

**INSTITUTIONAL MODELS IN BANKING AND INVESTMENT:  
A COMPARATIVE ANALYSIS OF CHINA AND RUSSIA  
(draft)**

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**Abstract.** The paper summarizes the results of empirical studies of banking and investment in China and Russia. Over the past 15 years or so the Russian government increased its presence in the credit system as regulator, strategic planner and service provider. The authorities have pursued the industrial policy aimed at nurturing a few «national champions» and increased the degree of interference in the lending decisions of state banks. Those policies partly reverse the destruction of the 1990s. The institutional models of banking in China and Russia appear essentially coherent, and Russia might be importing institutions from China (Vernikov, 2015). A comparative analysis of centralized investments into fixed assets and R&D in China and Russia suggests that in both countries the prevailing institutional model is what we define as «the state as investor». It makes China and Russia different from Western countries, and in particular the USA, where the prevailing model of investment implies “the state as regulator” (Kirdina, 2013). The institutional dynamics in banking and investment reflects a search for an optimal balance between the institutions of state and market coordination in China and Russia. The cases of banking and centralized investment illustrate the hypothesis of the TIM (Theory of Institutional Matrices) or X- and Y-theory that China and Russia belong to the same type of economy and society (Kirdina, 2014).

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**Key words:** China; Russia; banks; banking system; investment; R&D; government; comparative institutional analysis; path dependence

**JEL codes:** G21; G28; H82; P34; P52

## **1. Introduction**

Generally, the study of economic growth in mainstream economics explicitly or implicitly assumes the domain of neoclassical market model where the growth is the product of activity of competing companies. This assumption is deemed to be a fundamental truth. This approach assumes that the government shall just search for the optimal level of interfering in the economy, which allows the whole economy to overcome all sorts of obstacles and traps for the stable economic growth.

At the same time, there is another point of view on the problem of the government, markets and economic growth. It is based on the fact that we need to examine carefully the empirical data in order to understand where and when government economic intervention is

good, and where and when it is bad, as well as the way it affects the overall economic growth (Fligstein, 2005).

The paper is aimed at identification of institutional models for banking and investment in China and Russia. The paper is organized as follows: section 2 provides an overview of the comparative analysis of Russian and Chinese banking. Section 3 contents the results of the statistical comparison of the composition of investments made in the real sector of Russia and China, on the one hand, and in a typical Western country that is the US, on the other hand. In section 4 we describe the features of two institutional models identified in the research there are "state as investor" and "state as regulator". In Conclusion we discuss an idea that the institutional dynamics in banking and investment reflects a search for an optimal balance between these two models or the prevailing institutions of state and complimentary market coordination in China and Russia. Arguments of the TIM (Theory of Institutional Matrices) or X- and Y-theory are used to support the main outcome.

## 2. Russian and Chinese Banking: Comparative Analysis

Below we try to summarize our findings resulting from the comparative research of the institutional structure of the Chinese and the Russian commercial banking systems. In the **Table 1** we attribute signs reflecting our subjective judgment regarding two questions: (a) does essential similarity or difference prevail at the current stage; and (b) does the evolution go in the direction of convergence or divergence.

**Table 1. Comparison of the banking systems of China and Russia**

	China	Russia	Static: similarity (+) or dissimilarity (-)	Dynamic: convergence (+), divergence (-), no change (=)
<i>Institutional structure</i>				
The number of commercial banks, and - the direction of its change	541 ↑	≈850 ↓	-	+ +
Geographical outreach: bank entities per:				
- 1,000 km <sup>2</sup> ;	9.16	2.83	-	+
- 100,000 adults	7.7	38.2	-	+
Multi-tier and hierarchically organized system of commercial banks led by the core state-controlled banks	Yes	Yes	+	=

A bank-based model of financial intermediation	Yes	Yes	+	=
Financial depth (bank assets to GDP), %	131.6	45.6	-	+

*Market structure and concentration*

Supremacy of large state-controlled banks	Yes	Yes	+	=
The market share of the:				
- core state-controlled banks, %	44.9	42.4	+	-
- other state-controlled banks, %	≈50	17.3	-	+
- domestic private banks, %	3	25	-	=
- foreign-controlled banks, %	2	15.3	-	=
Concentration on the commercial banking market (Top-10), %	78	63	+	=

*The industrial policy of the government*

Nurturing «national champions» within the public sector:				
- official industrial policy	Yes	No	-	=
- the actual policy of the government	Yes	Yes	+	=
The core state-controlled banks are at least as efficient as other market participants	Yes	Yes	+	=
A genuine privatization of the core state-controlled banks	No	No	-	=
A more diversified equity structure of the core state-controlled banks (corporatization, external shareholders)	Yes	Yes	+	=
Favorable treatment of foreign subsidiary banks	Yes	Yes	+	=
Favorable treatment of foreign bank branches	Yes	No	-	=
An explicit scheme of deposit insurance	No*	Yes	-	+

