socially oriented free market economy without such public corporations as Statoil and the Norway Oil Fund.<sup>258</sup>, nor could South Korea have had modern SCSs in the automotive, shipbuilding, chemical, and electronic industries without such public corporations—chaebols like Hyundai, Samsung and Daewoo.<sup>259</sup>

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<sup>257</sup> The Alaska Permanent Fund Corporation (APFC). Permanent Fund Report, 2005, <http://www.apfc.org>.

<sup>258</sup> Finmarket.ru, Oct. 3. 2010.

<sup>259</sup> Trigubenko, Toloraya, 1993.

Thus, decisions made currently by Russia's leadership to liquidate most of the public corporations through marketization appears erroneous. Privatization of public corporations will signify a fundamental shift of their priority targets toward the commercial interest of stockholders, i.e., rendering meaningless the establishment and activities of public corporations intended to address strategic nationwide challenges. How this will unfold and what this will lead to are vividly described in *The Roaring Nineties* by Joseph Stiglitz.<sup>260</sup> Targeting an increase in current dividend payments not only limits investment opportunities for public corporations, but also inevitably leads to the abandonment of long-term planning for implementing goals set before the relevant public corporation.

For public corporations, it is necessary to formulate – at the legislative level – clear national priority targets, design high standard programs to materialize these priorities, select skilled managerial resources, and create and arrange (again, at the legislative level) a rigid system of reporting on and control over their activities.

Only in this way it is possible for public corporations to play their significant role – which has proven successful in international practice – of key development and modernization agents of the national CS.

## 6.2. Imaginary and real structural defects of the Russian economic system and conditions for their elimination

### *The myth about the monopolistic nature of Russia's economy and the actual state of affairs with Russian market competitiveness*

Among postulates that have had a strong impact on the economic policy pursued during Russian reforms is the one about the monopolistic nature of Russian industry (in contrast to the competitive industries of mature economies and almost all developing countries). According to this postulate:

- 1) Russia entered a market-based economy with an industry dominated by monopolies;
- 2) basically, even today the concentration of production in Russia's CS is excessive, and Russia's economy as a whole remains an economy of monopolies.

Hence, it was concluded that the high-level inflation in Russia's economy (even when the money supply is dramatically contracted, like what happened in 1994–1999 and 2008–2009) is caused by the monopolistic nature of Russia's economy and the CS servicing it. Meanwhile, it was ignored that, apart from the excess money supply and the size of the monopolistic market, there are many other factors capable of invoking inflationary developments.

Explanations about the nature of inflation in Russia generally ignored the following circumstances:

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<sup>260</sup> Stiglitz, 2005.

- given a liberalized system of external trade and a ruble exchange rate essentially undervalued in relation to its PPP<sup>261</sup> like in Russia, exporters will always seek to sell export products at a price equal to the world price converted into rubles at the prevailing exchange rate (i.e., highly exceeding average Russian prices);
- if an economy is serviced by an inefficient business community, like what existed in Russia in the 1990s and still exists to some degree even today, the economy will be inflationary in any case, regardless of its level of monopolism;
- finally, if the authorities administrating the economy pursue a policy aimed at raising prices on some goods and services (or if they simply initiate a rise in the prices and tariffs of natural monopolies), inflation becomes inevitable, irrespective of the market competitiveness level. At the same time, it is necessary to take into account that impulses based on directives instigating price increases will automatically be enhanced by the market mechanism.

Due to the problem related to assessing the impact of monopolies on price movements, it should be kept in mind that the European economy from the end of the 19th century until the beginning of the 1940s was dominated by cartels. In other words, during that period, the European economy was, if it was at all possible, an economy of monopolies and oligopolies. Nevertheless, precisely during that period (unless the World War I period and the first years of the postwar economic recovery are taken into account), European economies exhibited a very high degree of price stability. So, the relationship between the price increases and market monopolism is not so straightforward.

Finally, despite the widespread thesis about the monopolistic nature of the Russian market, there is evidence that it has never been monopolistic.

*First*, in the Soviet period, almost any product was manufactured by several producers not only across the entire Soviet Union, but also in Russia, which was a part of it. The duplication production system was purposefully established during the first five-year plans. For example, facilities manufacturing all basic engineering products were duplicated, and often many times. In Russia, for example, before the reforms there had been three major truck manufacturers (ZIL, GAZ, and KamAZ) and several smaller plants.

*Second*, the market monopolism level, even without imports, is determined not only by enterprises that manufacture certain goods. It is also determined by enterprises that at the same time are capable of manufacturing the products under review, but for one reason or another do not consider this practical (for example, due to low demand and a low price level in a particular market). The concept of high-level monopolism of the Russian manufacturing industry has always overlooked this fact.

*Third*, even though after the Soviet Union's demise, the number of duplicating production facilities dropped dramatically, this drop was compensated for by similar products from abroad that flooded the open domestic market. And it is known that an open market has no monopolies, except for natural ones.

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<sup>261</sup> See below for details.

Therefore, the actual situation in Russia compared with other market economies suggests that the competitiveness of the Russian market after the onset of reforms has always been adequate by international standards.<sup>262</sup>

### *The main structural defect of the nonfinancial sector in the Russian CS*

The main structural defect of the Russian CS nonfinancial sector and, in particular, the system of manufacturing corporations is the underdeveloped CS core of the system of major corporations. At the end of the 1990s, the main challenge faced by Russia's CS was a complete lack of candidates for monopolies in most branches rather than the presence of monopolies (excluding the oil and gas sector, certain raw material corporations, and the electric power industry).

As soon as the administration management system of the Russian economy collapsed and central offices for industrial management and trusts disappeared, Russia's manufacturing industry was left without economic entities matching the top 1000 world corporations in terms of sales or market value of assets.

Table 6.6 lists the 500 largest corporations as of 1995 broken down by country, with a gross income of \$US10.2 trillion.

*Table 6.6*

#### **Distribution of the largest international corporations by country as of 1995**

Country	Number of corporations	Earnings, US\$ billion
US	151	2,939
Japan	149	3,806
Germany	44	896
France	40	742
Britain	33	454
Switzerland	14	245
Italy	11	228
Sweden	3	45
China	3	41
Mexico	2	37

**Source:** Statistical Abstract of United States, 1995, table No. 1393.

<sup>262</sup> It did not take long for external competition nearly to wipe out light industry and most of the engineering industry in Russia, which together accounted for 1/3 of the RSFSR's gross industrial output.

At most, only two to three economic entities operating in Russia in 1993 were large enough to join the above list. At the same time, there is a well-known direct relationship between the ranking of domestic corporations among the top 500 or 1000 corporations in the world, and the share of the country in question in the total output and revenues of the global economy.

The economic importance of Russia as a global economic entity in 1993 and later was comparable with that of Sweden or Mexico. This was caused directly by an inadequate number of large economic entities in Russia's CS.

After six years of economic reforms, in 1998, the concentration of production in Russia's CS had fallen, as compared with the prereform concentration, to a level much lower than in most advanced and developing countries.

Table 6.7. shows the concentration of production (level of monopolization) in the industrial segments of Russia's CS in 1998. During that period, only the gas, oil, and electric power industries displayed a high-level concentration of production by international standards. In most of the other branches, large, by international standards, companies did not exist at all (Table 6.8, 6.9, 6.10).

At that time, Russia's 16 largest manufacturing companies (excluding those in the fuel and electric power industry) in 1998 employed only 1.9 million people (while the overall manufacturing industry employed 9.9 million people), who produced goods worth 360 billion rubles. This amount calculated at the ruble/dollar rate that prevailed in 1998 was US\$36.75 billion, but if calculated in terms of the average PPP of the ruble in 1998, the amount rose to about US\$73 billion. It is comparable with the sales of just one American corporation, General Motors (see Table 6.10).

*Table 6.7*

**Industrial structure of Russia's 200 largest industrial companies and enterprises in 1998**

No.	Industry	Number of companies	Sales		Labor force, thous. people
			RUB billion	US\$ billion at the annual average rate of exchange	
1.	Oil and gas industry	16	479.34	48.96	997.5
2.	Coal	19	36.23	3.7	285.7
3.	Electric power	4	233.62	23.86	753.5
4.	Subtotal for items 1–3	39	749.18	76.53	2036.7
5.	Iron and steel	34	102.43	10.46	503.2
6.	Nonferrous metallurgy	22	79.16	8.09	300.5
7.	Mechanical engineering	41	89.64	9.16	728.4
8.	Chemical and petrochemical	36	52.17	5.33	263.1

Final table 6.7

No.	Industry	Number of companies	Sales		Labor force, thous. people
			RUB billion	US\$ billion at the annual average rate of exchange	
9.	Forest, woodwork and timber, paper-and-pulp	8	13.83	1.41	62.9
10.	Construction materials	2	1.76	0.18	16.8
11.	Food	16	18.86	1.93	51.7
12.	Tobacco	1	1.01	0.10	1.5
13.	Perfume and toiletry	1	0.86	0.09	1.0
14.	Total for manufacturing sectors	161	359.77	36.75	1,929.1

Source: Expert, 1999. No. 36. P. 51.

Table 6.8

### The largest producers in some Russian industries as of 1998

No.	Company	Capitalization as on Sept 1, 1999, US\$ mn, at the exchange rate RUB/US\$ = 24.81	Sales in 1998		Labor force, thous. people
			RUB mn	US\$ mn, at the exchange rate RUB/\$US = 9.79	
1	2	3	4	5	6
<i>Fuel and energy sector</i>					
1.	RAO UES of Russia (holding)	2,990	218,802	22,350	697.8
2.	Gazprom (holding)	3,955	171,295	17,497	278.4
3.	Lukoil (holding)	5,402	81,660	8,341	102.0
4.	Bashkir Fuel Company (holding)		33,082	3,379	104.8
5.	Western Siberian Oil Company ("Sidanko")		31,363	3,204	80.0
6.	Surgutneftegaz (holding)	4,085	30,568	3,122	77.4

Continued table 6.8

No.	Company	Capitalization as on Sept 1, 1999, US\$ mn, at the exchange rate RUB/US\$ = 24.81	Sales in 1998		Labor force, thous. people
			RUB mn	US\$ mn, at the ex- change rate RUB/\$US = 9.79	
1	2	3	4	5	6
<i>Metallurgy</i>					
7.	Norilsk Nickel	472	25,107	2,565	115.0
8.	Severstal (Cherepovetsk Metal Works)	71	16,967	1,733	46.9
9.	Magnitogorsk Inte- grated Iron-and-Steel Works	131	12,866	1,314	27.8
10.	Novolipetsk Iron-and- Steel Works		11,035	1,127	46.4
11.	Krasnoyarsk Alumin- ium Works	47	5,329	0,544	13.4
<i>Mechanical engineering</i>					
12.	AvtoVAZ	42	26,255	2,682	110.3
13.	GAZ	141	14,556	1,487	107.2
14.	UAZ	29	3,619	0,370	25.9
15.	Zavolzhsk Engine Plant		2,426	0,248	18.1
16.	ZIL	8	2,368	0,242	23.7
17.	Perm Engines		1,831	0,187	18.3
18.	Dimitrovgrad Autoag- gregate Plant		1,805	0,184	14.2
19.	Ural Engineering Works		1,744	0,181	32.5
20.	KamAZ (holding)	10.6	1,720	0,176	49.5
21.	Uralvagonzavod		1,546	0,158	26.2
22.	Kirovsky Zavod	11	1,500	0,153	10.1

Final table 6.8

No.	Company	Capitalization as on Sept 1, 1999, US\$ mn, at the exchange rate RUB/US\$ = 24.81	Sales in 1998		Labor force, thous. people
			RUB mn	US\$ mn, at the ex- change rate RUB/\$US = 9.79	
1	2	3	4	5	6
<i>Chemical and petrochemical industry</i>					
23.	Nizhnekamsk Neft-ekhim	469	5,660	0,578	17.1
24.	Nizhnekamskshina		3,280	0,335	15.9
25.	Akron (holding)	42	3,197	0,327	10.6
26.	Uralkali	44	3,113	0,318	13.5
27.	Sylvinite	38.5	2,248	0,230	9.6
28.	Kirovo-Chepetsk Chemical Works		1,866	0,191	14.5
29.	Kazanorgsintez		1,815	0,185	6.9

Source: Expert, 1999. No. 36. Pp. 64–67 and 94–100.

Table 6.9

### European competitors of Russian industry (as of 1995/1996)

No.	Company	Country	Company's market capitaliza- tion, US\$ mn	Sales as of 1996, US\$ mn	Number of em- ployees, thous. people
1	2	3	4	5	6
<i>Fuel and Energy Complex</i>					
1.	Royal Dutch Shell	The Netherlands	135,350	108,557	104,000
2.	British Petroleum	The UK	58,198	56,319	58,150
3.	ENI	Italy	41,006	57,322	86,422
4.	British Gas	The UK	13,706	13,416	54,754
5.	Gas Natural	Spain	6,681	2,287	4,820
6.	Italgas	Italy	2,586	2,614	9,912

Continued table 6.9

No.	Company	Country	Company's market capitalization, US\$ mn	Sales as of 1996, US\$ mn	Number of employees, thous. people
1	2	3	4	5	6
7.	ScottishPower	The UK	5,848	3,543	11,344
8.	Preussag	Germany	4,077	17,505	63,603
9.	VEBA (power industry and chemistry)	Germany	26,176	44,057	123,046
<i>Chemical industry</i>					
10.	Bayer	Germany	26,276	29,613	144,050
11.	Hoechst	Germany	21,748	34,660	165,928
12.	BASF	Germany	19,446	30,709	105,557
13.	Imperial Chemical Industries	The UK	9,561	16,018	64,800
14.	Rhone-Poulenc	France	9,197	16,546	82,556
15.	Michelin	France	5,935	12,900	114,397
<i>Mechanical engineering and metallurgy</i>					
16.	Daimler-Benz AG	Germany	29,107	68,785	321,222
17.	Siemens	Germany	29,441	58,963	376,100
18.	L. M. Ericsson	Sweden	24,209	14,877	80,338
19.	General Electric Company	The UK	17,086	9,726	82,967
20.	Mannesmann	Germany	13,948	21,319	122,684
21.	Philips	The Netherlands	12,413	38,184	263,554
22.	Bayrische Motoren Werke	Germany	10,682	30,652	106,944
23.	FIAT	Italy	10,634	49,232	240,517
24.	Volkswagen	Germany	10,513	59,534	242,285
25.	Volvo	Sweden	9,960	25,832	80,369
26.	British Aerospace	The UK	7,078	8,955	45,200
27.	Schneider	France	6,394	11,595	92,695
28.	Britisch Steel	The UK	6,290	10,994	50,100

Final table 6.9

No.	Company	Country	Company's market capitalization, US\$ mn	Sales as of 1996, US\$ mn	Number of employees, thous. people
1	2	3	4	5	6
29.	Thyssen	Germany	5,870	25,988	126,987
30.	Renault	France	5,760	34,264	139,950
31.	Peugeot	France	5,564	32,050	139,900
32.	Rolls-Royce	The UK	5,511	5,611	43,200
33.	Electrolux	Sweden	4,111	17,441	112,300
34.	Thomson-CSF	France	3,569	6,926	46,320
35.	Fried. Krupp AG H-K	Germany	3,509	15,634	66,740
<i>Other sectors</i>					
36.	Nestle	Switzerland	44,746	45,859	220,172
37.	Unilever	The Netherlands	43,063	49,159	300,800

*Notes:* Sales data for 1996; other data, as of the end of 1995.

*Source:* Finansovye Izvestia, 1997, Feb. 27. P. 3.

In 1998, the aggregate share of the 161 largest manufacturing companies in industry sales amounted in Russia to slightly more than 30%. In 1998, the 41 largest engineering companies accounted for about 1/3 of the overall sales in the sector, the 36 largest chemical and oil and gas companies for about half of sales, and the 56 largest metallurgic companies for about 2/3 of sales.

Such an economic concentration level would be more or less acceptable under the technological conditions at the beginning of the 1960s in a relatively closed market.

But even at those times, such concentration of production in the manufacturing industry (and in the coal and oil industries, too) was far from optimal.

However, the problem is not the production concentration level alone, but also the relatively small size of production facilities and output of key Russian manufacturing companies. This becomes quite obvious when the data on Russia is compared with those on the US and Western Europe (see Tables 6.8–6.10).

The two largest Russian automakers (AvtoVAZ and GAZ) in 1998 employed 2 to 3 times fewer people than the largest European and American counterparts did, and were even smaller in terms of production potential. In the chemical industry, the largest Russian companies were many times smaller, both in terms of output and labor force, than their largest European and American counterparts.

After 1998, Russian reforms entered another stage, which lasted more than a decade. Statistics show that during that period, no catch-up development occurred in the Russian CS structure (See Tables 6.11. and 6.12.)

Table 6.10

**The largest US companies of American industry  
(sales data for 1996; other data, as of the end of 1995)**

No.	Company	Market capitalization, US\$ mn	Sales in 1996, US\$ mn	Labor force, thous. people
<i>Oil companies</i>				
1.	Exxon	103,384	107,893	82,000
2.	Texaco	24,313	35,551	28,250
3.	Mobil	45,603	64,767	50,400
<i>Other sectors</i>				
4.	General Electric	150,264	69,376	222,000
5.	Coca Cola	126,872	18,018	32,000
6.	Microsoft	78,466	5,937	17,800
7.	Phillip Morris	73,633	53,139	151,000
8.	Procter & Gamble	66,843	35,284	103,000
9.	IBM	65,673	71,940	225,350
10.	Hewlett-Packard	49,570	31,519	102,300
11.	DuPont de Nemur	49,346	36,689	105,000
12.	Ford Motor	36,969	137,137	346,990
13.	General Motors	36,318	165,370	745,000
14.	Boeing	32,672	19,515	105,000
15.	Gillette	31,130	6,795	33,500
16.	Motorola	30,518	27,037	142,000
17.	Electronic Data Systems	29,840	12,422	96,000
18.	Chrysler	20,856	51,190	126,000
19.	Daewoo Chemical	19,685	20,200	39,540
20.	Lockheed Martin	17,935	22,853	160,000
21.	Xerox	17,347	16,611	85,200
22.	Kellogg	14,646	7,004	14,490
23.	United Technology	14,548	22,802	170,600
24.	Caterpillar	14,535	16,972	54,350

*Source:* Finansoye Izvestia, 27.02.1997, p. 6.

Table 6.11

**The 400 largest Russian companies and enterprises in 2009 by industry and sales**

No.	Industry	Number of companies	Sales	
			RUB billion	US\$ billion at the annual average rate of exchange
1.	Oil and gas industry	13	8,428.8	265.69
2.	Coal industry	4	235.1	7.41
3.	Electric power industry	25	1,758.9	55.45
4.	Total for FES sectors and electric power industry	42	10,622.8	328.55
5.	Iron and steel industry	13	1,739.0	54.82
6.	Non-ferrous metallurgy	9	711.0	22.41
7.	Mechanical engineering	37	1,258.6	36.68
8.	Chemical and petrochemical industry	19	857.6	27.04
9.	Forest, woodwork and timber, paper-and-pulp industry	5	100.3	3.16
10.	Construction materials	3	99.4	3.13
11.	Food industry	27	788.1	24.84
12.	Tobacco industry	4	222.3	7.01
13.	Perfume and toiletry industry	1	14.5	0.46
14.	Total for manufacturing sectors	126	5,780.8	179.55

*Source:* Expert, 2010, No. 39. P. 93.

Tables 6.11–6.13 rank three US manufacturing corporations, including those in the engineering industry (in spite of crisis-driven dramatic drops in sales) among the top ten, but Rosenergoatom, Russia's largest engineering corporation, ranks only 23rd in sales.

As a result, Russian manufacturing corporations still do not rank among the world's 500 and 1000 biggest companies at all (Table 6.14). For comparison purposes, data on the 30 largest US companies ranked by Fortune magazine for the same 2009 are given in Table 6.13.

Table 6.12

**The 30 largest Russian companies in 2009 ranked by sales**

No.	Company	Sales in 2009, RUB mn	Sales in 2009, US\$ mn
1.	Gazprom	2,990,971.0	94,292.9
2.	Lukoil Oil Company	2,157,753.0	68,025.0
3.	Rosneft Oil Company	1,072,199.4	33,802.0
4.	RZD	1,050,157.9	33,107.1
5.	Sberbank of Russia	975,221.0	30,744.7
6.	TNK-BP	810,097.1	25,539.0
7.	AFK Sistem	594,744.2	18,749.8
8.	Surgutneftegaz	526,609.6	16,601.8
9.	MRSK Holding	461,659.8	14,554.2
10.	Severstal	414,088.7	13,054.5
11.	VTB Bank	393,300.0	12,399.1
12.	Tatneft	380,648.0	12,000.3
13.	AK Transneft	351,051.0	11,067.2
14.	MMC Norilsk Nickel	322,116.6	10,155.0
15.	Evrast Group S. A.	309,967.8	9,772.0
16.	X5 Retail Group	276,515.9	8,717.4
17.	VimpelCom	276,056.1	8,702.9
18.	IES Holding	264,167.0	8,328.1
19.	Svyazinvest Group	259,053.1	8,166.9
20.	United Company RUSL	258,993.8	8,165.0
21.	Gazprombank	226,615.0	7,144.2
22.	Novolipetsk Iron-and-Steel Works	194,757.5	6,139.9
23.	Rosenergoatom Concern	184,232.8	5,808.1
24.	Mechel	182,521.5	5,754.1
25.	Megafon Group of Companies	181,883.0	5,734.0
26.	Magnit	169,844.4	5,354.5
27.	Sibur Holding	161,400.0	5,088.3
28.	Magnitogorsk Integrated Iron-and-Steel Works	161,169.3	5,081.0
29.	TAIF Group of Companies	158,567.0	4,999.0
30.	Auchan	158,357.8	4,992.4

*Source:* Expert, No. 39 (723)/October 4, 2010. Pp. 104–105.

Table 6.13

**Fortune Magazine ranking of America's largest corporations in 2008**

No.	Company	Revenues (US\$ millions)	Profits (US\$ millions)
1.	Wal-Mart Stores	378,799.0	12,731.0
2.	Exxon Mobil	372,824.0	40,610.0
3.	Chevron	210,783.0	18,688.0
4.	General Motors	182,347.0	-38,732.0
5.	ConocoPhillips	178,558.0	11,891.0
6.	General Electric	176,656.0	22,208.0
7.	Ford Motor	172,468.0	-2,723.0
8.	Citigroup	159,229.0	3,617.0
9.	Bank of America Corp.	119,190.0	14,982.0
10.	AT&T	118,928.0	11,951.0
11.	Berkshire Hathaway	118,245.0	13,213.0
12.	JPMorgan Chase & Co.	116,353.0	15,365.0
13.	American International Group	110,064.0	6,200.0
14.	Hewlett-Packard	104,286.0	7,264.0
15.	International Business Machines	98,786.0	10,418.0
16.	Valero Energy	96,758.0	5,234.0
17.	Verizon Communications	93,775.0	5,521.0
18.	McKesson	93,574.0	0,913.0
19.	Cardinal Health	88,363.9	1,931.1
20.	Goldman Sachs Group	87,968.0	11,599.0
21.	Morgan Stanley	87,879.0	3,209.0
22.	Home Depot	84,740.0	4,395.0
23.	Procter & Gamble	76,476.0	10,340.0
24.	CVS Caremark	76,329.5	2,637.0
25.	UnitedHealth Group	75,431.0	4,654.0
26.	Kroger	70,234.7	1,180.5
27.	Boeing	66,387.0	4,074.0
28.	AmerisourceBergen	66,074.3	0,469.2
29.	Costco Wholesale	64,400.2	1,082.8
30.	Merrill Lynch	64,217.0	-7,777.0

**Source:** [http://money.cnn.com/magazines/fortune/fortune500/2008/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/2008/full_list/)

Table 6.14

**Average market capitalization of the five largest corporations in the world  
and Russia in 2008 by key sectors, billion dollars**

Industry	World	Russia
Oil and gas	205.1	45.0
Banks	158.2	9.5
Telecommunications	118.3	7.6
Pharmaceutical and biotechnology	106.8	0.38
Transportation	84.1	3.3
Electric power	40.1	2.1
Engineering and automotive	61.8	0.28
Chemical	29.2	2.6

Author's estimates based on FT Global 500 and Expert 400 rankings for 2008

The statistics for the best precrisis year – 2008 – show that, like a decade earlier, the sales of American and Russian engineering corporations differed by several tens of times (General Motors earned over US\$182 billion, while AvtoVAZ, only US\$7.3 billion).<sup>263</sup> To rank among America's top hundred corporations, a corporation's annual sales must be at least US\$25 billion, while to rank among Russia's top hundred corporations, a Russian corporation's annual sales must be at least US\$1.4 billion. General Electric, an American corporation, alone spends annually over US\$5 billion on R&D, which exceeds Russia's entire relevant spending.<sup>264</sup> By 2015, General Electric plans to increase investments in R&D to US\$10 billion.<sup>265</sup> How is this possible? Because this integrated corporation comprises GE Capital Finance, a financial entity with assets worth more than US\$500 billion. Such an entity allows, without resort to external financial institutions, to mobilize and concentrate resources needed for R&D.

A typical major corporation in the Russian manufacturing industry has only one production unit and generally lacks any strong marketing arm, which is replaced by intermediaries. A typical major European or American manufacturing corporation has a group of production units and various auxiliary units, including those (often with the status of affiliates) operating as wholesale marketing companies. The same situation was already observed about a hundred years ago.

Major corporations in the West and East are always transregional corporations and usually TNCs. Russian corporations, which are regarded in Russia as large and almost monopolist candidates, are mostly regional companies.

<sup>263</sup> See Expert, 2008. No. 39, pp. 170–177 and [http://money.cnn.com/magazines/fortune/fortune500/2008/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/2008/full_list/).

<sup>264</sup> Chernoy, *Innovation Materialization* // Economist, 2007. P. 11–16.

<sup>265</sup> GE Annual Report 2009, [http://www.ge.com/investors/financial\\_reporting/annual\\_reports.html](http://www.ge.com/investors/financial_reporting/annual_reports.html).

***Inadequate integration of the real and credit sectors of Russia's CS  
as one of its main system drawbacks***

As mentioned above, Russian economic law creates serious obstacles to the participation of banks in the capital of the CS nonfinancial sector. At the same time, Russia's credit system until recently has not had enough funds for large-scale long-term lending to real sector corporations.

Therefore, a close relationship between banks and nonfinancial corporations, which is characteristic of German and Japanese CS models, is impossible in Russia. But the establishment of Japanese-type FIGs is also impossible. The above circumstances result in:

- 1) substantial amorphism of the CS exacerbated by the policy of substituting large integrated economic entities with holdings;
- 2) a high willingness of Russian corporations to borrow abroad, which is always associated with elevated risks in view of ruble exchange rate instability;
- 3) reduced financial stability of real sector corporations, and
- 4) the excessive number of primary economic decision-making points in Russia's CS and hence, the points of inflationary shock generation that is being one of the main causes of the national economy's strong willingness for inflation.

***Main functional defects of Russia's CS***

Russia's CS sectoral structure is heavily biased toward SCSs (SCSs) associated with the extraction and processing of raw materials<sup>266</sup>. Most manufacturing industry SCSs of the national CS are experiencing stagnation along with the deterioration and obsolescence of capital goods; the share of their output in GDP is much smaller as compared with that of advanced and most of the developing countries and the presence of their output in global markets is almost impalpable<sup>267</sup>.

FCMs capable of ensuring the reproduction process in the basic industrial SCSs of the Russian CS are predominantly extremely weak or nonexistent. In most industries, their functions are performed by foreign corporations from advanced and developing countries (in recent years from China, India, and South Korea) to provide investment equipment and many services to the basic sectoral segments of the Russian CS. The Russian CS almost completely lacks FCMs (including export–import finance companies, marketing corporations, etc.) capable of promoting products to global markets.

The LRCMs of Russia's CS are too weakly interconnected through the business of transregional corporations as well as, in many cases, through a modern transportation and logistic infrastructure that predetermines their mutual economic autonomy and autonomy from federal economic management centers.

<sup>266</sup> Russia and the Rest of the World, 2008.

<sup>267</sup> See Russia in Figures, 2009, and International Comparisons, 2008.

Concurrently, some LRCMs located in Russia's periphery tend to strengthen economic links with the economies and CSs of neighboring countries. LRCMs in Russia's present CS are extremely uneven in terms of development, and many of them need to boost this significantly. Therefore, the preservation of current trends creates high risks of structural and functional disintegration of the single national CS into virtually independent regional subsystems, with part of them being integrated into the CS of neighboring countries.

The above weakness and unevenness of Russia's nationwide CS development generate not only typical market and investment risks in the set of CS operation framework conditions, but they also increase socioeconomic risks. In the current global crisis, these risks have noticeably increased<sup>268</sup> and in the future, political risks, which sharply lower the country's overall sociopolitical and economic stability, can add to them.

Thus, Russia's existing CS is highly inefficient. The major reasons of this state are a severe mismatch between CS system characteristics (and the format in general) and its operation framework conditions, as well as the deficiency or system incompleteness of the basic mechanisms controlling the CS characteristics.

### 6.3. Impact of the foreign capital factor on Russia's CS development potential

There was practically no production base to form corporations when corporate-type entities started to form in old Russia (the 1860s–1870s). In old Russia, production in the entire economy had been growing along with the establishment of a CS. Changes in the CS were closely related to growth, and in most cases they were initiated to enhance the efficiency and improve the financial standing of certain corporations, which were the backbone of the entire system, and superstructures like cartels and groups (concerns).

Foreign capital participation in the formation of Russia's CS and evolution by was no means especially encouraged apart from the restructuring of currency circulation based on the gold standard undertaken by Sergei Witte to promote international capital flows into Russia's economy. In fact, it was hardly the state of currency circulation that caused foreign capital to flow into Russia's economy before and after Witte's reforms.

Old Russia's economy was attractive for foreign investors mainly due to<sup>269</sup>:

- 1) the presence of free market niches for foreign capital in the CS of Russia's economy due to the Russian economy's technological and organizational backwardness and, hence, the low competitiveness of markets for technologically advanced goods;

<sup>268</sup> Socioeconomic Status of Russia, 2009.

<sup>269</sup> Chernoy, Bulletin of the State University of Management, 2007. No. 4. Pp. 292–296.

- 2) a high rate of return on capital;
- 3) Russia's comparatively high economic growth rates;
- 4) a tariff system protecting the Russian market by a sufficiently (highly, after Witte's reforms) liberalized currency system.

A typical foreign investor chose not to compete with Russian producers, but identify and occupy in the Russian market a niche where he would not encounter stronger foreign competitors. Foreign investment came to industry generally as direct investment (mainly because facilities for portfolio investment were scarce).

A typical foreign investor invested money in the Russian economy with a view toward selling goods in the Russian market and sought to stay in it.

From the viewpoint of potential investors, both Russian and foreign, capital investments in Russia's economy were not exposed to significant social and political risks. It was believed that the liberalization of the political regime (or, in an extreme case, its collapse) would have a positive rather than adverse impact on the operation of the economy as a whole and the relevant market mechanism.<sup>270</sup>

However paradoxical it might seem by present day standards, foreign capital preferred predominantly capital-intensive industries of old Russia like metallurgy, coal mining and oil extracting, electrical facilities, technologically advanced engineering sectors. The light industry was left to domestic capital.

Foreign investments in old Russia's economy by no means wiped out domestic producers because the latter were not present in the sectors receiving foreign investments, or were not capable of meeting the needs of a particular burgeoning market. It is evident that at present the situation is different.

International capital flows in old Russia's economy had another important result. Enterprises based on local capital had, driven by the need to enhance competitive performance, to match the technological and organizational level of enterprises established by foreign investors.

Therefore, the expanded reproduction of the CS was unfolding in old Russia both through the establishment of new, efficient by international standards, corporations and corporate-type entities (including large enterprises) and the restructuring of old corporations, including by increasing the degree of vertical production integration, mergers, cartelization, and syndication.

As a result, the CS of Russia's economy by the social upheaval of 1917 boasted a sufficiently strong core; i.e., it contained a sufficient (by the international standards of the relevant period) number of large enterprises and entities like cartels and syndicates.<sup>271</sup>

The relationship between the exchange rate and PPP of the ruble had and still has a material effect on the evolution of new Russia's CS, since it creates tangible differences in economic opportunities for Russian and foreign investors, and especially those from mature economies.

At present, the effect of an undervalued ruble exchange rate creates numerous advantages for foreign investors, because it multiplies their investment capital.

<sup>270</sup> It is indicative that during the 1905 Russian Revolution, and in the pre-1917 Revolution period, most foreign investors did not rush to transfer their assets from Russia.

<sup>271</sup> Tsyperovich, 1927.

But in old Russia, especially after Witte's reforms, the gold ruble exchange rate matched its PPP. As a result, a domestic producer paid in old Russia for imported equipment as much as a foreign investor did. But at present, in terms of the PPP of the ruble, he pays much more than a foreign investor.<sup>272</sup>

In other words, now the relationship between the exchange rate and purchasing power of the ruble has a strong adverse impact on the upgrading of technology and competitiveness of SCSs in modern Russia's industry. In old Russia, this factor was not a hindrance to the emergence of competitive (at least, domestically) producers.

Eventually, the balance between foreign and Russian corporations in old Russia's industry steadily shifted toward Russian corporations, while the ESRCs of old Russia's gradually increased (Table 6.15).

Table 6.15

**The number of industrial joint stock companies  
in the Russian Empire as of 1913 and their fixed capital assets \***

Group of joint stock companies (JCSs)	Number of enterprises	Fixed capital assets of enterprises at the prices of 1913, RUB mn
A. Russian JCSs	1,173	2,281.4
<i>including those in:</i>		
light industry *	701	1,020.9
heavy industry	472	1,260.5
out of which, in metalworking and engineering	99	250.6
B. Foreign JCSs	136	355.5
C. Total for JCSs in Russia	1,309	2,636.9

\* Light industry also comprises the forest, woodworking/pulp-and-paper, and graphic industries.

**Source:** Data book on joint-stock companies and partnerships in Russia. St. Petersburg: The Publishing House of the Trade and Industry Ministry, 1914

As can be seen from Table 6.15, in 1913 the share of Russian joint-stock companies in the aggregate equity value of Russian and foreign joint-stock companies was 86.5%. Russian joint-stock companies completely predominated in light industry. Their positions in heavy industry were also very strong. The number of Russian joint-stock companies in heavy industry and their fixed capital assets in

<sup>272</sup> The devaluation of the rouble occurred in the 2008–2009 winter further broadened the gap between the exchange rate and PPP of the rouble against the dollar/the euro. Therefore, today, almost two-thirds of portfolio investments and some categories of direct investment (not requiring significant equipment imports) are in fact subsidized by Russia.

