

**European Economy**

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**TRANSACTION COSTS STRUCTURE
OF THE INVESTMENT CONSTRUCTION
CYCLE STAGES***

Abstract

In this article there have been examined the economic problems of the Russian investment construction sector. The economical growth directions of economic activity «Construction» have been determined. Comparative analysis of key economical institutional indicators has been performed. Research and practice problematic of the development of Russian ICC – high transaction costs of investment construction cycle – has been actualized.

Key words:

Entrepreneurship, construction, transaction costs, entrepreneurial costs, regulation costs, development indicators, investment construction cycle, contracting.

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Some meso-economic studies, for example (Zotov et al., 2001), identify two primary issues: the current problems of the complex (industry) and its impact on the real sector of the economy. For investment construction complex (ICC)¹ this thesis is seen particularly clearly: it defines the state of development of all key aspects of the formation of the competitiveness of the Russian economy. Firstly, it creates a base for the development of productive forces, provides housing opportunities of migration and territorial consolidation of the effective workforce. Secondly, the development level of regional ICC defines quality and economic parameters of development of territories, their transportation and engineering infrastructure. Thirdly, the cost of construction product determines the efficiency of investment processes in the industry. (Asaul, 2005) 70% of the costs in a structure of industry investment capital (Russia in numbers 2012: short statistical review, 2012) are the capital construction, equipment and engineering services and real estate costs. That is why the development of regional ICC should be considered in qualitative and cost aspects. The quality aspect, by its nature, is technological, expressed in the current level of performance, innovation, technical and technological equipment of the complex and is the subject of study in engineering and technical-economic disciplines, and the economic aspect, which is the subject of this study, integrative determined by the valuation of the construction product. The cost of the product affects the effectiveness the participants' entrepreneurship during the investment construction cycle, and all related investment and social infrastructure fields.

It is theoretically correct to conduct a comparison of analysis of the state of economic and institutional position of economic activity «Construction» (F45) with the same activities in other countries. Inclusion in the comparison countries of the former Soviet Union and European Union is intrinsic in terms of the specifics of territorial features and evolutionary processes of ICC economic development. Modern scientific schools, which studied economy in construction, use this basis in their studies for comparative or criteria analysis (Asaul, 2004). International monitoring of investment and construction activities currently underway by a number of international research organizations: World Bank (WB), World Eco-

¹ Under conditions of national form of government the phenomenon of ICC finds specific and fully legitimate economical content only at the regional level [2, 3, 4]. The national ICC may be considered as the sum of regional ICCs.

conomic Forum (WEF), Organization for Economic Co-operation & Development (OECD), etc. But the most interesting reflection of economic and institutional aspects of the construction industry are provided by Global Property Guide a specialized in real estate research company, in their annual report «Residential property markets and investment» (Global property guide, 2011). Therefore, this article discusses the status and problems of the domestic industry «Construction» (F45) within the framework of indicators and report compares economic indicators of institutional development in the selected group of countries. Comparative indicators of construction industry development in 2012, are interpreted according to Global Property Guide, are given in Table 1.

Comparative analysis shows that the group with the high specific cost of the construction is formed by the most developed countries such as the United Kingdom, France, Switzerland and Russia (unit cost of product in the Russian construction industry (10,302 Euro per m²) (see Table 1) . But in European countries the high cost is determined by «... passivation factor – the territorial limitations of development of large European cities and activating factor – a high level of demanding advanced technologies in construction solutions» (Groak, 2013), the nature of the disproportionate cost of the Russian construction ICC is determined by the institutional factors. This (imbalance) are expressed by four indices (see Table 1), associated with the functional logic*.

Firstly, the Russian ICC has one of the lowest ratings (see COMP index value – 4.21 of 7) of competitiveness, which is expressed through the levels of capital liquidity, duration of construction investment contracts (projects) and investment attractiveness. The weakness of competitive position is determined by the high cost product with a relatively long construction cycle (22% higher than the EU average), which negatively affects the liquidity and efficiency of investment.