*Bank involvement in the lending to the non-financial sector*

Domestic bank lending is an important source of investment into fixed assets of non-financial companies	Yes	No	-	=
Lending by the core state-controlled banks complement budgetary funds invested into fixed assets of non-financial companies	Yes	Yes	+	=
Government bodies interfere into the lending decisions of the core state-controlled banks	Yes	Yes	+	=
The core state-controlled banks combine commercial banking with development banking	Yes	Yes	+	=
Government bodies exert influence on the lending decisions of nominally independent banks	Yes	No	-	=

Bank lending covers the budget deficit of the regional and local authorities	Yes	No*	-	+
<b>Total</b>			<b>+12</b>	<b>+8</b>
			<b>-14</b>	<b>=18</b>
				<b>-1</b>

\* Envisaged.

The Table above suggests that statically there are quite a few differences and incoherencies. However, in dynamics the trend goes in the direction of greater coherence between the institutional structure of the banking system in China and in Russia. Only one parameter displays a reverse dynamics, namely the market share of the core state-controlled banks.

Russia went further than China in liberalizing its banking industry in the early 1990s. The subsequent development was non-linear. China combined a transformation of the state-controlled banks and a reduction of their market share with the employment of more sophisticated tools of monetary policy. One could interpret that as a departure from a «socialist» model of a credit system in the direction of a market-like commercially oriented system governed by competition (Xu, van Rixtel, van Leuvensteijn, 2013). In Russia the past 10 or 15 years gave what looks like evidence of a stronger public sector and an ever narrowing field for competition in banking. Taken out of the context, statistical data might suggest that development paths diverge. Would such an interpretation be accurate, and is it true that China’s model of banking aims at an «authentic market», whereas Russia’s is pointed in the opposite direction? We do not think so, in view of the large (and ever growing) number of similar institutional forms and structural features in the two banking systems (see previous sections).

Western scholars recognized a decisive role of the state in both countries’ economies. They still choose to believe that the evolution goes in the direction of capitalism and market (Puffer, McCarthy, Wilson, 2007). Some would say in the early 1990s that the completion of China’s transition to a market system was within sight [Perkins, 1994]. We argue that the mainstream paradigm that sets «socialism» against «capitalism» or «market» fails to describe the social dynamics in China. The Chinese themselves have merged these two seeming extremes into one term, «socialist market economy» (see [Wikipedia](#)).

The theory of institutional matrices or TIM (Kirdina, 2001; 2014) allows inserting the developments in a particular sector (e.g., commercial banking) into the socio-economic context of Russia and China. According to the TIM, both national economies feature a dominance of the institutional X-matrix that implies centralized non-market re-distribution as well as superior

conditional ownership. The prevalence of the X-matrix or the Y-matrix is invariable («path dependence»), therefore the lead of the given type of institutions persists. Attempts of double-crossing by replacing cardinal institutions with those from an alternative matrix are doomed.

The survival of the system and its efficient functioning depends on the balance between dominant institutions and complementary ones. A forward-looking trajectory must comply with several criteria including a static and a dynamic complementarity of institutions and a rational sequencing of the institutional change (Polterovich, 2006). Sustainable development requires the proportion of 65:35 or 70:30 (close to the « golden ratio») between dominant and complementary institutions (Davydov, 1988; Kirdina, 2001).

Banks' main function in X-type and Y-type economic system alike is transforming savings into investments and allocating/reallocating monetary resources between subjects. The TIM pre-determines the specific form of resource allocation for the given type of society. Kirdina develops a theory about two basic institutional models of real sector financing, namely «state as investor» and «state as regulator». China and Russia both represent the X-type of economy, so they adhere to the former model; the US economy belongs to the Y-type, so they adhere to the latter model (Kirdina, 2013). The dominant form of resource allocation in an X-economy is centralization and subsequent redistribution under the guidance of the government. The complementary institution in this case rests in the decentralized raising of resources from the financial market and their allocation according to financial efficiency. Correspondingly, the state-controlled banks and their financing for government programs and projects appear as serving the dominant institution of resource allocation for the X-economy. Then privately owned banks' activity in the accumulation of savings and their investment into financial market assets relates to the functioning of the Y-type institution. Together they ensure a needed proportion and balance in the financial system.

The above paradigm enables interpreting various phenomena. *China* is moving gradually but consistently from a total dominance of one type of institutions, those of centralized redistribution of financial resources, to a more balanced mix of those plus the resource allocation via market. Private capital remains underrepresented in the banking system, so its share is set to grow. Maintaining a proportion between different types of institutions preserves the stability of the financial system and the trust of the population and sustains economic growth.