1913 exceeded the number of all foreign joint-stock companies by 3.5 times in light and heavy industry and their fixed capital assets.

The fixed capital assets of Russian joint-stock companies in the metalworking and engineering industries were comparable with those of foreign joint-stock companies. If government-run enterprises are taken together with those in the defense industry, it should be admitted that Russia's CS by 1913 (but in fact even earlier) had reached a state of relative maturity and essential independence from the CS of more developed countries.

This was not fully achieved then and probably will not be now. An experiment to attract foreign capital on a concessionary basis that started in the Soviet Union during the NEP period<sup>273</sup> fell short of expectations mainly because the production potential of concessionary enterprises in any case could not exceed that of foreign joint-stock companies operating in the Russian Empire in 1913. The latter was much smaller than the production potential of Russian joint-stock companies in the same period.

On the other hand, the Soviet experiment with "administrative industrialization" in the 1930s proved rather successful, because the Soviet Union had inherited from old Russia the "command administrative" experience in establishing a sufficiently advanced CS capable of being a relatively robust base to form administratively controlled economic entities.<sup>274</sup>

The initial conditions for developing new Russia's CS differed radically from those in old Russia.

At the time the marketization process began in new Russia, its economy had huge production facilities (55–65% of the US economy's production facilities, in terms of the value of assets) and boasted a high rate of accumulation. There was no need to attract foreign investments to increase output in almost all of Russia's economic sectors in the early 1990s. Therefore, foreign capital was not expected to gush into Russia's economy after its liberalization.

But this does not assume that new Russia's economy originally had no room for foreign capital. Russia's economy as a whole needed a certain modernization, while the Russian manufacturing industry needed to intensify competitiveness. Russia's economy at the beginning of the economic liberalization process therefore was able to absorb a fairly large amount of foreign capital. Russia still retains this ability.

However, the amounts of foreign capital flowing into Russia's economy during the reform period failed to meet expectations and fails to do so now. And this was not a coincidence. The common view is that foreign capital flows into Russia's

<sup>273</sup> Organizational forms..., 1992.

<sup>274</sup> The bulk of production in the modern industrial sector during that period targeted war needs, i.e., state needs, rather than the market. By the end of 1915, Russia had in place a robust, predominantly state-run, ammunition industry. This objective had been achieved practically within the same timeframe as in Britain. In the course of the war, a military chemical (gunpowder) industry, again using public funds, had been created almost from scratch. From 1916, a centralized administrative grain procurement system began to build up (a surplus appropriation system for army needs). This process ended in 1918 in areas controlled by the Bolsheviks when the Russian Civil War was raging.

economy have been limited because of its inadequate liberalization level and the corruption level of the Russian bureaucracy.

In fact, the former factor disappeared as far back as the mid-1970s. The latter is in place so far. However, in fact, there are some other factors that strongly limited international capital flows into Russia and hampered the establishment of a national CS. This continues to be the case.<sup>275</sup> These factors include:

- 1) a crisis state of the economy and excess capacities in many industries;
- 2) low domestic demand and uncertainty about the prospects for change;
- 3) pursuit of an open market policy as a factor increasing market and investment risks;
- 4) uncertainty about the currency situation;
- 5) a deficiency in legitimacy of a considerable part of privatized property;
- 6) the general complexity of property relationships and uncertainty (until recently) about acquiring title to land used by enterprises;
- 7) in 1994–1999, demonetization of the economy, an acute liquidity crisis, and hence, nationwide payment gridlock<sup>276</sup>;
- 8) a high level of social and political risks associated with increasing differentiation in population income level both throughout the social vertical and across the country;
- 9) the pursuit of a policy of establishing “excess profit centers” (including in the FES, metallurgical feedstock, and fertilizer sectors) discriminating against other economic sectors;
- 10) the inability to trade securities in a commercially efficient manner on the Russian stock market because of its low efficiency, as well as expensive loans as factors increasing investment risks;
- 11) growing competition and depressive trends in global markets, bringing into question the viability of large export-oriented production facilities in Russia’s manufacturing industry.

Capital investments in old Russia’s economy, as mentioned earlier, were not considered risky, whereas capital investments in new Russia’s economy are considered (at least, by reputable investors from mature economies) highly risky.

Out of 11,815 organizations and enterprises with foreign capital operating in Russia in 2003, those from mature economies accounted for only half. In 2003, capital from Cyprus participated in 1,576 enterprises and organizations; from China, 1,499; from the US, 1,408; from Germany, 1,298; from offshore zones in the Virgin Islands, 590; and from Turkey, 519<sup>277</sup>. By 2011, the overall picture had not substantially changed.

If we take into account the above-listed risks facing an investor in Russia, it is no wonder that real foreign investment in the domestic economy is so small (Rosstat often misrepresents statistics).

<sup>275</sup> Chernoy, Materials of Scientific Workshop on Corporate Governance in Russia: Problems, Decisions and Prospects. Moscow: CMEI RAS, 2006. Pp. 23–26.

<sup>276</sup> Statistics for 2009–2010 evidence that demonetization and liquidity crisis issues and the insolvency of enterprises and barter transactions in Russia are again top priority.

<sup>277</sup> Russian Statistical Yearbook, 2004. P. 345.

The point is that Russian statistics combine borrowings abroad, including trade credits, with foreign investments. In 2003, for example, according to official statistics, foreign investments in Russia's economy amounted to US\$29.7 billion. However, various loans accounted for US\$24.3 billion, or 81.8 % of this amount, while capital investments, for only US\$4.7 billion.<sup>278</sup>

The insignificance of this amount is obvious if we take into consideration that the share of net exports of goods and services in Russia's GDP in 2003 amounted to 11.4%, in 2004 to 12.7%, and in 2000 even to 20.1%.<sup>279</sup> It should be noted that in the current crisis, the share of loans in foreign investments in Russia has grown further.

The aggregate real foreign investments in the production capital of Russia's economy in 2004 were only 4%, even if they are converted into rubles at the prevailing exchange rate<sup>280</sup>; i.e., if they are positively overvalued. Later, the situation did not change substantially and even worsened. According to the Ministry of Finance and the Central Bank of Russia, in 2008–2010 and at the beginning of 2011, net capital outflows from the country significantly exceeded foreign direct investments in Russia's economy<sup>281</sup>.

However paradoxical it may seem, enterprises recognized by Russian statistics as those with foreign capital participation account for a considerable part of Russia's economic assets. In 1998, the share of enterprises with foreign capital participation (with a 10% interest or more in the charter capital), according to Rosstat, accounted for 5.4% of employment in industry and 7.0% of industrial production. In 2001, the figures were 8.4% and 15.0%, respectively<sup>282</sup>.

After 2001, enterprises with foreign capital participation comprised those in which foreign investors had less than a 10% capital interest.<sup>283</sup> As a result, already in 2003, according to the Russian statistics, the share of enterprises with foreign capital participation in industry employment rose to 18.1%, and in industrial output, to 27.6%<sup>284</sup>.

However, if industrial enterprises with 10% or more of foreign capital in charter capital are considered enterprises with foreign capital participation, then the latter in modern Russia would account for about the same output as in old Russia. But the input of foreign capital in the production facilities of Russia's economy even today is minor, whereas that in old Russia's was quite sizeable.

One of the main causes of the disparity between the scope of foreign presence in the CS of Russia's economy and the input of foreign investors in its production facilities is the operation of Russia's economy with undervalued ruble ex-

<sup>278</sup> *Ibid.*, p. 620.

<sup>279</sup> Russia in Figures, 2005. P. 158.

<sup>280</sup> Estimates are based on the net book value of the fixed capital assets in Russia's economy amounting to 32.31 trillion rubles in 2004 (Russia in Figures, 2005). P. 57.

<sup>281</sup> Based on official press releases of the Central Bank of the Russian Federation. Cited: *Vedomosti*.

<sup>282</sup> Russian Statistical Yearbook, 2004. Pp. 345, 359.

<sup>283</sup> *Ibid.*, p. 345.

<sup>284</sup> *Ibid.*

change rates. In 2004, for example, the annual average ruble exchange rate was RUB28.60/US\$1, while the PPP of the ruble was RUB9.27/US\$1.<sup>285</sup> Thus, the PPP exceeded the exchange rate threefold.

As mentioned earlier, with a big difference between the exchange rate and PPP, Russian exporters automatically receive a big export bonus. Foreign investors (when they invest in Russian assets and even in the construction of new facilities) are automatically subsidized by the Russian state. In the late 1990s – early 2000s, portfolio investments (or the purchase of such facilities as stores, apartment houses, or land) were subsidized about 200% of the real invested capital in dollars or euros.<sup>286</sup>

Today, this subsidy is smaller, but still considerable. Hence there is a difference between the positions of foreign investors in Russia's economy and the actual size of foreign investments. As long as the ruble exchange rate is undervalued, Russia will subsidize foreign investments in its economy. Therefore, the attraction of considerable (in dollar terms) foreign investments becomes rather difficult. The exchange rate subsidy enables foreign investors to spend substantially less hard currency than when the ruble exchange rate matches its PPP.

Again, as foreign investments are subsidized under the policy of undervalued exchange rates, the share of companies and corporations controlled by foreign capital in Russia's CS grows much faster than the amount of foreign investment. Eventually, the interaction of Russia's economy with foreign capital market in the new Russia (as distinguished from that in the old Russia) strengthens the position of nonresident capital in the national economy and CS.

Trade is one of the least risky Russia's CS sectoral segments. For this reason (as well as due to a relatively small share of imported equipment costs in the total establishment costs of a trade enterprise and the advantages of "exchange rate subsidies") foreign capital rushed into this segment.

As a result, in 2004, 53 out of the 400 largest, by sales, enterprises in Russia's economy were wholesalers and retailers, and half of them were foreign companies operating in the Russian market and using their brand products<sup>287</sup>. By 2008 (the onset of the crisis) the percentage of foreign companies both in this market segment and among the 400 largest companies in Russia, had risen again<sup>288</sup>. In 2009–2010, a new spiral of capital expansion of nonresidents in Russia's CS started, primarily in sectoral segments of the food industry and finance.<sup>289</sup>

It was typical of old Russia's economy (as for the US economy of the 19th century and the early 20th century) that at first the presence of foreign investors in the economy gradually increased, but then gradually decreased. This process unfolded, while production facilities increasingly expanded.

<sup>285</sup> Russia in Figures, 2005. P. 467.

<sup>286</sup> Chernoy, *Economist*. 2004. No. 8. Pp. 52–69.

<sup>287</sup> *Expert*. 2005. No. 38. Pp. 132–147.

<sup>288</sup> *Expert*. 2008. No. 39 Pp. 190–202.

<sup>289</sup> During that period, for example, Societe Generale, a French bank, obtained absolute control over Rosbank, PepsiCo, an American global corporation acquired control of Wimm-Bill-Dann, Danone, a French corporation, took over Unimilk.

However, the opposite process is characteristic of new Russia's economy, i.e., production facilities in most branches dwindle or stagnate, and the share of companies with foreign capital and their economic importance in Russia's economy rise. Under certain circumstances, this process can lead to the disintegration of Russia's economy.

Even in a market moderately protected by tariffs, like old Russia's market, this was impossible, since the regime of a closed market automatically weakens the ties of corporations with foreign capital participation with external CSs. However, the establishment of an integrated CS in Russia has not been accomplished, its core consisting of a system of major corporations is weak and there is a huge disparity in financial strength between local and foreign companies. Against this background, since the Russian market is an open market and had been such before its accession to the WTO, corporations with foreign capital whose proportion is growing inhibit the formation of an integrated and efficient CS within the national economy. Specifically, also for these reasons, Russia's CS is being split into a subsystem of "foreign market corporations" (where export revenues predominate) and a subsystem of "domestic market corporations", as well as into LCRMs with increasingly weakening interrelations.

The arrival of foreign investors and corporations in old Russia's economy by establishing their affiliates and branches in Russia increased the willingness of Russian companies to invest. In modern Russia, the situation is different: the arrival of foreign investors has decreased the willingness of domestic investors to invest and, however paradoxical it may seem, it is a factor that increases their willingness to export capital.

The principal causes of the above are:

*First*, due to undervalued ruble exchange rates, foreign investments (as was already outlined above) are in fact subsidized by the Russian state.

*Second*, foreign investors can obtain, relatively cheaply, large loans at home, whereas Russian investors (save a few major, primarily raw-material, corporations), due to the weak Russian banking system and stock market, still have no efficient credit support. Therefore, because of this fact alone, Russian investors face much higher investment risks than their foreign counterparts. In other words, they are unable to compete on a par with foreign investors.

*Third*, almost all investments in domestic securities, due to the high ability of Russia's economy to generate risks (including inflation risks), are highly risky.

It is no wonder that potential Russian investors export their capital. Whenever the number of foreign investors in the Russian market noticeably increases, domestic investors tend to disinvest in the relevant sector. This is one of the main reasons investments in production in Russia's GDP are decreasing, even in spite of some growth in foreign investment.<sup>290</sup> Therefore, the share of Russian investors in the assets of the national CS is dwindling.

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<sup>290</sup> In 1995, gross capital accumulation accounted for 21.1% and in 2004 for 17.9% of GDP (Russia in Figures, 2005. Pp. 29 and 158. Afterwards, until the decline during the current crisis, it ranged between 18 and 21% (Russian Statistical Yearbook, 2006, 2009).

## 6.4. Factors affecting the choice of a strategy to improve Russia's CS performance and conditions for its implementation

### *A mismatch between the economic policy and Russia's CS operation framework conditions*

Russia's CS operation framework conditions in the current period are determined, in the first place, by the following factors exhibiting a substantial degree of stability<sup>291</sup>:

1. Long distances between economic centers, hence, high-level costs due to transportation and logistic expenses;
2. Harsh climatic conditions necessitating high energy consumption to meet infrastructure, production, and socioeconomic challenges (consequently, higher energy consumption per GDP in comparison with most of the advanced and developing countries);
3. Undeveloped mineral and raw material resources are located primarily in harsh climate areas not easily accessible by vehicles; hence, it is impossible to use most such resources in the economic cycle without enormous expenses to the infrastructure sector, which are unattractive for private capital, whereas, at the same time, a significant part of accessible mineral and raw material resources have been considerably depleted;
4. Natural resources are distributed very unevenly across the country (minerals, forests, etc.) and especially oil and gas, which are produced mainly in the Ural Federal District;
5. Heavy deindustrialization of most regions and substantial deagrarianization of a significant part of regions. On the whole, most of Russia's LRCMs display far-gone deindustrialization and deagrarianization that are not compensated for (in view of the underdeveloped economy and markets in general, and low effective demand from the majority of the population) by any considerable growth in services;
6. The above conditions and tendencies causing an increasingly uneven geographical distribution of the economic potential of the domestic CS, with the economy and LRCMs of most regions becoming distinctly more underdeveloped<sup>292</sup>;
7. The emergence in Russia's CS of a "foreign market economy" (receiving the bulk of its proceeds from products sold abroad and from currency earnings converted into rubles at undervalued ruble exchange rates) coexisting and weakly interacting with a "domestic market economy" largely confined to regional markets;
8. A low and steadily declining density of the economic integration (system linkage) of the national CS across the country;

<sup>291</sup> Chernoy, *Economist*. 2006. No. 2. Pp. 27–42.

<sup>292</sup> Chernoy, 2005.

9. Low attractiveness of most regions to private investors, local and foreign alike, due to:
  - adverse climatic and transportation factors;
  - shortage of skilled labor force;
  - high level investment risks generated by poor infrastructure facilities and general underdevelopment (as a result of regressive processes developing in the economy over recent decades), inefficient administration, law enforcement authorities and economic policy, and a highly crime-ridden society;
  - groups of special interests strongly affecting the economic objective-setting priorities and economic policy (both at the federal and regional levels);
10. Deindustrialization of the regional capitals and their essential turning into service centers. At the same time, due to a lack of conditions for creating in Russia's CS an advanced service economy outside the capital cities because the income level of 70–80% of households is too low to substantially increase their expenses on services;
11. Constraints on the development of SMEs in the CS real sector due to:
  - an underdeveloped system of major corporations generating a broad demand for products of SMEs;
  - degrading agroservices;
  - capture by foreign competitors, predominantly from Asian countries, of a significant part of the markets of consumer goods that could be manufactured by SMEs;
  - a highly crime-ridden economic environment and significant influence of corruption;
12. Constraints on the development of SMEs in the services sector in view of limited domestic demand for services, and high transaction costs associated with a crime-ridden society;
13. Constraints on development in the national CS of innovative productions in view of a priori superior competitive performance of foreign competitors in most of the innovative economy segments, as well as in view of the weakness or just a lack of domestic demand for innovative products;
14. A low birth rate associated with quite high overall social modernization of society with 60–70% of households having income levels like those in underdeveloped countries; as a result, a highly insufficient demographic basis of the economy and persisting negative demographic trends; and the necessity of a relatively high burden of social expenditure on GDP (and hence also the CS) associated with the above factors;
15. Considerable potential for growth in centrifugal economic and, then, possibly, political tendencies (due to the effect of factors 1, 4, 5, 6, 7, 8, and 14);
16. From a formal legal viewpoint and from that of the public at large, the acquisition of a part of sizeable corporate property is not deemed quite legitimate because the CS private sector has been formed by privatization of a significant part of public assets at knockdown prices and as the result of dubious, from a legal viewpoint, bidding and auction procedures, or raider seizures;

17. An inefficient business community: international experience suggests that under favorable conditions several decades are needed to create an efficient business community, but conditions for its formation in post-Soviet Russia cannot be called favorable, so as a result, a significant part of Russia's present business community exhibits a high willingness for inflation models of economic behavior and capital outflows and a low willingness for investments in production, socially illegitimate goals, and sometimes criminalization;
18. The Russian business community is being squeezed out of the economy (often even from criminal business) by the highly organized foreign business community;
19. A high level of investment and market risks (due to factors 9, 16, 17, and 18, and the high level of criminality in Russian society).

*Due to the climatic factor and transportation and logistic costs*, the real sector in Russia's economy CS as a whole exhibits, other things being equal, reduced competitiveness.

*Due to the effect of factors 1, 3, and 5*, Russia's CS exhibits a strong need for investments, primarily in capital-intensive infrastructure projects, which are unattractive for private investors.

*Due to factors 11 and 12*, the problems of Russia's CS in the short to medium term cannot be solved by fostering small and medium businesses or by creating a service economy in this country.

*Due to the effect of factors 13 and 17*, an innovative economy sector with a predominant economic mass cannot be created in Russia's CS within a short time.

*Due to the effect of factors 3 and 4*, the economic problems of almost all regions and Russia as a whole cannot be solved by developing the CS primary (including extraction of oil and gas) sector.

*Due to the effect of factors 5, 6, 7, 8, and 10*, there is a strong need to implement a package of measures to increase the integration of Russia's economy across the country.

*Due to the effect of factors 4, 5, 6, and 8*, there is a strong need to restore in Russia's CS as a whole and in most LRCMs production operations based on low and medium technology, as well as farm production in those regions where this production has been scaled down. However, this invariably calls for implementation of a package of measures to protect the domestic market.

### ***Summary***

1. Russia's present CS (and the economy as a whole) represents an inadequately systemic combination of moderately to weakly developed SCSs, FCMs, and LRCMs.
2. There is a strong need for economic revival of most Russian regions, which feature a substantial decline in production in the real sector against the 1990 level.
3. The goal of turning Russia's CS in an advanced CS capable of servicing a modern efficient economy cannot be achieved without a revival, in its intermediate stage, of low- and medium-tech products in most regions, without

heavy capital investments in infrastructure sectors and without broad diversification of production.<sup>293</sup>

4. The policy of maximizing the liberalization and privatization level of Russia's CS fails to match its operation framework conditions and, above all, factors 9, 16, 17, and 19.
5. The current level of Russia's openness of the economy is excessive and fails to match the efficiency of its business community and competitiveness of Russia's CS.
6. The investment needs of Russia's CS, in view of their volume and structure, basically cannot be covered by CS private sector resources and foreign investments, or by most investments done in an unregulated regime.
7. Russia's present CS exhibits a substantial level of system and geographical disintegration and a weak core. The CS nonpublic sector already has a mosaic pattern. International capital inflows and foreign capital broadening its scope of control over Russian companies decrease the integration level of Russia's CS. At present, it is supported largely by state-controlled companies.
8. As the public sector decreases, CS disintegration (amorphism) grows. The privatization of electric power generation companies, for example, has substantially reduced the integration level of Russia's economy and CS across the country. The low sensitivity of the CS and Russia's economy as a whole to administrative actions implemented through budgetary and monetary policy tools (excluding the exchange rate policy) is largely the result of the low system integration of the national CS.
9. Russia's CS as a whole due to amorphism, foreign capital control of a large sector, dependence of large companies on foreign borrowings, underdevelopment of the domestic credit sector, weakness of the stock market, low capitalization of assets, the weak competitive position of most corporations, and large scale capital outflows, exhibits a pronounced deficit of the ESR. The latter has resulted in very high sensitivity of Russia's CS to global market conditions, which has been marked during the current crisis by a catastrophic decline in industrial production and GDP (much deeper than on average in the international economy, even without taking into account such countries as China and India, which were largely spared).
10. Russia's present CS, which is highly liberalized, open, and highly privatized, has limited development capacity due to factors determining its operation framework conditions. Presently, especially in a crisis and when Russia's main (in the future) competitors in global markets, including China, India, Brazil, Turkey, etc., are developing at a very high pace, the outlook for Russia's economy and CS is rather uncertain.

The nature of this uncertainty, as illustrated above, is to a substantial degree associated with the mismatch between the current model of the economic policy and the factors affecting the operation framework conditions of Russia's economy and hence with the resultant low CS structural and system quality, its functional incompleteness, inadequate ESR, and low efficiency.

<sup>293</sup> Chernoy, *Economist*. 2007. No. 12. Pp. 14–23.

### *Implications of the preservation of the operational economic policy model*

In the event the precrisis option of the EOSS is preserved and hence the precrisis option of the economic policy, Russia's CS performance may be enhanced to some extent by universal economic policy tools. Thus, the performance of financial markets (primarily, the credit and stock market) and the legal framework (specifically, antiraider and anticorruption laws) for CS operation will be improved, and the CS restructured by selectively encouraging corporate mergers and, where possible, the development of small and medium businesses.

However, these measures alone are not enough to substantially improve the CS performance servicing the Russian economy because the precrisis option of the economic policy is based on the EOSS, for which development priorities are not as important as the maintenance of high level economic liberalization, privatization, and openness, and fails to match the CS operation framework conditions.

The retention of the precrisis option of the objective-setting and economic policy in fact preserves the following essential negative tendencies in the national CS:

- a) the inability to address investment challenges satisfactorily;
- b) the freezing of or even a further decline in the competitiveness of industrial corporations, except for those few engaged in the extraction, transportation, and processing of raw materials;
- c) a gradual increase in the share of assets controlled by foreign capital in the CS and a decrease in those controlled by Russian capital;
- d) further splitting of the CS into segments of foreign market corporations and domestic market corporations;
- e) eventually, a further decline in the CS integration level (including geographical integration) and, as a consequence, a decline in the  $ESR_{CS}$  and sensitivity of the CS to administrative actions (irrespective of their nature), as well as the preservation or decline of CS performance.

The cumulative effects caused by the amorphism of Russia's CS and the non-uniform distribution of the economic potential across the country can ultimately lead to full autonomization of LRCMs based on federal districts, i.e., to the actual elimination of the CS and Russia's economy as an integrated system, with relevant political implications.

After Russia's accession to the WTO, membership alone will place a very high priority on the enhancement, or at least the maintenance at a high level, of Russia's economy and liberalization, privatization, and openness of the CS. At the same time, WTO membership requires that investors from WTO member nations (after a certain adaptation period) be given the same legal rights as those exercised by domestic investors. This will further increase Russia's economy and openness of its CS. Since the competitive weakness of Russia's CS will remain (as well as the latent subsidizing of foreign investors through ruble exchange rates undervalued against its PPP value), Russia's accession to the WTO will, above all, increase the share of foreign owners (not only from mature economies, but also from de-

veloping countries, including China) in Russia's CS assets. This will further lower the integration level and ESR of the national CS. This process will proceed faster, the faster the leftovers of the public sector are privatized.

Further, the accession to the WTO will hamper the formation in Russia of large transregional corporations targeted primarily at servicing the Russian economy, as well as equalization of the development levels of Russia's LRCMs. It will further the piecemeal integration of Russia's CS with the stronger CSs of the EU, China, the US, and Japan. In this case, the above-listed unfavorable trends associated with the growing nonuniformity of Russia's economy across the country and mutual economic isolation of LRCMs will worsen.

A substantial increase in Russia's ESRCs and simultaneously in its performance is possible only if deep changes in the EOSS (and hence the economic policy) occur to place top priority on Russia's economic development and modernization.<sup>294</sup>

To that end, at present, there are certain signs that the neoliberal economic paradigm will be abandoned, since the economic crisis has already caused substantial changes in the EOSS of all major international economic entities and of mature economies in particular. The changes consist of placing a substantially lower priority on maintaining the highest possible liberalization and privatization level of national CSs and, particularly, of their financial sectors.

In this connection, it should be noted that had the marketization of Russia's economy begun not in 1990–1991, but 20–30 years earlier, it most likely would have been carried out in the sense of the modernization paradigm, which was common for most advanced European economies of that time. Probably, it would have resulted in Russia's (the Soviet Union's) economy and CS being transformed into a mixed economy similar to the economies and CSs of France, Italy, or South Korea in the 1960s–1970s, or similar to the modern Chinese economy.

Such a restructuring would not have required substantial changes to the EOSS adopted in the Soviet Union, since it would have resulted in a free market economy and CS whose system-critical parameters are driven by economic development and modernization priorities.

However, during marketization of the economy and the creation of a market CS (like almost all other former centrally planned economies, except China and Vietnam), Russia attempted to skip the stage of a mixed market economy and to establish straightaway a highly liberalized and privatized market economy. It was not taken into account that such a market economy option and, hence, a CS could not be efficient in principle without a highly efficient business community and efficient and advanced financial markets.

As mentioned above, Russia's present CS is limited in development capacity. This is associated with the low CS structural and system quality, the nonoptimal state of the EOSS, and a low  $ESR_{st}$  and  $ESR_{CS}$ . Hence, this is associated with the weakness, incompleteness, and inefficiency of the operation management system of the economy and its key functional modules governing evolution of the CS, namely, the universal economic policy module, selective economic policy module, and public sector controlled module (state entrepreneurship).

<sup>294</sup> Chernoy, Bulletin of the Institute of Economics, RAS. 2008. No. 3. Pp. 119–140.

## 6.5. Capacities and constraints of modernization strategy options for Russia's CS and economy

### *Factors inhibiting an economically sound reduction in the activity of the state as an economic modernization agent in Russia*

In old Russia, the role of modernization agents was shared by public, foreign, and local capital. The input of the above agents in the modernization process varied substantially at different stages of old Russia's economic history.

In the era of Peter the Great, the state was the main modernization agent, while local private capital operating in a regulated regime was an auxiliary agent.

From the start of reforms conducted during the reign of Aleksander II, foreign and local private capital operating in a deregulated regime were Russia's main economic modernization agents. The input of local private capital in the economic modernization process over time gradually increased.<sup>295</sup>

From 1861 to 1914, the state took part in the modernization process mainly as the manager of the system of economic development framework conditions (customs duties, foreign exchange, and financial policy) to create conditions to attract foreign capital (which was vividly evidenced by Sergei Witte's reforms) and increase the willingness of domestic capital to invest in production. The Russian state performed as a modernization agent mainly in railway construction and the military industry.<sup>296</sup>

In European countries, as mentioned above, the state began to play an active role as a modernization agent during the recovery of economies after World War I (Great Britain) and during the Great Depression. However, this process broadened enormously after World War II.

For example, in Britain after World War II, the state started to perform, apart from other functions, as the largest investor and economic modernization agent in the CS, considerably complementing the private sector in this respect.<sup>297</sup> However, the state was no less active as the largest investor and property owner in continental European countries devastated by the war during the secondary postwar modernization. Thus, huge nationalization and economic recovery programs financed by the government were implemented in France after World War II.<sup>298</sup>

Moreover, in most postwar European countries, the state assumed the role of one of the major technological modernization agents: it used both financing mechanisms to develop new technologies at national laboratories and nationalized government-run corporations and mechanisms for placing government financed orders with private corporations for products with a high proportion

<sup>295</sup> Data book, 1914.

<sup>296</sup> Chernoy, 2004; Tsyperovich, 1927.

<sup>297</sup> Florence, 1958.

<sup>298</sup> Chernoy, 2003. P. 218.

of high-tech components.<sup>299</sup> In this respect, some experts view the state's modernizing role in Europe during that period almost as important as it was in the Soviet Union.

The specificity of present-day Russia's need to modernize its economy and the relevant CS are determined by the following basic conditions.

The results of the country's post-Soviet development have led to substantial demodernization of the CS and economy as a whole. Meanwhile, most of Russia's international competitors in the post-Soviet period were rapidly modernizing. In most branches of the Russian economy, the "modernization pause" that occurred in the post-Soviet era aggravated the technological backwardness originating from the late Soviet period as compared with leading economies.

The marketization of the former Soviet planned economy had split state-run economic entities that were financially and technologically capable of playing the role of modernization agents, but the private sector practically failed to produce corporations with an investment and technological potential large enough to play the same role.

As a result, the Russian economy and its corporate base found themselves in a situation where they had (using a systemic approach differing from sector to sector) to combine the elements of secondary modernization (remodernization) of CS segments with efficient and modern technological quality left over from Soviet times, as well as those of catch-up modernization of other numerous corporate segments.

The core of the Russian CS, in contrast to other countries that its main international competitors, contains only few major corporations capable of acting as a modernization agent in terms of investment potential and technological advancement.<sup>300</sup> Government-run corporations existing in Russia cannot as yet assume the role of key modernization agents in most branches.

The experience of foreign direct investment gained in the post-Soviet period showed that foreign investors are reluctant to bring state-of-the-art technology to Russia, thus avoiding the fostering of high-tech competitors in global markets. In particular, this concerns such SCSs of the manufacturing industry as machinery and equipment manufacturing. Thus, by the end of 2008, aggregate accumulated foreign investments in this sectoral segment were US\$884 million, or 0.7% of the accumulated foreign investments in Russia's economy.<sup>301</sup>

Moreover, the current crisis has revealed a distinct trend toward a dramatic decline in global volumes of foreign direct investment (FDI). According to the United Nations Conference on Trade and Development (UNCTAD), global FDI volumes in 2008 shrank by 14% (from \$2 trillion to \$1.7 trillion), and in 2009 by another 39% (to \$1 trillion). In Russia, according to Rosstat, FDI shrank even more (by 48% in January–September 2009 as compared with January–September 2008).<sup>302</sup>

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<sup>299</sup> Chernoy, *Economist*. 2007. No. 3. Pp.11–16.

<sup>300</sup> Chernoy, *Bulletin of the Institute of Economics, RAS*. 2008. No. 3. Pp. 119–140.

<sup>301</sup> *Russia in Figures*, 2009. P. 455.

<sup>302</sup> *Kommersant*, January 20, 2010.

According to statistics, 2010 was not the turning point for FDI in Russia. But most experts describe the investment activity of domestic corporations as at the beginning of 2011 as a “protracted pause”.

Thus, in modern Russia, the state alone holds not only investment resources needed to modernize the national CS, but also the main unutilized potential needed for technological modernization (including valuable patents and know-how).

At present, in the global crisis (which hit Russia, due to the above causes, harder than most other countries), almost all our private corporations and government-run corporations further (at that substantial character) lowered their modernization (including, investment) potential.

In this situation, the state’s role as a key modernization agent of the CS and economy as a whole is unmistakably growing both in the part related to modernization process management (including transformations of the CS aimed at raising its competitiveness) and in the part related to financial, material, and research and technology support for this process.

To this end, only the state has the necessary institutional (above all, legislative and executive) tools. Only the state today is still a reliable investor and lender of last resort capable of arranging and providing target financing for necessary modernization programs, as well as initiating cofinancing and implementing such programs in both the public and private sectors of the CS. Only the state is capable of establishing an infrastructure and institutional framework for foreign investments that enables the efficient use of foreign investors with their financial resources and technology as modernization agents of the national economy.

At the same time, there are serious fears that the modernization potential still available in Russia can be irreversibly destroyed as the result of (in our opinion, premature at the present modernization stage of Russia’s national economy and CS) measures considered by the national leadership to increase Russia’s openness of the economy and lower the regulatory potential of its operation management system.

It appears that the abandonment of tariff (for accession to the WTO) and non-tariff (for the Central Bank’s plans to give up its control over ruble exchange rates in the near future) mechanisms to protect the domestic and foreign market under these circumstances will lead to a substantial loss in  $ESR_{St}$  and  $ESR_{CS}$  and make control of its modernization process practically impossible.

A reduction in the scale of GDP budget reallocation, recently declared by the national economic leadership as a priority target, will substantially lower investment opportunities for managing transformations to modernize key CS segments. In particular, the experience in public private partnership in infrastructure projects gained in recent years shows that downsizing of the state budget would extremely hamper meeting investment challenges related to the establishment of an infrastructure base for CS modernization, including its private segment.

At the same time, this will greatly reduce the opportunities for the state to invest in the research and technology potential to modernize the national economy and the relevant CS, as well as in the transfer of innovative technologies to CS public and private segments.

It should be emphasized again that the global experience outlined above suggests that as long as modernization challenges have priority over liberalization and

privatization of the economy and CS, maintenance of the state's regulatory activity is economically prudent (including the use of budgetary resources) at a level allowing at least to efficiently meet investment challenges and affect CS parameters, including its structural and functional characteristics. So, for instance, globally, the use of depreciation rates is one of the most efficient mechanisms for providing investment support to modernize corporate fixed capital assets (in both the CS private and public sector).

In the US, for example, depreciation rates established by the government depend on branch and area.<sup>303</sup> The same is taking place in most other successful countries, both advanced and developing. Thus, the state using depreciation rates to help upgrade the fixed assets of enterprises is a powerful incentive to replace equipment and related product lines. In other words, it creates one of the most important "motives for modernization and innovation" for entrepreneurs and managers.