Secondly, the Russian «Construction» industry (F45) has two parallel depressing trends: the low level of legislative framework development (see indicator LOW value – 25 of 100) and an insufficient level of entrepreneurial freedom of market participants (see indicator EFREE value – 50.47 of 100). In this context, the position of the Belgian ICC (Jauhiainen and Moilanen, 2011) is very representative: on the one hand, a national regulation system, which possesses a lower level of the regulatory framework regulation (20) and no plans to expand it, and, on the other, a relatively high level of entrepreneurial freedom of the market participants (see Table 1). Of course, one could argue, appealing to the relatively high level of transaction costs in Belgium (TRANS – 17.88%), but one should understand that it is «... more business communications costs at this stage, reflecting the inherent principle of development, while maintaining low prices for construction products (2,753 Euro per m²)» (Global property guide, 2011). At a minimum, such a system has obvious potential and background evolution and institutional self-organizing of investment construction cycle participants.

Table 1

**Comparative indicators of national construction industry development
in 2012***

Country	PM2	COMP	LOW	EFREE	TRANS
Austria	5,109	5,14	90	71,88	11,82
Belgium	2,753	3,83	20	57,51	17,88
Bulgaria	1,305	4,16	30	64,91	24,88
Denmark	3,782	5,4	90	78,64	2,05
Estonia	2,153	4,62	80	75,2	3,81
Finland	6,184	5,47	90	74,04	10,15
France	13,380	5,14	80	64,59	16,30
Germany	3,094	5,41	90	71,79	11,46
Hungary	1,645	4,36	65	66,58	10,58
Italy	7,213	4,43	50	60,33	17,00
Latvia	2,657	4,24	50	65,83	5,16
Lithuania	2,189	4,41	60	71,26	2,35
Luxembourg	5,647	5,03	90	76,23	15,65
Netherlands	4,271	5,41	90	74,68	11,03
Poland	3,326	4,46	60	64,1	6,61
Portugal	2,213	4,4	70	64,01	13,65
Romania	2,043	4,08	40	64,71	7,58
Russia	10,302	4,21	25	50,47	25,00
Serbia	2,135	3,88	40	57,96	8,15
Slovenia	2,786	4,3	60	64,56	6,92
Spain	4,022	4,54	70	70,15	12,16
Sweden	6,991	5,61	90	71,87	6,54
Switzerland	11,397	5,74	90	81,95	5,74
Turkey	3,384	4,28	50	64,21	9,93
United Kingdom	15,187	5,39	85	74,53	5,03
Ukraine	2,807	4	30	45,76	12,50

* Interpreted according to Global Property Guide – Residential property markets and investment (Russia in numbers 2012: short statistical review, 2012). Legend: PM2 – unit cost of construction (m²/euro); COMP – comprehensive competitiveness ranking CSI (7 – maximum); LOW – legislative framework realization indicator of ICC (100 – the highest score); EFREE – entrepreneurial freedom indicator of ICC subjects (100 – maximum); TRANS – level of transaction costs (%).

But institutional trend that has grown in the Russian Federation, on the one hand, due to excessive regulation of communications (including levels of control and coordination of investment and construction decisions), and on the other – this is not covered by an adequate level of the regulatory framework development. Ultimately, the Russian construction product by virtue of institutional contradictions prevailing in the lawsuit as regional economic systems has the highest level of transaction costs in Europe – 25%, and that this is the main problem of development in Russia.

Investment construction activity generates a significant amount of non-operating expenses, which substantially affect the price of construction products sold and/or the investment efficiency. The high cost of construction products is a factor that hinders the productive forces and productive relations development of within the national economy.

Primary. High transaction costs prevent the formation of an effective spatial distribution of labor resources; opportunities to reduce migration and consolidation in the industrial areas of potential breakthrough. Indeed, «... the housing space coverage of the country is 40% of the level of developed countries» (Groak, 2013), and prices in regions not just high, they are rising much faster than the annual rate of inflation and wage growth index. Thus, in Moscow only in the I quarter of 2012, an increase in the cost of housing space was 2.3% (Exhibited average price is 146.9 thousand Roubles per m²), and in St. Petersburg – 1.3% (average price is 77.3 thousand Roubles per m²). For comparison, in the same period the real wage fund in St. Petersburg increased by 0.6% (Asaul and Ivanov, 2013, p. 81).