*Russia* attempted in the 1990s to reverse at a single throw the operating mode of the credit system by crushing the embedded institutions. The government withdrew itself from the

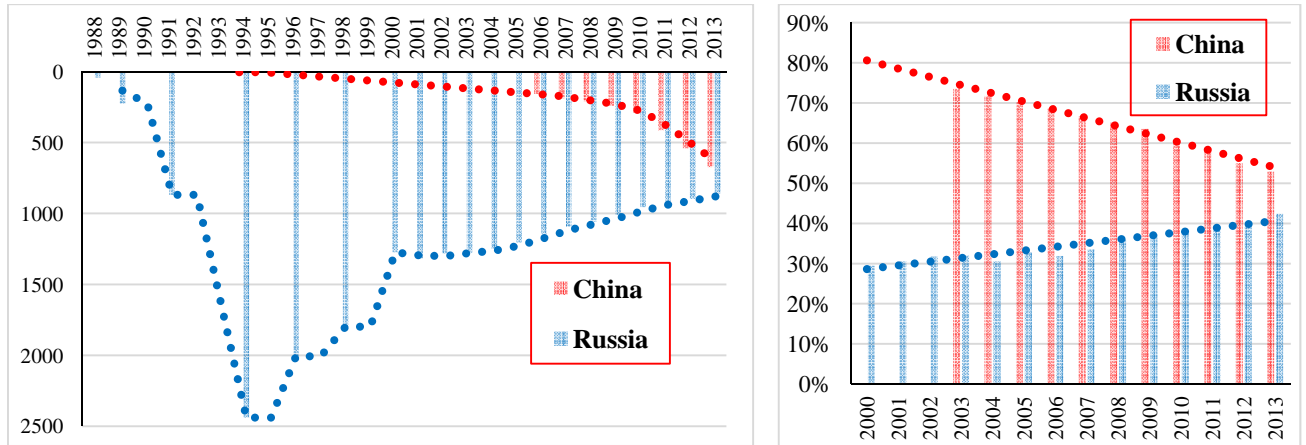
reallocation of credit resources and encouraged the breakup of the *spetsbanki* system. In parallel to that, domestic private capital was burgeoning quickly and unrestrained until it came to control around two-thirds of the banking industry by the end of the same decade. Hundreds of privately owned banks emerged practically from scratch, out of nowhere. At its peak, the number of commercial banks in Russia exceeded 2,400. That crowd failed to deliver. Banks were extending little financing to the rest of the economy but instead were preying on Russia's fiscal weaknesses. By mid-1998, the share of government securities reached 32.1% of the banks' total assets, which exceeded the share of loans to non-financial enterprises (28.5%) (CBR, 2002, p.10, Table 9). The banking system melted down and the largest banks went bust during the crisis of 1998. The posterior developments can be featured as *institutional self-adjustment*, within the TIM paradigm. The pre-crisis proportions between public and private capital in banking and between centralized redistribution and market had shifted far away from the historical equilibrium. That was an overshooting. Since 1998 the proportion started recovering. The state build up its relevance as a regulator, a systemic programmer and a producer of banking services in its capacity of controlling shareholder at the largest commercial banks and development lenders. A growing share of resources now flows via these channels. The government learns how to influence the level of bank loan interest rates of all participants. As a result, there is less room for private initiative and market exchange.

To sum up, each of the two banking systems migrates to a specific proportion between the dominant X-type institutions that centralize and redistribute financial resources and the complementary Y-type institutions that ensure the workings of the market demand/supply and competition. We assume that the number of active commercial banks, the majority of which are privately-owned, denotes a liberalization of the banking sector and the strength of the private initiative. On an inverted scale the trend line for Russia goes deeply down and then reverses the direction, while the trend line for China goes down slowly (**Fig. 1-a**). In a similar fashion, we view the market share of state-controlled banks as a proxy for the strength of X-institutions of centralization and redistribution (**Fig.1-b**). The trend line for China displays a similar shape as in the previous case<sup>1</sup>. The trend line for Russia apparently does not, only due to