In Russia, according to Rosstat, consumption of fixed capital as of 2008 exceeded 46%, but its replacement rate was about 4% of the total value per year.<sup>304</sup> However, in reality, according to some sectoral research, consumption of fixed capital is even higher. Thus, some analysts believe<sup>305</sup> that as at the beginning of 2003, consumption of fixed capital was already 49.5% in Russia nationwide and 52.9% in industry. At the same time, in Russia there are no laws on depreciation rates that require entrepreneurs and managers to replace fixed assets of their companies and enterprises!

***Adaptation of the modernization paradigm to Russian conditions  
as a prerequisite for a rapid increase in the modernization potential  
of the national CS***

Russia's CS performance cannot be substantially improved without changing the national EOSS and economic policy to give absolute priority to economic development and modernization.

Global experience shows that any large crisis inevitably causes changes in economic policy. The present crisis has also revealed that the economic policy of most advanced and successfully developing countries tends to considerably strengthen the state's influence on economic processes.

So, almost everywhere in the world, the state's role in managing the financial sector of national economies is growing dramatically. In many countries (for example, in the US and China), the state is beginning to have a direct bearing on the investment landscape.

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<sup>303</sup> So, in late October 2010, US President Barak Obama put to Congress a bill introducing for American corporations an up to one year depreciation period for operating equipment. According to economists, this bill will enable US corporations to save up to \$150 bn on taxes and simultaneously provide the real sector with more than \$50 bn of additional investments (Bloomberg, Oct 29, 2010).

<sup>304</sup> Russia in Figures, 2009. P. 70.

<sup>305</sup> E.g., Lisin, 2004. P. 13.

Under these circumstances (especially when the neoliberal economic model is preserved, thus entailing extremely negative effects for Russia), changes in the EOSS and economic policy in this country are necessary and expedient.

At the same time, it is necessary, above all, to bring the economic policy in line with the CS operation framework conditions. To this end, Russia's economic policy must refocus primarily on the following challenges:

- 1) preservation and recovery of the CS economic potential (given that after 1990 a significant part of the economic potential, including almost the entire innovative potential, has been lost);
- 2) recovery of the potential of CS SCSs in industry and agriculture (above all, in regions where their scaling back was especially drastic)<sup>306</sup>;
- 3) on this basis, reduction of gaps in the level of economic development between LRCMs and regions as a whole;
- 4) placing priority on the stimulation (in contrast to the present economic policy option encouraging outward economic links) of interregional economic links;
- 5) shaping of an export policy aimed at reducing the percentage of corporations predominantly targeting foreign markets in Russia's CS to a reasonable figure; this is vital to avoid intensive disintegration of the national CS;
- 6) ensuring of Russia's CS functional completeness, namely, normalization of the industrial production structure in the CS based on its diversification (including the recovery of SCSs of the engineering industry and part of light industry as a necessary condition for turning Russia's economy into an advanced economy in terms of scale, production pattern, and GDP per capita);
- 7) restructuring of how the transportation system operates to minimize traffic limitations on the development of interregional economic links and foster the preservation of regional economic integrity. Reduction of the average railroad and airplane rates (to match the average real household income) to approximately the level of Soviet times and intensive construction of the transportation infrastructure are necessary conditions for maintaining an acceptable territorial integration level of Russia's CS and economy;
- 8) bringing of investment in production in line with the modernization and development needs of Russia's CS and economy as a whole: it appears that investment challenges related to industrial SCSs of the Russian CS could have been essentially solved by adopting laws on mandatory depreciation charges and their rates differentiated between CS sectoral segments and functional modules;
- 9) export diversification and hence, the buildup of the export efficiency and export capacity of Russian manufacturing industry SCSs.

If Russia draws on global experience in economic modernization policies (here, probably, the experience of France and Italy pertaining to their recovery and re-modernization stage after World War II would be most appropriate), it seems that all the above problems can be solved within an acceptable timeframe.

In any event, when Russia's economic policy is refocused to meet modernization challenges, such a policy must draw upon global experience in the tools used for a modernization-led economic policy (See Chapter 3 and 4). Therefore,

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<sup>306</sup> Chernoy, *Industrial Policy in the Russian Federation*. 2008. No. 5. Pp. 66–73.

Russia's economy (similar to the economies of France, Italy, and many others after World War II) must be transformed into a mixed economy with an advanced system that harmonizes the processes unfolding in Russia's CS and global markets with the potent and efficient mechanisms of state administration of the regulated operation framework conditions and system-critical parameters of the CS.

At the same time, it should be kept in mind that Russia's economy today is already a mixed economy, like it was in the period immediately preceding the current global crisis. However, Russia's economy and CS are distinguished from efficient economies and mixed CSs by an extremely low regulation level and quality. Its EOMS exhibits weak basic modules of CS selective management and those of management by state entrepreneurship tools or the lack of both.

In the present condition of framework factors governing the operation of the national economy, a substantial increase in the system efficiency of Russia's CS and economy and, ultimately, its modernization are impossible without increasing GDP budget reallocation and revising the monetary and foreign exchange policy and customs tariff regulation. This is needed to manage, depending on CS branches and segments, the openness of the Russian market, limit capital outflows, exercise rigid control over ruble exchange rates (maybe establishing, like developed European nations did after World War II for their currencies, a special ruble exchange rate for capital transactions), and actively use public capital and the CS public sector as key modernization agents.<sup>307</sup>

WTO membership imposes substantial formal limitations on a modernization-led economic policy. However, it should be kept in mind that WTO rules have been violated during the current global crisis by all major global market agents in efforts to defend from collapse their financial (above all, banking) and insurance systems and a significant part of real sector corporations.

If Russia's membership in the WTO obstructs the implementation of the recovery and modernization program, membership must be suspended for the period of this program.

Here it is worth reminding that, for example, China and Vietnam, being WTO members, nevertheless, with few exceptions, are conducting a modernization-led economic policy. This is why Russia's CS, the economic policy of which is being brought in line with the neoliberal economic paradigm, is unable to compete with China's CS.

### *Conditions and directions for restructuring Russia's CS into an efficient economic modernization tool*

To turn Russia's CS into an efficient tool to meet modernization challenges:

- 1) the share of major corporations, outside the primary sector, that could be ranked, after Russia's economic recovery is over, among the top 1000 international corporations by size of assets, employment, and turnover should be substantially increased in the CS;

<sup>307</sup> Chernoy // Society and Economy. 2009. No. 10. Pp. 64–78.

- 2) the CS should be restructured by increasing the proportion of transregional corporations in it;
- 3) the presence of foreign capital in Russia's CS should be limited to economically feasible amounts;
- 4) special investment banks should be established in the banking system to bring investment lending to a level high enough to meet modernization challenges.

The sale of assets slated for privatization at prices below their real value (irrespective of demand) must be banned, like they were banned in the UK and Italy and some other countries in view of their extremely negative effects on the market capitalization of the economy's assets and, in particular, the stock market and the willingness of the private sector to invest.

In practice, a sizeable public sector (including banks and nonfinancial corporations), as a condition for Russia's CS to become a modernizing CS in terms of nature and quality, must perform the function of:

- 1) a carrier of a significant part of the ESR;
- 2) a vehicle for raising the integration level of the CS across the country;
- 3) a vehicle for financing and implementing capital-intensive investment projects;
- 4) a vehicle for maintaining prices on strategic resources and loan costs at an optimal or almost optimal level.<sup>308</sup>

All the listed restructurings will have a positive rather than a negative effect on the development of the private sector of the economy. First, by driving the private sector and the entire economy alike out of stagnation (and hence, dynamizing the CS private sector and entire economy). Second (since the transition to the modernization development model will enable Russia to create a normal stock market), by normalizing the market capitalization of assets and increasing manifold the financial assets of the private sector and their value. China's experience showed that the private sector benefits from such normalization much more (!) than from any privatization.

A modernizing CS always has a considerable ESR. Therefore, Russia's CS transformations described above must substantially reduce the sensitivity of the CS and Russia's economy as a whole to negative trends in global markets and raise the controllability of CS facilities by universal (budgetary, tax, etc.) policy tools.

The above-listed Russia's CS transformations envisage a substantial increase in the regulatory potential of the EOMS and the creation of certain governing modules that perform specific functions within its framework. The economic laws must be adjusted accordingly before these transformations take place.

Changes in corporate and common law must cover:

- 1) a law on state-run corporations, precisely defining their target functions, operation environment, and resource supply, along with measures to control the implementation of objectives and resource use;

<sup>308</sup> Chernoy, Bulletin of the Institute of Economics, RAS. 2009. No. 4. Pp. 162–178; Chernoy, in a collection of papers: The Heritage of Academician D.S. Lvov: The economics of growth and growth of the economy/Transactions of CMEI RAS, edited by G.B. Kleiner, V.G. Grebennikov, B.A. Yerznkian. Moscow, CMEI RAS, 2009. Pp. 58–77.

- 2) statutory expansion of the rights of banks to acquire shares in nonfinancial corporations (according to the German model), which makes it possible to bridge the gap between the financial and nonfinancial sector of the CS;
- 3) a law on FIGs replacing the repealed one to establish and support major (including, vertically integrated) corporate entities that are competitive in global markets;
- 4) mitigation of the provisions of antitrust law concerning domestic corporations operating in open segments of the domestic and international markets;
- 5) a law on depreciation charges ensuring compulsory depreciation rates differentiated by CS sectoral segments; otherwise, rapid technological upgrading of the domestic manufacturing industry is hardly feasible;
- 6) a law on standardization of products and services and a developed system of standard and technical regulations, without which Russian-made products are unlikely to achieve high quality and competitiveness on a large scale.
- 7) refinement of bankruptcy laws (to eliminate the possibility of seizure of property of companies that are actually not bankrupt, but have been declared bankrupt due to the drawbacks of the relevant part of economic laws);
- 8) refinement of the law on joint-stock companies to better protect shareholders' rights from the actions of management that encroach on their rights, as well as to avoid raider seizures.

During the reform period, Russia replicated an economic policy model that was obviously unsuitable for Russia's conditions, whereas in fact it refused to replicate economic legislation even when it was a must (for example, to minimize the possibility of raider seizures).

This defect should be remedied in accordance with the saying "better late than never".

Upgrading of the legal framework for operation of the economy in general and the CS in particular, in most cases, should draw upon the German and French prototypes as the most appropriate for Russia.

***Public private partnership as a prerequisite  
for boosting the innovative activity of Russian corporations***

A common view is that only a private business initiative is able to provide real stimulus to large-scale innovative processes. However, nowadays (and Russia is no exception) even major corporations often, or rather as a rule, have insufficient funds to finance R&D capital-intensive projects. This problem is especially urgent for high-tech sectors.

So, according to Sergei Glaziev<sup>309</sup>, in the modern world, R&D spending in most advanced branches (fine mechanics, molecular biology, aircraft industry, etc.) accounts for over 50% of total investments in fixed-capital assets and R&D. Therefore, (because of R&D capital intensity), it is a common practice when the

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<sup>309</sup> Glaziev, 2003.

state shares the financing of R&D with corporations and stimulates the R&D spending of corporations.

In most mature economies, the state finances 50–70% of expenditures on fundamental research and 35–50% of nationwide R&D spending<sup>310</sup>. In Russia, in the prosperous year of 2006, public expenditures accounted for 27% of investments in R&D and overall financing of R&D accounted for 1.07% of GDP, while the US in the same year invested in R&D 2.62%, Germany 2.53%, France 2.11%, the UK 1.78%, Japan 3.39%, and Israel 4.65%.<sup>311</sup>

As a matter of fact, it took several decades to shape the modern market innovation-generation system where the state actively participated, directly or indirectly. No serious economist challenges the fact that at least during the 20th century key, innovative breakthroughs were instigated by the state and/or involved heavy public investment.<sup>312</sup>

Globally, the knowledge economy is successful only when the private–corporate sector systematically cooperates with the state on a mutually beneficial basis, with due regard for national goals and strategy.

Private businesses play a crucial role in the commercialization of ideas, but it is the state that creates the basic conditions when motivations for the innovative process may wax and wane. It is the state that generally delineates (including by setting its investment priorities in the CS public sector and state-supported R&D) key innovative areas where the investments of businesses can be promising and profitable.

This is true both for highly developed countries that are traditional leaders in global research and technology and for countries (including so-called “newly industrialized countries”, NICs), which have been creating an innovative (research and technology) system in recent decades.

This happens because the innovation sphere often becomes a so-called area of market failure with major innovations in many cases that only indirectly (or after a long time) affect the economic efficiency of a particular corporation (firm). In such cases, they will be primarily needed by the national (or global) economic system as a whole rather than by individual entrepreneurs or managers.<sup>313</sup>

It is for this reason the innovation sphere (and the related knowledge economy) requires special government efforts to stimulate its development. But the modernization of the national CS (both the remodernization of its old sectoral

<sup>310</sup> Chernoy, 2000. P. 208.

<sup>311</sup> Russia in Figures, 2009. P. 307.

<sup>312</sup> So, the Tennessee Valley Authority, an innovative industrial complex, in the US was established by the Roosevelt administration to boost military aviation development. Silicon Valley in the US started with a defense order worth \$500 million per year; using these funds, universities cooperating with government-run laboratories embarked on R&D leading to breakthrough technologies (See, for example, *Vedomosti*, March 25, 2010). The nuclear power and laser optics industry in all developed countries, like in the Soviet Union, were based entirely on a multitude of interlinked and system-based R&D efforts in information technology conducted in government laboratories and institutes.

<sup>313</sup> Valentei, 2005 p. 132.

segments and catch-up modernization of new sectoral segments), too, requires an active and consistently pursued innovative modernization national policy.

The role of the state in the creation of a modern innovative economy goes hand in hand with its role as an initiator of so-called Big Projects<sup>314</sup>, which gave birth to a host of new technologies. The Manhattan Project, Silicon Valley Project<sup>315</sup>, Apollo Program in the US; the Northern Sea Route Program, nuclear and missile programs (including the Soviet counterpart of the Apollo Program) in the Soviet Union; the national program of nuclear power construction in France — these played the role of technology generators.

The Soviet Union demonstrated that the state, even when it channels huge funds to R&D programs and technology upgrades, is unable to raise the technology level in all sectors and can do so only in certain high priority sectors. But the private sector without state support is also unable to generate and assimilate novel technologies at acceptable rates.

This gives rise to certain conclusions: the modernization challenges of Russia's economy and CS, like in other countries, can be successfully met only through private and public sector partnerships.

However, the current situation in this regard cannot be regarded as satisfactory merely because Russia is lagging behind advanced countries not only in terms of overall R&D spending as a percentage of GDP, but in particular in terms of the amount of such expenses in the CS private sector. Until recently, the latter has accounted for less than 20% of overall Russian nationwide research and development activities.<sup>316</sup>

There are some objective factors hampering the innovative activity of entrepreneurs and managers in Russia.

*First*, entrepreneurs must be enabled to finance their innovative risk by debt financing. However, Russia totally lacks a long-term credit market for venture capital financing. There is no state support (for rare exceptions) whatsoever.

*Second*, globally, corporations generally cover substantial innovative expenditures and risks, realizing that they are acting within the market mainstream. The state's innovative strategy (the state's role as an entity setting long-term goals for corporations) and hence direct or indirect state support greatly affect this mainstream.

For example, the US President and Congress for several years were increasing the government funding of NASA, the National Science Foundation, and US Geological Survey. Key national innovative programs were proclaimed: supercomputers, new geographic information systems, bioengineering, nanotechnology, etc. Then businesses realized that the state strategy was placing high priority on the development of the proclaimed areas. Thus, they received the most competent signals about promising and lucrative market niches.

<sup>314</sup> Katorgin, Chernoy, 2009.

<sup>315</sup> Though a few private initiatives are commonly believed to be crucial, it was the Pentagon's major investments in designing instruments to simulate nuclear tests and combat missile paths that boosted the development of the mentioned cluster of computer engineering and programming (see above).

<sup>316</sup> Russia in Figures, 2009. P. 360.

However, if such signals are not given or they are vague and contradictory, the innovative activity at the level of companies, corporations, and creative individuals generating new ideas will be weak, chaotic, and often trifling.

It is no wonder that businesses in modern Russia show very weak demand for innovative ideas. So, as at the beginning of the 21st century, Japan had been implementing 95%, US 62%, and Russia no more than 10% of innovative ideas and projects.<sup>317</sup>

Nor is it a wonder that the scale of really novel knowledge generation is steadily declining both in basic (which is the only area where major innovations are generated) and applied sciences.

Russia has yet to foster (almost from scratch) interactions between the state and private sector to address R&D financing challenges and promote new technologies for application in manufacturing.

### ***Establishment of an institutional framework to modernize Russia's CS as a factor of its substantial acceleration***

Practice shows that economic modernization may be substantially accelerated through institutions generating basic novel technologies and their promotion to manufacturing and the economy.

In the US, for example, since the 1960s, strategic decisions on research and technology policy have been taken at the president's level. These decisions embraced the coordinated efforts of the following White House bodies:

- The National Science and Technology Council;
- The Council of Economic Advisors;
- The National Economic Council ;
- The President's Council on Sustainable Development.

Further, the development and implementation of innovations are coordinated and controlled by the Technology Administration, a powerful and well-staffed agency in the US Department of Commerce that controls target government-corporate programs.<sup>318</sup>

In particular, the US as far back as 1993 adopted the government Technology for America's Economic Growth program, including budgetary support for fundamental science and major R&D activities and government measures to upgrade mass production technology. It defined key objectives for the development of the knowledge economy<sup>319</sup>:

- building a 21st century infrastructure;
- integration of defense and civil industries;
- encouragement of high-tech development and commercialization;
- creation of a new labor force for the knowledge economy;
- establishment of a business climate with preferences for innovations.

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<sup>317</sup> Ivanov and Ivanova, 2002. P. 60.

<sup>318</sup> Chernoy, 2000 p. 207.

<sup>319</sup> Ibid., p. 209.

At the same time, a system of laws and regulations was instituted providing particular mechanisms to meet these challenges:

- disposal of scientific equipment at high rates of depreciation;
- target tax holidays for innovation projects;
- concessional lending to, and partial budget financing of, corporate scientific programs;
- assignation of state property, plots of land, and social infrastructure to corporations for R&D on concessional terms (or even free);
- permission to include R&D expenditures in the product cost.

Moreover, the Bayh–Dole Act on commercial licensing of corporations and universities to use federal patents, the Stevenson–Wydler Technology Innovation Act on technology transfer from federal laboratories to industry, and several dozen related statutes were adopted.

The above program is just one of those adopted in the US. Specifically, the government SBIR (Small Business Innovation Research) program is aimed at filling the gap between pure research results (“ideas”) and technological innovations, which are already fit for commercial use. This program envisages<sup>320</sup>:

- commitments of ten US government agencies to use 2.5% of their own research budgets for grants under the SBIR program;
- awarding of these grants on a competitive basis after external examination of applications;
- two-phase grant support for promising applications, when after a primary six-month grant of \$100,000, research that has passed second competitive selection receives an additional biennial grant of \$750,000 for research on the project’s commercial potential, for creating a production prototype, etc. Such grants provide the project initiators with venture capital to ensure its commercial realization.

In other words, the US purposefully established institutions to bring businesses and the government together to develop the knowledge economy. Similar efforts were made by other successful countries like Germany, France, Israel, China, South Korea, and Malaysia. As a result, already by the mid-1990s, the products of knowledge-intensive industries in OECD countries accounted for more than half of the overall industrial output.<sup>321</sup>

Of course, one cannot say that Russia lacks institutions backing the innovative process altogether. However, global achievements in this area have obviously not been utilized in full. The innovation generator, which is often called the “idea generator”, still functions in Russia. But the machine assimilating technology in the CS (its efficiency factor is minor) is all but idle. Such an engine has yet to be established.

The number one goal in this area is the adaptation of Russia’s CS to operation in open competitive high-tech (also as a WTO member). Above all, it concerns the strengthening of the ability of the CS to assimilate and marketize new foreign and domestic technologies.

<sup>320</sup> Yasin and Yakovlev, 2004. P. 28.

<sup>321</sup> Economist. 1999. Oct. 16–22. P. 107.

## 6.6. Prerequisites for increasing exports and the import substitution potential of corporations in Russia's manufacturing industry

In post-Soviet decades, the export pattern of Russia's CS was steadily deteriorating, drifting toward the absolute dominance of primary products (primarily, mineral raw materials). So, in 1995 minerals accounted for 42.5%, in 2000 for 53.8%, in 2005 for 64.8%, and in 2008 for 69.6% of total exports. Over the same period, the share of machinery, equipment, and transportation vehicles in Russian exports dropped from 10.2% in 1995 to 4.9% in 2008.<sup>322</sup> At the same time, the share of machinery, equipment, and transportation vehicles in Russian imports was invariably rising. The above indicator in 1995 amounted to 33.6%, in 2000 to 31.4%, in 2005 to 44.0%, and in 2008 to 52.7%.<sup>323</sup>

However paradoxical it might seem, at present, with the rather high overall export burden of Russia's economy, a significant part of its regions are practically isolated from the world export market since mineral products – oil, natural gas – and petrochemicals are predominantly export items. Russia faces the need to concurrently increase both the exports of manufactured products (at least because the export burden of most LRCMs is insignificant) and import-substituting production (primarily products of the engineering industry and some other sectors).

Meanwhile the conditions in which Russia has to address these challenges are rather disadvantageous. Protection of the domestic market with customs duties has practically been excluded. That would have been possible had Russia entered the market at least in the 1970s. But not now. At present, the basic permitted methods to protect the domestic market are a policy of an undervalued national currency exchange rate in relation to its PPP and nontariff barriers to imports (the remaining import duties, as a rule, are insignificant).

At the same time, the export potential of SCSs of Russia's manufacturing industry, excluding the iron and steel and chemical industries, is insignificant, with the competitive potential of national SCSs of the manufacturing industry steadily declining.

It is characteristic that even those engineering operations (primarily in the defense and space industries) that are still competitive enough to meet international market requirements are gradually losing their competitive edge.<sup>324</sup>

Low competitiveness is the chief problem faced by Russia's manufacturing industry and the relevant national CS segment. The failure of Russian producers to withstand foreign producers of medium- to high-tech products capturing the

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<sup>322</sup> Russia in Figures, 2009. P. 498.

<sup>323</sup> Ibid., p. 501.

<sup>324</sup> See, e.g., Veretennikov D.V. The Ministry of Defense must assume responsibility for the defense industry complex modernization development // The Military Industry Courier. Nov. 9, 2005.

national market is a direct consequence of this. The insignificant export potential of most Russian manufacturing sectors stems from the same fact.

In turn, the following key factors govern the insufficient competitiveness of Russian producers:

1. Russia exhibits a high level of aggregate (in the first place, market) risks associated with investing in the export segments of the manufacturing industry. Meanwhile, Russia's manufacturing corporations are simply too small in comparison with their global competitors. The intrinsic investment potential of Russia's manufacturing corporations is also extremely limited, and their ability to make large-scale long-term investments in technological upgrading and R&D is therefore very low. This results in insignificant investments in adaptation to the market environment. The situation is exacerbated by expensive energy (if the ruble is valued in terms of PPP), which has a negative bearing not only on the overall competitiveness of Russian manufacturing corporations, but also on the ability to make depreciation charges. All these hamper the attempts of most Russian manufacturing corporations to compete with major foreign corporations both in terms of investment size and, therefore, in terms of technological level and range competitiveness of exports.
2. In effect, Russia's CS is scaling back the production of most investment products (especially machinery and equipment). Russian manufacturers therefore have to overpay for imported equipment (in view of the undervalued ruble exchange rate), which, in turn, adversely affects their competitiveness.
3. Due to the lack of stable domestic demand and insufficient technological competitiveness, Russia scales down or fails to develop the production of competitive components and raw materials for high-tech industrial exports (micro-electronics, optics, fine mechanics, new materials, etc.). Therefore, Russian corporations are compelled to buy almost all high-tech components abroad, which, with undervalued ruble exchange rates, also reduces their export price competitiveness.
4. In Russia, both the CS private and public segments almost completely lack FCMs aiding in the promotion of exports (including relevant marketing research). Most Russian manufacturing corporations export their output at their own risk, while lacking necessary experience of competitive struggle in world markets or any positions whatsoever in the global trade infrastructure. Eventually, it must be admitted that the marketing competitiveness of most SCSs of Russia's manufacturing industry are grossly insufficient by international market standards.

Meanwhile, WTO Director General Pascal Lamy said on February 24, 2010, that world trade had also been a casualty of this crisis, contracting in terms of volume by around 12% in 2009 – the sharpest decline since the end of the Second World War<sup>325</sup>. Pascal Lamy noted that the main explanation for this free fall in trade had been various direct and indirect (also those implemented in the framework of antidumping actions) protectionist measures taken worldwide, including across all major world economies, that one way or another close national markets.

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<sup>325</sup> RIA Novosti, Feb. 24, 2010.

Against this background, developing countries that are major exporters of manufactured products (including China, India, South Korea, Brazil, etc.) that are being squeezed out of the markets in developed countries are undertaking special efforts to retain international market positions and conquer new markets. Most of them seek to raise their own competitiveness also by further undervaluing the exchange rate of their national currencies in relation to their PPP.

The above transformations of the global economy (including the shrinking of global markets) create additional obstacles for Russian manufacturing exports, substantially reducing the capacity to achieve their price competitiveness by using a ruble exchange rate undervalued in relation to its PPP.

For the above circumstances, a substantial increase in Russian exports of products with high added value due to the price competitiveness factor can hardly be expected even in the long term. International experience suggests that exports of such products can be increased by:

- 1) forming in Russia's CS, by mergers and acquisitions, a core composed of large and superlarge (mainly multibusiness) corporations and relevant superstructures like FIGs (thereby automatically creating the capacity for extensive use of credit resources to finance manufacturing industry restructuring programs);
- 2) forming within large corporate entities, which are expected to emerge from the above restructuring, units focusing on technologically competitive products (based on foreign and Russian technology);
- 3) priority development of sectoral segments and FCMs in the CS to ensure import substitution for components and raw materials required for high-tech products in manufacturing sectors;
- 4) establishing of FCMs within the CS capable of conducting extensive research of international markets and promoting Russian-made manufacturing products to global markets and their entrenchment there;
- 5) setting up a group of transregional export-oriented trading companies following the Japanese pattern (such companies, as evidenced by the Japanese and, partially, South Korean experience, basically make it possible to double the export potential of the manufacturing industry with the available technological base);
- 6) reinforcement of the credit support for exports.

It is often said and written nowadays in Russia that the export potential of the Russian CS can be substantially increased by importing state-of-the-art Western technology. Such attempts were already made in the 1980s. However, Western countries generally prohibit the export of their real state-of-the-art technology. In addition, everyone who has in practice ever dealt with the procedure of an idea moving from its conception to embodiment in prospective export items realizes that nothing can be done here without an appropriate strong infrastructure, trained personnel, various know-how, and own experience. It is for this reason both public authorities and large corporations worldwide consider that massive R&D expenditures in their budgets are a must.<sup>326</sup>

A series of studies conducted recently demonstrate that the education and creative effort of employees have become a crucial factor for a country's competitive-

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<sup>326</sup> Subbotina, 2006.

ness (including export competitiveness), leaving behind such factors as the size of national savings, investments, and population growth rates.<sup>327</sup> It is no surprise that the education level and creative effort of personnel are taken into account to build modern concepts of dominating so-called “creative class” that many researchers regard as a new key quality of advanced 21st century economies.<sup>328</sup>

Meanwhile, over the last two decades, Russia has lost at least half of its creative class. It has to be created anew. Apparently, the national education and training systems of academic and engineering personnel must take into account the above facts.

Among other things, to enhance its export capacity (and hence, its competitiveness), the Russian manufacturing industry requires that substantial changes be made in Russia’s EOMS.

The EOMS must contain dedicated management units to:

- 1) provide financial support for relevant investment programs;
- 2) upgrade and develop the industrial infrastructure as needed;
- 3) boost government-funded and corporate R&D;
- 4) transfer technology;
- 5) promote export products to global markets, etc.

The policy regulating ruble exchange rates must be harmonized with challenges related to market protection and enhancement of the Russian economy’s export capacity (the ruble exchange rate in spring 2011 failed to meet these challenges)

A comprehensive approach to the above challenges requires target programs. It appears that here the experience of South Korea and Taiwan would be instrumental.

At present, a common view is that the export capacity of the Russian manufacturing industry can be substantially increased by the products of SMEs. However, this view ignores the following facts.

*First*, the ability of Russian SMEs to compete with foreign manufacturers even in the domestic market is negligible. The Russian CS segment consisting of SMEs has low technological competitiveness, extremely limited capacity for R&D, highly limited access to long-term credit resources for investment purposes, inexperience in promoting their products to global markets, and practically zero-level positions (including brands and representatives abroad) in the international trade system. In Taiwan, for example, export products of SMEs are promoted to global markets aided by an advanced system of specialized firms servicing exporters. Russia has nothing of the kind.

*Second*, the system of advanced target state support for the export segment of the CS periphery consisting of SMEs, like the one established in Taiwan<sup>329</sup>, does not exist in Russia.

For to the above reasons, the export capacity of aggregate Russian SMEs is very low. With few exceptions, they are unable to independently acquire the ability to export products with a high percentage of added value. In the short to medium

<sup>327</sup> The Global Competitiveness Report 2002–2003. World Economic Forum (WEF).

<sup>328</sup> Florida, 2005. P. 19.

<sup>329</sup> See Appendix 3.

term, the export capacity of Russian SMEs (though minor) can be implemented only where they operate as contractors and subcontractors of large export manufacturing corporations. That is where they operate following a pattern that ensures a high enough input of SMEs in the aggregate CS export potential in such countries as Japan, South Korea<sup>330</sup>, Brazil, Malaysia, and China.

## 6.7. Conclusions from Chapter 6

1. Thus, the neoliberal option of the economic objective setting and economic policy (liberalization, privatization, demonopolization, openness as objective-setting priorities) that dominated throughout Russia's market reforms has proved its inefficiency convincingly enough. The accelerated privatization of state assets at undervalued prices did not only preserve the corporate ownership legitimization problems, but also made the stock market steadily undervalue the assets. Demonopolization by splitting the largest enterprises and spinning service and marketing units off the manufacturing complex has enormously hampered the formation of a core composed of large investment and innovative corporations capable of compete in open markets in the Russian corporate base of the economy.

2. The permeation of Russia's CS with major corporations is obviously inadequate. This in particular concerns SCSs of the manufacturing industry at the end of the manufacturing cycle. Russia's CS private sector displays the predominance of small and medium corporations and a poorly developed (except for the extractive industry) core consisting of major corporations and financial industrial groups. To some extent, large companies with predominantly public capital were performing (and partially are performing) the functions of such a core.

The monopolism level of the CS servicing the Russian economy, at any time after 1991 was not higher than in developed countries. There are no grounds on which the willingness of Russia's economy toward inflation can be linked with excessive production concentration.

3. During almost the entire reform period, Russia's CS advanced without a strong financial core and with highly reduced borrowings, except for those made abroad. The weakness of the CS credit sector has been having an extremely negative effect on the performance of Russia's CS nonfinancial sector and its adaptability to the changing market environment.

4. Even the largest Russian corporations are highly limited in their ability to implement large-scale investment programs and R&D, which curtails their competitiveness over the mid to long term not only in the global, but also in the domestic market.

The separation of marketing arms from production ones in the course of Russia's CS marketization in most cases was a mistake. When the industrial sector badly needed investments, it was unable to invest trading profits. Instead, due to

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<sup>330</sup> See Appendix 2.

the above separation, they were extensively used for unproductive purposes (for capital outflows and/or they were just “guzzled away”).

The Russian manufacturing industry, since it operates in an economic environment exposed to high market and investment risks with a weak credit sector and stock market, needs large multibusiness corporations with considerable vertical integration, including strong service and marketing units. In other words, it needs production and marketing corporations like most major corporations in advanced and newly industrialized countries.

5. It would be sensible to boost the integration of the real and credit sectors in Russia’s CS, including by establishing integrated FIGs. To this end, above all, formal regulatory obstacles should be eliminated (including strict constraints on the acquisition of shares in nonfinancial corporations by banks).

6. In the event the precrisis option of the EOSS and economic policy is preserved, the performance of the Russian CS can be enhanced, to a certain extent, by improving the performance of financial markets (primarily, the credit and stock markets) and the legal framework for the operation of the economy (specifically, anti-raider and anticorruption laws), and by restructuring the CS by selectively encouraging corporate mergers and, where possible, developing small and medium businesses.

However, the above measures are insufficient to boost the performance of Russia’s CS and the economy it services. Russia’s accession to the WTO becomes especially dangerous if the latter continues to adhere to the neoliberal economic policy, which will inevitably further the amorphism of the ESR of the national CS and its decline.

7. A switch of Russia’s CS to an efficient development regime requires a change in the economic objective-setting and economic policy. Here, the experience of European countries and Japan gained during the recovery and modernization stage after World War II, as well as the experience of newly industrialized countries in accelerated modernization, would be instrumental. Such a change in the economic objective setting and policy appears feasible in the context of the current economic crisis when most developed nations tend to abandon the basic principles of the neoliberal economic doctrine.

8. To be an efficient tool to meet modernization challenges, Russia’s CS should be substantially restructured by:

- a) raising in the CS, outside the primary sector, the proportion of big corporations that in size of assets, employment and turnover could rank among the world’s 1000 biggest companies;
- b) restructuring the CS by increasing the proportion of transregional corporations in it;
- c) limiting the presence of foreign capital in Russia’s CS to an economically sound percentage;
- d) establishing special investment banks in the banking system to bring investment lending to a level high enough to meet modernization challenges;
- e) using a regulated operation regime for a significant portion of the CS and, especially, regulating the interaction of the CS and the external economic space.

**9.** A substantial increase in the export potential and import-substituting potential of the basic SCSs of Russia's manufacturing industry involves:

- a) a sharp increase in the investment potential of the above CS segments by improving their access to long-term loans, by increasing capital investments based on depreciation charges, and by channeling investment resources from primary exporters to the manufacturing industry;
- b) formation in the manufacturing industry, including by mergers and acquisitions, of large multibusiness corporations comparable in production potential with EU and US counterparts;
- c) formation, within the above corporations, of strong units that use state-of-the-art technology in manufacturing;
- d) priority development of sectoral segments and FCMs in the CS to provide import substitution for components and raw materials required for manufacturing high-tech products;
- e) a sharp increase in R&D spending and the restoration of the training and re-training system;
- f) system-level harmonization in enhancing the export competitiveness of products of Russia's CS manufacturing segments with the modernization and innovative transformation of the Russian CS and economy as a whole.

SMEs in Russia's CS periphery can materialize their export potential mainly as subcontractors of large export corporations in the manufacturing industry.

