

TRANSACTION COSTS AND THE EFFICIENCY OF INSTITUTIONS *

UDC 657.471.1

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Abstract. *The economists of neoclassical school aiming to give economics the status of an exact discipline, made a distinction between the study of facts and the study of values, emphasising that the primary domain of economic science is studying facts. From Marshall, over Pigou and Robinson, economic science has attained the status of the science of choice or science of rational decision-making. In the orthodox model of rational decision making, the role of transaction costs in the economic development of society is interpreted incorrectly. The purpose of this paper is to prove that the declining efficiency of the institute in the short-term increases the specific transaction costs, while their long-term increase in efficiency reduces specific and increases general transaction costs.*

Key Words: *transaction costs, the adaptive efficiency of institutions, evolutionary efficiency of institutions, technology, Majewski's theorem, Coase's theorem*

INTRODUCTION

In the neoclassical theory, the market is a normal, naturally established order which leads to automatically established economic equilibrium. So, the neoclassicists see the market as the ether in which the beforehand given individual preferences and intentions interact and become mutually connected, which results in the exchange of goods and services. At the same time, cooperation takes place without significant costs, i.e. it is assumed that the market, as the organizational and coordination mechanism, is free of charge, and that transaction costs are equal to zero or negligible. The representatives of institutionalism have a critical attitude towards the classical conception of the market.

Received November 18, 2011 / Accepted December 05, 2011

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* This paper is a part of the research project entitled "Improving Competitiveness of Public and Private Sector by Networking Competences in the European Integration Process of Serbia", Number 179066, financed by the Ministry of Science of the Republic of Serbia

They assume that "ethereal" and naturalistic conception of the market, offered by the classical approach, prevents genuine insight into the real functioning of the market. Also, they especially insist on the fact that the market exchange does not operate smoothly, but that the realization of an economic transaction assumes certain costs in connection with negotiating, requires time and resources, and poses a certain degree of risk and difficulties in its execution.

Today it is generally accepted that the concept of transactional costs in the works of neo-institutionalists has experienced a complete affirmation and become a kind of research "refreshment" compared to the traditional economic analysis. In particular, it has emphasized that a high level of transaction costs is the evidence of the imperfect functioning of the market, which has a direct impact on the economic efficiency and performance of the business entities. Hence, the need to minimize the transaction costs is an imperative for building modern institutional systems. However, in practice, it is difficult to achieve savings in the transaction costs, and specialization, deepening the division of labor and the development of cooperation between the economic entities have not brought any improvements through time.

Proceeding from this, the aim of this paper is to, in addition to institutional traditional approach, which insists on minimizing transaction costs and the consequent increase in economic efficiency, present some different views on the statement that, in the long term, the evolutionary efficiency of the institutions with accompanying trend of increase in certain categories of transaction costs is the most important for the functioning of the economy.

1. THE CONCEPT OF TRANSACTION COSTS

In the works of the neo-institutionalists, the conception of the transaction costs has experienced a complete affirmation and become a kind of research "refreshment" compared to the traditional economic analysis. Consequently, the transaction costs have today become the symbol of the neo-institutional theory, and that is the reason why, among other things, the neo-institutional economics is often called the theory of transaction costs.

In developing the concept of transaction costs, the biggest credit goes to Coase and Williamson. As for the term "transaction costs", Williamson derived it from Commons' definition of the concept of transaction, while he mainly constructed the very concept of transaction on the achievement of Ronald Coase.

For Williamson, Commons' definition of transaction was very inspiring. In this definition, Commons says that transaction is "the ultimate unit of activity that connects law, economics and ethics, and which is contained in three principles: conflict, dependency and order. It cannot be identified with the exchange of goods in terms of physical "delivery", but it implies alienation and appropriation of property rights for physical objects, in the manner required by the rules of social behavior." [3, p. 58] However, Williamson does not use Commons' principles of scarcity, efficiency, sovereignty and current rules, but his conception of transaction costs is based on the definition given by Ronald Coase.

Coase was the first to elaborate on this issue in his famous article "The Nature of the Firm" calling transaction costs the costs of using price-cost mechanism [13, p. 9]. In the structure of these costs, there is a domination of the costs of establishing the relevant prices, the price of negotiating and concluding contracts, the costs of decision-making

process, etc., while the primary mission of a firm is to economize on these costs [3, p. 19]. *Cheung* [10 p. 55-56] shares a similar opinion, in spite of the fact that he does not take a firm as the unit of the analysis, but instead, his unit is an organization related to all processes whose regulation is not based on the "invisible hand" of the market, and includes the activities of the management, supervisors, judges, lawyers, clerks, bailiffs, licensors, agents, etc. Kenneth Arrow [2, p. 1] defined the transaction costs as the costs of "maintaining of the economic system". Thus understood, transaction costs become categorically different from the production costs that are generally the main focus of the neoclassical analysis. In this context Williamson [13, p. 19] presents his view that transaction costs are nothing more than an equivalent to "friction" – a phenomenon inherent in mechanical systems. *Kornai* also uses the term friction in order to clearly identify the factors that hinder and impede the process of concluding and enforcing contracts [15, p. 14].