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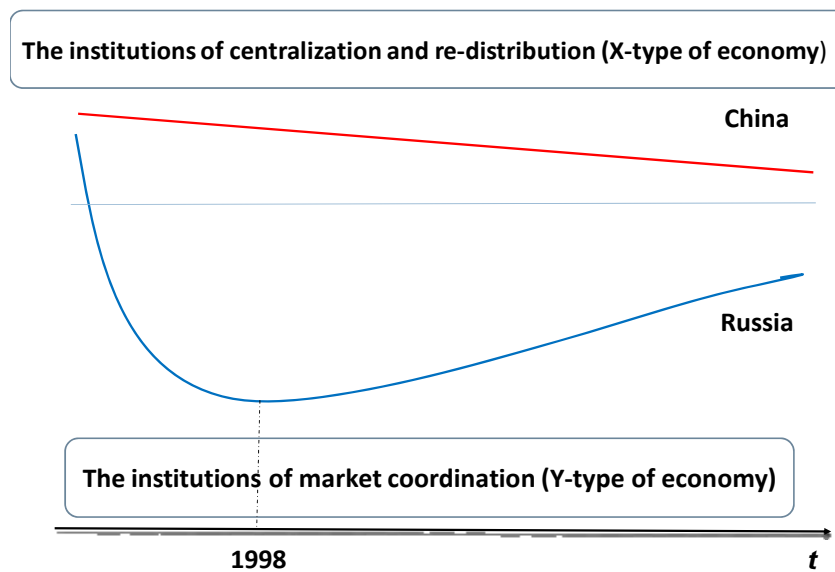
<sup>1</sup> The trend line for China on the **Fig. 1-b** goes downward rather steeply. The 5 "large commercial banks" represent a significant part of the public sector of the Chinese banking industry but not its entirety. As we argued in the section 3.3, the majority of joint stock, city and rural commercial banks received their initial funding from the government and remain closely related with the authorities. The market share of the entire public sector would therefore appear on the chart as a line almost parallel to the time axis and only lightly declined downwards. Absence of precise data impedes drawing it.

the absence of precise data on the market share of state-controlled banks in the 1990s. If we could insert those data in the chart 1-b, it would assume a V-shape. **Fig.1-c** reflects our graphical vision of the shifting proportion between X- and Y-institutions in China and Russia. Diverging paths are therefore an illusion. These paths are actually converging from different starting points 15 or so years ago.



(a) The number of commercial banks (inverted scale)

(b) The market share of the core state-controlled banks



(c) a changing proportion between two types of institutions

**Fig.1. The direction of the institutional change in the Chinese and Russian banking**

The typological coherence between the banking systems of China and Russia touches upon the interesting topic of the *direction* of institutional transfer. In the second half of the 20<sup>th</sup> century China relied to a certain degree on the experience of the Soviet Union, learning from the practice of centralized planning, structural policy, enterprise cost-accounting, etc. The direction of institutional imports changed in the early 21<sup>st</sup> century as China became the donor of institutions and institutional forms for Russia. We refer to the large state-controlled banks,

their corporatization and commercialization and the combination between commercial banking with development lending; the delegation of ownership rights from the central government to other entities within the public sector; «dirigisme» over bank lending decisions; bank financing of regional budget deficits; the development of a national system of payment cards *à la* China UnionPay; regulation of interest rates for bank deposits and loans; and the network of development institutions. Examples of institutional transfer in the opposite direction, from Russia to China, are much harder to identify. Probably China took into account the Russian experience with foreign-controlled banks when it started encouraging locally incorporated foreign-owned institutions rather than foreign bank branches.

There is a special case of institutional engineering, namely the introduction of state guarantee / insurance of household bank deposits. Such a system already is in existence Russia and may soon emerge in China. However, in both countries there have been large state-backed players in the household deposits market. It means that the government is already bearing ultimate liability for a large share of private savings. Instead of balancing the traditional paternalism of the state and the people's infantilism with some new mechanism of market discipline, the government introduces deposit insurance that adds one more circuit of paternalism. It further erodes market discipline and aggravates moral hazard, thus adding fragility to the banking system. We view deposit insurance as an alien institution for China and Russia that serves some tactical political goals but goes against the general logic of the system. Russia has already discovered the fallout from deposit insurance; China has yet to discover it.

### **3. Institutional Models in Russia and China Investment in Comparison with the US.**

The term "institutional model" used in the paper is understood as the structure of key institutions providing finance for a real sector as well as R&D sphere. They nominate the structure of major sources that invest in them. Fixed-asset investment is a main focus of the analysis. The long-term data on fixed investment sources in Russia, China, and the US are analyzed in the overviewю

#### *3.1. Data.*

It is known that the comparison of fixed investment source structures in Russia, China and the US is made difficult by the different structure of data obtained by the Federal State Statistics Service of the Russian Federation (Rosstat), National Bureau of Statistic of China, and the US Census Bureau.



The first difference concerns the composition of the enterprises examined. Thus there are data on fixed investment sources for companies of all forms of ownership (excluding small business entities) including profit and non-profit organizations in Russia and China. State and non-state property entities (private, state-owned, mixed, joint property, etc) are fused here. They include enterprises of all branches among them financial and agricultural enterprises (for Russia see: Metodologicheskie polozheniya... , 2009).

As such the US statistic data has the investment sources structure represented for corporate, non-financial, non-agricultural sector (excluding individual businessmen and small enterprises), i.e. for a lesser range of economic entities as compared to the Russian and Chinese data. However, the statistics used in three investigated countries covers the bulk of the economic entities and therefore can be used for a comparative analysis of the major trends.