**10.** Implementation of the above measures involves a substantial restructuring of the EOMS by increasing its regulatory potential. If the regulatory potential of the Russian EOMS decreases further, a substantial increase in Russia's CS quality, ESR, and performance cannot be expected.

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## GENERAL CONCLUSION

Of course, our goal was not in one study to comprehensively formulate and validate all principles and mechanisms managing the performance of the corporate base of a national economy.

However, it appears that the above suggests that the corporate base of any modern national economy is a sophisticated systemic set of market agents and various institutions permeated by diverse interrelations – an open dynamic system.

In this context, it is necessary to emphasize two principal interrelated facts making it impossible to raise the efficiency of a market economy only by a mechanical increase in its privatization, liberalization, and degree of openness.

*First*, it is a substantial dependence of market economy efficiency on some system-critical parameters of the CS, apart from its privatization and competitiveness level. *Second*, and no less important, the level of dependence of market economy efficiency on the harmonization between the characteristics (format) of the CS and its operation framework conditions. When they do not match, the efficiency of the CS and the relevant economy will be inevitably low.

When the efficiency of the relevant business community is low, enhancement of CS competitiveness is generally incapable of bringing about positive results within a short time.

If a CS does not contain competitive corporations, basically its openness is not capable of creating positive economic impacts until the CS efficiency is raised in one way or another.

If the ESR of a national state and the relevant CS are low, a rise in the privatization openness and competitiveness level of such an economy inevitably leads to a decline in the CS efficiency and various negative economic consequences.

International experience suggests that under certain circumstances, precisely with a rather low CS efficiency and its failure, for various reasons, to adapt rapidly to operation conditions that have changed due to a situation of openness, the production potential of at least some subsystems and segments of the CS may substantially decrease (as happened in the course of the market reforms in Russia's engineering and light industries). For exactly this reason, the process of liberalization and opening of successful economies of new industrial countries, like India and China, to the international economic environment was extended to several decades quite deliberately and purposefully.

Where legal guarantees related to corporate property are not high enough, the CS efficiency automatically becomes considerably limited. The lack of such le-

gal guarantees has a very negative impact on the economic behavior of property owners and, under certain circumstances, managers, including their willingness to invest, to meet contract obligations, etc.

The more the economic behavior of entrepreneurs and managers are criminalized, the lower the CS efficiency. This was ignored in the course of market reforms in many countries, including Russia. Even comparatively small, at first glance, the effects of the legal and regulatory framework supporting the CS operation are able to paralyze its efficiency.

The adaptability of CS characteristics to the existing level of market and investment risks is crucial (since they have the strongest impact on the willingness of nonpublic entities and, hence, corporations controlled by private capital to invest, as well as on the selectiveness of this willingness). The thesis under which privatization is a priori a benefit ignores this fact. There is always such a level of market and investment risks that may significantly or even entirely scare away private investors.

The lower the efficiency of the business community, the more its investment behavior is sensitive to the economic risk factor. Risks clearly depend on the deficiency of CS development, since it generates market and investment risks of a social or political nature. Developing countries in the 1950s–1960s lacked efficient business communities; therefore, they were incapable of carrying out primary modernization of their economies without the government involved as a strategic investor and property owner.

Developing countries also could not, under financial deficits and a high level of market and investment risks, revitalize their national economies and efficient CSs after World War II without the active involvement of the government, whose investment behavior is least exposed to aggregate risks. It is one of the main reasons why a government presence appeared in the economy in many countries, including developed ones, as a strategic investor and property owner in the 1930s–1950s.

Even now, foreign investors prefer not to deal with market and investment risks in developing countries. For precisely this reason, they, while willing to buy at the lowest cost the assets of state-run enterprises slated for privatization, usually avoid direct investment in underdeveloped countries if these investments are not used to launch, within a short time, products with export potential and therefore could not be quickly depreciated.

Due to the well-known correlation between the level of economic development, efficiency (and the relevant CS), and the level of investment risks, the economy policy option that is efficient in a developed economy is inefficient, as a rule, in a developing economy when its inefficiency is higher, the lower the economic development level. Since CS efficiency depends on the harmonization between its system characteristics and its operation framework conditions, which are prone to change, a CS design that would be efficient under any circumstances does not exist in principle.

Therefore, the intensity of administrative actions of public authorities directed at the economy and the economically sound presence of the government in the CS as a strategic property owner may vary from case to case. When the business community is inefficient (for example, when it is immature and criminalized), the

level of government regulatory and investment presence in the economy must always be high.

The American CS model, for example, is a priori inefficient in an economy with an inefficient business community and a significant level of investment risks. The experience of the current crisis suggests that this model barely works even in the US itself when investment risks are too high.

When property relations are legally uncertain and the economy is highly criminalized, the privatization of corporate assets owned by the state aggravates the system quality of the CS and overall economic performance rather than improving them.

The above circumstances governed conditions for Russia's CS efficiency and caused Russian market failures in the 1990s.

A crisis always presumes a certain degree of disharmony between the system characteristics of a CS and its operation framework conditions. Therefore, in order to successfully combat a more or less deep crisis, the system characteristics of the CS and its adjustable operation framework conditions should be substantially changed to ensure their mutual harmonization. This is also evidenced by the experience in combating the current economic crisis.

When the system of economic objective setting places high priority on economic development, the economic policy must always be adapted to the existing characteristics of the CS and its basic operation framework conditions.

Since basic operation framework conditions that are nonadjustable or poorly adjustable greatly vary geographically, the principle of high priority economic development requires that the economic policy must be substantially selective in regard to specific CSs and their LRCMs.

The global unification of the economic policy and system characteristics of a CS requires an essential departure from the principle of high priority economic development. Most countries refuse to give up this priority or have no intention of doing so, thus hampering systemic unification of market modules across the globe. This substantially constrains development of globalization, regardless of whether it is based on the Washington Consensus or the "real socialism" model.

The neoliberal economic paradigm is implicitly based on the assumption that market factors generate a certain natural (the most efficient) model of a market economy and CS and there are departures from it due to social and political factors.

In fact, the system characteristics of nearly all CSs that have been operating for a long time (primarily, those of developed economies, including the US) are a product of multiple and quite radical restructurings, and they are conventional in nature.

Conventionality is a principal feature of all currently operating CSs. In particular, the modern American model of economic policy and CS is marked by complex conventions of various SEIs and in this respect is no better or no more liberal than any other economic model.

If CS models, as well as economic policy models, are ranked in terms of conventionality, those of them that strictly adhere to the principle of priority economic development should be regarded as the least conventional. The American

model, which is sometimes called the Anglo-Saxon model, of a market economy and CS does not fall into this category.

The poor current state of the Russian CS and related economy to a great extent is caused by big mistakes in the economic objective setting and economic policy that affected domestic market reforms. Too much reliance on automatic adjustment of the economy under market factors, as well as the lack of an active state regulation policy focused on managing CS parameters and changing operation framework conditions, gave birth in Russia to a CS with several systemic drawbacks.

The most important of these drawbacks are the extreme weakness of the domestic system of financial corporations; the lack of a core consisting of major world-level corporations in the financial and nonfinancial economy segments (except in a part of the primary sector); high competitiveness of the corporate environment in most sectoral segments of the CS against the low competitiveness of the majority of corporations operating in the markets; and a lack of transregional corporations ensuring efficient economic interrelations within the national economic space.

It appears that Russia needs a substantial adjustment to the national system of economic objective setting by placing the highest priority on development and essential changes to the economic policy related to managing development of national CSs. The first steps in this area may include:

- a thorough revision of the operation framework conditions of the CS (differentiated by SCSs and local regional corporate modules);
- an in-depth (again differentiated by sectors and regions) analysis of the system characteristics of Russia's current CS;
- development (again differentiated by sectors and regions) of an economic policy to manage CS parameters and its adjustable (changeable) operation framework conditions focused on maximum adaptation of the CS parameters to its operation framework conditions to enhance its system quality and efficiency.

However, it should be kept in mind that even with a deep understanding of the aggregate systemic drawbacks of the CS and methods for their elimination, the implementation of relevant actions to enhance its efficiency is impossible when the ESR of a national state is low, the latter is unable to play the role of a "superior economic arbitrator", and the mechanisms of harmonizing and balancing of the corporate interests do not work.

## APPENDICES

Appendix 1.  
 THE CONTROLLED EVOLUTION  
 OF THE INDIAN ECONOMY CS AS AN EXAMPLE  
 OF THE NORMAL PHASE PATH OF  
 A CS BASED ON AN UNDERDEVELOPED ECONOMY  
 WITH A LARGE NONMODERN SECTOR  
 AND A SUBSTANTIAL POTENTIAL SIZE  
 OF PRODUCTION AND MARKET

*Initial conditions for shaping India's CS and their influence on its development  
 in the first period after decolonization*

Before the 1929 global crisis, India's economy already had three sectors in addition to the informal economy sector (predominant in terms of input into GDP):

- 1) public sector (in particular, the state owned 2/3 of the railroad system);
- 2) sector controlled by local capital;
- 3) sector controlled by foreign, almost entirely British, capital.

India's CS core by the end of British rule was composed of companies controlled by British private capital and state-run companies. Moreover, there was a group of relatively large companies controlled by Indian capital (Tata, Birla, Dalmia-Jain Groups, etc.).

The modern banking sector emerged in India's economy as far back as the 19th century. However, in the period immediately preceding decolonization, traditional loan offices in the form of pawnshops existing outside the CS proper predominated in India's credit system. As the nonmodern, or unorganized, sector even in the period immediately preceding decolonization predominated in India's economy, the CS accounted for an insignificant part of India's GDP.<sup>331</sup>

<sup>331</sup> Pavlov et al., 1979.

After decolonization, changes that occurred in India's CS and in the related economy sectors comprised:

- 1) driving foreign capital out of the economy or foreign capital outflow;
- 2) rapid growth of the public sector.

However, foreign capital was not driven out of India's economy and, hence, its CS in one stroke. After decolonization, for a long time it held strong positions there. In the early 1950s, foreign capital accounted for 44% of total capital investments in India's industry.<sup>332</sup>

In December 1953, foreign investments in India's economy stood at 4,190 million rupees, out of which direct investment accounted for 3,493 million rupees (or slightly more than \$700 million at the then prevailing exchange rate)<sup>333</sup>. Britain accounted for 82% and the US for 7% of total foreign investments.<sup>334</sup>

In the mid-1950s, 14 foreign, mainly British, banks with 68 branches inherited from the colonial period were still operating in India.<sup>335</sup>

By the end of the 1950s, public capital was dominant in India's economy. In the 1960s, it played roughly the same role as foreign capital in 1949–1950.

From a purely economic point of view, such developments were not irrational. India's economy badly needed investments primarily in the infrastructure, agriculture, and capital-intensive sectors. The private sector was unable to provide resources needed for such investments.

The investment weakness of India's private sector in that period was caused by:

- a rather modest size of the public corporate sector compared with the entire economy;
- hence, the inability of the private and even the public sector to extend more or less sizeable loans for economy development;
- too high, from the viewpoint of a private investor, investment risks associated with the aggregate effects of negative political, social, and economic factors.

Investment risks of a political nature were caused by:

- 1) religious conflicts (relations between the Hindu and Moslem communities were rather tense, which actually led to the dissolution of British India into Pakistan and the Republic of India during decolonization);
- 2) interethnic contradictions (India as a multinational country has always experienced acute interethnic contradictions, tending toward regional ethnic separatism, which only grew further after attaining independence)<sup>336</sup>;
- 3) the instability of the political situation stemming from the struggle between the parties, which was especially pronounced in India's states.

<sup>332</sup> Foreign Countries, 1957. P. 352.

<sup>333</sup> Ibid.

<sup>334</sup> Ibid.

<sup>335</sup> Ibid., p. 358.

<sup>336</sup> See India: the Country and Regions, 2004. In the 1960s, the leftist organizations in some Indian states began a guerilla war to establish liberated territories. It sparked high-level interethnic and social tension in Indian society, which continues today. In the 1950s, the level of this tension was even higher.

The political instability stemmed primarily from the extremely hard social and economic conditions of the bulk of the population.<sup>337</sup>

The fear of nationalization was among direct economic risks which in the 1950s and even much later had a significant bearing on the willingness of potential private investors to invest. After India attained independence, the issuing Reserve Bank was the first to be nationalized, which happened on January 1, 1949.<sup>338</sup> However, nationalizations continued until the mid-1970s. So, obligatory insurance was nationalized in 1972, and 711 coal mines (whose operation was controlled by the state) and a branch of Exxon oil company, in 1973.

Apart from the risks generated by the nationalization process, the low utilization of production facilities caused by the economic situation, however paradoxical it may seem, had been creating significant market and investment risks for a long time. So, in 1950 and 1953, 40 of the 80 largest industry sectors utilized less than 50% of the facilities and 28 sectors utilized no more than 60% of their production facilities.<sup>339</sup> One of the main causes of this in the first period after independence was the imbalance of India's economy caused by its falling out of the British Empire's economy and especially by the breakup of the single economic space of the former British India into the isolated economic spaces of India and Pakistan.

The break-up of the single economic space of the Soviet Union was obviously similar to the above developments. For this reason alone, the economies of the countries newly born within the boundaries of the former Soviet Union could not help being imbalanced, which, in turn, fueled various market and investment risks.

For a long time, the overall inefficiency of the administration, a lack of law and order, and, in the private sector controlled by national capital, a deficit of efficient entrepreneurs and managers with the experience and knowledge needed to conduct business in the modern sectors of economy had been creating considerable challenges to the operation of India's corporate private sector.

Moreover, the overall state of the institutional environment in which India's economy was developing after independence hampered efficient operation of market mechanisms. Gunnar Myrdal was among the first researchers to show that this influenced the economic development of Asian countries, including India, in his classic study *Asian Drama*.<sup>340</sup>

Basically, inflows of private foreign capital could not help in meeting the investment challenge in India under the specific conditions of the 1950s and 1960s.

First, the need of India's economy for capital in that period was too strong to be helped much by inflows of foreign capital. Second, India's economy in that period and much later was not very attractive for foreign investors due to the high

<sup>337</sup> During the 1940s, India teetered on the verge of an acute food crisis. During WWII, many people died of famine. In the first seven years after independence, food production in India increased by 1/3. Food rationing ended only in 1954 (Foreign Countries, 1957. p. 353). This substantially improved the food situation, but for a long time it remained severe, especially in the poorest states.

<sup>338</sup> *Ibid.*, p. 358.

<sup>339</sup> *Ibid.*, p. 356, 357.

<sup>340</sup> Myrdal, 1972.

level of market and investment risks. Third, during the first decades after World War II, free capital resources in developed countries were extremely scarce. At the beginning of that period, Europe and Japan had no free capital at all and their economies during the 1950s operated under more or less rigid foreign exchange regulation that alone extremely constrained capital outflows.

In brief, India after independence faced:

- 1) extremely high investment risks;
- 2) a low operating efficiency of market mechanisms due to both the risk factor and the specifics of the Indian social institutions;
- 3) nonpublic potential investors with a low willingness to invest in strategically critical capital-intensive sectors due to the above reasons;
- 4) private capital, both domestic and foreign, with an extremely limited investment capacity.

Developed countries during World War I and II and in the first period after World War II encountered the same problems as India's economy in the 1950s:

- high investment risks that paralyzed the activities of private investors;
- no alternative to the state as a strategic investor in capital-intensive sectors (during the war, these were the military industry and related heavy industry sectors);
- the impossibility of an acceptable efficiency of the economy without introducing elements of economic programming and a distributed economy, as well as partial control over prices.

The difference was that the market infrastructure and production facilities in developed countries in the first half of the 20th century were much more developed than in India in the first postcolonial decades. More importantly, developed countries during the First and Second World Wars and in the postwar periods boasted a highly efficient community of entrepreneurs and managers, while India had yet to foster such a community.

Thus, the general economic situation in postcolonial India was as follows:

- 1) there was no alternative to the state as a key strategic investor capable of mobilizing resources for large-scale investments and exhibiting low sensitivity to market and investment risks;
- 2) the modern nonpublic sector could not operate efficiently in the liberalized regime;
- 3) an acceptable degree of the efficiency of the entire economy was unachievable without economic programming and, in the first years after independence, without the active use of elements of a distributed economy.

The above factors determined India's economic development at the primary stage of modernizing its economy and, as a consequence, the format of its CS in that period.

In accordance with the economic social and political conditions, the economic policy was aimed at developing the economy under programs and plans and combining unorganized and organized sectors interacting with the CS public sector as its core.

Such a policy could have solved the central problem of development, i.e., capital investments.

***India's CS in at primary stage of economic modernization (1950s–1970s):  
State-funded investment as a factor for transforming the corporate base of the  
economy***

In 1951, India embarked on implementing the first economic development program (1951–1956). Overall investments under the program amounted to about 40.5 billion rupees (without investments in the traditional sector), out of which government investments accounted for 22.5 billion rupees, while private investments accounted for about 18 billion rupees.<sup>341</sup> The investment capacities of the Indian state already in the first postcolonial period of national economic development outstripped the investment capacity of the private sector.<sup>342</sup>

The first economic development program was aimed at eliminating the most critical bottlenecks rather than at modernizing India's economy. Boosting agricultural production when famine in the country was imminent was an absolute necessity.<sup>343</sup> Therefore, in 1951–1956, 45% of public investments were channeled to the agricultural sector, irrigation, and construction of power plants and only 8% to industry.<sup>344</sup>

It must be emphasized that some major heavy industry plants were built in India as far back as 1951–1956.<sup>345</sup> However, India launched large-scale industrialization only after 1956. In 1956–1961, the state invested in industry five times as many funds as in 1951–1956. Heavy industry received 4/5 of the total public investments in industry (7 billion out of 8.9 billion rupees). The transportation and communications sectors in 1956–1961 accounted for 28.8%, irrigation facilities and power stations for 18.7%, industry for 18.6%, and agriculture (without irrigation facilities) for 11.8% of total public investments. Social services (schools, hospitals, utilities) in 1951–1956 received 21.8% and in 1956–1961 (target figure) 19.7% of total investments.<sup>346</sup>

<sup>341</sup> Foreign Countries, 1957. P. 352.

<sup>342</sup> State-funded investments were channeled into India's economy during its modernization mainly through the development budget (other public expenditures were financed through the regular budget, which in turn was split into budgets of the central government and those of the states), as well as through a special railroad budget and a budget system of public enterprises. In the first period of its operation, the development budget received proceeds from domestic loans, increasing savings bank deposits, excess profits tax, short-term loans from state-run banks, and foreign aid.

<sup>343</sup> To boost agricultural production and modernize the agricultural sector, the Community Development Programme was launched in 1952. By 1995, the projects under the Programme covered 20% of villages. Between 1952 and 1955, during the its implementation, about 40,000 hectares of wasteland were reclaimed, 520,000 hectares were irrigated, over 10,000 schools were built, and over 50,000 wells were dug or repaired (Foreign Countries, 1957. P. 355). In addition, the sanitation state of villages was improved.

<sup>344</sup> Foreign Countries, 1957. P. 352.

<sup>345</sup> Including Chittaranjan Locomotive Works, Perambur Carriage Works, the Hindustan Shipyard at Visakhapatnam, two chemical fertilizer factories in Sindri, machine-tool and telephone equipment plants in Bangalore, a precision mechanical engineering plant in the suburbs of Calcutta, a cable plant and other enterprises. In August 1956, the first reactor was commissioned at a nuclear power plant near Bombay (Ibid., p.356).

<sup>346</sup> Ibid., p. 352.

In 1956–1961, the construction of three large iron and steel plants was launched with an overall design capacity of 4.5 million tons of steel.<sup>347</sup> After the construction was finished, India's steel output more than doubled. It is significant that all these state-run enterprises were built with foreign aid.

In 1956–1961 and later, public investments were mainly channeled to sectors of the economy and its CS that were highly capital-intensive and did not attract private capital, but nevertheless were crucial to the development of not only the entire economy, but the CS private sector as well.

In most developed countries, the arrival of the government in the economy as a strategic property owner and investor after World War II stimulated rather than suppressed private sector development. The situation in India was similar. Until the end of the 1970s, the public segment of the economic complex in India grew faster than the private one. At the same time, the nonpublic segment was also growing fast during that period. In 1974–1979, 356 billion rupees (almost 16 times more than in 1951–1956) of public investments were earmarked for India's economy. During the same period, the private sector intended to channel to India's economy 156 billion rupees or almost nine times more than in 1951–1956.<sup>348</sup>

By 1980, India's primary modernization of the economy and industrialization had largely been accomplished. In 1980, the state owned such sectoral segments of the CS as transportation and communications, electric power, the oil and gas industries, about 3/4 of the iron and steel industry, and a host of other enterprises in various branches.

The Indian version of a mixed economy in the first decades after independence was distinguished by a considerable degree of state control over trading and distribution activities (for instance, in the early 1970s, the wholesale trade in rice and wheat was nationalized).

The enormous population and chronic tension of the food balance fueled this phenomenon.

Data given in Table 1 of Appendix 1 summarize India's economic development at its primary stage of modernization through 1980.

In 1980, the state accounted for 20% of India's GDP and half of the organized sector GDP, i.e., India's economy without agriculture and small enterprises. India's light industry was dominated by private capital, and heavy industry, by public capital.

It is a common view that the public sector is a competitor (often an unfair competitor) to the private sector. However, it can play the role of a tugboat for the private sector. This was happening in India in the first decades after independence.

Public sector development also affected the private sector in other ways.

Statization processes in India's economy and its CS in the first decades after independence certainly entailed a decrease in the footprint of the private sector in India's CS (including state-run companies operating in the market regime). At the same time, the footprint of the CS sector controlled by national capital was growing rather than shrinking.

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<sup>347</sup> *Ibid.*, p. 356.

<sup>348</sup> Data on capital investments projected for 1974–1979 are given in accordance with *The Economic Situation in Capitalist and Developing Countries*, 1973. P. 133.

Table 1 of Appendix 1

## Dynamics of India's economy

Indicator	1948	1951	1980	1990	2004
Electric power, billion kWh	4.58	5.86	111	289	668
Coal, million tons	29.8	34.3	119	217	403
Steel, million tons	1.5 <sup>1</sup>	1.7	9.4	15.0	32.8
Primary aluminum, thous. tons	—	3.7 <sup>2</sup>	185	—	600
Cement, million tons	1.56	3.08	18	45.7	124
Cotton fabric, billion m <sup>3</sup>	3.95	3.73	9.94	11.3	18.2
Total industrial output total industrial output, % <sup>4</sup>		100	479	836	1,955
Labor force in the modern sector, million people <sup>5</sup>	2	2.5 <sup>6</sup>	6	8	10 <sup>7</sup>
GDP (%) <sup>8</sup>	—	100	307	514	1,176

**Notes:**

<sup>1</sup> Cast iron. In 1950, 1.5 million tons of steel were produced.

<sup>2</sup> In 1950.

<sup>3</sup> Including fabric manufactured in the artisan industry.

<sup>4</sup> Including the nonmodern sector.

<sup>5</sup> Enterprises with engines and at least ten people employed and those without engines and over 20 people employed.

<sup>6</sup> In 1955.

<sup>7</sup> Employment in 136,000 industrial enterprises in 1997/1998 (Statistical Abstract India 2000, New Delhi, p. 90).

<sup>8</sup> According to Bolotin, 2001, p. 94; Russia and the Rest of the World 2006, p. 78.

**Source:** Statistical Abstract India 2000; Foreign Countries, 1957. Pp. 351–356; Capitalist and Developing Countries, 1973. P. 50; Modern Capitalism, 1985. Pp. 46, 52, 53, 56, 71, 77; Russia and the Rest of the World, 2002. Pp. 64, 66, 163, 173, 179, 195; Russia and the Rest of the World, 2006. Pp. 78, 154, 157, 174, 188, 195, 197, 198; Bolotin, 2001. Pp. 94, 106.

At the end of the 1970s, India's CS sector controlled by national capital was roughly in the same position with respect to the public sector as it was with respect to the India's CS sector controlled by foreign capital at the time it obtained sovereignty. By that time, foreign capital had been pushed to the India's CS periphery. Its place as the core of India's CS was taken by state-run companies. In the private sector, the role of the core gradually passed to companies controlled by local capital.

Specific causes of the above, other than nationalization of part of the enterprises owned by foreign capital, comprised:

- 1) an import substitution policy<sup>349</sup>;
- 2) the related policy of isolating the market with customs;
- 3) business licensing and most sectors of the Indian economy actually closed to foreign capital.

From a purely formal point of view, the economic policy conducted in India in the first decades after independence was an option of classical protectionist policy in the sense of Colbertism adapted to the specific conditions of the economic and social situation.

It is a common view that protectionist policy is conducted mainly to have local producers entrenched in the national market. Externally, this is exactly how things seem. However, there are some more fundamental reasons to choose the protectionist option out of several models of economic policy (moreover, such an option under which not only imports but also exports are regulated).

On one hand, a policy restricting imports enables local producers to dominate the market. On the other hand, when local producers are capable of selling the same goods as external producers, restriction of imports reduces market and investment risks for local producers and therefore increases their willingness to invest.

Thus, an import restriction policy (regardless of whether it is put into effect through tariffs or not) always increases the willingness of local investors to invest and therefore always promotes the development of the national CS sector controlled by local capital.

Exports of specific commodities, in one way or another, are limited when domestic producers are not able to concurrently meet both the domestic and foreign demand. If domestic demand is not fully met, it results in a reduction in economic growth rates and, as the domestic market becomes a shortage market, in inflation.<sup>350</sup>

The above reasons were behind the policy pursued in India to regulate exports in the 1950s–1980s. The export and import regulation policy in India has always been aimed at creating the best conditions, under the given circumstances, for national economic development. Naturally, the export and especially import regulation policy had a minor impact on the public sector development since the government, as a strategic investor, was not very sensitive to investment and market risks. At the same time, this policy undoubtedly accelerated the development of India's CS sector controlled by national capital and strengthened its positions in the national economy.

<sup>349</sup> The import substitution policy was inevitable because of limited exports and imports and the enormous need of India's economy for various products that were not produced in the country at all or only in limited quantities.

<sup>350</sup> However, there are examples when a policy of restricting exports of strategically critical industrial products was abandoned if it had a negative effect on the economy. For example, for many years petrochemicals have been undersupplied to the Russian domestic market because of unrestricted oil exports. Inflation-led prices on petrochemicals in Russia are closely associated with this and substantially hamper economic growth in Russia. The price jump in food prices in Russia in the fall and winter of 2007–2008 was, to a great extent, also caused by the export deregulation policy.

***Causes of the relative stability of India's corporate base of the structure of economy in the 1980s***

As far back as the 1960s and even earlier, the level of investment risks (compared with the end of the 1940s and the beginning of the 1950s) ceased to have a paralyzing effect on private corporate and noncorporate investors. It is even more typical of the 1980s. However, the ability of the nonpublic sector to generate capital to invest in capital-intensive sectors (including FES, iron and steel, chemical fertilizers, infrastructure) in the 1980s was still low.

The ability of enterprises controlled by private capital to compete with both state-run companies and foreign manufacturers also remained low despite the fact that the private sector of India's economy in the 1980s, like in the 1950s–1970s, was supported explicitly or implicitly, by the public sector pursuing a policy of low prices on products from state-run industrial enterprises, including FES products and railroad rates.

With India enormous size, the tariff policy of public railroads alone was important because it had a decisive bearing on the geographic integration level of India's economy. It can stimulate or, conversely, suppress economic development both in individual regions and across the country as a whole. Since India's railroads are owned by the government (2/3 of them were public property in the colonial period, too), the tariff policy of India's railroads has always been oriented toward enhancing economic development.

It should be noted that today economic development varies greatly in India from area to area and from one LCRM to another; hence, large-scale public investment is a necessary condition to narrow the development gap between them.

All of the above factors contributed in the 1980s to the retention, and even to the expansion in individual sectors, of government presence in India's economy.

One more reason for such retention is that India's economy and some other developing countries are invariably split into a modern (organized) sector, including the public sector and modern market nonpublic sector, and a nonmodern (unorganized) sector, including other economic forms.

India's problem is in huge size of the nonmodern sector not only in absolute, but also in relative terms. Still the nonmodern (unorganized) sector accounts for 90% of employment in India's economy. When the interaction between the modern and nonmodern sectors is governed by economic and social elements, acute social situations will inevitably arise and waves of economically critical risks, including investment risks, will be generated by the socioeconomic formation.

The processes unfolding in the nonorganized sector of a developing economy are only partially governed by market factors, as Gunnar Myrdal outlined in his work *Asian Drama*. That is why the processes unfolding in the nonmodern and modern sectors of India's economy cannot be coordinated by market mechanisms alone. Therefore, the government must be highly active economically for the entire institutional system supporting economic activity to operate efficiently.

In many cases, the necessary level of the government's regulatory efficiency can be achieved without its significant presence in the economy as a strategic investor and property owner.<sup>351</sup> However, in India's economy in the 1980s and partially today, a sufficient level of the state's regulatory efficiency cannot be achieved if the government withdraws from the economy. Put most simply, it appears that food prices should be regulated; however, this can be done without regulating railroad rates, controlling distribution networks, one way or another, and controlling prices on chemical fertilizers and their output.

As long as the nonmodern sector is the main source of income for 90% of the population, a significant presence of the government in India's economy as a strategic investor and property owner is inevitable.<sup>352</sup> In this situation, the development problem becomes unsolvable within an acceptable time unless the government creates economic conditions to decrease the proportion of the nonmodern sector in the economy and gradually modernize it. In turn, these challenges cannot be met without the government performing the functions of a strategic investor and strategic property owner.

For these reasons, the government is slowly being squeezed out of India's economy against growing GDP and industrial production.

Because maximizing economic growth rates was a priority (under the then economic conditions), there were no reasons to squeeze the government out of the India's CS and substantially liberalize it in the 1980s. That was the main cause of its relative institutional stability in that period.

It is significant that in the 1980s the presence of the public sector in India's GDP did not decrease, but rose to 25% in 1990.<sup>353</sup> In the early 1990s, the state controlled 28 leading sectors of the national economy the access to which was banned for private capital.<sup>354</sup> At that time, the government almost totally controlled the banking system. The markets of staple agricultural commodities were regulated in various ways. Import quotas were well in place. Exports and imports were regulated rather rigidly.

<sup>351</sup> This is the current situation in most developed countries. The efficiency of the state as a regulator of social and economic processes in developed countries at present is secured mainly by large-scale (as a percentage of GDP) of GDP budget reallocation by using monetary policy tools and economic laws to influence the economy. However, the sensitivity of India's economy to monetary policy tools was insignificant not only in the initial period of India's economic modernization, but even in 1980 and much later. Its sensitivity to economic laws was also minor. India's leaders from the very beginning faced the dilemma of whether or not to manage economic development at all or manage it by using rigorous methods through the public sector and by direct public investment in the economy. Because of the enormous need for development, the second path was decisively chosen.

<sup>352</sup> The modern (organized) sector of India's economy customarily implies, in terms of statistics, a sector including state-run enterprises and private agricultural enterprises that employ no fewer than 10 people (Russia and the Rest of the World, 2002. P. 64). When the modernization of India's economy began, the modern (or organized) economy employed 10 million people at best out of 152 million people of the active population (Foreign Countries, 1957. P. 351), with the total population amounting to 382 million people. In 2000, India's economy employed 389 million people (Russia and the Rest of the World, 2006. P. 59), but only 28 million people worked in the modern sector in 2000 (Russia and the Rest of the World, 2002. P. 64).

<sup>353</sup> Bulatov, 2007. P. 598.

<sup>354</sup> *Ibid.*, p. 599.

The Indian model of a modernizing economy (and hence that of a modernizing CS) had been instituted by the mid-1950s. The period between 1955 and 1990 was one of substantial institutional stability of India's economy and the related CS.

Institutional shifts in India's economy became perceptible only after 1990, because conditions for them were fostered rather gradually.

***Factors inhibiting radical changes in the system characteristics of India's corporate base of the economy after 1990***

Industrial production in India's modern sector increased between 1990 and 2006 by 5 times, and GDP by 2.5 times. In terms of GDP, India climbed to one of the first places in the world.<sup>355</sup> However, India's economic modernization is still far from complete.

India's economy boasts a large modern sector and a large modern CS. However, in terms of GDP per capita, India is many times behind developed countries.<sup>356</sup>

The opposition between the modern and nonmodern sector formed in India's economy as far back as colonial times. This opposition is expected to be eliminated after India's economic modernization is accomplished. However, the solution to this problem is still far off.<sup>357</sup> It should be noted that in 1955 the agricultural sector employed 72% of India's active population<sup>358</sup>, whereas today this figure is about 62%.<sup>359</sup> As long as this situation persists, it is not possible to squeeze the state out of India's economy.

After 1990, the government presence in the economy (also due to privatization) and the proportion of the regulated sector in the economy could gradually decrease. It is apparent that in this respect everything reasonable was done in India over the last 15 years. Until now, however, India's economy (India joined the WTO in 1994) has retained the quality of a mixed economy with a significant regulated sector.

<sup>355</sup> According to the World Bank, in terms of PPP, India's share in the world economy in 2005 was 5.9% against 20.1% of the US, 14.8% of the EU (12 countries), 6.4% of Japan, 4.1% of Germany, and 2.6% of Brazil (World Economic Outlook, 2006. P. 170).

<sup>356</sup> According to the World Bank, the annual average population of India in 2005 was 1,091 million people against 296 million in the US and 183 million in Brazil. In India, GDP per capita in 2005 was 8% of that in the US and 22% of that in Brazil.

<sup>357</sup> The effect of fast GDP growth in India (mainly due to the modern sector) is substantially neutralized because the population is growing just as fast. The same is true of food production growth. In 1951, India produced 140 kg of cereals and pulse crops per capita, and in 1955–1956 about 170 kg (Foreign Countries, 1957. P. 351, 353). In 1990, India produced 249 kg of cereals and pulse crops per capita and 229 kg in 2004 (Russia and the Rest of the World, 2002. P. 30; Russia and the Rest of the World, 2006. P. 205). The figures for 1990 and 2004 do not seem quite as comparable, but in India cereals production per capita definitely did not grow too much between 1955 and 2004.

<sup>358</sup> Foreign Countries, 1957. P. 351.

<sup>359</sup> Bulatov, 2007. P. 603.

The problem does not stem from unwillingness to abandon the mixed economy model, but rather from the impossibility of doing this when economic development remains a priority in a country where 70% of its more than one billion people live in rural areas, while about 2/3 of those living in urban areas work in the nonmodern or semimodern sector.