Secondary. Objective understanding of the transaction costs of investment and construction cycle as an obstacle in the growth of the investment attractiveness of the industry, transport and engineering infrastructure. Deterrent factor which brakes the claimed government policy of modernization impersonally is the high cost of construction, as a consequence – a relatively long payback investment. Thus, 70% of the construction work's value in the investment industry budgets of the Russian Federation (Russia in numbers 2012: short statistical review, 2012) can be contrasted with 20-30% of the Eastern European countries (Global property guide, 2001) and 10-22% of the value of the Asia-Pacific region. Obviously, in terms of the global integration of portfolio investors consider, first of all, global territorial alternatives, and from this point the investment conditions of Russian regions do not look competitive (see COMP index value- 4.21 in Table 1).

The methodological basis for the inquiry on transaction costs in this article are publications of R. Coase, Y. Barzel, D. Bromley, X. Demsetz, D. North, K. Arrow, M. Jensen, R. Dzhoskou, William Meckling, K. Menard, O. Williamson, T. Eggertsson. Within the framework of the existing basis one formalized their definition: «the costs that accompany relationships of economic agents» (Dalman, 1979), and classification (see Table 2), are divided into 4 groups: research (search for information); contracting, provision of technological processes, the protection of property rights.

Table 2

Structure of the ICC transactional costs

Groups defined by R. Couse (<i>Oleynik, 1999</i>)		Costs classification within the group	NSA* (%)	Types of ICC transactional costs, which according to R. Couse [8], belong to academic group
R	Research (searching for the information)	Acquisition costs, searching, processing, analysis of market information, providing decision making of marketing decisions by private and legal persons within ICC markets.	47	Data collection about the current status of ICC
C	Contracting	Contractual activity costs of individuals and entities: negotiations, approvals and signing of contracts, monitoring of their execution, closing of contracts, conflict treaty process.	29	Planning of the interaction between the subjects. Negotiations about compliance of mutual interests and interaction plans. Making Decisions on the form, character, and timing of the cooperation. Securing agreements with application of the procedures for execution of contracts and conclusion of deals. Verification of compliance with the obligations by the subjects during cooperation.
T	Engineering processes support	Non-production expenses to ensure the engineering process and conditions of its implementation	8	Participants co-operation in the course of shared use of material and immaterial resources
J	Property rights protection	Costs of private persons and legal entities arising from the execution of laws and regulations aimed at the registration of property rights and its protection, payment of duties and taxes, licensing	16	Specification and property rights protection. Legal arrangement of the land lots and construction (reconstruction) objects

* Results of the research conducted within the main aspects of the scientific school «Methodological problems of the regional investment effectiveness and construction complexes as a self-organizing and self-governing system» at the St. Petersburg State University of Architecture and Civil Engineering (Asaul and Ivanov, 2008).

The key issues of the debates define the concepts, approaches and tools for reducing the level of transaction costs of regional ICC (Asaul et al., 2009).

Firstly, we rely on the consolidated point of view about the nature of transaction costs of investment construction cycle. They arise due to uncertainty in information and communication activities of the participants of the investment, construction and operational processes. Finding information and relation counterparts, planning and shaping construction and operational cycles, registration of legal documentation, approval and obtaining permission documentation actually don't create an added value of construction products, as these are non-productive costs of the company. The higher the levels of uncertainty in these processes, the more resources are expended by the regional ICC on their compensation. In fact, there are two types of costs in accordance with their nature: business (arisen as a response to the low level of organization of investment construction market, the lack of established practice among contractors) and regulatory (arise in the implementation of the subjects of legislation and rules of registration of contracts and property rights authorization documents).