The second difference is related to the structure of sources and uses of financial funds. So, for the Russian enterprises analyzed statistics distinguishes accounting for fixed capital expenditures, highlighting internal and external sources. Internal sources structure includes profits after tax and dividends, capital consumption allowance and other equity capital. External sources include bank loans, net new equity issues, high-level organizations' assets, government (of all levels) budget funds, non-budgetary funds and foreign investments (FDI) (Metodologicheskie polozheniya ..., 2009). In China, according to Chinese Statistics Year Book, Chinese investment are categorized into 4 different kinds: state budgetary appropriation, internal (domestic) loans, self-raised funds, utilization of foreign capitals. State budgetary appropriation refers to appropriation in the budget of the central and local governments earmarked for capital construction and for innovation projects, and the special appropriation from the budget of the central government for capital construction and for the transfer fund to banks to be issued as loans for capital construction projects (Cheng, Wang, 2011:39). Internal loans refer to loans offer to enterprises to invest on projects (ibid.). But it corresponds to the item "Net increase in liabilities, including net funds raised in markets" in the US and Russian statistic we suppose. Self-raised funds in China refer to the capitals that are supplied by enterprises themselves (ibid.). In its turn, this item corresponds to "Internal funds" in statistics of the US and Russia. Also we have to note that the item "self-raised funds" include a part "the others" that is not clearly identified. Utilization of foreign capitals refers to the capital offered by foreign company to invest Chinese projects (ibid.).

The structure of financial funds for the US corporate sector, the resources for the economic reproduction of the real sector clearly do not singled out. Internal and external

sources are singled out here as well. But in this case corporation investment includes fixed investment as well as financial investment. In our overview we took into consideration net increase in liabilities to evaluate "raised funds". This "net increase" includes, on the one hand, net funds raised in markets with net new equity issues and credit market instruments, i.e. corporate bonds, bank loans, other loans and advances, and on the other hand, "other issues" i.e. trade payables, miscellaneous liabilities, and foreign direct investment in the US etc.

As such, there are no such sources outlined (apparently due to being non-characteristic and insignificant) as high-level organizations' assets (like in Russia) and governments budget funds (like in Russia and China) in the US statistic data for the corporate sector. However there are industrial revenue bonds (IRB) included in municipal securities. They represent a kind of securities issued by municipal and regional governments to finance local capital investment projects. Peculiarities of this financial instrument attribute this expense group as an equivalent to investment financing at the expense of budgetary funds. But the share of IRB in corporate funds is less than 0.5% (U.S. Census Bureau, 2012:495).

How can we explain the revealed features of statistical records of these two countries (Russia and China), on the one hand, and the US, on the other? For the Russian Federation the process of distinguishing the data on fixed capital expenditures has a long, at least, the Soviet history as the socialistic country, when its capital investment programs were centrally formed. These programs required the special accounting for all funds in all segments of national economies for this purpose, what has been preserved in modern Russian statistics of fixed capital expenditures. It is similar for China we suppose.

As for the US economy, we have structured statistics for the corporate sector only. The private nature of corporate ownership limits the completeness of business information disclosure. On the one hand, the presentation of the data in terms of depreciation, reducing the income tax, certainly profitable for corporations and is reported in full. At the same time, outsiders' access to the insider information on the investment portfolio profile is not always desirable. Therefore, US statistics does not allocate specific sources of investment for corporate funds.

Inconsistency of data structure for survey entities and peculiarities of external financing sources grouping outlined, impose certain restrictions on comparative analysis of the Russian, Chinese and the US' statistical data. It is necessary to keep these restrictions in mind. However, as it will be shown below, these discrepancies do not cancel the validity of conclusions made.

### 3.2. Empirical Outcome.

What are the trends of the US corporate sector financing sources structure? The information is given in the **Table 2**.

**Table 2. The US: Corporate funds – sources and uses, 1990-2010, %**

	1990	1995	2000	2005	2006	2007	2008	2009	2010
Funds for investment, total	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Internal funds (+IVA)	<b>69.8</b>	<b>60.9</b>	<b>37.3</b>	<b>53.1</b>	<b>56.6</b>	<b>45.3</b>	<b>76.4</b>	<b>91.9</b>	<b>58.8</b>
Net increase in liabilities, including	<b>30.2</b>	<b>39.1</b>	<b>62.7</b>	<b>46.9</b>	<b>43.4</b>	<b>54.7</b>	<b>23.6</b>	<b>8.1</b>	<b>41.2</b>
- net funds raised in markets	11.8	17.9	12.4	-0.9	-5.1	-1.9	-3.1	-6.0	4.0
-others	18.4	21.2	50.4	47.8	48.6	56.6	26.7	14.1	37.1
among them: FDI	9.7	5.5	12.6	4.8	9.9	12.3	16.8	8.8	8.4

*Source:* Table 752. Corporate Funds - Sources and Uses: 1990 to 2010 ( U.S. Census Bureau..., 2012:495); [www.census.gov/compendia/statab/2012/tables/12s0752.xls](http://www.census.gov/compendia/statab/2012/tables/12s0752.xls)

As we can see, internal financing sources have been dominating in general in the US over the past years (note that the same trend was in the years before). Their segment is 60% on average. If to take into account the abovementioned assumption that not all external resources are directed to the fixed capital expenditures, the share of internal sources is obviously much higher. In 2009 (the most difficult year of the global financial crisis) it increased to over 90%, e.g. The biggest percentage of internal investment sources is comprised of capital consumption allowance. It amounts in general to one third and more of an aggregate amount of sources and in the period under review it was no less than one half of corporate internal financing sources with maximum of 75-85%.