As a matter-of-fact, India's economy even now cannot do without development planning and programming. It is significant that the manufacturing of 800 industrial items in India has been assigned by law to small businesses (over 3 million enterprises).<sup>360</sup>

The plan adopted in India in the middle of the first decade of the 21st century envisaged the maintenance of GDP growth rates at a level of 7–8% for the next five years and the implementation of a package of actions to stimulate agriculture development and maintain industrial output growth rates at a level no lower than 10%.<sup>361</sup>

It is noteworthy that the key indicators of this plan had been met despite substantial losses of the Indian economy from the current global crisis.

However, India's economy in a certain sense is still too loose. The ability of market forces to coordinate economic processes at different points of India's economic space is limited. If India's economy is left to market forces, it will simply break down into regional modules and the CS servicing India's economy will be heavily disintegrated.

It should be emphasized that this problem is not purely an Indian one. The Russian economy also displays a low economic integration level across the country.

### ***Changes in the framework conditions governing operation of India's economy that occurred by the 1990s and their impact on India's CSF after 1990***

Although some framework conditions governing the operation and development of the institutional system of India's economy are essentially stable, it does not mean that the entire system of such conditions is also stable. In fact, it keeps changing. Substantial changes also occurred within the first 40 years of India's economic modernization, i.e., by 1990.

The main changes are outlined below.

1. India's economy dimensions have increased manifold. So did production in the corporate sector, where growth was faster than in the economy as a whole. Output in the private sector also increased manifold. By 1990, India's economy had a large public sector, on one the hand, and a comparatively large and modern private sector, on the other.
2. The technology level of nearly all of India's economy sectors increased dramatically. The competitiveness of India's economy as a whole rose substantially.
3. The CS sector of India's economy controlled by national capital was profoundly modernized. The private sector acquired the ability to compete, in certain

<sup>360</sup> Ibid. Without such protectionist laws most of the microenterprises could not have survived.

<sup>361</sup> Bulatov, 2007. P. 603.

branches of industry that earlier had almost entirely been monopolized by the government, with the public sector, not only as an efficient manufacturer, but as an investor as well. The investment potential of the private sector sharply increased. While at the beginning of the 1950s, the private sector was unable to invest in major capital-intensive projects, by 1990 it had acquired such an ability, with the significance that it was rapidly bolstered.

4. For 40 years, the state of the external economic environment had also significantly changed. The export capacity of world markets increased manifold. Now it was possible to attract large investment resources from international capital markets, an opportunity which had hardly existed in the first years after independence.

All of the above changes opened new avenues for India's economy that had not earlier existed, including the possibility of receiving significant economic benefits by the international division of labor and attraction of foreign private capital.

The former economic policy model also could not be maintained unchanged because by 1990, India's economy had encountered a series of problems that were not solvable under the former model.

So, at the beginning of India's economic modernization, there were illusions about the possibility of solving the problem of job places mainly by developing the public sector. But by 1990 or even earlier, it had become quite clear that the labor capacity of the public sector was relatively small. The employment potential of the public sector was only several tens of millions of jobs. That was not enough to meet the employment challenge in a country with a multimillion and fast-growing able-bodied population. Only the development of the nonpublic sector could have coped with the challenge.

In addition, some resources, including oil, became scarce. It was also realized that domestic production alone could not meet the demand of India's economy for state-of-the-art equipment, especially for that needed to launch enterprises that were sufficiently competitive by international standards. It was obvious that the economy's performance and, in particular, the use of capital could be enhanced by strengthening the economy's competitiveness.

One more thing necessitated the fastest increase in the export potential of India's economy, namely, the chronic deficit in the balance of payments, in particular, external debt service payments. In 1991, these accounted for 35% of revenues from exported goods and services (later this indicator was substantially reduced due to increasing exports and foreign investment).<sup>362</sup>

The need arose to adapt the institutional system supporting India's economy and CS operation to the above changes in the framework conditions and for an appropriate change in the economic policy.

These changes boiled down to the following:

- 1) gradual liberalization of the economy and, especially, of private sector operation conditions.<sup>363</sup>

<sup>362</sup> Bulatov, 2007. P. 605.

<sup>363</sup> In particular, agricultural production and the agricultural commodities market were substantially deregulated. Liberalization of the private sector as opposed to a low level of economic risks is necessary to maximize private investments in production.

- 2) gradual liberalization of foreign economic relations;
- 3) gradual privatization of the public economic complex mainly by privatizing enterprises in those sectors where the private and public sector became competitors<sup>364</sup>;
- 4) opening of a significant part of the economy to foreign capital, with some of the sectors reserved for the government and local producers.

The liberalization of economic relations had modified the domestic market protection system rather than scaled it back.<sup>365</sup> In fact, restrictive and liberal measures in foreign trade policy were balanced.<sup>366</sup> Transformations in the Indian economy through liberalization and privatization were gradual and matched the private sector's level of efficiency and competitiveness. Privatization at a symbolic price was totally excluded.<sup>367</sup>

Benefits to India's corporate base of the economy from the above measures included:

- 1) in the CS, the proportion of state-run companies decreased and that of the nongovernment sector increased;
- 2) rather fast growth in the proportion of foreign capital in the CS;
- 3) a reduction in the presence of the regulated sector in the CS, and overall, within certain limits, deregulation of the latter;
- 4) enhancement of CS competitiveness.

The CS with a low level of competitiveness and significant adjustability gradually gave way to a more or less liberalized, in terms of its operation conditions, CS with a relatively high level of competitiveness. After 1990, growth rates of India's modern sector rose overall. Production growth rates in India's corporate sector accelerated in particular. Thus, events evolved as follows:

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<sup>364</sup> Part of state-owned assets were sold to Indian entrepreneurs. Private investments in public enterprises were permitted.

<sup>365</sup> Licensing for many export and import groups was eliminated. Direct participation of the government in foreign trade was significantly scaled back. Import tariffs were from 50% in 1990 to 21% in 2001 (*ibid.*, p. 600). In 2004–2005, import duties on raw materials and semifinished products were 10%, and on finished products, 20% (*ibid.*, p. 604). In spite of India's membership in the WTO (since 1994), it appears that the complete liberalization of India's foreign trade is still far off.

<sup>366</sup> Indeed, import tariffs after 1990 declined sharply. However, in the 1990s, the rupee exchange rate was devaluated 2.2 times. In 2003, the rupee PPP exceeded its exchange rate by five times, and by 2008, the difference between the rupee exchange rate and PPP declined merely to 4. The implication is that India protects its domestic market by heavy nontariff barriers through the exchange rate policy and concurrently encourages exports. Since with an undervalued exchange rate, exporters automatically receive an "exchange rate subsidy", while importers pay a kind of "exchange-rate tax".

<sup>367</sup> Privatization for a symbolic price was excluded in India as in most other countries for sociopsychological reasons alone. But there are pure economic grounds to consider privatization for a symbolic price as unfeasible. As long as government property is privatized at a price substantially lower than its real value, the stock market becomes paralyzed. And when it is underdeveloped, it cannot mature to function efficiently (i.e., to evaluate assets in accordance with their real value). Moreover, privatization for a symbolic price automatically paralyzes the willingness of private investors to invest in relevant economy sectors.

- 1) gradually (even before 1990), changes were accumulating in the system of operation of the economy framework conditions;
- 2) after these changes exceeded a certain threshold, the economic policy began to change;
- 3) these and associated changes in the institutional systems (apart from the economic one) resulted in changes in the CS;
- 4) the CS was adapting structurally and functionally to changes in the system of framework conditions; the discrepancy between the system characteristics of the CS and the existing system of framework conditions was eliminated;
- 5) accordingly, the structural and system quality of the CS, as well as its efficiency, were enhanced: the outcome was increased efficiency of the economy as a whole.

When liberalization and privatization transformations are regarded as an end in themselves, they may reduce, rather than enhance, the CS efficiency (as well as that of the system of market agents in general). Worsening may occur if such transformations give rise to the emergence of major discrepancies between the CS operation framework conditions and its format, i.e., to a decline in the system quality of the CS.

Something like this occurred in Russia in the first decade after the onset of reforms. In India, liberalization and privatization transformations were conducted gradually to increase the economy's efficiency, whereby the efficiency of the CS continually grew. So too did the degree of its competitiveness.

However, so far, the competitiveness of India's CS is still comparatively low.<sup>368</sup>

### *The present status of evolution of the economy and tendencies of India's corporate base*

India's CS, like that of China, is floating in a sea of small enterprises. In the middle of the last decade, the traditional sector of India's industry alone had 3.2 million industrial enterprises. The value of products manufactured by them, in terms of the rupee, whose exchange rate is undervalued manifold, amounted in 2005 to about US\$115 billion.<sup>369</sup> Other sectors of India's industry even in

<sup>368</sup> In 1990, India's exports were worth US\$18.0 billion and imports, US\$23.6 billion; in 2005, US\$85.9 billion and US\$125.4 billion, respectively (Russian Statistical Yearbook, 2006. P. 791). In relation to imports, the foreign trade deficit in 1990, at the beginning of liberalization, was 31%, and in 2005, 45%. Even at current prices, India's exports in 1991–2006 were not growing faster than the industrial production. The relative competitiveness of India's economy in 1990–2005 did not increase in spite of substantial foreign capital inflows. The output of ASEAN countries is not higher than that of India: it is significant that in 2004, electric power production in ASEAN countries was 477 bn kWh against 668 bn kWh in India (Russia and the Rest of the World, 2006. Pp. 26 and 198). Nonetheless, the exports of ASEAN countries, totaling US\$544 billion, in 2004 were much more than India's in terms of value (ibid., p.26).

<sup>369</sup> Bulatov, 2007. P. 602.

1997/1998 had 136,000 enterprises employing 10 million people in total.<sup>370</sup> Non-corporate microenterprises accounted for 1/3 of these employees<sup>371</sup> and for 5% of industrial fixed assets.<sup>372</sup>

In other words, almost all of India's industrial fixed assets (and those in the nonagricultural sector as a whole) are concentrated at present in the corporate sector, including state-run companies.

In the private sector, 75 corporate groups or "houses" account for 44% of nonbank assets<sup>373</sup>. These groups compose the core of the private corporate sector of India's economy. Only a minor part of private sector capital originates from privatization. Even without the public sector, India's corporate sector now has a distinct core composed of major corporations and groups; in terms of structure, it is close to the CS of a developed country.

The total (accumulated) amount of foreign direct investment in the country's economy rose from US\$1 billion in 1985 to US\$50 billion in 2004/2005.<sup>374</sup> However, the assets of India's public sector are much greater in value. The state has remained dominant in capital-intensive sectors, which, today as in the past, are generally not attractive for private capital.

The state also remains dominant in the credit system, since state-run banks in the middle of the last decade accounted for 80% of banking operations in the country.<sup>375</sup> The percentage of foreign banks in India's banking system assets as of 2008 was small and did not increase during the current crisis.

At present, India's industry by output per capita is roughly at the same level as that of Italy and France at the end of the 1940s and the beginning of the 1950s when the CSs of these countries reached the format of a regulated CS, which was retained over the next three decades.<sup>376</sup> It is no wonder that modern India's CS has much in common with that of Italy and France of the 1950s–1970s.

This supports the assumption that when economic development is a priority, the development level starts to considerably affect the institutional characteristics of a CS.<sup>377</sup>

<sup>370</sup> Statistical Abstract India, 2000. P. 90.

<sup>371</sup> Bulatov, 2007. P. 603.

<sup>372</sup> Ibid., pp. 602 and 603.

<sup>373</sup> Ibid., p. 605.

<sup>374</sup> Ibid., p. 602.

<sup>375</sup> Ibid., p. 601.

<sup>376</sup> In 1951, electric power production per capita in Italy was 628 kWh, and in France 890 kWh (Foreign Countries, 1957. Pp. 151, 155, 240, 244). In India, as far back as 2004, this indicator was 619 kWh (Russia and the Rest of the World, 2006. Pp. 30 and 198). Electric power consumption in industry generally varies only slightly against its total consumption. This indicator in today's India is comparable with that in France and Italy in 1951. Electric power consumption in industry is rigidly tied to industrial output. Thus, it can be concluded that the industrial output in India in 2004 is comparable with that in Italy and France in 1951.

<sup>377</sup> See also below about the mentioned dependence.

*Cyclical fluctuations in the share of various property owners  
in CS assets as a specific feature of the Indian model*

The above suggests that in the initial period of India's economic modernization, in an appropriate economic and social situation, the arrival of the government in the economy helped reach an economic optimum. Roughly speaking, there was no alternative to the government as a strategic investor and resource manager both in the 1950s and much later. The state was a leading modernization agent of India's economy.

At first glance, the stronger the state's presence in the economy today, the more it will be tomorrow if political factors that affect economic policy are ignored. However, the actual situation looks different. As outlined above, in developing an originally undeveloped economy, the government gradually creates (when development is given high priority) conditions to keep its presence in the economy within certain limits.

The optimal economic policy applicable to the conditions of India were first aimed at increasing the share of the government in the economy and then, after appropriate changes to the system of framework conditions, downsize it and eventually keep it within certain limits. However, these limits were sufficiently wide.<sup>378</sup>

The dynamics of foreign capital presence in India's economy (i.e., practically in its CS) is in inverse proportion to the dynamics of the government's presence. First, the proportion of foreign capital in India's economy assets was falling fast. Had the nationalization not been performed, the proportion would be falling in any case due to massive public capital investments in the national economy.

In 1985, accumulated foreign investments in India's economy were still insignificant. However, after 1990 they began to grow rapidly<sup>379</sup>. This phenomenon was also linked with the changes in both internal and external conditions of India's economy development.

Eventually at present India's CS structure, in terms of property distribution, substantially departed from the 1990 version and neared the 1950 version.

At the same time, there are constraints in India's economy for reversing toward the 1950 format like:

- 1) low GDP per capita even by developing country standards
- 2) the inability of local capital (and moreover, of foreign capital) to replace the government as a strategic investor providing investment services to capital-intensive sectors, and
- 3) huge demand for capital investments in the nonmodernized economy sector and the infrastructure.

<sup>378</sup> The economically sound presence of the government as a strategic owner in India's economy is unlikely to be lower than that in India's former metropolis, Britain, in 1980, when the British government owned almost the entire coal, natural gas, and electric power industries; railroads; shipbuilding, half of the automotive industry, and the most of the oil industry (Economist, Jan 4, 1986. P. 72).

<sup>379</sup> The overall (accumulated) amount of foreign direct investment in the country's economy rose from US\$1 billion in 1985 to US\$50 million in 2004/2005 (Bulatov, 2007. P. 605). In real terms, after 1985 foreign investments in India's economy rose by 20–25 times.

Moreover, due to the presence of the giant nonmodern economy sector, market forces are not able to create, within India's economic space, integrating effects comparable with those that they create in developing economies. This fact also hampers the withdrawal of the government from the economy and its deregulation.

In the first period after WWII the institutional characteristics of CSs in Western Europe and Japan substantially changed due to an increase in the state's presence in the CSs. From the 1980s onwards, the characteristics began to change in the opposite direction. The same cycle is typical of India, too. However, the size of the government's presence in India's economy in each phase of the cycle is substantially higher than in developed economies.

By and large, it should be admitted that the evolution of India's CS is a normal option of the evolution of a CS emerging from an underdeveloped economy with a large, nonmodern sector and a substantial potential size of production<sup>380</sup>.

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<sup>380</sup> Chernoy, Bulletin of RUNF. 2008. No. 2. P. 18–30.

Appendix 2.  
 THE SOUTH KOREAN MODEL FOR MANAGING  
 THE CS OF A MODERNIZING ECONOMY  
 WITH A MEDIUM POTENTIAL SIZE  
 OF THE DOMESTIC MARKET

*Sources of specifics and main system characteristics of the South Korean model  
 of the corporate base of the economy*

The system qualities of the South Korean model for developing the corporate base, like those of other models, originate from the framework conditions governing the operation of the economy.

In the case of South Korea, the system of framework conditions has a rather complex structure and includes:

- 1) a group of superstable primary basic framework conditions
- 2) a group of relatively less stable primary basic framework conditions
- 3) a group of secondary (derived from the primary ones) framework conditions
- 4) a superstructure in the form of regulated framework conditions in which
- 5) the priorities of the EOSS are central.<sup>381</sup>

The above framework conditions together with certain external impacts (which are a kind of independent variables for the South Korean economy and CS) plus the specific realities of the current economic situation, including the condition of the production facilities, determine, based on mutual influence through direct and inverse links, the character of the South Korean economic policy model and the national model of manageable CS transformation.

The superstable basic framework conditions determining the operation of the South Korean economy and CS include:

- 1.1) relatively small dimensions of the territorial and demographic base of the economy;
- 1.2) the inability of the national mineral raw materials base to meet the needs of South Korean economy for raw materials (the resource scarcity factor);
- 1.3) dependence on imports and, therefore, on exports, and technological dependence on the rest of the world<sup>382</sup>;
- 1.4) a high level of economic risks of a political nature due to the presence of another Korean state, which is the institutional antipode of the Republic of

<sup>381</sup> Basic framework conditions are operation framework conditions of the economy and CS that are not directly adjustable.

<sup>382</sup> At the initial stages of South Korea's economic modernization, its technological dependence on the rest of the world was very high. The technological dependence of South Korea on developed countries still remains, since South Korea's economy still operates in a regime of new technology assimilation and improvement rather than its development.

Korea, on the Korean peninsula and the high level of tension between the two.<sup>383</sup>

The above conditions and the factor of cultural specifics make up the core of the system of operation framework conditions of the South Korean economy. Today, they still have the strongest impact on South Korean economy, just as they did at its primary stage of modernization.

At the primary stage of modernization (approximately until the end of the 1960s), the South Korean economy was heavily affected by the following basic framework conditions specific to the given situation:

- 2.1) underdevelopment;
- 2.2) in the 1950s, devastation caused by the war with North Korea in 1950–1953 and the highest economic imbalance<sup>384</sup>;
- 2.3) underdevelopment of practically the entire system of institutions supporting the efficient market mechanism operation and, above all, the underdevelopment and low efficiency of the business community (including managers performing entrepreneurial functions);<sup>385</sup>
- 2.4) underdevelopment of the infrastructure and the need for huge investments in it;
- 2.5) unattractiveness of South Korea for foreign investors and failure to attract sizeable direct private investments from abroad.<sup>386</sup>

The following constraints – also being framework conditions – on the operation of the South Korean economy in the 1950s–1960s are derived from the framework conditions of categories 1 and 2:

- 3.1) a high level of market and, especially, investment risks of various kinds, including political and inflation risks<sup>387</sup>;

<sup>383</sup> The hostilities between North Korea and the Republic of Korea ended in 1953. Nonetheless, even today, the defense expenditures of both countries take into account the possibility of a new spiral of military confrontation. Nuclear weapons developed by North Korea did not improve relations between the two states.

<sup>384</sup> Economically, South Korea, when it was part of the Japanese Empire, was tied to North Korea and Japan proper. The breakup of the Japanese Empire and the economic separation of North Korea, which accommodated almost the entire Korean energy and mineral raw material base and heavy industry (as of 1945) already before 1950, automatically led to the imbalance of South Korea's economy. The Korean War in 1950–1953 only furthered this imbalance.

<sup>385</sup> The low efficiency of South Korean business community at the time when South Korea gained independence after the capitulation of Japan in September 1945 directly resulted from the fact that when South Korea was part of the Japanese Empire, all more or less complex entrepreneurial functions in the country were performed by the Japanese.

<sup>386</sup> In 1959–1966, foreign direct investment in South Korea's economy amounted to a mere US\$29 million (Trigubenko and Toloraya, 1993. P. 134). In 1967, foreign direct investments were only US\$21 million and even in 1971 the figure was just US\$61 million (ibid.). Foreign direct investments in South Korea's economy over a long time were constrained, to a great extent, by a high level of investment risks and an underdeveloped infrastructure.

<sup>387</sup> Risks originated from:

- a) confrontational relations with North Korea;
- b) social and political instability;
- c) strong dependence of the economy on foreign trade and borrowings from abroad;
- d) monetary financing of economic development, which gave rise to inflation. In 1982–1986, South Korea departed from the inflation model of economic development (Ibid., p. 144).

- 3.2) low efficiency of the market mechanism;
- 3.3) failure of the economy to develop at acceptable rates without covering the deficit of its efficiency by regulatory actions affecting the processes unfolding in the economy and its structure-forming parameters;
- 3.4) a low willingness of the private sector to invest in the production sector and moreover in projects with a high level of capital intensity and long payback period (at least such was the situation in the 1950s–1960s)
- 3.5) the incapacity to cover investment needs (and therefore to ensure acceptable rates of economic modernization) without reallocating, one way or another, financial resources in the investment sector through regulatory channels and without splitting the investment functions between the private and public sectors where the latter assumes the function of capital investments in key capital-intensive sectors (infrastructure, power industry, etc.);
- 3.6) the dominance of the public sector in the modern sector of the South Korean economy at the onset of the modernization process<sup>388</sup>.

In the above respects, the South Korean economy at the stage of primary economic modernization did not differ much from the economies of India' (see Appendix (1) and Taiwan (see Appendix (3) at a similar stage of development. The similarity of the basic framework conditions resulted in similarity of EOSSs.

However, there are substantial differences between the EOSS underlying the Indian, South Korean, and Taiwanese economic policy models.

The EOSS underlying the South Korean economic policy model during accelerated modernization was backed by:

- the highest priority placed on development;
- a high level of priority placed on maintenance of the economic subjectness of the South Korean economy throughout the economic modernization stages;
- formation in the country, as soon as possible, of a highly efficient business community.

The Japanese business community model with a core composed of several dozen entrepreneurial family clans was apparently a stepping stone to establishing a business community with a significant ESR in South Korea. This goal is directly related to the attempt (which proved quite successful) in the relatively early modernization stages of the South Korean economy to set up a counterpart to Japanese corporations of the zaibatsu–keiretsu type in the core of the CS.<sup>389</sup>

At the same time, it should be noted that the EOSS underlying the Indian economic model did not draw upon the Japanese experience on any significant scale to create family-based major corporations, and the Taiwanese economic model (see below) by no means actively encouraged the setting up of major corporate entities in the private sector at the accelerated modernization stage.

In conformity with the system of basic framework conditions and economic objective setting, the South Korean economic policy model at the primary stage of its modernization was based on:

<sup>388</sup> In 1950, 30% out of the 860 more or less large enterprises were controlled by foreign capital (Foreign Countries, 1957. P. 445). The 1950–1953 war strengthened the state's positions in South Korea's economy.

<sup>389</sup> See, Modern Japan, 1973; Okumura, 1986.

- 1) a reasonable level of liberalization and privatization of the economy determined at each stage of its development by the need to maximize economic modernization rates for the medium to long term;
- 2) the state at any given moment using its leverage to cover the insufficient ability of the market mechanism to efficiently coordinate the interaction of market agents, the volume of appropriate adjusting actions tied with the actual efficiency of the market coordination of economic processes under the given conditions, and the increasing efficiency of the market mechanism fueling the liberalization of the operation conditions of market agents;
- 3) an active structural policy pursued to compensate for the insufficient ability of the market mechanism to shape an optimal economic structure for the medium to long term, and programmed economic development, including by using investment structure management mechanisms;
- 4) a policy of managing CS parameters pursued to bring the CS parameters in line with the existing operation framework conditions of the economy and trends of their change, management performed both through one-off regulatory actions directed at the CS (for example, the 1945–1946 nationalization) and by regulating, using legislative and financial policy tools, the operation of the reproduction loop by relatively small, at any given moment, changes that over time created considerable cumulative effects;
- 5) no objective set to minimize the public sector as an end in itself, at the same time, with the state taking measures to establish a system of major economic entities as soon as possible in the nonpublic sector of South Korea's economy;
- 6) a lack of investment ability in the private sector remedied by the state at the initial stage of South Korea's economic development, above all, by active investment activities of the public sector (i.e., by government-controlled companies), as well as by using a system of financial support for investments made through regulated channels (using government foreign borrowings, proceeds from regulated credit sources, financial resources of government-owned enterprises, the state budget, and by encouraging investments through a system of privileges)<sup>390</sup>;
- 7) where possible, a policy of compensating for scarce internal accumulation sources by attracting funds from abroad, mostly as loans (government loans, credits from private lending institutions), as well as foreign direct investment<sup>391</sup>;

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<sup>390</sup> Loans received by the South Korean government usually were tied to projects. About 60–70% of them were channeled to the development of the economic and social infrastructure. Government borrowings were used to fund railroad construction, development of public utilities, and construction of nuclear and heat power plants (Trigubenko and Toloraya, 1993. P. 87). More expensive loans from private financial institutions were primarily channeled to the development of the manufacturing industry as a sector with a high rate of return.

<sup>391</sup> In 1959–1966, South Korea's government ("state-to-state") loans amounted to US\$141 million; loans from private financial institutions, to US\$184 million; and foreign direct investments, to US\$29 million. Figures for 1959–1989 were US\$2,458 million, US\$2,647 million, and US\$659 million, respectively, and for 1976–1989, US\$15,628 million of government loans

8) a policy of attracting foreign capital as direct investment by granting to foreign investors various privileges combined with a policy channeling foreign capital into priority economy sectors (first of all, the export sector) and assuming certain obligations by companies with foreign capital in exchange for privileges<sup>392</sup>;

9) a policy of protecting major companies from takeovers by foreign owners.

The South Korean economic policy model at the accelerated modernization stage of the national economy encouraged the development, above all, of the CS core (i.e., major companies) and only then its periphery composed of small and medium firms – predominately medium corporations – manufacturing industrial products. The development of small businesses proper (the sector composed of small enterprises predominantly owned by natural persons) was stimulated last<sup>393</sup> (See below about the manageable evolution of South Korea's CS periphery in connection with the problem of the economic importance of small and medium firms).

The key features of the South Korean CS model are directly linked to the above-mentioned specifics of the South Korean economic policy model and exhibit:

- a) in the CS, the presence of a sizable sector composed of companies controlled by the state as the main or sole proprietor;
- b) in the CS core, the dominance of large conglomerates (“chaebols”) controlled by a few families
- c) relations of complementarity between the public and nonpublic economy sectors and, in the latter, relations of complementarity (and hence function sharing) between companies controlled by local private capital and those controlled by foreign capital – as a result, in the CS, a kind of “noncompetitive symbiosis” of sectors controlled by public and private capital;
- d) a high degree of programmability of CS operation, including its sector controlled by foreign capital;
- e) the presence of a large gray public sector composed of nonpublic corporations (including banks and other financial institutions) whose economic behavior to a substantial degree is programmed by government authorities;

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and US\$4,395 million of loans from private financial institutions (*ibid.*, p. 134). South Korea started to receive considerable funding from abroad through government and private lending channels (apart from American aid) and as foreign direct investments only after 1975, i.e., only after the primary modernization of South Korean economy was over and the level of investment risks of a political nature substantially decreased. American aid before 1977 totaled US\$13 billion, out of which US\$7 billion was military aid, while US\$6 billion was direct infusions in South Korea's economy (*ibid.*, p.134).

<sup>392</sup> *Ibid.*, pp. 89, 91. At the early stage of modernization of South Korea's economy, corporate, income, and property taxes were not levied against companies with foreign capital; customs duties were not levied against items imported for production purposes. The policy of attracting foreign capital as practiced in South Korea (like in Taiwan and China) was also an attempt to remedy the insufficient efficiency of the business community by “importing entrepreneurs.”

<sup>393</sup> About the attempt made after 1997 to turn small and medium firms into a locomotive for the economic development of South Korea see: Lee Hyun Jae et al., 2008.

- f) strict governmental control over the credit system in combination with large dedicated government-owned banks lending to certain categories of borrowers, including investment lending<sup>394</sup>;
- g) due to the presence of a considerable number of special economic zones, considerable variability across the country in the operational conditions of corporate entities and their functional characteristics<sup>395</sup>;
- h) the significant presence of companies controlled by foreign capital in the CS periphery as opposed to their absence in the CS core (composed of chaebols and controlled by the public capital of companies);
- i) insignificant amounts of capital outflows.

South Korea's CS retained the system quality of the above model as long as the input in its specifics of system-critical individualizing features "a", "b", "c", "f", and "h" remained sufficiently large (see above). This input changed along with changes (including changes in the EOSS) in the framework operation conditions of South Korea's economy. However, until the mid-1990s, it had been large enough for South Korea to retain the above model of CS development.

Externally, this was manifested by steadily high growth rates of South Korea's economy up to the 1997 crisis. Afterwards, the South Korean economic policy model and hence the South Korean CS model began to erode substantially (see below).

### *Main features of the South Korean option of the system for managing the system characteristics of the economy's corporate base*

#### *Targets of regulatory actions*

The South Korean option of the system for managing CS characteristics at the accelerated economic modernization stage was designed to regulate a significant number of CS parameters (in aggregate constituting the regulatory profile of the CS), including:

<sup>394</sup> In the mid-1980s, the system of government-run banks, apart from the Bank of Korea, comprised seven specialized banks. In fact, part of these banks were owned by private persons. Among them was the Korea Exchange Bank specializing in foreign exchange transactions (privatized in 1989), the Export-Import Bank (which extends loans not only for ordinary export-import operations, but also for investment projects of South Korean firms abroad), the Industrial Bank (which extends loans to SMEs), the Civil National Bank (which extends loans to the public at large), the Housing Bank (which extends loans mainly for housing construction), and the Civil Bank of Long-Term Lending (in the early 1990s, it was a nonbanking institution).

<sup>395</sup> In the early 1990s, South Korea had 26 specialized sectoral industrial zones, including two zones of export production, open to local and foreign capital. Out of these, six zones were controlled by the central government; 14 zones, which were supposed to encourage the industrialization of backward regions, were controlled by the provincial governments; two were managed by private corporations and two (in Masan and Iri) were assigned to export zones. In the mid-1980s, the specialized industrial zones accommodated 3,300 enterprises employing 500,000 people. Later, their number increased (Trigubenko and Toloraya, 1993. P. 93; Trigubenko and Moiseyev, 1992. P. 49).

- a) system-critical parameters or system characteristics of the CS (see above);
- b) functional characteristics of the CS (competitiveness, export potential, dependence on imports, goods-to-services ratio, investment opportunities, sensitivity to external market risks, financial stability, level of integration into the GCS, ESR).
- c) parameters characterizing the state of the CS production base (technology level, main structure characteristics);
- d) parameters showing the level of liberalization (regulation) and openness (closedness) of the CS or its individual segments, since these parameters have a considerable impact on all intercorporate interactions and, eventually, on the system characteristics of the CS.

*The EOMS and the system of regulatory actions governing manageable CS transformation*

Basically, the South Korean model of economy and CS operation management features:

- a) a high regulatory capacity of the governing action system as a whole (see above);
- b) a multichannel system of regulatory actions directed at the CS and its segments;
- c) a wide variation in specific administrative actions directed at designated groups of corporate entities depending on the parameters of the latter (dimensions, functional specifics, competitiveness, etc.) and fluctuations in the economic situation<sup>396</sup>;
- d) the use of a system of financial support for investments through regulated channels (including public sector channels) as one of the main tools (the main tool in the primary modernization of the South Korean economy) to affect the reproduction process parameters determining the state of the production base and functional characteristics of the CS for the medium to long term;
- e) with significant changes made within a short time in the system of administrative actions directed at the CS (i.e., under the reforms proper), the use of combined packages of administrative actions consisting of a basic package of administrative actions and a complementary balancing package of administrative actions to compensate for negative effects generated by the basic package of administrative actions<sup>397</sup>;

<sup>396</sup> For example, in the course of reforms carried out in the 1980s, economic liberalization elements were combined with social deliberalization elements (improvement of the public healthcare and pension systems and expansion of trade union rights).

<sup>397</sup> Concurrent regulatory actions at different stages may target, for example:

- 1) conglomerates--chaebols and their subordinated major companies;
- 2) small and medium enterprises (companies);
- 3) corporations predominantly oriented toward the domestic market;
- 4) corporations predominantly oriented toward the external market;
- 5) trading companies engaged predominantly in export operations;
- 6) the CS sector composed of corporations controlled by foreign capital;
- 7) special economic zones (and hence companies operating in these zones);
- 8) the system of lending institutions, etc.

- f) concurrently operating dedicated subsystems of selective administrative actions directed, at any given moment, at a combination of certain elements, structures, and subsystems of the CS;
- g) high variability in the employed regulatory action packages in conformity with the economic situation and a high level of adaptability to changes in the economic conditions. As outlined below (see Appendix 3), the main functions of the EOMS of South Korea in general are similar to those in Taiwan.

The South Korean EOMS model uses the following tools to channel administrative actions directed at the economy in various combinations (depending on the situation):

- 1) a system of graduated taxation of economic entities;
- 2) a CS sector controlled by the state;
- 3) specialized banks lending in accordance with the credit plan system;
- 4) other targeted extrabudgetary funds set up using different methods;
- 5) a system of tax and other privileges granted to certain categories of corporate investors (with broad variability in privileges);
- 6) a system of tariff and exchange rate regulation;
- 7) nontariff import barriers (including a selective consumption tax on some imported commodities);
- 8) a license and quota system;
- 9) direct financial support to some categories of corporate entities;
- 10) participation of the state in the investment projects of nonpublic corporate entities;
- 11) administrative reservation of some economic activity for certain categories of economic entities;
- 12) direct administrative actions directed at markets;
- 13) direct administrative support to some categories of economic entities;
- 14) informal harmonization of the positions of the administration and entrepreneurial entities on certain issues of mutual interest (this especially concerns superlarge corporate entities—chaebols);
- 15) finally, direct administrative actions directed at corporate entities (this practice was very popular in the 1950s–1960s, and it was still in place in the mid- and late 1990s and even at the beginning of the 21st century). Thus, the South Korean model of operation of the economy management focuses (which is typical of a modernizing economy) concurrently on management of the CS operation framework conditions and the above-listed structure and system characteristics (and the format on the whole) of the CS.

At the same time, the importance of the EOMS subsystems listed above kept changing depending on the stage of modernization of the economy and corporate base.

So, the impact of governing subsystem EOMS<sub>a</sub> (affects the parameters of the current phase of the reproduction process to ensure efficient functioning of the market mechanism at a given moment and in the short term) on economic growth was highest during the primary stage of modernization of the South Korea economy, which was characterized by various factors that negatively affected economic growth and hence by the need to compensate for such impacts. Management was

performed predominantly through direct administrative actions directed at the economic behavior of corporate entities (including government-controlled companies) and hence the CS.

The EOMSb subsystem (performing the programming function) had a stable and substantial impact on economic growth and its structure until the end of the 1970s. Then this impact began to decline.