Secondly, determinateness of the transaction costs nature in the regional ICC makes it possible to identify specific costs of regional economic activity of ICC attributed to classify groups according to methodology offered by R. Coase. The solution proposed in (Asaul, 2011), allows one to select specific operations and processes of the participants in the regional ICC (see Table 2), which are forming research, contractual, technological and legal costs that can be considered as an idea about the structure of the transaction costs of investment construction cycle.

As a third block in the theoretical basis of the study, we accept the results of the research (conducted in 2006–2009) about the quantitative relations in the structure of the transaction costs in investment construction activities. Deterministic relationship groups (see NSA column, Table 2) make it possible to identify the specifics of the distribution of transaction costs.

In furtherance of ideas about the point of transaction costs concentration a quantitative relationships were detailed both within academic groups by Ronald Coase, and in relation to the stages of investment construction cycle, which allowed to localize and stage and participants of the process, generating the bulk of transactional relationships. Quantitative values obtained during the study were standardized (expressed in percentage values) and distributed according to investment construction phases of the cycle. The results obtained are given in Table 3, which allows evaluating the distribution of ICC transaction costs throughout the phases of investment construction cycle.

Concentration of the costs studied is objectively detected during the development of business plans – 35.7% of the transaction cycle total cost. Biggest market uncertainty characteristic is typically occurring during pre-investment stage of the projects, where a choice of investment intentions and creation of appropriate communications is performed, as well as evaluation of risks and marketing environment research of areas and facilities.

Table 3

Structure of the transactional costs during the stages of investment construction cycle (%)

Investment construction cycle stages	Groups of transactional costs (as defined in Table 1)			
	<i>R</i>	<i>C</i>	<i>T</i>	<i>J</i>
Total	47.0	29.0	8.0	16.0
Stage A. Evaluation and selection of the investment intentions	6.2	0.7	0.0	0.0
Stage B. Business plan elaboration	35.7	0.5	0.0	0.0
Stage C. Legal implementation	0.0	11.5	0.0	7.3
Stage D. Front-end engineering design, project engineering design	2.3	6.3	3.7	0.0
Stage E. Construction (reconstruction), commissioning of facility	1.2	4.9	4.3	0.0
Stage F. Implementation of the project results, registration of rights	1.6	5.1		8.7
Stage G. Facility operation	0.0	0.0	0.0	0.0

According to this logic, one can predefine a connection between the value of transaction costs of subsequent cycle stages (C, D, E, F, G) and depth of the studies done during the stages A and B. Level of certainty, risks which triggered the investment construction cycle, are largely depend on the organization's readiness to bear the transaction costs exactly in the pre-investment phase. At the same time there is an understanding that the macro- and meso-level management of the ICC transaction costs should focus on creating conditions for information and communication security investment planning process.

Thus, as a result of the study revealed the practical aspect of improving the competitiveness of the Russian investment construction sector and key scientific problem – creation of approaches to the management of the transaction costs level. A theoretical ideas described in this article about the subject, nature and structure (quantitative relations) of the transaction costs, in part, which connected to the investment construction phases of the cycle are the scientific basis for further discussion of conceptual approaches to reduce them. In this article it was actualized scientific and practical problems of Russian ICC development – high transaction costs of investment construction cycle.

In the context of understanding of the research issues the following conclusions have been made:

1) the comparative analysis showed that the specific value of the product construction investment activities disproportionately high due to disharmonized factors such as institutional development of construction as an economic activity;

2) domestic construction product due to institutional contradictions in the investment construction industry (considered as an economic system) has the highest level of transaction costs in Europe – 25%, and this is the key problem, which affected Russian regional development ICC;

3) compiled and formalized modern theoretical ideas about the subject, nature and structure (quantitative relations) of transaction costs of regional ICC are defined as the theoretical basis of this research;

4) the concentration of transaction costs is related to the pre-investment stage (35.7% – business planning process), where a choice of investment intentions and creation of appropriate communications is performed, as well as evaluation of risks and marketing environment research of areas and facilities.

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