As such the raised funds in the form of credits, loans, security yields, FDI and other liabilities amount in general to less than one half. Thereat the percentage of market borrowings that are clearly identified (credit, loans, corporate securities, etc.) is steadily decreasing within the structure of raised funds, but the other parts increase, among them dominating miscellaneous liabilities. They include in general various instruments of risk hedging. Over the past two decades their percentage exceeds that of traditional financial instruments.

The level of FDI in the US corporate sector is at 10% on average. The percentage of a budgetary fund counterpart such as industrial revenue bonds amounts to less than 01%.

The data on composition of fixed investment in Russia demonstrate to a certain degree the opposite (**Table 3**).

**Table 3. Russia: Composition of fixed investment by sources, 1995-2014, %**

	1995	2000	2005	2010	2012	2013	2014
Funds for investment, total	100	100	100	100	100	100	100
Internal funds, including	<b>49</b>	<b>48</b>	<b>44</b>	<b>41</b>	<b>45</b>	<b>45</b>	<b>48</b>
Net increase in liabilities, including	<b>51</b>	<b>52</b>	<b>56</b>	<b>59</b>	<b>55</b>	<b>55</b>	<b>52</b>
- bank credits and loans	-	10	14	15	15	16	16
- budgetary and non-budgetary funds	33	27	21	20	18	19	16
- high-level organizations' funds	x	x	11	18	17	13	13
- others	18	15	10	6	5	7	7
among them: FDI	x	5	7	4	x	x	x

x –data is not available or slight.

*Source:* Структура инвестиции в основной капитал по источникам финансирования (Composition of fixed investment according to financing sources), billions of rubles. Federal State Statistics Service of the Russian Federation web-site.

<http://www.gks.ru/wps/wcm/connect/rosstat/rosstatsite/main/enterprise/investment/nonfinancial/#>

First, there is a different ratio of internal and external fixed investment in Russia: it is on average 45% vs. 55%. In other words if the most part of real sector investment in the US is comprised of equity capital, the situation in Russia is completely reversed, that is more than a half of investment comes from external sources.

The second difference deals with the external investment sources composition and quantitative difference in their structure. There is a predominant source in Russia; it involves central distribution from state budgets of different levels and non-budgetary state funds. It steadily surpasses the market raised funds. Thereat the percentage of credits and similar instruments is at the same time gradually increasing, and the percentage of government subsidies is slightly decreasing.

Peculiar to Russia is such source of investment as "high-level organizations' funds." Their percentage is gradually increasing that makes them as significant in investment as capital consumption allowance, profit, budget funds and credit market instruments.

The final difference is the percentage of direct foreign investment that is twice as low in Russia as in the US and amounts about 5%.

The structure of actual funds for investment in China is presented in the **Table 4**.

**Table 4. China: Actual funds for investments, 1990-2013, %**

	1990	1995	2000	2005	2010	2012	2013
Funds for investment, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State budget	8,7	3,0	6,4	4,4	4,7	4,6	4,5
Domestic loans	19,6	20,5	20,3	17,3	15,2	12,6	12,1
Self-raising funds and others	65,4	65,3	68,2	74,1	78,5	81,7	82,5
FDI	6,3	11,2	5,1	4,2	1,6	1,1	0,9

*Source:* China Statistic Yearbook, 2014. 中华人民共和国国家统计局  
URL://www.stats.gov.cn/tjsj/ndsj/2014/indexeh.htm

We can see three things in common for Russian and Chinese investment statistics. First, it indicates such source of investment as "state budget". Eg. for China this share is stabilized at 4.5% on average. The second peculiarity is the minim of FDI last years. The third one is the share of bank loans of investments: in Russia and China it is several times higher than in the US.

The differences revealed in the financing channels of the real sector in the US, Russia and China allow to single out the two institutional models of the economic reproduction, which can be called as "state as regulator" and "state as investor".

### *3.3. "State as investor" and "state as regulator" - two institutional models.*

In the model "state as regulator" the investment resources are concentrated in the business community, and the main task of government is to create conditions encouraging investment and economic growth. We suppose that this model is presented in the US. The second model "state as investor" involves the concentration of investment resources and its centralized management by government institutions. This model prevails in Russia and China.