The impact of the EOMSb subsystem (which directly and indirectly affects the system-critical characteristics of the corporate base of the economy) on economic growth and the system characteristics of the corporate base of the economy has been significant throughout the entire period in which South Korea's economy has operated. In the 1950s–1960s, and partially in the 1970s, the impact was manifest in the establishment of a system of large conglomerates—chaebols; in the 1960s–1980s, in the stimulation of development of the economy's export-oriented sector segment controlled by foreign capital; and after 1975, in the stimulation to establish business groups with a core composed of major companies and a periphery composed of small and medium firms.

*Functional specifics of the parameters of the South Korean option of the system for managing the corporate base of the economy*

The parameters of South Korea's CS at the different stages of its evolution until the 1997–1998 crisis to a substantial degree resulted from the efforts of government authorities to manage the implementation of the following main functions:

- 1) compensation for the lack of willingness of nonpublic sector agents to invest (especially in capital-intensive production projects) by using:
  - a) state investment activity;
  - b) loans granted to the private sector through government-controlled banks;
  - c) state stimulation of investment activity of nonpublic corporate entities and management of this activity<sup>398</sup>;
- 2) encouragement of the establishment of major companies as a stepping stone for setting up conglomerates – chaebols;
- 3) encouragement of export-oriented sector development;
- 4) management of foreign capital utilization (this function had been actually scaled back by 1993);
- 5) encouragement of small and medium business development;
- 6) protection of small and medium companies from takeovers by large companies and TNCs<sup>399</sup>;
- 7) encouragement of the development of high-tech industrial sectors and the R&D industry;
- 8) management of local capital outflows (at present this function has also been scaled back).

<sup>398</sup> Lee Hyun Jae et al., 2008.

<sup>399</sup> In the middle of the last decade, limitations on capital investments in already existing small and medium companies were still retained (major companies and foreign investors were banned from acquiring a controlling interest in small and medium companies).

Apart from the above-listed functions, the system for managing South Korean CS parameters has implemented the following “secondary” regulatory functions.

- A. Compensation for the insufficient efficiency of market regulation of the economy (under a deficient institutional system and high-level risks) by direct and indirect actions directed at economic processes. Until the 1970s, direct actions aimed at remedying the insufficient efficiency of market regulation had a relatively significant importance.
- B. Management of national production competitiveness through:
  - a) encouraging capital investments to enhance competitiveness;
  - b) a policy of low prices on goods and services produced by the public sector;
  - c) public financing of R&D, also through the financial participation of the government in R&D programs implemented by private corporations;
  - d) transferring technology developed in the public sector (primarily in the defense sector) to the private sector;
  - e) encouraging the development of high-tech sectors;
  - f) attracting foreign capital in technologically backward sectors;
  - g) encouraging a rise in the technology level of small and medium businesses;
  - h) a structural policy.

### *Changes in the South Korean CS core in the course of its controllable transformation*

#### *Changes in the South Korean CS core at its primary stage of modernization*

In 1955, South Korea’s CS and its core were composed mainly of major government-owned companies based on Japanese property nationalized after World War II. Moreover, part of the companies (predominantly American) operating in that period could also be assigned to South Korea’s CS core of 1955.<sup>400</sup>

It should be noted that in Taiwan (see Appendix (3), government-controlled companies on the whole retained their positions in the CS core assets until the 1980s.

In South Korea, comparatively soon they had to make room in the CS core for chaebols, which are conglomerates or groups controlled by family-based local private capital.<sup>401</sup> The state actively supported (also by investments) the establishment

<sup>400</sup> In 1950, 30% of 860 large enterprises in South Korea were controlled by foreign capital (Foreign Countries, 1957. P. 415).

<sup>401</sup> The chaebol in terms of their main features considerably corresponds to the zaibatsu (“chaebol” is the Korean pronunciation of the same characters in Japanese) that had existed in Japan before World War II (Trigubenko and Moiseyev, 1992. P. 16). A more or less big chaebol, like a zaibatsu, comprises multibusiness companies. It may include, apart from industrial companies, companies specializing in trade (including foreign trade), services, construction,

of several dozen chaebols practically from scratch, within less than two decades.<sup>402</sup> In the second half of the 1980s, there were about 50 chaebols in South Korea.<sup>403</sup>

*Economic functions of conglomerates—chaebols and their place in the South Korean CS core*

At the end of the 1980s, 22 South Korean chaebols controlled over<sup>350</sup> companies.<sup>404</sup> In that period, the total sales of these companies employing about 900,000 people exceeded US\$200 billion, in terms of the exchange rate.<sup>405</sup> In 1985, the five largest chaebols produced 23% of industrial output and 27% of exports; 30 chaebols, 40% of industrial output.<sup>406</sup> In 1988, chaebols accounted for 50% of the total assets of South Korean companies, including government-owned companies.<sup>407</sup> The assets of South Korea's CS core in 1988 were almost entirely owned by chaebols (predominantly) and government-owned companies.

The situation with the monopolization of commodity markets points indirectly to the role chaebols played in the South Korean economy as far back as the mid-1980s. In 1985, free markets where the share of the largest suppliers (chaebols, as a rule) did not exceed 60% included markets trading in less than 25% of types of industrial products.<sup>408</sup> Chaebols accounted for nearly all R&D spending in South Korea, apart from those made by the government. They also manufacturer most

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or finance. For instance, Hanjin, in size a rather moderate chaebol (18 companies) in 1990 specialized (with sales of US\$7 billion) in the following areas: “the aerospace industry, air transportation, airfields, information, ground and sea transportation, construction, cattle breeding, mineral waters, office space leasing, finance (including securities trading, insurance, trading, and banking operations), medical service, and education” (ibid., pp. 59, 60). Key activities of the chaebol Samsung, which ranked second in 1989 in sales (over US\$30 billion) comprised “trade, electronics, heavy and precision engineering, aerospace, chemistry and petrochemistry, food, textile, garment, shipbuilding, construction, engineering, paper industries, mass media, sports, art and culture, the hotel industry, medical service, department stores, credit cards, and insurance” (ibid., p. 56). In 1988–1989, this chaebol employed about 180,000 people, apart from a host of independent firms, predominantly small and medium, cooperating with the chaebol companies. In the period under review, foreign trade firms played the role of a parent company in chaebols (Trigubenko and Toloraya, 1993. P. 49).

<sup>402</sup> Historically, chaebols emerged from family firms and their achievements are closely associated with the retention of family control over chaebol companies (ibid., p. 14). It seems that the establishment of efficiently functioning counterparts to chaebols beyond societies adhering to a certain system of cultural and social values is impossible. It seems that this is not the only case when the type of economic organization is constrained by social and cultural traditions.

<sup>403</sup> Ibid., p. 12.

<sup>404</sup> Ibid., pp. 49–53.

<sup>405</sup> Ibid. The four largest chaebols – Samsung (29 companies), Hyundai (over 30 companies), Lucky Goldstar (30 companies), and Daewoo (29 companies) – by the end of the 1980s were in a unique position in South Korea's economy. At the end of the 1980s, these “big four” employed in total over 500,000 people and in aggregate earned US\$100 billion in terms of the exchange rate (ibid., p. 49–51) and much more, if calculated in PPP terms of the won, South Korea's currency.

<sup>406</sup> Ibid., pp. 48 and 49.

<sup>407</sup> Trigubenko and Moiseyev, 1992. p. 54.

<sup>408</sup> Trigubenko and Toloraya, 1993. p. 49.

medium- to high-technology products and hold the main part of South Korea's ESR.

An economic environment with a high level of market investment risks and restricted capacity to attract financial resources from abroad, as well as a social environment characterized by developed socialization forms based on kinship relations, fueled the emergence of chaebols and Japanese zaibatsu.

As mentioned above, the standard chaebol includes companies operating in various sectors of the economy (industry, trade, services, construction, or finance). The multibusiness nature of chaebols alone automatically reduces its sensitivity to market and investment risks (losses in one activity are usually covered by earnings from other activities). The standard chaebol in the 1980s had in its structure a trading company (companies) and/or financial entities (banks, financial companies, insurance companies, etc.) that allowed the use of trading profits as a source of accumulation, on the one hand, and the attraction of financial resources from abroad, on the other.

Naturally, the South Korean government has actively stimulated the development of chaebols. However, the rapid growth of the economic mass of chaebols is primarily associated with the organizational principles underlying chaebols; in South Korea's specific sociocultural situation, this has become rather effective. Chaebols have convincingly proven their efficiency as successful commodity exporters and, later, as successful capital exporters.

The system quality and functional completeness of South Korea's CS (including the growth of its competitiveness and ability to manufacture high-tech products) after 1955 grow mainly due to the expansion of the chaebol system. Three decades ago they became an institution that has concentrated the bulk of South Korea's production and technological potential and ESRCs, and this continues today.

The growing proportion of chaebols in the nonpublic sector of South Korea's CS gave rise to an increase in the market self-regulation efficiency of South Korea's CS, its economy as a whole, and hence, to a substantial increase in system quality. As a result, the ability of South Korea's CS to develop by self-financing and attracting borrowings from financial markets increased.

Eventually, all these processes led to a partial scaling back of administrative actions directed at South Korea's economy. First, the chaebol system was established and then, based on the development potential created by it, South Korea's economy embarked on a liberalization process.

However, this liberalization unfolded gradually: the state, realizing the economic power of the chaebol system as a national CS core, was distrustful of the future results of their activities in the liberalized regime and the implications of these activities for the stability of the national economy.

Soon it became clear that such distrust was well-grounded. The weakening of state control over lending and investment activities resulted in the fact that many private corporations in South Korea (where the biggest chaebols played first fiddle in this process) started to borrow heavily from Western (primarily American) banking and investment institutions. Simultaneously, due to the chronic external deficit of the country, external public debt began to grow.

As a result, by the onset of the 1997–1998 economic crisis, South Korea's economy was deep in a debt trap of external loans with external public debt alone exceeding US\$200 billion.<sup>409</sup> Later, this made the operation and development of the South Korean economy highly dependent on the dictates of international financial institutions (primarily the IMF); i.e., it caused a substantial decline in the ESRst and ESRCS.

***Impact of the policy of encouraging the development of small and medium firms on the periphery and the system characteristics of South Korea's corporate base of the economy***

In 1955 (after the rehabilitation of South Korea's economy, which had been badly hurt during the Korean War in 1950–1953), almost the entire workforce of the nonagricultural sector of South Korea's economy was engaged in micro-, small, and medium enterprises employing 1–9, 10–49, and 50–300 people, respectively.

The profound modernization of South Korea's economy (in the state of its initial stage) necessitated the establishment of a national system of large enterprises. Therefore, South Korea's economy at its initial stage of modernization focused almost entirely on encouraging the development of large enterprises and companies, i.e., on building up a CS core.

However, over time (practically since the 1970s), the sector of small and medium firms began to receive increasingly stronger support. This was prompted by the following reasons.

*First*, the need to modernize the system of SMEs was increasing and, therefore, their technology level and competitiveness had to be enhanced.

*Second*, the Japanese experience showed that the cost of semifinished products and components manufactured by small and medium firms using low to medium technology was usually lower than those manufactured by large firms due to relatively lower labor costs, a higher intensity of labor utilization, and lower capital intensity of production.<sup>410</sup>

*Third*, South Korea's economic modernization showed – like in India (see Appendix (1) – that the labor intensity of the sector of large enterprises was too limited to absorb the labor force coming from the agriculture sector to industry. By and large, the segment comprising micro- and small enterprises had to be developed to meet the challenge.

Around 1980, South Korea already had a rather developed system of government encouragement of small and medium businesses. Later, the system underwent certain changes, but they were not fundamental.

The policy of supporting small and medium businesses was always strongly influenced by economic objective-setting priorities. First, when economic develop-

<sup>409</sup> The Economist, March 7, 1998.

<sup>410</sup> Masahiko, 1988.

ment was given top priority, the strategy would focus only on promising small and medium companies; then, when the employment problem worsened, emphasis shifted to all small and medium companies needing support; After 1998, as the problem of competitiveness became urgent and an acute need to accelerate exports arose, support again centered on promising companies.<sup>411</sup> Since the beginning of the 21st century, as the employment problem has worsened, microenterprises have also been receiving stronger support.

In the CS (i.e., without noncorporate producers), the policy of encouraging the development of small and medium businesses pursued in South Korea has resulted in:

- a system of cooperative links between small and medium firms, on the one hand, and large firms, on the other;
- the establishment on this basis of more or less stable business groups and an increase of their proportion in the CS;
- splitting of the mass of small and medium firms manufacturing industrial products into firms working directly for end-users and primarily for the domestic market, and firms predominately producing intermediate goods (semifinished products, units, components) under contracts with large companies<sup>412</sup>;
- a rise in the share of small and medium firms in the overall industrial employment, as compared with 1970.<sup>413</sup>

However, attempts to create new technology generators (venture companies) based on small firms capable, in aggregate, of competing in this respect with large companies has been unsuccessful.<sup>414</sup>

The scaling back of the system of state regulatory actions directed at Korea's

<sup>411</sup> Lee Hyun Jae et al., 2008. Pp. 12–13.

<sup>412</sup> In the early part of the last decade, in industry, the second category included 60% of small and medium firms. (Lee Hyun Jae et al., 2008. P. 126). This category in South Korea's automotive industry comprised 70% of the component and spare part suppliers against 40% in the US and Europe (ibid.). For example, the carmakers Hyundai and KIA were receiving 20,000 types of components from 5,000 suppliers (ibid.).

<sup>413</sup> In 1970, in South Korea, SMEs (but not microenterprises) accounted for 49% of the industrial workforce and 30.3% of industrial production. In 1988, the figures were 58.7% and 39.4%, respectively (Trigubenko and Toloraya, 1993. P. 55). By 2004, these indicators had grown further.

<sup>414</sup> At the end of 2004 (after the boom related to the establishment of venture companies on a large-scale was over), the country presumably had 10,000 companies and it was projected that in 2008 there would be 30,000 (Lee Hyun Jae et al., 2008. Pp. 28, 56). In practice, they were firms that spent a considerable percentage of sales to develop new technology and its promotion to manufacturing. It was assumed that the encouragement of venture companies would notably raise their contribution to exports. However, this did not happen. In 2004, South Korean exports amounted to US\$254 billion (Russia in Figures, 2007. P. 322). Venture companies accounted for only US\$10 billion of 2005's exports (Lee Hyun Jae et al., 2008. P. 32). Reliance on the mass replication of small and medium venture firms, by and large, proved unjustified. There were good reasons for this. In particular, it was revealed that new technology developed by a small and medium firm cooperating with a major company could hardly be protected, nor the firm proper, from being taken over by the major company. That makes meaningless any significant spending, unless it is sponsored by government, on new technology development for most small and medium firms.

economy as a whole, including its CS (and especially its periphery), due to promotion of the development of small and medium firms, substantially slowed down rather than accelerated. At the turn of the century, the periphery of the nonpublic sector of South Korea's CS (precisely because it was composed of small and medium firms) received more support from the government than the nonpublic segment of South Korea's CS core. It was significant that the intensity of relevant regulatory actions was increased rather than decreased until approximately 2004.

Until recently, the presence of public (or government-controlled) institutions specializing in lending to small and medium firms was a condition for efficient financial support to programs encouraging the development of small and medium businesses in South Korea. For this reason, the policy of encouraging the development of small and medium firms always inhibited the withdrawal of the government from South Korea's banking system.

The sphere of small and microfirms, whose efficiency in most cases highly depends on personal ties of their owners and managers and on the size of the shadow part of the business, has low attractiveness for foreign investors (even without South Korean statutory restrictions, which until recently had been imposed on the proportion of shares in SMEs that can be acquired by foreign investors and large companies in general).

Accordingly, the policy encouraging the development of medium, small, and microfirms (especially small and microfirms) helped maintain, and continues to do so, the economic subjectness of South Korea's economic system, and indirectly its CS, at a relatively high level even when South Korea's economy operates in a virtually open regime.<sup>415</sup>

### ***Impact of the policy turning South Korea's economy into an export-oriented economy on the system characteristics of the economy's corporate base***

Since 1962, South Korea has pursued a policy of boosting exports. However, the impact of this policy on the system characteristics of South Korea's economy and its CS was perceived only later.

In 1966, after the accomplishment of the first five-year plan, South Korea was still not an export-oriented economy. Nor was it one even in 1971 (18 years after the accelerated modernization started). In 1971, the ratio of exports to GDP in South Korea was 16%, while in Taiwan it was 31% and in Singapore, 78%.<sup>416</sup> However, already in 1976 this ratio in South Korea rose to 31%; i.e., it reached Taiwan's level as of 1971.

<sup>415</sup> Foreign portfolio investors are usually attracted by large companies (since the financial standing and competitive positions of microfirms, especially if they are subcontractors of large companies, are always uncertain). Therefore, the growing proportion of small and medium firms in the CS (moreover, when capital investments of foreign investors and major companies in these firms are restricted) is a factor that increases the independence of the CS and the system of economic entities as a whole from the world economic system.

<sup>416</sup> Trigubenko and Toloraya, 1993. P. 134.

The transformation of South Korea's economy into an export-oriented economy took about 15 years starting from 1962.

South Korea's CS underwent a number of changes while implementing the policy aiming at an export-oriented economy:

- 1) changes associated with the development of the common economic base of the export sector of the manufacturing industry (the infrastructure for producing feedstock and semifinished products used for manufacturing export products);
- 2) changes directly associated with the development of the CS export sector;
- 3) changes associated with the formation of LRCMs based on special industrial zones specializing in manufacturing export products and distinguished from the rest of the CS by their system, functional, and technological characteristics.

The role of economic policy was especially important in establishing the export sector of the CS.

South Korea could not meet the objective of rapidly expanding the range of export products and enhancing the technological level of export production within acceptable timeframes (and sometimes it could not do it at all) without massive foreign capital inflows. A package of measures was required (including rather radical ones) to attract foreign investors into export-oriented sectors. Such investors were granted not only the same rights as local investors, but also various additional privileges whose scope and content depended on the export production where the investment was made.

On the whole, the South Korean practice of attracting foreign investments for setting up export-oriented productions did not differ from that of Taiwan (see Appendix 3). Later (after 1980), China's policy of attracting foreign investments (again, primarily for setting up export productions) essentially replicated the South Korean and Taiwanese experience.

As of the mid-1980s, over 3,000 South Korean enterprises with foreign capital accounted for 1/3 of export products. These enterprises employed about 10% of the industrial workforce.<sup>417</sup> Thus, a large segment composed of companies with foreign capital emerged within South Korea's CS.

Incentives were offered not only to foreign entrepreneurs investing in export-oriented products, but also to local investors engaged in the same production activities and local companies manufacturing export products. As a consequence, when the export sector of South Korea's economy was at the accelerated development stage, the corporate sector split into (1) a sector whose development was stimulated in every way (export and high-tech production) and (2) the rest of the CS.

The policy of encouraging the development of export-oriented productions resulted in the geographical splitting of South Korea's CS into a CS segment operating under ordinary conditions and segments that are in effect LRCMs operating under special conditions within special economic zones.

Under the South Korean (as well as under the Taiwanese and generally East Asian) option, special economic zones typically feature:

<sup>417</sup> Trigubenko and Moiseyev, 1992. Pp. 44 and 49.

- 1) an infrastructure system supporting operation of the industrial sector of the economy and conforming to the standards of developed countries;
- 2) concessional tax treatment;
- 3) a special legal regime of operation facilitating as much as possible export and import operations (since the latter are associated with imports of raw materials and semifinished products for manufacturing export products).

The infrastructure ensuring the efficient operation of enterprises located in those zones was built using public funds.

By 1990, 70 special industrial zones, including two free export zones (in Masan and Iri), had been set up in South Korea.<sup>418</sup>

The establishment of a system for organizational support for exports was a substantial aspect of the transformation of South Korea's economy into an export-oriented economy. Apart from purely administrative bodies, the system included:

- the Export–Import Bank;
- the paragovernmental Korean Trade Promotion Corporation (established in 1962);
- sectoral associations and federations uniting the producers and exporters of relevant products.

Special intermediary trading companies (in fact, specialized FCMs) engaged in export and import operations are also additional elements of the system of organizational support for transforming South Korea's economy into an export-oriented economy. In this respect, the South Korean practice from the start followed the Japanese pattern.<sup>419</sup>

The CS of South Korea became substantially more sophisticated as a result of South Korea's economic transformation into an export-oriented economy.

*First*, it had been institutionally diversified (due to the emergence and expansion of a sector controlled by foreign capital in the CS).

*Second*, typical of economies in which a significant part of output comes from the export sector, South Korea's CS split into a sector directed primarily at the domestic market and displaying a high proportion of government-owned enterprises and a low proportion of enterprises with foreign capital in the assets of the given sector, on the one hand, and a sector targeting the foreign market and displaying a low proportion of companies with public capital, a high proportion of companies with foreign capital, and a relatively higher technological and organizational level of production, on the other.

<sup>418</sup> Trigubenko and Toloraya, 1993. P. 45.

<sup>419</sup> Specialized foreign trading companies always played a noticeable role in the export expansion of Japan's economy. South Korea borrowed the Japanese experience already at the early stage of development of the local CS. It is significant that a substantial part of chaebols (out of those available in the 1980s) emerged from export–import companies. In the 1980s, a significant part of South Korean exports came from so-called “general trading companies” entitled to export any goods and perform the functions of trade agents (*ibid.*, p. 65). The export efficiency of the economy relies substantially on its positions in the world trade infrastructure (availability of marketing networks, counterparts, etc.). Basically, the vast majority of manufacturers, due to the limited size of output, are simply unable to occupy strong positions in the international trade system. The presence of specialized foreign trade companies acting as intermediaries therefore dramatically increases the export potential of the CS or, at least, its segment composed of small and medium companies.

*Third*, the CS split into segments composed of corporations (enterprises) deployed on the grounds of special industrial zones or outside of them.

*Fourthly*, a sector supporting export enterprises proper had been formed to comprise:

- 1) enterprises manufacturing intermediate goods consumed by enterprises manufacturing export products;
- 2) a system of service (nonfinancial) support for the export sector;
- 3) specialized export companies that match, functionally and organizationally, the Japanese prototype and market their products internationally.

### ***Changes in the level of system quality and economic subjectness of the CS in different economic modernization stages: the South Korean experience***

Under a more or less modernized economy in which the CS accounts for the bulk of GDP, the high efficiency of the CS always presumes high efficiency of the economic mechanism. When a lack of development is perceptible, GDP growth rates are not high (unless GDP growth is related to significant net financial inflows from abroad).

External financial inflows boosted South Korea's economic development mainly in the 1950s (chiefly, they were American "political" investments in the country, which was a strategic ally of the US in its confrontation with North Korea, China, and the Soviet Union). Already in the 1960s, these inflows were not high compared with GDP and later became negative. In 1981–1989, South Korea repaid US\$75.9 billion of foreign debt, while in the same period it received about US\$20 billion as new loans and about US\$3.7 billion as net foreign direct investment.<sup>420</sup>

In spite of negative net financial inflows, South Korea's GDP growth rates in the 1970s–1980s were very high, barely lower than in the 1960s (Table 1, Appendix (2)).

*Table 1 of Appendix 2*

#### **Historical GDP for South Korea and the International Economy (without China and centrally planned economies), %**

<b>GDP growth per development decade</b>	<b>1970 to 1960</b>	<b>1980 to 1970</b>	<b>1990 to 1980</b>	<b>2000 to 1990</b>	<b>2006 to 2000</b>
South Korea	+134	+127	+139	+80	+31
Global economy (without China and centrally planned economies)	+63	+45	+34	+37	+15
Ratio of GDP growth per decade (South Korean economy to global economy)	2.2	2.8	3.9	2.2	2.1

**Sources:** Bolotin, 2001. P. 94; Russia and the Rest of the World, 2002. P. 82 and 2006. P. 89.

<sup>420</sup> Trigubenko and Toloraya, 1993. Pp. 100, 134.

Growth rates of South Korea's economy through 1990 (effectively through 1996) significantly outstripped those of the international economy. This suggests that throughout the entire period under review, the South Korean economic and CSs enjoyed a substantial ESR and high system efficiency.

The gradual erosion of the South Korean economic and CS model until the mid-1990s had no bearing on the growth rates of South Korea's economy, since it was taking place when the technology quality and competitiveness of corporate entities were growing rapidly. This stability was maintained because erosion-driven changes did not cause substantial imbalances between the parameters of South Korea's economic system and CSs, on the one hand, and the set of basic framework conditions, on the other.

This balance was disturbed gradually between 1997 and 2001, caused by:

- 1) the 1997 monetary and financial crisis, which changed the operation framework conditions of the South Korean economy (the crisis revealed that South Korea's foreign exchange reserves were insufficient as compared with the accumulated debt owed by the state and corporations to nonresidents)<sup>421</sup>;
- 2) changes in the economic policy toward a radical departure from the principles underlying the South Korean economic policy model, first, under the pressure from the IMF and, then, due to South Korea's commitments related to WTO membership.<sup>422</sup>

The South Korean economy had become more liberalized and open to foreign investors and less statized than before 1997. Changes occurred in the EOSS; building up the export capacity and ensuring a high external surplus were assigned a higher priority than improving the ability of the economy and CS to ensure high development growth rates. The ability of the South Korean economy to service foreign debt after restructuring its economic policy in conformity with the neoliberal economic paradigm had increased.<sup>423</sup>

However, the negative consequence of this restructuring was growth in investment risks and, hence, in the trend to reduce total accumulation rates and, especially, the proportion of investments in production in GDP. Moreover, the investment fund stabilized. The average total accumulation level for 2000–2005 was 1% lower than in 1996.<sup>424</sup> The ability of the CS to finance the reproduction process decreased.<sup>425</sup> Hence, so did its system quality, if it is measured by the ability of the CS under the given framework conditions to perform the functions of a develop-

<sup>421</sup> Russia and the Rest of the World, 2002. P. 82 and 2006. P. 79.

<sup>422</sup> After 1997, as South Korea's economy became more liberalized and open to foreign investors, the value of the won was reduced (which automatically strengthened the positions of foreign investors in the local market) and privatization was launched. In 1996, the format of South Korea's economic policy in the main still matched the format of the South Korean economic model in its classic, for this country, version. At present, it is much closer to the format of the neoliberal economic paradigm than to that of the South Korean economic model in the 1970s–80s.

<sup>423</sup> Russia and the Rest of the World, 2006. P. 322.

<sup>424</sup> *Ibid.*, p. 89.

<sup>425</sup> The ability of the CS to finance the reproduction process under the given conditions is one of the main parameters determining its system efficiency.

ment agent.<sup>426</sup> After 1996, attempts were made in the stage of compelled economy liberalization to compensate for the negative impact of liberalization on economic growth by developing small and medium businesses. However, these attempts did not enhance the system efficiency of the CS and were not beneficial to the economic dynamics. At the same time, these attempts showed that SMEs could not compensate for a decline in economic growth and development potential resulting from an increase in the economy's liberalization and openness.

Because the efficiency of the CS is also measured by the ability to grow and develop, the restructuring of the South Korean economic system in conformity with the neoliberal economic paradigm had substantially reduced South Korea's CS efficiency. The CS, restructured after 1997 to bring its system characteristics closer to those of the CSs of other developed countries, reduced the gap between the growth rates of developed economies and those of the South Korean economy. In other words, South Korea's economy and corporate base had partially lost the ability to develop faster than developed economies and the international economy as a whole (without China).

However, if the efficiency of South Korea's CS is measured by the ability to maintain a surplus in export–import operations and the financial stability of the economy, then the above efficiency increased after the 1997–1998 crisis.

Thus, the ESR (because it is, to a great extent, governed by the ability of an economy to develop at relatively higher rates than the global economy) of the South Korean economy and CS noticeably declined. But the situation with the financial subjectness resource was different (and hence with the financial stability of South Korea's CS and economy) after the 1997 crisis. Undoubtedly, it increased due to a fast rise in exports and foreign exchange reserves.

After 1995, personnel engaged in R&D in South Korea more than doubled (outstripping developed countries by far in this respect).<sup>427</sup> This, together with exports, which doubled between 1995 and 2004, pointed to substantial growth after the 1997–1998 crisis in the technological subjectness of the South Korean economy (and, primarily, its CS).

Finally, the ESR of South Korea's economy and corporate base decreased in general, albeit slightly, against that of developed countries after the 1997–1998 crisis.

The dependence of South Korea's CS on the GCS until the mid-1990s was weakening, primarily due to:

- 1) a higher proportion of government-controlled companies in the CS;
- 2) a considerable size of the regulatory resource of the system of nonmarket management of economic processes by governmental authorities;

<sup>426</sup> The 1997 monetary and financial crisis led to a steep and rapid drop in the system efficiency of South Korea's economy and CS. A 6.7% decrease in South Korea's GDP in 1997 is indicative of this process (Russia and the Rest of the World, 2002. P. 79). Then, the positive GDP dynamics were restored, but the ability of South Korea's economic mechanism to ensure economic growth under the given conditions declined dramatically: in 1997–2000, the annual average growth rates of South Korea's GDP were only 4.1 %, and in 2001–2006, 4.6% (Russia and the Rest of the World, 2002. P. 82). This evidences that after an abrupt drop in 1997, the system efficiency of South Korea's CS failed to return to the 1996 level.

<sup>427</sup> Russia and the Rest of the World, 2006. Pp. 306, 307.

3) the policy of an undervalued exchange rate of the won combined with a highly efficient local business community.<sup>428</sup>

In addition, the dependence of South Korea's CS (as it was in the 1960s and later) on the global CS was reduced due to the presence of a "stiffening core" consisting of a few family clans in the South Korean business community, which are the strategic owners of key economic entities. Thus, the South Korean economic dynasties (like the dynasties of the Rothschilds, Rockefellers, Morgans, or Krupps) were a factor enhancing the system quality and efficiency of the South Korean CS and economy as a whole.

In short, at least within the first half-century of its operation the South Korean CS (beyond the special zones whose economy is controlled by foreign capital), first, was owned by the government and a few families and then by a few families and the government. Family control still being retained over key economic entities is a factor that substantially reduced the ability of foreign business communities to influence South Korea's economic development.

Due to this factor alone (and to the presence of a major public sector, including the system of government-controlled banks and other financial institutions) the South Korean economy for a long time being formally open retains a relatively high level of the ESR.

Before 1997 (and the resultant restructuring of South Korea's economy policy under pressure from the IMF), a series of factors fueled the growth in openness of its economy:

- 1) growth in the ratio of exports to GDP since it automatically weakened the sensitivity of the economy to internal system factors, including administrative actions on the part of nonmarket institutions regulating economic processes;
- 2) a decrease in the proportion of the public sector in the economic system (and hence in the CS).

Nonetheless, since these processes were unfolding gradually, South Korea's CS was able to adapt to changes in its operation framework conditions without incurring substantial losses in the ESR.

After 1997, South Korea's ESRCS started to decline perceptibly not only due to the rapid withdrawal of the state from the economy and an increase in the proportion of foreign investors in financial and production assets, but also as the result of a gradual increase in the proportion of South Korean corporations with branches abroad, thus becoming TNCs, in the CS.

However, the reproduction dynamics in South Korea's economy still displays substantial independence from that in the international economy. It is significant that foreign direct investment accumulated by South Korea as of 2005 amounted to US\$55 billion, while foreign direct investment accumulated abroad by South Korea in 2004 exceeded US\$39 billion.<sup>429</sup> As can be seen, the difference is not

<sup>428</sup> The high efficiency of the local business community weakens those potential benefits, which, under the policy of the undervalued exchange rate, foreign investors could have received when investing in the South Korean economy (since their investments at the undervalued exchange rate of the South Korean currency were automatically subsidized by the South Korean economy).

<sup>429</sup> Bulatov, 2007. Pp. 550 and 552.

great. Later (including the period of the current global economic crisis), no substantial changes occurred in the above investment ratio.

Foreign debt and the high costs of its servicing remain quite a challenge for South Korea (US\$189 billion in mid-2005 and US\$381 billion at the beginning of 2008 with a debt service ratio of 20%).<sup>430</sup> The debt burden became one of the main causes of the challenges faced by South Korea's economy and CS in the current global crisis.

The size of South Korea's ESRCs in the long run is determined by the following factors:

- 1) the high efficiency of the South Korean business community and its core composed of a few strategic owners;
- 2) the ability of local businesses to influence the government and the EOSS;
- 3) the presence of major corporate entities capable of challenging the competitive environment of the global market and exhibiting a high level of competitiveness and financial stability (superlarge companies and the superstructure over them in the form of chaebols);
- 4) a highly efficient stock market;
- 5) a high level of technology competitiveness in priority sectors;
- 6) the presence of an efficient system of institutional and financial support for new technology utilization and its promotion to manufacturing. Thus, there are grounds to believe that in the long run, South Korea's ESRCs will remain quite high. In this respect, South Korea outstrips most developed countries.

If South Korea and North Korea unite their economies, in one form or another, it can be expected that the ESR of both Koreas will (by involving the large potential of raw materials and natural resources of North Korea in the modern economic turnover) substantially exceed the ESR of South Korea's economy.

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<sup>430</sup> Bulatov, 2007. P. 553; Russia and the Rest of the World, 2008. P. 349.

Appendix 3.  
 THE TAIWANESE MODEL FOR MANAGING THE CS OF AN  
 ECONOMY WITH A LOW POTENTIAL DOMESTIC MARKET AND  
 BASED ON CULTURE-DRIVEN ENTREPRENEURSHIP

*The Taiwanese model for managing the corporate base  
 as a derivative from other operation of the economy framework conditions and  
 its impact on Taiwan's CS parameters*

The superstable basic framework conditions determining the conditions for Taiwan's CS operation at practically all stages of its operation after separation in 1949 from mainland China include:

- 1) a small territorial basis;
- 2) a scarcity of natural resources discouraging self-reliance (practiced in the 1960s–1970s in mainland China);
- 3) a relatively small population (much smaller than in South Korea and moreover in India) and the related limited capacity of the domestic market<sup>431</sup>;
- 4) direct dependence of economic growth rates on imports and hence export growth rates. As a consequence, a total impossibility of dynamizing the economy (both at the stage of its modernization and after accomplishing modernization) by developing the economy under an autarchic regime<sup>432</sup>;
- 5) dependence on importing technology;
- 6) the Chinese mentality favoring the retention of small and medium firms in the nonpublic sector. In the first two to three decades after separation from the mainland, the following relatively stable framework conditions, which were specific to this period (or the majority of it), apart from those mentioned above, but on the whole matching those in India and South Korea, had a substantial impact on Taiwan's operation of the economy and CS:
  1. substantial underdevelopment<sup>433</sup>, which became aggravated in the 1950s due to the economy's imbalance<sup>434</sup>;
  2. insufficient efficiency of the business community;

<sup>431</sup> The population in 1950, together with emigrants from the mainland and military servicemen, was 11.5 million people; now it is 24 million people.