It is typical that in times of crisis, accompanied by the general decline in investments the identified models appear to be more vivid. If in the US in times of 2008-2009 crisis, the share of internal corporate sources increased. In Russia in the same period of crisis the situation was vice versa. The share of internal sources decreased, while the typical for the "state as an investor" model the share of raised funds such as credits and loans from banks (as we indicated in the section 2 mostly state-owned and managed), budgetary and non-budgetary funds as well as high-level organizations' funds increased.

The model "state as an investor" domination does not cancel the state's role as an investment process regulator. Even more the harmony between these two models is a necessary condition for a successful development of any country. However for the countries with redistributive economic institutions of an X-matrix domination (besides Russia and China a number of other countries are placed in this group, see Kirdina, 2012) such harmony is based on the frame character of the institutional model "state as an investor".

The role of the state in the property right system in Russia is presented in an **Appendix**. It explains the prevalence of the state in the investment process in history of Russia. The role of the state in the China investment is argued in Cheng, Wang, 2011. They noticed that "Internal loans are directed by government, if government ask the state-owned banks loan to state-owned enterprises, the banks have to loan. Those self-raised funds owned by state-owned enterprises also are directed by government. Self-raised funds owned by private sectors are smaller than those that owned by state-owned enterprises. Therefore, internal loans and self-raised funds are not good indicators for private investment" (Cheng, Wang, 2011:41) but reflect the role of the Chinese state in investment .

Russian scholars are also note that the state plays a major role in China investment process (L'vova, 2011:10-11). First, we refer to the direct and indirect investment support of large-sized state companies. It is they who play the key role in and outside the Chinese economy. Moreover, as noted by worried observers from the western countries "the state- owned enterprises in China are potentially poised to alter the rules of global economic competition" (Schuman, 2012). The state-owned companies receive financial support in the form of state subsidies, regulatory privileges and various benefits. Despite the ideological rejection of the following policy the western experts are nevertheless forced to acknowledge that such companies are "a potentially powerful mix that can reshape the global competitive environment" (Schuman, 2012) and it contributes to the extension of influence of China over the international markets.

Second, in China with the "state as investor" model prevailing the state banking system role is great as such the "State development bank" provides up to 80% of all loan portfolio (Zhifeng, 2011). As a result there is a multistep investment system established in China. It includes state and private investment. Thereat the state acts as the main investor but at the same time attracts by all means private (including foreign) investment. The system includes development of long-term investment plans, activities to improve investment climate, and a scientific approach to price formation. Within investment area free pricing is coupled with

measures of strict control over expenditures and prices. Auditions on price formation for infrastructure facilities are conducted as well as strategies and plans are openly developed. It often helps to avoid substantial errors (Zhifeng, 2011).

The advantages of the institutional model "state as investor" are central resource support of the branches with the highest priority and evasion from cyclical changes. At the same time its main problems are insufficient motivation of would-be innovators, risk of corruption and investment thieving at the local levels. It is noted in the expert's publications (see for example, Wu et al, 2009). Struggling with such risks implies the improvement of the model "state as investor" itself as well as the necessary compensating action of the alternative model "state as regulator".

The institutional model "state as a regulator" that is characteristic to the US is described in numerous publications on the state investment activity regulation. That is why we will give here only some examples. So, such regulation results in the above-mentioned investment structure data showing a high percentage of capital consumption allowance in the US corporations' real sector investment. It refers to the state policy of so called "accelerated capital allowance". In the Russian academic literature this phenomenon is described in details by Michail M. Sokolov (Sokolov, 2010) in his reviews of the US and Russia economic strategy concerning capital consumption allowance. The US took this strategy before the rest consistently improving the rate of fixed assets replacement and indirectly financing investment activities using state budget funds (Fedorovich, Patron, 2007). Capital consumption allowance in this context is deemed to be the most important element of tax policy as it represents a share of corporate tax-exempt profit. Therefore in a short-term period an increase of allowance leads to tax revenues reduction in the budget (Mal'tseva, 2011). At the same time in the context of development prospects this strategy proves to be effective.

The choice in favor of the "state as regulator" model over the "state as investor" model is described by the investment companies program for small business aimed to support venture capital financing in the US. If at first the US considered venture capital investment support as direct participation in the capital of companies formed then later restricted itself to providing state guarantee for bonds issued by venture capital companies. As the researchers note that "the US abandoned venture investment support with participation in the equity capital of the venture capital companies due to heavy losses" (Spitsyn, 2010: 9) in favor of indirect supportive actions.

The advantages of the "state as regulator" model are high investment activity of market

entities and in this respect a higher rate of technological progress. It is the decentralization in some experts' opinion that provides permanent innovation flow for market economies (Kornai, 2012). The problems of this model are cyclicity and 'financial bubbles' risks (Perez, 2002), that emerge in the stock markets as a result of profit pursuit by isolated market entities. The institutional model "state as a regulator" risk reduction is achieved by its improvement as well as by incorporation of the alternative "state as investor" model complementing the general practice of real sector financing in the countries with market based economy.