<sup>432</sup> In 1953, the value of Taiwanese exports at current prices was still only US\$128 million; imports, US\$192 million (Economic Yearbook of the Republic of China, 1976 and 1977. Data on Taiwan's economy, unless otherwise stated, are taken from the above Yearbook).

<sup>433</sup> Taiwan's GDP per capita in 1950 was slightly above \$1,000 per year with the absolute value of GDP estimated at US\$12 billion at 2000 prices (Bolotin, 2001. P. 94).

<sup>434</sup> The imbalance of Taiwan's economy in 1949 and the early 1950s was partially caused by devastation and partially by the disruption of economic ties, which were traditional for the island's economy (being part of the Japanese empire), with Japan. After 1945, the economic links shifted toward mainland China. These new economic relations were disrupted in 1949.

3. high-level market and investment risks both of an economic, social, and especially political nature<sup>435</sup>;
4. a scarcity of financial resources held by the private sector;
5. as a consequence, an extremely limited capacity of the private sector to finance the development of capital-intensive sectors.

Due to the acuteness of the problems stemming from underdevelopment, the managers of Taiwan's economy (like the managers of most developing economies) had no difficulties in identifying priorities for the EOSS. The objective setting targeted the fastest elimination of underdevelopment; hence, Taiwan's economy accelerated industrialization and modernization.

The specific content of the economic policy was determined also by other framework conditions and, primarily, by the need to increase exports, the level of investment risks, the efficiency of the local business community, its financial power, opportunities for attracting private capital from abroad, the Chinese mentality favoring the development of small and medium businesses, and their relative stability.<sup>436</sup>

Since the system of Taiwan's economy (and hence Taiwan's CS) operation framework conditions taken as a whole was gradually changing (the conditions at the periphery of the system of basic framework conditions were changing), certain changes occurred in economic policy, too. Nonetheless, until the mid-1990s, top priority was placed on the soonest elimination of underdevelopment (and hence on the fastest economic development) when defining Taiwan's economic policy parameters.

For this reason, at any given moment, economic policy was adapted to the conditions of the economic situation to ensure high economic growth rates.

A significant part of these conditions, by and large, were retained throughout Taiwan's entire economic modernization process. However, part of the basic framework conditions did not change substantially. Therefore, until the mid-1990s, high economic growth rates invariably remained a priority target in Taiwan's economic policy, in spite of all changes to it. This gives grounds to state that there are the Taiwanese economic policy model and the Taiwanese economic model.

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<sup>435</sup> The foundation of the People's Republic of China (PRC) in 1949 did not mean the end of the Civil War. The PRC instituted control over the large island of Hainan (south of Taiwan) only in 1950, over Tibet even later. The Kuomintang administration of the island of Taiwan deemed itself a legitimate authority not only for Taiwan, but also for the PRC, which implied all of China both in the 1950s and much later. During the 1950s, Taiwan's economy developed actually under wartime conditions with the associated high level of investment and market risks. In this situation, there was no alternative to the market mechanism option introduced in Taiwan (a regulated, partially planned, economy with a large public sector). A high level of risks would have had a paralyzing impact on the operation of any other, more liberalized, economic model.

<sup>436</sup> The cultural factor, the traditional Chinese willingness to spearhead, by all means, some business and acquire the status of a proprietor, thus being empowered – like the head of a family – to issue orders and make decisions, has contributed to the stability of small and medium businesses in China's conditions (in Taiwan, too). Therefore, a significant majority of Taiwanese companies are family-based and in many of them, the key positions – chairman of the board, general manager, accountant, cashier – are held by the members of one family (or to be more precise, of one large clan) (Trigubenko et al., *Taiwan...*, 1993. Pp. 64 and 65).

The Taiwanese economic policy model is an one that has been optimized to achieve the soonest adaptation of the economy as a whole and CS in particular to the above-mentioned operation of the economy framework conditions.

Therefore, this economic policy involves:

- 1) division of the production and investment functions between different categories of institutional investors (companies controlled by public capital, local private capital, or foreign capital);
- 2) assignment of the government and the public sector to develop capital-intensive and highly risky economy sectors (infrastructure, basic sectors of heavy industry, part of the engineering industry);
- 3) matching the economy's degree of liberalization and privatization to the state of the system of steadily acting factors determining the working capacity of the market mechanism, including the factors of the efficiency of the business community and the economic risk level;
- 4) maintaining a high-level of investments in production in the economy, simultaneously targeting a high level of the means of production and minimizing the dependence of the investment complex on imports;
- 5) reallocation of the main part of financial resources designated for investing in capital-intensive and high-priority sectors through a system of regulated investments;
- 6) management of economic development by managing investment programs when implementing, as planned, construction projects of strategically important economic facilities determining the economy's structure and its development format for the medium to long term;
- 7) financing R&D and technology assimilation (since the private sector is persistently reluctant to finance R&D) also largely through regulated channels;
- 8) pursuing a policy encouraging the retention of the position of small and medium firms (employing 300 people or less) in the nonpublic sector of the economy throughout the entire economic modernization;
- 9) active regulation of the parameters not only of the core, but also of the periphery of the corporate base of the economy, which is composed of small and medium firms;
- 10) maintenance of the ESR of Taiwan's economy and CS at the highest level under the given conditions; in this connection, the combination of the import substitution policy with the policy of actively encouraging the development of the export sector of the manufacturing industry when seeking to maximize added value exports (i.e., effectiveness of exports) and to minimize the dependence of the consumer sector on imports;
- 11) relatively high adjustability of the economy in all modernization process stages;<sup>437</sup>
- 12) linkage of the foreign exchange policy to the objective of maximizing exports;
- 13) linkage of the tariff policy with the competitiveness of local producers;
- 14) regulation of foreign capital inflows;
- 15) risk management (results from the foregoing).

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<sup>437</sup> Taiwan's economy liberalization phase logically occurred in the period when development deficiency had been remedied.

Therefore, the model of the economy's corporate base instituted within the Taiwanese economic policy model displays:

- 1) institutional polymorphism, i.e., parallel operation of groups of corporations controlled by various categories of institutional investors (including the government, local entrepreneurs, foreign capital) whose share in CS assets depends on changes in the operation framework conditions of the economy;
- 2) predominance of public capital in the companies composing the CS core (and accordingly, efficient government control over the CS core);
- 3) predominance of public capital in capital-intensive sectors;
- 4) in the economy's export modernization stage, symbiosis between the CS sector controlled by the government and the economically critical CS sector controlled by foreign capital;
- 5) a regulated regime of the CS financial sector;
- 6) due to differentiated privileges for certain categories of nonpublic investors, the presence of important specific features in the operation conditions and selective management measures for various segments of the CS nonpublic sector
- 7) during the majority of the modernization cycle, in the CS, a significant proportion of the gray public sector composed of companies whose economic behavior (primarily the investment behavior) is rigidly controlled by governmental authorities
- 8) specialized zones (usually regional clusters) accommodating industrial enterprises (predominantly, by local standards, high-tech ones manufacturing export products) conducting economic activity under special conditions, and
- 9) a high (especially in the initial stages of Taiwan economy development) proportion of SMEs in the overall volume of goods and services produced by the nongovernment sector of the CS<sup>438</sup>. Several causes are behind the latter structural feature of the Taiwan CS model.

*First*, the above-mentioned Chinese mentality favoring the development of small and medium businesses and their relative stability.

*Second*, a lack (in contrast to India and South Korea) of major enterprises in the private sector of Taiwan's economy in the first period after Taiwan separated from mainland China.

*Third*, a small domestic market at the initial stage of Taiwan's economic modernization.

*Fourth*, low efficiency of Taiwan's business community in the first two decades of autonomous operation of Taiwan's economy.

*Fifth*, efficient and stringent regulation by governmental authorities of economic activity and their conditions at SMEs (enterprises employing 50 or more persons).

As a matter of fact, major enterprises could be established in Taiwan in 1950s–1960s only using public funds. The objective of setting up capital-intensive major enterprises in the public sector, which was typical of the Taiwanese model of economic policy in the period of Taiwan's economy accelerated modernization and,

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<sup>438</sup> By 1990, when modernization of Taiwan's economy was actually accomplished, SMEs employing up to 300 people accounted for 65% of Taiwan's export value and 70% of employment in the manufacturing industry (Trigubenko et al., Taiwan..., 1993. p. 63).

in the 1950s–1960s, for many developing countries, stems mainly from the above causes.

Efforts to minimize social commitments of the state (and thus pursue a policy to reduce the social burden on GDP) also contributed to the retention of the position of SMEs in Taiwan's economy. The successful policy of stimulating the modernization of SMEs that had been pursued since 1967 entrenched their positions in the economy.

The main system feature of the Taiwanese CS model was its high adaptability to the current operation conditions of the economy, primarily, due to CS segments with a significant degree of autonomy and specialized functions.

Among these segments are the public sector, the sector of export-oriented enterprises as a whole, and within the latter, the segment of SMEs. The high efficiency of the total system of economic entities, including Taiwan's CS before the primary modernization of the economy was accomplished, resulted from the policy aimed at adapting the main segments of the CS to their operation framework conditions.

The system of economic objective setting based on the adaptation of the economic policy to the framework conditions aimed at accelerating development inevitably necessitated substantial changes to Taiwan's CS as the internal (related to the development factor) and external (openness of world markets, credit availability, opportunities for capital inflows, etc.) operation conditions changed. In the course of economic modernization, the Taiwanese model of the CS, accordingly, gradually underwent transformations and erosion.

However, this process was relatively slow. All of the above features of the Taiwanese CS model were in place as back as the 1980s and most of them in the mid-1990s and even at the beginning of the 21st century (see below).

### *Export-led modernization and the public sector position in Taiwan's CS*

In the 1960s–70s, the economic modernization process was closely associated with its export sector outstripping other sectors in development rates with heavy involvement of foreign capital in this sector.<sup>439</sup> It would be correct to say that this period was one of export-led modernization of Taiwan's economy.<sup>440</sup>

The private sector expanding relatively faster was the main factor that decreased the proportion of the public sector in Taiwan's economy in the period under review and throughout the entire period of Taiwan's economic modernization. The

<sup>439</sup> Above all, it is US capital whose inflow was essentially governed, like in South Korea, by the alliance between Taipei and Washington against China.

<sup>440</sup> The switch to a policy of creating a large-scale export sector in the manufacturing industry occurred in 1960, when regulations were adopted to boost foreign investments in Taiwan's economy and especially in its manufacturing industry. In 1969–1972, foreign direct investment in Taiwan's economy (primarily in the manufacturing industry) amounted to US\$796 billion (including \$15.5 million in 1960) against \$20 million in 1952–1959 (Economic Yearbook of the Republic of China, 1977, Section IV). Taiwan's exports exceeded imports only in 1971 (exports US\$2,415 million, imports US\$2,305 million).

development of the export sector, where private capital dominated, lowered the proportion of the public sector across the entire CS (because it directly lowered the share of the public sector in manufactured products). In 1952, the proportion of the public sector in the manufacturing industry was 57%; in 1975, after 15 years of export-led modernization, it fell to 22.7%.

The policy of export-led modernization affected the public sector's position in the economy and CS not only because the emerging enterprises controlled by foreign capital "mechanically" reduced the presence of the public sector. Its role as the main agent of Taiwan's economy technological modernization passed to the expanding export sector (and its segment controlled by foreign capital) of the CS.

However, the public sector, represented by government-controlled corporations, retained the following system-critical functions at the export-led stage of modernization of Taiwan's economy:

- 1) compensating for the inability of the nonpublic sector to finance investments in capital-intensive sectors of industry and the infrastructure supporting operation of the economy;
- 2) producing industrial goods and services whose scarcity inhibits the development of the nonpublic sector and the economy as a whole (the function of eliminating bottlenecks);
- 3) financial support to the private sector through the credit system;
- 4) compensating for the inability of the nonpublic sector of the economy to establish effective prices on strategically important industrial goods and services of the system providing infrastructural support for operation of the economy;
- 5) reducing the inflationary potential of the economy;
- 6) reducing market risks and the economy's sensitivity to market risks;
- 7) raising the competitiveness of local producers, including enterprises controlled by foreign capital.<sup>441</sup>

Moreover, after export processing zones had been established, the government also assumed the functions of creating and supporting the system providing infrastructural support to industrial (predominantly export-oriented) enterprises located in these zones.<sup>442</sup>

Accordingly, in the period under review, the public sector retained the following basic functions of:

- a) a tool for laying the economy's foundation, composed of basic capital-intensive sectors needed to develop the private sector;
- b) stimulating private sector development.

<sup>441</sup> Here is meant the influence of the policy of price restriction for state-run enterprises manufacturing basic types of goods and services (for example, electric power, petrochemicals, rolling stock, etc.) on the competitiveness of exporters.

<sup>442</sup> An export processing zone (EPZ) is a combination of a free port and an industrial park with the necessary facilities, including standard factory buildings and appropriate infrastructure facilities. The first EPZ Kaohsiung was instituted on December 3, 1966. In 1969, two more EPZs, Taichung and Nanzi, were set up. In the early 1980s, these three zones, with a total area of 195 hectares, accommodated about 348 industrial enterprises (Trigubenko et al., Taiwan..., 1993. P. 54). Later, several more EPZs were established. In 1985–1996, the total exports of Taiwan's zones exceeded US\$49 billion (Zimenkov, 2006).

Performing the above basic functions, the government-controlled CS sector thereby also implemented the superstructure function of raising Taiwan's economy export potential.

By the end of the 1960s, the division of labor between the private and public sectors of Taiwan's industry was typical of the Taiwanese economic model, under which:

- 1) the government-controlled CS sector was oriented primarily toward the domestic market and manufactured predominantly intermediate goods for production and investment consumption;
- 2) the private sector controlled by local capital manufactured the bulk of consumer items and low- to medium-tech export products;
- 3) the industrial sector controlled by foreign capital manufactured predominantly medium- to high-tech export-oriented products, and in the 1960s medium-tech products almost entirely dominated its output.

Though the proportion of the government-controlled CS sector in the 1960s–1970s declined, the range of the goods for intermediary production and investment purposes manufactured by the sector in the same period increased.

This growth was mainly due to the manufacturing of such industrial products by the public sector, the need for which was earlier covered mainly or entirely by imports, which were more or less scarce, because the nonpublic sector was incapable of producing the relevant products.

By building up the production of such products, the public sector compensated for the relevant deficiency in the private sector's production capacity. The public sector's manufacturing of lacking industrial products promoted the growth of the economy's export efficiency (by reducing the need for imports) and, indirectly, the growth in Taiwan's economic competitiveness and, therefore, the growth of its export potential<sup>443</sup>.

Changes in the production structure of the government-controlled industrial sector between 1961 and 1981 primarily involved a reduction in the proportion of light industry and an increase in the proportion of the fuel-and-energy and heavy industry sectors. After 1975, major facilities were launched in the public sector to manufacture petrochemical and metallurgical products. Also, after 1975, new facilities to produce medium- to high-tech engineering products for investment and military purposes were launched in the public sector (*ibid.*).

Around 1981, government-controlled corporations still predominated in the assets and fixed capital of Taiwan's CS core.

At the end of the 1970s, Taiwan's CS core included the following categories of government-controlled corporate entities (see Table 1, Appendix 3):

- 1) a group of major industrial corporations, part of which were effectively multi-business conglomerates, including nonindustrial branches, such as marketing networks, construction organizations, etc. (see below);

<sup>443</sup> At the stage of economic modernization, the exchange rate of the Taiwanese dollar was heavily undervalued. Therefore, consumers of domestic products, when the latter were substituted for import products, reaped a perceptible economic benefit. Consumers oriented toward the external market also reaped the same benefit when using materials and semifinished products. The more these exporters used local materials and semifinished products, the higher their export competitiveness and share in the world market.

- 2) a group of major corporations specializing in the infrastructure servicing operation of the economy<sup>444</sup>;
- 3) a group of government-controlled banks and other financial entities.

These financial entities included the following specialized banks, financial corporations, and funds:

- the Export–Import Bank (insuring exports and financing foreign trade expansion)
- the Bank of Communications and the China Development Corporation (its key function is long-term financing of the development of strategic and basic sectors);
- the Development Fund (extending investment loans to develop technology-intensive and specifically critical manufacturing enterprises and financing capital investments in risky projects and technology transfer projects);
- eight territorial Banks for lending to SMEs (set up after 1977).

In addition, Taiwan's Central Bank established several special funds to finance major projects and private industry to enhance its production capacities and technology level.<sup>445</sup>

Modernization of the public sector (and therefore Taiwan's CS core) was accomplished before that of Taiwan's economy as a whole, including its infrastructure sectors, no later than 1981.

Vigorous attempts undertaken in the second half of the 1970s to accelerate modernization of the CS sector, composed of companies controlled by local private capital, were necessitated by the technology level of this CS sector, which was substantially lower as compared with both enterprises (companies) controlled by foreign capital and government-controlled enterprises.

*Table 1 of Appendix 3*

**Taiwan: key government-controlled corporations as of the mid-1970s  
and the first half of the 1980s**

No.	Key government-controlled companies	Industry	Position in the industry
1.	Zhongguo shiyu gongsi	Oil imports and refining	Monopolist
2.	Taiwan dianli gongsi	Electric power	Monopolist
3.	Zhongguo gangtie gongsi	Iron and steel industry	Key manufacturer
4.	Taiwan luye gongsi	Aluminum production	Key manufacturer
5.	Taiwan jintonghuan gongsi	Production of copper, nonferrous, and precious metals	Key manufacturer

<sup>444</sup> Including the Taiwan Railway Administration, China Airlines, Yang Ming Marine Transportation Corp., and Chunghwa Telecom, a monopoly provider (in the period under review) of telecommunications services.

<sup>445</sup> Trigubenko et al., Taiwan..., 1993. P. 40.

*Final table 1*

No.	Key government-controlled companies	Industry	Position in the industry
6.	Taiwan sujiao gongsi	Plastic manufacturer	Dominance
7.	Zhongguo chuanjiao gongsi and Taiwan chuanjiao gongsi	Shipbuilding	Dominance
8.	Taiwan Machinery Manufacturing Corporation	Investment equipment, equipment for railroads, production of marine engines and steam turbines	Key manufacturer
9.	Taiwan feiliao gongsi	Chemical fertilizers	About 60% of capacity
10.	Taiwan shuini gongsi	Cement production	About 40% of capacity
11.	Zhongguo fanzhi gongsi (mixed capital)	Textile	Major manufacturer
12.	Taiwan tangbie gongsi	Sugar production	Major manufacturer
13.	Taiwan tielu gongsi	Railroad Company	Monopolist
14.	Shipping company		
15.	Air carrier		Monopolist
16.	Banks		Main banks
17.	Chunghwa Telecom	Telecommunication company	Monopolist
18.	Government-controlled investments in the overall investments in production		Over 60%

**Sources:** Economic Yearbook of the Republic of China. 1977. I–315, III–363, IV–51; Trigubenko et al. Taiwan..., 1993, p. 68 and on; Chernoy, 2000. P. 47.

***The government-controlled CS sector functionally needed at the final stage of Taiwan's economic modernization***

By the time the second six-year plan (1982) was launched, Taiwan's economy had achieved a comparatively high level of development, though it lagged considerably behind developed economies. Nevertheless, despite rather substantial,

though gradual, changes in the system and structural characteristics of Taiwan's economy, it continued to develop in the modernization regime until 1997. The above is evidenced not only by high growth rates of Taiwan's economy in 1982–1987, which were typical of modernizing economies, but also by retention of the mature economic planning system (and hence economic development programming) and high-level activity of the system of nonmarket management of economic processes.

Throughout the period under review, the proportion of the public sector in the economy increasingly diminished. Hence, almost all instrumental functions of the public sector related to compensating for or covering the insufficient efficiency of the nonpublic sector were eroding. The function of the public sector as a factor reducing the degree of economic uncertainty and hence the level of market and investment risks was especially heavily eroded.

However, the erosion of some key economic functions of the public sector by the beginning of the third six-year plan (1993–1999) was rather vague. The following functions were retained:

- 1) the function of compensation for the insufficient ability of the nonpublic sector to invest in capital-intensive segments of the system that provided infrastructure support for operation of the economy and in the electric power and iron and steel industries;
- 2) the function of producing industrial goods and services whose scarcity inhibits the development of the nonpublic sector and the economy as a whole (the function of eliminating bottlenecks);
- 3) the function of financial support to the private sector through the credit system;
- 4) the function of compensating for the inability of the nonpublic sector of the economy to establish effective prices on strategically important industrial goods and services of the system that provides infrastructural support for operation of the economy
- 5) the function of reducing the inflationary potential of the economy;
- 6) the function of raising the competitiveness of local producers by establishing low prices on strategically important industrial goods produced by the public sector.

Changes in the manner in which the public sector performs the function of technology accumulation and its translation into the nonpublic sector are worth mentioning. At the initial stages of Taiwan's economic modernization, the technology accumulation function was performed by the public sector, since the growth in production in government-run enterprises was usually accompanied by the assimilation of new technologies, which were then translated from the public core of the CS into the surrounding economic space, primarily, at the industrial periphery of the CS.

As public spending on R&D increased, a number of organizations and institutions specializing in R&D were set up in the public sector, as well as enterprises (especially in the defense complex) for improving technology and even developing new technology and bringing it to mass production. The function of technology accumulation and assimilation was complemented by the function of developing

new technology and improving the old one with their subsequent translation into the surrounding economic space.

By the beginning of the 1990s, the public sector concentrated a significant part of its technological improvement and development potential in the defense complex enterprises and already in the mid-1990s the transfer of new technology from the defense industry to the civil industry started.<sup>446</sup>

The following factors specific to this period contributed to the preservation and, to some extent, reinforcement of the public sector positions in Taiwan's corporate sector in 1982–1997:

- 1) state-funded construction of certain large and superlarge facilities (since such facilities strengthened the public sector positions in the economy)<sup>447</sup>;
- 2) saturation of the CS, which began as early as the 1970s, with government-controlled major companies comparable in production size and asset value with their counterparts in developed countries (see Table 1 Appendix 3);
- 3) an increase (due to the establishment of appropriate capacities) in the ability of the public sector to provide materials and equipment to meet the needs of the expanded reproduction process;
- 4) emergence at the end of the 1970s of new government-controlled specialized banks<sup>448</sup>;
- 5) growth of the defense industry;
- 6) improvement of so-called industrial areas by the government using a system of infrastructure support, including roads, water supply lines, sewage system, and electrical substations, etc.<sup>449</sup>

In 1990, in spite of the gradual decrease in the presence of the public sector in industrial production, government-controlled enterprises still accounted for about 30% of fixed-capital assets of Taiwan's industry.<sup>450</sup> In 1987, the state held over 50% of the total assets in the nonagricultural sector (including investments in infrastructure).

The decline in the proportion of the public sector in the economy as a whole and in the CS, in particular, that occurred at the final modernization stage of Taiwan's economy, i.e., during the second and third five-year plans (1982–1993),

<sup>446</sup> It is significant that the Institute of Science and Technology, which designs missiles, was created as far back as 1969. At the end of the 1990s, this Institute employed 3,800 scientists and 4,600 engineers (Taipei Review, 2000, April, p. 15). Since 1995, the institute has been transferring technology to the civil sector (*ibid.*, p. 16).

<sup>447</sup> In 1973, ten major construction projects were launched, including an integrated iron-and-steel works, petrochemical complex, nuclear power station, shipyard, national north–south freeway, railroad lines, and port (Larin, 2000. P. 128). Not long before the construction of these ten major projects was over, the construction of another 12 major projects was announced, to be followed by another 14 in 1985 (*ibid.*, pp. 129 and 130).

<sup>448</sup> Among them are banks providing credit services to small and medium firms. In July 1976, the Medium Business Bank of Taiwan was set up mainly to extend medium- to long-term investment loans to small and medium enterprises. In 1978, eight territorial savings companies of Taiwan were restructured into banks for lending to SMEs.

<sup>449</sup> In the early 1990s, 63 areas were allotted for new industrial construction projects (Trigubenko et al., Taiwan..., 1993. P. 40).

<sup>450</sup> *Ibid.*, p. 32.

to a certain extent was compensated for by growth in the proportion of the gray public sector, consisting of public companies whose economic (and especially investment, including investment in R&D) behavior was intensively programmed by government-run organizations and institutions.<sup>451</sup>

In this period, regional clusters were salient in Taiwan's economy as administrative economic complexes (AECs), including:

- (1) managing administrative entities (MAEs);
- (2) for the most part, nonpublic corporations operating in the market regime, whose economic behavior was programmed by MAEs;
- (3) government-controlled or government-run service economic units (including organizations and enterprises of communications, transportation, and public utilities) servicing local AECs, like science and technology parks and special economic (industrial) and export processing zones.

To manage them, the Export Processing Zone Administration of the Ministry of Economy was set up. A good example of a major localized AEC is the Hsinchu Science and Industrial Park managed by the Administration of the Hsinchu Science and Industrial Park.<sup>452</sup>

By developing the above AECs, which are one of the best examples of the command corporate mixers described earlier, the "pure public sector" and "gray public sector" taken together were losing their presence in Taiwan's economy much more slowly than the pure public sector alone.

It should be noted that this phenomenon is generally characteristic of mixed economies developing in the modernization regime. In particular, the command corporate mixer type outlined above is successfully functioning in most sectoral segments of China's modern CS.<sup>453</sup>

### ***Impact of export-led modernization on the system characteristics of Taiwan's corporate base of the economy***

As outlined earlier, Taiwan embarked on accelerated development of the export sector in 1960. In 1965, the ratio of Taiwan's exports to GNP valued at current prices, with GNP converted into US dollars at the prevailing exchange rate, was 16%; i.e., in 1965 Taiwan's economy was taking only the first steps toward becoming an export-oriented economy. Taiwan's CS in 1965 was still oriented mainly toward the domestic market. By the mid-1970s, however, the situation had changed. In 1975, in terms of the US dollar exchange rate, exports accounted for 41% of GDP, and in 1977, for 44%.<sup>454</sup> Thus, only by the mid-1970s had Taiwan's CS turned into an export-oriented CS.

<sup>451</sup> See below.

<sup>452</sup> Trigubenko et al., *Taiwan...*, 1993, p. 100.

<sup>453</sup> Zhen Yunnian, *Lianhe Zaobao*, Singapore. What is the basis of the Chinese model? War and Peace portal, 14.05.2010, <http://www.warandpeace.ru/ru/analysis/view/47117/>.

<sup>454</sup> Economic Yearbook of the Republic of China for relevant years.

Companies in Taiwan's services sector, like in other countries with a high level of export burden on the economy, have always been oriented almost entirely toward the domestic market. Companies in the manufacturing industry, excluding production of petrochemicals, already in the 1980s primarily targeted the external market.

The establishment of a major large export sector in Taiwan's economy had a substantial impact on Taiwan's CS and its development process.

*First*, it split Taiwan's CS into an export sector and a sector oriented toward the domestic market. Originally, this splitting was aggravated by various privileges enjoyed by export sector companies.

*Second*, the export-led modernization substantially boosted the formation of a large sector controlled by foreign capital within Taiwan's CS.<sup>455</sup> Foreign direct investment accumulated by Taiwan's economy as of 1998 totaled US\$10.9 billion and, as of 2004, US\$56 billion.<sup>456</sup>

At the same time, it should be remembered that the export-led modernization, to a certain extent, helped the public sector retain its position in the economy and play from the start, in relation to the export sector, the role of a producer and supplier, at relatively low prices, of services related to infrastructural support for the operation of the economy, such as water supply, electric power, petrochemicals, certain types of materials, and even the role of a creditor.

The emergence in Taiwan's economy of a CS sector controlled by foreign capital and specializing in medium- to high-tech products under certain conditions might have stalled the development of the local private sector. But this did not happen since the economic policy pursued in the accelerated modernization stage envisaged certain measures to reserve important positions in the economy for local private capital and encouraged the development of the sector of small enterprises controlled almost entirely by local capital. In fact, the emergence in Taiwan's corporate sector of a sector controlled by foreign capital boosted technology upgrading and comprehensive modernization of the CS sector controlled by local capital.

The accelerated export-led modernization caused certain changes in the structure of the LRCM system.

As mentioned above, in 1966 an EPZ was established in Kaohsiung, and in 1969, similar zones were established in Taichung and Nanzi.<sup>457</sup>

<sup>455</sup> In 1976, Taiwan's manufacturing industry employed 1,688 people (Economic Yearbook of the Republic of China, 1977. P. III–48). Out of them 220,000 worked at 1,350 enterprises with foreign capital, including that coming from overseas Chinese (*ibid.*, p. IV–49). At the beginning of 1977, direct investments of foreign investors in Taiwan's economy amounted to US\$1.55 million, out of which 80% went to the manufacturing industry, including 33% (of total investments) to electronics (*ibid.*). Foreign investors preferred to avoid making direct investments in capital-intensive industrial sectors. Therefore, their proportion in the total amount of Taiwan's industrial capital as of 1976–1977 (over US\$20 billion) was not high. At the same time, their proportion in exports, because a significant part of foreign investments was export-oriented, was sizeable (25% in 1976).

<sup>456</sup> Trigubenko et al., *Taiwan...*, 1993. P. 38; Bulatov, 2007. P. 556.

<sup>457</sup> A significant part of Taiwanese enterprises with foreign capital almost always operated as joint ventures (which apparently promoted the modernization of local businesses as a whole). The situation in today's China is similar.

It is significant that regulatory frameworks covering the activities of enterprises located within the above EPZs and Hsinchu Science Park, including tax rates and export and import conditions, were substantially distinct from the rates determining the conditions of enterprise activities in other parts of Taiwan. To stimulate the production of export and high-tech industrial products, the enterprises located within the EPZs and Hsinchu Science Park were granted privileges effective only within their grounds.

In effect, the EPZs and Hsinchu Science Park operate outside the rest of Taiwan's economic area.<sup>458</sup> These economic establishments in Taiwan (like in some other companies, including South Korea) resulted directly from the policy of the economy's export-led modernization.

At first glance, the process of CS fragmentation launched in the 1960s–1970s became a side effect (and not always desirable) of the export-led modernization process. As a matter of fact, in a technologically backward and underdeveloped economy, a substantial rise in the economy's export potential within a short time is not possible without fragmenting the CS and forming within it some specialized sectors in terms of the functions and conditions of economic activity.

This was evidenced by the experience of export-led modernization pioneers, including Taiwan and South Korea. China's experience over the last 15–20 years has evidenced the same.

### ***Key features of the Taiwanese model for managing the parameters of the corporate base of the economy***

#### *The conceptual base of Taiwan's model for managing the system characteristics of the corporate base of the economy*

The management of Taiwan's operation of the economy (in conformity with the principles underlying Taiwan's economic model) focused primarily on:

- 1) modification of the system of framework conditions by weakening the impact of such negative factors for CS operation as underdevelopment, technological backwardness, insufficient efficiency of the business community, etc.;
- 2) compensation, to a certain extent, for the negative impact of the same factors on Taiwan's operation of the economy.

The "compensation" challenge was addressed by the direct impact of Taiwan's operation of the EOMS on the economy as a whole and its CS.

Appropriate compensation effects were created both by current actions of the EOMS directed at the CS (including through a system of regulated financial sup-

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<sup>458</sup> Hsinchu Science Park covers 2,100 hectares. The park comprises industrial, research, administrative, and residential areas. As of 1989, government investments in the park (mainly in infrastructure) exceeded US\$300 million, while investments from businesses amounted to US\$1 billion. The park's grounds accommodate companies that manufacture high-tech goods. In 1990, they channeled 6% of their gross proceeds to R&D (Trigubenko et al., Taiwan..., 1993. P. 57).

port for investments) and by using cumulative effects created by such actions (including the cumulative effect of regulated investment programs, which resulted, in particular, in the establishment of Taiwan's electric power and infrastructure system).

Below, we focus mainly on the tools of the Taiwanese model for managing the CS parameters.

*Tools for managing Taiwan's CS parameters and the targets of regulatory actions*

Developed countries, to affect the operation of the economy on a whole and the CS in particular, use the option of the system for managing market operation of the economy (Option "FM") based on the so-called universal economic policy and featuring the following:<sup>459</sup>

1. The regulated target comprises the entire economy and the entire CS.
2. By and large, the current condition of the economy (or, to be more precise, the condition of the economy in the short term) and, accordingly, the current condition of the CS are regulated.
3. The structural policy, if any, under the option optimizing the CS sectoral structure is practiced on a limited scale.
4. Regulatory actions directed at investment flows are practiced on a limited scale.<sup>460</sup>
5. Regulatory actions, if any, are performed predominantly by monetary and budgetary policy tools.

Option "FM" of the system for managing market operation of the economy ( $EOMS_{fm}$ ), as outlined above, is effective only under certain conditions (framework conditions), namely, when there are:

- 1) a strong currency;
- 2) a significant percentage of GDP budgetary reallocation (not less than 30%);
- 3) in the private sector, a mature core of large corporations, and in the latter, a core of large financial entities;
- 4) a low level of various economically critical risks;
- 5) a highly efficient business community.

As a tool to manage the operation of economies with a substantial underdevelopment level, the  $EOMS_{fm}$  option is a priori inefficient.

The Taiwanese experience, as well as the experience of many other once underdeveloped economies that have successfully addressed the problem of development, suggests that an efficient EOMS option ( $EOMS_m$  option) in modernizing

<sup>459</sup> Here, the current state of the system for managing developed economies is outlined. Until 1980, most developed countries pursued an active structural policy aimed at forming a certain economic structure, especially that of industry and agriculture.

<sup>460</sup> Even under contemporary conditions, certain regulatory actions are practiced, directed at the structure of investment flows in developed countries. Tools for implementing such actions (apart from a certain amount of investments made through the state budget and enterprises controlled by municipalities and other public sector enterprises) comprise differentiated depreciation charge rates, environmental laws (which compel enterprises to invest money in waste treatment plants), etc.

developing economies employs a selective economic policy to manage the economy and a policy of government entrepreneurship using the following tools:

- 1) management of parameters and functional characteristics of the government-controlled CS sector;
- 2) regulation of investment flows;
- 3) selective control over prices;
- 4) regulation of capital inflow;
- 5) regulation of export and import tariffs and currency exchange rates.<sup>461</sup>

Under option “FM”, the  $EOMS_{fm}$  is mainly aimed at strengthening the short-term performance of the economy (and hence the CS). Under option “M”, the  $EOMS_m$  is mainly aimed at strengthening the performance of the economy (and hence the CS) in the medium and, especially, long term rather than the short term. The use of this EOMS option envisages economic development programming.

The specifics of the  $EOMS_m$  option employed in Taiwan involved, in particular, a combination of the following elements:

- 1) focusing on the future condition of the economy rather than on its current state as the main target for regulation<sup>462</sup>;
- 2) using the public sector as the main (but not the only) tool of regulatory actions directed at the current and future state of the economy<sup>463</sup>;
- 3) essential differences in the degree of controllability of various sectors of the economy (the public sector, by definition, is the least liberalized, while the sector of export-oriented enterprises controlled by foreign capital is the most liberalized);
- 4) the system of regulatory actions is constructed to target mainly small and medium corporate entities;
- 5) extremely active use of the selective economic policy, including the established system of target-differentiated actions influencing the economic behavior of various corporate entity groups of the nonpublic sector and the economic behavior of foreign investors (see below).

In this context, the CS parameters are directly influenced by:

- 1) management of the public sector investment program;
- 2) splitting of enterprises into ordinary and priority (encouraged) ones and all-out stimulation of the latter;

<sup>461</sup> Hence, the practice of multiple exchange rates of national currencies widely used from 1945 to the 1980s, which most of the European countries abandoned only in the 1960s.

<sup>462</sup> Any system of economic development programming presumes management of investment flows and the future state of the economy (which requires a certain image of this future).

<sup>463</sup> In fact, in the classical period of development of the Taiwanese economy (until the early 1990s), the public sector, to a certain extent, played the same role that the state budget in developed economies does today. The enormous size of the latter (as a percentage of GDP) in most mature liberalized economies results from the budget's role as a system stabilizer of an economy. If, for example, the proportion of the state budget in the GDP of EU countries is reduced three to four times, risks will soar, investments will fall, and the situation almost inevitably will reach a crisis point. For example, tax cuts initiated by the Reagan administration in the early 1980s led to a drop rather than a rise in investments and to the 1982 crisis.

- 3) implementation of a package of measures to attract foreign investment in priority sectors;
- 4) stimulation of development of certain categories of SMEs with soft loans;
- 5) management of the deployment of enterprises and creation of infrastructure conditions by the government for the efficient performance of industrial enterprises;
- 6) establishment of special economic zones with privileged conditions for the operation of the stimulated categories of enterprises (EPZs and science and industrial parks).

The above tools enable the regulation of the following CS parameters:

- 1) in the CS, the proportion of corporations of different forms of ownership (including corporations controlled by the state, local nonpublic capital, foreign investors) and their dynamics;
- 2) concentration of capital and production;
- 3) sectoral structure of production;
- 4) geographical variations in CS structure (including industrial areas, EPZs and science and technology parks established by the government);
- 5) the presence of high-tech and highly competitive enterprises in the total output of the CS;
- 6) sharing of economic functions between large, medium, and small corporate entities and between the CS and the noncorporate sector of the economy.

The economic behavior of economic entities is managed by combining compulsion and economic encouragement, if not by purely command methods. The Taiwanese economic model mainly uses the latter (“the carrot policy”) as a tool to influence the economic dynamics of nonpublic market agents. If the economic behavior of a firm conforms to the strategic goals of economic development, it is encouraged in every way (by tax holidays, grants, credits, duty-free importation of equipment, etc.), otherwise it is not encouraged at all.

Under such a policy, at any given moment, the nonpublic sector of the economy within the Taiwanese economic model operates in a rather substantially liberalized regime. It is one of the main reasons for Taiwan’s attractiveness to foreign investors. However, on the whole, the nongovernment segment of the CS servicing Taiwan’s operation of the economy not only in the 1950s–1970s, but also much later, operated under a regulated regime, since the system of regulatory actions quite rigidly determined its future conditions and, therefore, the dynamic characteristics.<sup>464</sup>

<sup>464</sup> For example, the first six-year plan of national economic development (1976–1981) targeted for 1981 a production of 40 billion kWh of electric power, 810 million m of cotton fabric, about 14 million tons of cement, 5.3 million black-and-white TV sets, 1.2 million color TV sets, 68,000 cars, as well as the bringing of exports, at 1975 prices, to US\$12.3 billion and imports to US\$11.3 billion. Actually in 1981, 40.15 billion kWh of electric power, 820 million m of cotton fabric, 14 million tons of cement, 4.6 million black-and-white TV sets, and 1.65 million color TV sets were produced (China Statistical Yearbook, 1982. P. 477). Exports in 1981, at 1981 prices, were brought to US\$22.6 billion, and imports, to US\$21.2 billion (ibid., p. 480), which at constant prices roughly complied with the targets.

*Investment tools for managing the operation of Taiwan's CS and its parameters*

The Taiwanese option of managing the operation and parameters of the CS through investment involves:

- 1) influencing the CS performance (in the future, its format) by managing investment program parameters;
- 2) managing the investment program using the system for investment support through regulated channels.

Under the Taiwanese option, the system of regulated investments uses various financial and nonfinancial instruments to initiate and regulate investment flows, including:

- 1) direct budgetary allocations to fund economic development<sup>465</sup>;
- 2) investments of government-owned enterprises using their current earnings and loans from foreign financial institutions (the latter played a notable role as early as the 1970s);
- 3) investment loans of government-controlled banks and special funds set up by the Central State Bank;
- 4) administrative (statutory) target stimulation of investments, especially those in priority (encouraged) sectors;
- 5) tax stimulation of investments in general, including foreign investments, if they are made in priority sectors (simultaneously blocking foreign investments in the sectors reserved for the local business community).<sup>466</sup>

Under Investment Encouragement Regulation for investors in encouraged sectors in the 1960–70s and even much later, the preferential tax regime, even with import duties reduced to zero, was introduced for imported machinery, equipment, and semifinished products.<sup>467</sup> The above-mentioned Investment Encouragement Regulation (published in 1960) is a distinctive feature of the Taiwanese economic model. The lack of such a regulation until recently was a distinctive feature of Russian economic policy.

The system regulating the investment behavior of corporate entities in the period of accelerated modernization of Taiwan's CS also featured, along with many channels of actions affecting their behavior, differentiation of such actions and their broad variability depending on the target of the action and specific economic situation.<sup>468</sup>

<sup>465</sup> In 1990, all investments into fixed capital assets of Taiwan's economy accounted for 22% of GDP and about half of them were financed by the state budget. The situation before 1990 was roughly the same.

<sup>466</sup> Trigubenko et al., *Taiwan...*, 1993. P. 40–59.

<sup>467</sup> *Ibid.*, p. 58.

<sup>468</sup> In the early 1990s, based on the development strategy, the government could decrease income tax on an enterprise by 5–20% of total funds it invested in the same year in production equipment (*ibid.*, p. 51). In this case, the size of the privilege varied from case to case. In the same way, during accelerated development of Taiwan's economy's, graduated tax rates, tax holiday periods, depreciation rates, real estate tax rates (for example, all taxes on real estate used by an enterprise for production purposes were halved), and import duty rates were widely employed to manage the economic (primarily investment) activity of corporate entities. The

Functionally, the system of regulated financial support for investments in Taiwan's economy consists of:

- 1) a system of regulated financial support for investments in the public sector;
- 2) a system of regulated financial support for investments in the nonpublic sector.

The first of these systems peaked as far back as the early 1950s. Later, the proportion of investments in the public sector was gradually diminishing in the total amount of investments.

This process in the 1960s–1970s was mainly compensated for by growth in the proportion of investments made from regulated extrabudgetary channels in the total amount of investments. Including

- 1) through the Bank of Communications and the China Development Corporation;
- 2) through the Development Fund under the Executive Yuan (government) that invests funds primarily in technology-intensive or crucial manufacturing enterprises;
- 3) through specialized funds established by the Central Bank to finance private industry development;
- 4) through other government-controlled banks.<sup>469</sup>

In connection with the above, it is worth mentioning the participation of the Central Bank as an investment bank (like in Brazil and some other countries) in lending to the economy.

The system of regulated investment to finance the fixed-capital assets of Taiwan's economy no later than in the 1980s was complemented by a system of regulated financial support for R&D and technology importation as a tool for managing CS parameters in the future.

The system of regulated financial support for investments in R&D and technology importation, like that for investment in fixed-capital assets, is multichannel.

The fund to finance R&D through regulated channels is formed from:

- 1) direct budgetary allocations;
- 2) funds to finance R&D by government-run enterprises from their current earnings;
- 3) funds of nonpublic economic entities coming from tax holidays and other privileges.<sup>470</sup>

A significant part of funds spent by nonpublic enterprises (corporations) on R&D in the 1980s came from direct government participation in funding relevant expenditures.<sup>471</sup> The system of stimulating foreign investments in stimulated indus-

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latter was important in the early 1990s, when import tariffs for some items were high. The practice of government involvement in venture capital (the size of which varied from case to case) also contributed to the differentiation of economic activities between enterprises (*ibid.*, p. 59). The above privileges were extended to corporations with foreign capital (in the first place), since Taiwan's CS sector controlled by foreign capital displayed a higher proportion of high-tech and knowledge-intensive productions.

<sup>469</sup> *Ibid.*, p. 40.

<sup>470</sup> In the period under review, R&D spending, wholly or partially, was deducted from taxable income (Taiwan: A Guide, 1993. P. 50). Also, loans were extended to cover R&D spending, but no more than 50% thereof (*ibid.*, p. 59).

<sup>471</sup> *Ibid.*

trial sectors (and especially in those regarded as strategically important), which was widely used in the 1970s–1980s, was also a system for stimulating and financing technology importation.

In Russia, at least before the “national projects” emerged, fundraising for investments, let alone investments in corporate R&D, was entirely a private initiative of individual enterprises. So far, little has changed in this regard (despite the local banking sector in Russia still being hardly capable of financing investments through loans). The Taiwanese economic model offers a conceptually different approach to this important matter.

*The low degree of mutual autonomy between the nonpublic sector of the CS and the system for managing its operation as a distinctive feature of the Taiwanese model for managing the CS*

Taiwan’s economy in the period of its fast modernization invariably contained several command corporate mixers primarily servicing:

- 1) the export-oriented sector of the economy as a whole;
- 2) specialized economic zones;
- 3) small and medium firms.

In a sense, the entire, more or less modern, market sector of Taiwan’s economy in the period of its accelerated development was a giant mixer involving practically all available mechanisms of the system for managing operation of the economy to affect the processes unfolding in the CS. The state of the regulated sector of Taiwan’s economy was changing (as the economy was developing and the external economic environment was changing), and so was the system for managing the operation of Taiwan’s economy and CS.

This economic mechanism was necessitated basically due to the following:

1. The pressing issue of rapid development and enhancing the CS export potential under the existing Taiwanese conditions could be hardly addressed without a package of measures to stimulate export sector development and create economic conditions for its efficient operation (including capital investments in infrastructure and the exchange rate policy).
2. Small and microenterprises predominated in Taiwan’s economy at the initial stage of its modernization as opposed to the high level of economic risks, decreasing the effectiveness of market forces. This system of SMEs could operate efficiently only while compensating for deficiencies in the existing market mechanism by external coordinating and programming actions. Among them are external financing and external complementation in the form of large government-run enterprises performing the functions that the system of small (and even small and medium) enterprises was incapable of performing.<sup>472</sup>

<sup>472</sup> Micro and small enterprises completely dominated in Taiwan’s industry, the more so in other sectors, also after the primary modernization was accomplished. In 1968, there were 33,000 industrial enterprises in Taiwan on average employing 30.6 persons. In July 1976, there were 41,500 industrial enterprises in total employing 1,750,000 people that is on average 42.2 persons per enterprise (Economic Yearbook of the Republic of China, 1977. p. III–48). This figure includes state-run enterprises, which are comparatively larger in size. Later, though the

The system of SMEs that accounted for most of Taiwan's industrial output had to be placed within a certain framework to enable it to operate in an efficient regime within a short time. This challenge was met by forming an appropriate command corporate mixer with an EOMS possessing a sizeable regulatory resource making it possible to affect in a differentiated manner different groups of enterprises and even individual enterprises and invest heavily in stimulated segments of the CS (first, import substitution was stimulated, then, the export-oriented sector of the CS and the sector of SMEs as a whole).

Control over the system of financial flows and, especially, over the system of financial support for investments was a necessary condition to solve this problem.

As mentioned earlier, the economic mixer formed during the operation of the Taiwanese option of the system for managing market operation of the economy was employed at the postwar recovery stage of Japan's economy. However, the Taiwanese mixer differed greatly from its Japanese prototype since the regulatory resource of the Taiwanese option of this system was (at least in the 1960–1970s) substantially higher than the regulatory resource of the Japanese option of the system around 1950 (when its regulatory power was the highest).

It was not unexpected, since the nonpublic sector of Taiwan's CS in the period under review differed from the Japanese one by much higher amorphism and the absence of major corporations with a high sensitivity to administrative actions from government authorities and capable, in turn, of defining the economic behavior of the mass of small and medium firms. In addition, in Taiwan, in contrast to Japan, financial instruments used for controlling the economy's performance were immature.

Hence, the scope of objectives to be addressed in order to dynamize and modernize Taiwan's economy even in the 1970s from the start was broader than the scope of similar objectives that Japan's economy was addressing in the 1950s.<sup>473</sup> To make the Taiwanese option of the EOMS a tool to direct CS performance in the 1970s as efficient as the Japanese option in the 1950s, the Taiwanese option had to have a much higher potential and use a broader and more differentiated set of tools for selective actions directed at the subsystems and elements of the CS. And this was done.

From the 1970s, when the economy was becoming distinctly export-oriented, and until the 1990s, small and medium companies were the main manufacturers of export products. Taiwan's experience seems to suggest that the problem of export support for economic development can be solved without major corporations capable of generating new technology and efficiently assimilating it.

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number of major enterprises was increasing, the average number of employees per industrial enterprise changed slightly. In total, in 1990, there were 78,000 production enterprises (including construction, transportation, and other firms) against 84,000 trading enterprises (Trigubenko et al., Taiwan..., 1993. P. 67).

<sup>473</sup> Japan in 1945 possessed a relatively well-developed heavy industry, but Taiwan had to create its heavy and engineering industries almost from scratch. Japan never needed foreign investors to enhance the technology level of its industry and launch more or less high technology export products. Conversely, Taiwan's economy not only in the 1950s, but also in the 1970s and 1980s, needed investors both to raise its technology level and export potential.

However, as a matter of fact, Taiwan's economic export potential after 1960 could not be expressed as the potential of individual small and medium firms or even that of corporations with foreign capital participation. In fact, it was determined by a combination of cumulative effects of the system of selective regulatory actions undertaken on the part of the EOMS directed at the non-public sector of the CS and, primarily, its segment composed of small and medium firms.

At any given moment, formal exporters were, naturally, specific corporations, primarily small and medium one. Actually, the export capacity of Taiwan's economy in the 1960s–1980s and, partially, in the 1990s was a product of the economic command corporate mixer including the EOMS and the export-oriented sector of the CS, composed, in this case, predominantly of small and medium firms. The export orientation of the above sector was mainly the result of the policy of encouraging exports and, consequently, the result of vigorous actions on the part of the EOMS.

A large public sector providing cheap supplies to exporters of fuel and energy sector products and some other sectors of heavy industry, together with infrastructure development and the policy of the undervalued exchange rate of the Taiwanese dollar, were necessary conditions for the export sector of Taiwan's CS in the 1960s–1980s to operate efficiently.

There are different views regarding how effective the input of small and medium firms can be into economic development and, especially, economic modernization. The Taiwanese experience illustrates that with duly optimized powerful and targeted actions on the part of the EOMS directed at the system of small and medium corporations, this system of corporations is capable of making a major contribution to technological development and even to building up significant export potential within a relatively limited timeframe.

The same method to increase the potential of relatively small firms within a short time by active administrative actions on the part of the EOMS was employed in most countries of Southeast Asia and, over the last 15 years, in China.

### ***Capacities for stabilizing the corporate base of the economy system quality and efficiency: the Taiwanese experience***

An economy's corporate base system quality and efficiency, as mentioned above, greatly depend on how well the CS system characteristics are harmonized with the existing CS framework conditions. GDP growth rates are a key indicator of CS system quality and efficiency when the economy is developing in crisis-free conditions. The higher, other things being equal, the growth rates of output in the given CS, the higher is its efficiency.

If the corporate sector in a market economy accounts for the bulk of GDP as it usually does in modern economies, long-term GDP growth rates of such an economy as compared with comparable economies are indicative of its corporate base efficiency.

Taiwan's GDP annual average growth rates in 1951–2000 were high and in 1961–1990 were very high (see Table 3 of Appendix 3). At least in 1951–1990, growth rates of the GDP part produced by Taiwan's CS notably exceeded Taiwan's overall economy growth rates. The above suggests that Taiwan's CS efficiency over the whole period of 1951–2000 was high.

Meanwhile, during more than 50 years of Taiwan's operation of the economy as a special economic formation (since 1950), the system characteristics of Taiwan's economy as a whole and the related CS had undergone substantial changes, namely:

- 1) the proportion of the CS sector controlled by the state kept diminishing
- 2) conversely, the proportion of the nonpublic sector was growing
- 3) major corporations emerged in the nonpublic sector of the CS
- 4) in 1961–1980, a major sector controlled by foreign capital had been established in Taiwan's CS, and
- 5) since the 1980s Taiwanese companies started to turn into transnational or at least transregional (with branches in mainland China) companies.

*Table 2 of Appendix 3*

**Taiwan's GDP performance, %**

Years	Taiwan's GDP annual average growth rates, %
1951–1960	6.2
1961–1970	8.6
1971–1980	9.3
1981–1990	9.2
1991–1995	7.0
1996–2000	6.0
including 2000	6.4
2001–2004	2.0
including 2001	– 1.1

**Sources:** Figures for 1951–1990 are based on Taiwan's GDP valued at the Taiwanese dollar's PPP as of 2000 (Bolotin, 2001. P. 95). GDP growth figures in 1991–1995, 1996–2000, and 2001–2004 are based on the China Statistical Yearbook 1993, 2003, 2005.

The Taiwanese experience shows that CS efficiency (including its capacity to ensure economic growth) may be practically constant, even when its operation framework conditions change significantly. CS efficiency stability is ensured by maintaining, at any given moment, a rather high degree of harmonization between the system characteristics of the CS and the existing operation framework conditions.

The Taiwanese economic model was distinguished from the Indian or South Korean ones in that it intended to solve this problem both by compensating,

through economic policy tools, for the effects of the framework conditions, which had a steadily adverse impact on the CS efficiency, and by intensive selective management of CS parameters (including the management of parameters of the non-public sector of the CS).

However, the period after 1988 exhibited a notable decline in growth rates of Taiwan's economy, which suggested a decline in the CS efficiency nationwide (see Table 2 of Appendix 3). In this case, the decline in Taiwan's CS efficiency was mainly caused by the following.

The direct cause is the erosion of the Taiwanese economic model and hence a decline in the intensity and effectiveness of regulatory actions directed at the economy (due to a reduction in investment financing through regulated channels and privatization).

However, there is a more fundamental cause. It is the adverse changes in the system of operation framework conditions of Taiwan's economy. Among them are:

- 1) the growing need for high depreciation investments (and especially for investments to maintain competitiveness), at least at the achieved level, which is not an easy task considering stronger global competitiveness<sup>474</sup>;
- 2) the inability to maintain the previous level of regulatory actions directed at the economy because of WTO membership requirements and the inability to boost exports (with prospects of their decline if accession to the WTO is avoided);
- 3) growth in investment risks of various kinds (political risks and risks initiated by economic deregulation and growth in competitiveness of external markets);
- 4) capital outflows.<sup>475</sup>

The above circumstances resulted in a decline in growth rates of Taiwan's economy in the current decade to levels roughly matching those in developed countries.

Naturally, Taiwan's CS efficiency declines if we ignore the effect of deregulation of the economy and CS (in a sense, compulsory), reducing the ESRst and ESTCS. If the need to deregulate Taiwan's economy (under external pressure) is regarded as an ordinary framework condition, then Taiwan's CS efficiency should still be considered quite high enough (under the existing set of its operation conditions)<sup>476</sup>, while a decline in Taiwan's economic growth rates should

<sup>474</sup> China becoming a very large (at present, probably the world's largest) exporter of manufacturing products had an especially limiting impact on Taiwan's exports.

<sup>475</sup> Such capital export was economically justified where capital was intended to establish products consuming components manufactured in Taiwan outside the island. However, the export of capital by Taiwanese companies resulted in establishing, outside the island, products competing with Taiwan's export sector. However, in the early 1990s, Taiwan's administration was effectively restraining capital outflows. However, ten years later, in a compelling situation for openness (in line with WTO membership requirements) and, especially, due to the specific relations between Taiwan and mainland China, the capacity of the Taiwanese administration in this regard substantially decreased.

<sup>476</sup> As GDP per capita rises, achievable GDP growth rates, other things being equal, decline. As of 2000, Taiwan's GDP per capita, in terms of the PPP of the Taiwanese dollar, was 50% of the American level, while in 1980 it was 27% (Bolotin, 2001. P. 106). It is clear that the marginal growth rates of Taiwan's economy in the current decade are much lower than 20, 30 or, moreover, 40 years ago as compared with the system efficiency of Taiwan's CS in the relevant periods.

be viewed mainly as the result of the change in its rigid operation framework conditions.

The Taiwanese experience shows that the capacity to stabilize the efficiency of an economy is substantial, even if it is relatively small in size and depends greatly on the global economy. However, it is significantly reduced when the modernization-led economic paradigm gives way to the neoliberal one.

### *Causes of Taiwan's economic model erosion and related changes in the CS*

The Taiwanese economic model is a product of adaptation of the economic policy to a certain system of framework conditions. As the system of framework conditions changed (primarily, due to the expansion of the production base, a rise in its technology level, and a reduction in economic risks of various kinds), changes to the Taiwanese economic model became inevitable. First, the economic policy was the direct target of these changes (as a fundamental manageable framework condition) and then the economic parameters derived from the economic policy, including the system characteristics of the CS.

The erosion of the Taiwanese economic model directly stems from the following factors:

- 1) gradual elimination of development deficiency and, hence, a change in the system of economic objective setting (a decrease in the economic development priority);
- 2) a decrease in investment risks of a political nature (since thereby some restrictions on the investment behavior of nonpublic investors were lifted);
- 3) liberalization of the foreign exchange policy and the entire system of foreign economic relations (partly in connection with factor (2), and changes in the internal political sphere and due to the external pressure)<sup>477</sup>;
- 4) gradual modernization of the nonpublic sector of the CS (also due to foreign capital inflows and, over the last decade, to privatized assets also, which grew in number);
- 5) growth in the financial capacity of the private sector (due to its own accumulations, borrowings made more accessible and affordable, capital inflows from abroad, the emergence of an efficient stock market) and, as a result, growth in the investment capacities of the private sector and a weakening of the government role in investments;
- 6) the emergence of major corporations in the nonpublic sector and gradual growth of their economic importance (with a relevant decrease in the role of government-run corporations in the CS core)<sup>478</sup>;

<sup>477</sup> Taiwan's economy embarked on substantial liberalization only after the death of Kuomintang leader and Taiwan's President Chiang Ching-kuo (1988).

<sup>478</sup> In 1989, the Taiwan stock exchange had 181 listed companies, in 1995, 347 companies, and in 2000, 531 companies (China Statistical Yearbook, 1993. P. 852 and 2003. P. 963). The number of major and medium companies in the above years was about the same.

- 7) growth in the proportion of the CS sector controlled by foreign capital, including the proportion of foreign bank branches in the banking system (another factor reducing the ESRst and ESRCs);
- 8) growth in social expenditures (since it limits government investment capacities);
- 9) growth in the economic importance of exports and imports (as a factor furthering liberalization of an economy);
- 10) change in the conditions for access to external markets (since already in the 1990s, Taiwanese exporters were granted access to foreign markets only after opening Taiwan's market both for foreign exporters of goods and services and foreign investors);
- 11) external pressure on economic policy; Taiwan's commitments when joining the WTO (2001) to further liberalize the economy and grant equal rights to foreign and local investors.

Under external pressure, Taiwan's foreign economic relations became more liberalized, domestic and foreign investors were granted almost the same rights, and privatization processes were boosted. On the whole, the external pressure was directed at equalizing the system characteristics of Taiwan's CS with those of developed economies.

The proportion of the public economic system in Taiwan's economy was diminishing even before the erosion of the Taiwanese economic model started. However, as long as the state retained its position in basic economic sectors, which exhibited a high level of capital intensity, and in the banking system, as well as controlling the investment process and structural shifts in the economy, a reduction in the presence of the public economic system in Taiwan's economy did not cause the erosion of the Taiwanese economic model.

On the contrary, it is the erosion of the objective-setting system underlying the Taiwanese economic model (lowering the development priority) that finally automatically gave rise to prerequisites for a substantial weakening of the state positions in both the capital-intensive sectors and the banking system.

The erosion of the Taiwanese economic model and the related erosion of the Taiwanese CS model passed through several stages.

### *Stage 1 (1987–1994)*

This stage exhibited:

- liberalization of the currency legislation;
- gradual deregulation of Taiwan's CS operation conditions;
- growing economic importance of the stock market.

However, the state in that period, by and large, retained its positions in the banking system and capital-intensive sectors. The erosion of the Taiwanese economic model in 1987–1994 for the CS resulted in:

- 1) weakening of government control over the economic behavior of companies and especially over their investment behavior;
- 2) launching of the dissolution of the gray public sector consisting of companies whose economic behavior in essential aspects were controlled by government authorities;

- 3) an increase in the proportion of major corporations controlled by private capital in the nonfinancial sector of Taiwan's CS;
- 4) a reduction in the proportion of government-controlled banks in the banking system;
- 5) an increase, due to the growing capital outflows, in the number of companies with branches outside Taiwan (primarily in mainland China), i.e., companies that can be regarded as TNCs.<sup>479</sup>

It should be recalled here that for a long time, the Taiwanese CS model presumed a certain functional complementarity between the CS sectors controlled by local and foreign private capital. Namely, companies controlled by local capital manufacture primarily low- to medium-tech products, while high-tech products are manufactured, as a rule, by companies controlled by foreign capital; the latter are the main collectors of high technology and technology modernization agents of Taiwan's CS.

However, the situation gradually changed as companies controlled by local capital achieved higher capacity to manufacture high-tech products and their proportion in the total output of high-tech products increased. As a result, the complementarity relationships between the sectors of Taiwan's CS controlled by local and foreign private capital were becoming increasingly less pronounced.

The erosion of the functional complementarity between Taiwan's CS sectors controlled by private local and foreign capital brought about a radical change in the CS characteristics as compared with the standard Taiwanese modernization economic model. Taiwan's CS sector controlled by local private capital was acting more and more as an economic modernization agent.

Thus, the public sector was the main economic modernization agent in the initial period of Taiwan's economic modernization. That role passed to the public sector and the CS sector controlled by foreign capital after Taiwan's economy had been transformed into an export-oriented economy. By 1993, or a little later, the CS sector controlled by local capital had assumed the role of the main economic modernization agent.<sup>480</sup>

### *Stage 2 (1995–2000)*

Changes in Taiwan's CS associated with the erosion of the Taiwanese economic model developed in the same directions as in Stage 1. By 2000, the position of major companies controlled by private capital had been significantly reinforced in Taiwan's CS core. The state continued to dominate in the fuel and energy sector, iron and steel industry, and capital-intensive sectors of infrastructure. It is significant that the privatization of Chunghwa Telecom (35,000 employees) effectively started only in 2000.<sup>481</sup>

<sup>479</sup> Already in 1989, around 2,000 enterprises established by Taiwanese companies operated in China (predominantly in Fujian and Guangdong provinces) (Trigubenko et al., *Taiwan...*, 1993. P. 36).

<sup>480</sup> Taiwan became a "great computer power" as early as the 1980s, and it was the private sector that spearheaded the manufacture of computers and their components.

<sup>481</sup> *Globalization of Resistance: Struggle in the World*, 2004. P. 49.

The following features are specific to Stage 2 of the erosion of the Taiwanese economic model and the related Taiwanese CS model:

- 1) by and large, the loss of the government's ability to control the investment behavior of companies significantly reduced the economy's investment burden after 1994;
- 2) turning of corporations controlled by local private capital into the main vehicle of technological potential and the main economic modernization agent;
- 3) a substantial weakening of direct and reverse links in the linkage "operation of the economy management system – CS".

### *Stage 3 (after 2000)*

Its main content related to the CS includes:

- 1) privatization transformations in Taiwan's economy;
- 2) the growing presence of companies in Taiwan's CS that have branches outside Taiwan (mainly in mainland China) and thus being functional counterparts of western TNCs;
- 3) a lowering of the Taiwan's ESRCS.

By the end of the 1990s, Taiwan's economy became objectively prepared to expand the privatization process. Among them are the formation of sizable free financial resources in the CS private sector and the stronger capacity of the private sector to replace the public sector as a strategic investor. Privatization investments, other things being equal, are rather attractive for private investors since investment risks associated with them are relatively small (in most cases, they are even a priori below those related to investments in greenfield projects at home and abroad).

Therefore, privatization in Taiwan's conditions encouraged a reduction in capital outflows. From this point of view, it alone has a certain positive effect because it "retains capital". In addition, privatization at the same time increases budget revenues and improves the state's financial standing.

Nonetheless, the economic feasibility of further privatization remains an open issue for Taiwan's economy. because the future political status of Taiwan being a neighbor to the rising mainland China is uncertain. This automatically limits the willingness of the private sector to invest in major and capital-intensive projects, which, in 1990 or so, were still financed by the state.

The growth in capital exported by Taiwanese companies and, hence, the growth of companies in Taiwan's economy with branches abroad were mainly caused by the deregulation of Taiwan's economy and a reduction in the gap between the exchange rate and PPP of the Taiwanese dollar. This entails an increase in aggregate risks, including investment ones, associated with investments in the island's economy and especially in its export sector.

When the level of investment risks in Taiwan grew, Taiwanese capital flowed into countries with a lower level of investment risks even if this level was achieved due to a much stronger presence of the state in the host economy than in Taiwan's economy. This is one of the main causes of large-scale capital flight from Taiwan to mainland China.

At present, in its key parameters, Taiwan's CS does not differ much from a CS typical of European developed economies in the mid-1980s.

At the initial point of Taiwan's economic development, the degree of autonomy of the nonpublic sector of the CS from the system for managing the economy through government authorities (and the state administrative economic system) was not high. However, it gradually increased. At present, it is roughly the same as in most developed countries with a medium-sized economy of the 1970s–1980s.

The Taiwanese economic model at the stage of the accelerated economic modernization was oriented toward maintaining a high level of the ESRCS. Taiwan's ESRCS declined along with the erosion of the Taiwanese economic model (and relevant CS restructurings).

However, despite the strongest dependence on imports, enormous export burden, and significant capital inflows as foreign direct investments, Taiwan's CS still displays substantial autonomy from the GCS (excluding mainland China's CS). Sources of this autonomy are:

- 1) a steadily high level of competitiveness and considerable adaptability to fluctuations in global market<sup>482</sup>;
- 2) a significant level of vertical integration of Taiwan's economic complex and especially its export-oriented sectors;
- 3) a large proportion in Taiwan's GDP of micro- and small companies controlled by local capital and adapted to local conditions, which can withstand attempts from companies controlled by external capital to drive them out of the market;
- 4) a still relatively small share of companies controlled by foreign capital in Taiwan's CS assets.<sup>483</sup>

The gap between the PPP and the exchange rate of the Taiwanese dollar is much less than that between the PPP and the exchange rate of the Chinese yuan. This is one of the vital sources that gives a competitive edge to mainland China's CS over Taiwan's CS. Due to the Chinese yuan exchange rate, which is relatively more highly undervalued in relation to the PPP, export products of China's CS are implicitly subsidized much more strongly than the export products of Taiwan's CS.

<sup>482</sup> The Taiwanese consumer knows that the local currency exchange rate, above all, being always undervalued, sometimes more, sometimes less, governs the price of imported components and semifinished products in Taiwan. Therefore, even if such a factor as a relatively low level of labor costs is ignored, the Taiwanese consumer usually pays less for locally manufactured components and semifinished products of comparable quality. For this reason, in 1977, private and subsidized electronic and radio engineering firms met with the Ministries of the Economy and Communications and the Economic Planning Committee and agreed to launch the national production of high-tech parts and materials needed to manufacture basic state-of-the-art radio electronic products. This goal was successfully achieved. As early as the 1990s, Taiwan turned into one of the largest global manufacturers of color TV tubes, integrated circuits, and personal computers. In 1998, the production of color TV tubes peaked at 23.34 million units (China Statistical Yearbook, 2003, P. 956). In the same year, Taiwan's manufactured 12 million personal computers and in 2000, 16 million (Ibid, p. 957). It is significant that with modest levels of car production (several hundred thousand cars per year), spare parts for cars are produced in Taiwan on a rather massive scale: as early as 2002, the value of car spare parts produced amounted, in terms of the exchange rate, to US\$4.4 billion (ibid., pp. 957 and 963).

<sup>483</sup> As of 2004, the volume of foreign direct investment accumulated by Taiwan's economy was US\$56 billion (Bulatov, 2007, P. 556). In terms of the exchange rate, it is seven times lower than the market value of shares in 462 Taiwanese companies (before their value fell due to the crisis) listed in 1999 on the stock exchange (China Statistical Yearbook, 2003, P. 963).

This factor, apart from those outlined above, became the main cause of the trend as early as the 1990s (and partly even earlier) toward transferring the production activities of Taiwanese companies to mainland China. As of 2005, direct investments of Taiwanese companies in mainland China's economy amounted to several tens of billions of dollars.<sup>484</sup>

The prospects of unification of Taiwan with mainland China so far is hypothetical. However, the process of integrating Taiwan's CS into mainland China's CS is already taking place. It relies partially on capital outflows into the mainland and partially on the division of labor.

Mainland China's economic model displays rather high autonomy of regional CSs not only at the provincial level, but also at the district level. Therefore, it is no wonder that Hong Kong's CS in spite of close links with the rest of China's CS continues to retain a high level of autonomy from it after Hong Kong's political integration with China. There are no grounds to expect that in the near future the situation will be fundamentally different.

The outlook for the integration of Taiwan's CS with China's CS appears similar. In practice, in any event, it will retain a high degree of autonomy from China's CS. The ties of Taiwan's economy to the world market hamper its deep integration with China's CS. In the same way, the ties of Taiwan's CS to that of China already today hamper its integration with the non-Chinese segment of the world economy or the world economy proper (without China).

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<sup>484</sup> During three years (2003–2005) alone, Taiwan's direct investments in mainland China's economy amounted to US\$8.65 billion, or 5% of the total amount of direct investments in China's economy during the same period (China Statistical Yearbook, 2005. P. 644 and 2006. P. 753).

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