#### 4. Conclusion

Comparative statistical data and analytical surveys show that it is possible to distinguish two basic institutional models – "state as investor" and "state as regulator" in banking and investment. Even though they do not exist separately but rather coexist, one of the models strongly dominates over the other one. The prevailing position of any of the models is related to social, economic and political processes and the type of a predominant *institutional matrix* (Kirdina, 2012). It is reasonable to keep in mind the mentioned differences during the institutional overview of economic growth problems and mechanisms. We hope to continue a comparative institutional analysis to test the hypothesis about the relationship and interaction between two abovementioned models in a context of other nation-states.

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## Appendix.

### Ambiguity of property types in Russia.

In Russia the presence of property types other than state and private property stands out. First of all it is mixed and joint enterprise property types with fixed investment over the years from one fourth to one fifth of the total investment amount. What is the reason for them being singled out? Is the only reason the transitional character of the Russian economy? But there is no such structure nowadays in the Eastern Europe countries that moved over as Russia from «socialism to capitalism» – their statistics on the matters discussed strictly reproduce that of the USA<sup>2</sup>.

Ambiguity of property types in Russia has a long history and reflects one of the major civil law problems, still not solved, that is based on the understanding of a legal entity meaning. The modern

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<sup>2</sup> It is characteristic that unlike western neighboring countries of the Russian Federation, the statistics of the People's Republic of China points out the same property types. The large-sized grouping includes state, municipal, private, mixed Chinese, joint Chinese and foreign property (Chung, 2010, p. 13).

Russian textbooks on the civil law theory state that in the Russian Federation "the question of a legal entity meaning is still open" (Status juridicheskikh lits, 2006, p.6). Moreover the authors point that there is no significant advancement in the Russian civil law science (Tolstoy, 2000, p. 103).

We think that the main difficulties are linked with a persistent inability to isolate economic and proprietary rights of any entity from state participation. There are theories prevailing in the global practice that compare legal entity with separate estate. If estate owners of any legal form are private individuals then these legal entities make up private proprietors. If the owners are government bodies of different levels (from the upper, federal, to the lower, municipal) then such kind of property is governmental. However, it has not been possible to separate property in such an obvious way over the whole period of the Russian history due to the fact that "the state property even with some legal entity based on it remained the state property anyway" (Status juridicheskikh lits, 2006, p. 4). In the USSR the way out of this juridical dead end was the theory of two-level state property proposed by Anatolii V. Venediktov (Venediktov, 1940; 1948, p. 657-672) and supported by Sergei N. Bratus' (1947), Olympiad S. Ioffe (1958) and many other civilists (Grazhdanskoe pravo, 1998, p. 176). According to this theory "the juridical personality of a legal entity is based not only on the unity of state property but on operative administration of its parts as well" ((Status juridicheskikh lits, 2006, p. 4). In other words at the upper level the unity of the state property was preserved that is belonging to the Soviet state and all the Soviet people (as public owner) was fixed. At the second level the right of operative administration was given to different legal entities that were able to enter legal relationship with each other.

During market-based reforms in Russia at the end of the 20<sup>th</sup> century and in the beginning of the 21<sup>st</sup> century as shown in the statistics the property types could not be fully segregated onto private and state (government) types due to, as we can see, a number of intermediate types.

According to official statistics, the share of investments in privately owned enterprises in the Russian Federation now makes 63%, compared to 81% in the USA. In this case, if the USA economy share of the latter is decreased in the last decade, then the Russian share, on the contrary, is growing. Does this mean that there is a corresponding decrease in the share and the impact of the government institutions in the investment process? Detailed analysis of the organization of statistical accounting in modern Russian Federation forces to put this statement in doubt.

Firstly, the structure of the property with the government participation becomes more representing: it includes the share of state-owned corporations.

Secondly, pursuant to the overview of the rules of Property type code assignment being in effect on the territory of the Russian Federation (Instruktsija o porjadke ucheta juridicheskikh lits..., 2001), sometimes private property is not always private in every sense of this word. For example, mixed property types include those founded by parties with governmental (federal, regional, municipal) and other structures, according to these rules. But if legal entities with any type of mixed property found other economic entities, the latter are considered as private property enterprises (Ibidem, Part 1, cl. 4.6.24). It is obvious that in such cases the function of the first-order founders (governmental structures) is preserved though officially this organization is recognized in statistics as private property.

The third example is the property codification of joint stock companies established in the course of privatization with a golden share in state property. According to the rules mentioned, such companies are identified as one of mixed property types (Ibidem), though it is more correct to identify it as modified state property.

Fourthly, the joint (with foreign participation) property includes enterprises established not only by private but also public institutions with foreign capital.