In recent years, with the escalation of problems related to determining the owner of the property, all the more prevalent view is that transaction costs are directly related to the establishment, maintenance, exchange and protection of the property rights. This means that they occur in the normal appropriation and alienation of the property, and that they are basically the costs of coordinating the activities of economic entities in order to eliminate the allocation conflict between them. Transaction costs are, therefore, the real resource costs, including the opportunity cost of time, in connection with negotiation, conclusion and implementation of the act of exchange.

Transaction costs can be *ex ante* and *ex post*. The first group includes:

- (1) the costs of the preparation of the draft interim of the prospective contract,
- (2) the costs of negotiating and
- (3) the costs of preventing the abuse of the contractual rights and obligations [13, p. 20].

Ex post transaction costs have various forms. They include:

- (1) the costs of incorrect adjustment when unbalanced transactions occur between the contracting parties in the relation named "the shift of the contracting curve" by Masahiko Aoki,
- (2) the costs of negotiating when both contracting parties try to correct the unbalanced transactions,
- (3) the costs of establishing and functioning of the governance structures dealing with resolving various disputes and
- (4) the costs of the effective insurance of liabilities [13, p. 21].

2. THE TRANSACTION COSTS AND DIFFERENT MODELS OF CONTRACTS

Ex ante and *ex post* transaction costs are derived from two assumptions of human behavior: bounded rationality and opportunism [6, p. 101]. The individuals who participate in the exchange are bounded rational actors. Their activities are aimed at choosing the best means for achieving the given goal [17, p. 54]. The bounded rationality indicates reduced cognitive abilities and limitations of the rational behavior. "On the other hand, opportunism suggests the satisfaction of one's own needs, and this explains the cases of fraud, deceit, and giving selective or inaccurate information." [8, p.939] In addition, the individuals who participate in the bilateral exchange invest the capital in the transactional-

specific resources. This is a specific kind of property which cannot be used for any other purposes without large losses. The more specific property bears greater risk of the opportunistic behavior [8, p. 940].

We shall assume that the process of entering into agreement is coupled with the certain amount of risk. This raises the problem of choosing between different contractual models covering different combinations of bounded rationality, opportunism and specific property. Each of the given elements shall take one of two possible values. When the value of the element is equal to zero, it means that it does not participate in the interaction with other elements and that it is not relevant to the choice of the optimal model of the contract. If an element has a positive value, there is an interaction with other elements and its impact on the choice of the optimal model of contract. (Table 1)

Table 1. Attributes of the Contracting Process

Bounded rationality	Opportunism	Asset Specificity	Implied Contracting Process
0	+	+	Planning
+	0	+	Promise
+	+	0	Competition
+	+	+	Governance

Source: Williamson, O. E. (1985), *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*, The Free Press, p. 31.

Coase distinguishes between two alternative mechanisms of organizing the production: via market and via organization. The other way to realize the activities in the economy includes the following models of the contracts:

- planning,
- providing guarantees and
- governance.

The neoclassical theory assumes that rational individuals are directed towards realization of their personal interests and that each property has some specificity. Although the opportunistic behavior requires the recognition of private interests when entering into an agreement, when it comes to complex settlements, all the relevant issues arise in the negotiation phase. When the entities are unboundedly rational, the contingent of events is predefined. Problems related to the realization of the contract do not increase (such agreements do not contain errors, because it is assumed that all the arbitrations are efficient) [13, p. 31]. Contracting is, in the context of the unbounded rationality, equal to the process of planning.

If the specific property is managed by bounded rational actors who do not have reliable information, and thus cannot behave opportunistically, then the costs of using the market (transactional costs) are higher than the costs of using the organization. In such a situation, the parties that operate within a certain organization do not act opportunistically if they have not previously redefined the general clause of the contract. Each party seeks to perform their rights and duties in an efficient way and expects a satisfying return on the extension of the contracted period. In other words, the contracting parties benefit if the initial requirement is fulfilled. They tend to have a maximally efficient implementation of

contracting obligations and rights, because the guarantees, in the absence of the opportunistic behavior, automatically increase. In this context, the contract is equal to giving a guarantee.

If the inequality of the property is less, opportunistic behavior of the bounded rational actors can provide optimal economic results. In that case, the costs of using a market are less than the costs of using an organization. When the property has the character of the more specific and more special resource, there is an increased risk of opportunism. An increased risk of opportunism means greater uncertainty and greater possibility that the implementation of such a contract will be monitored by the management structure. Arbitral resolution of disputes is the main characteristic of such structures. Of course, one question immediately arises – are these structures able to assess the damage caused by the dispute accurately or does the adopted solution equally charge contracting parties?

3. THE TRANSACTION COSTS OF THE EVOLUTION OF THE SOCIAL SYSTEM: COASE'S THEOREM OR МАЕВСКИЙ'S THEOREM

Solving the issues connected to the realization of the contract can be viewed differently, as shown by so-called Coase's theorem. According to this theorem, the interested parties will alone come to the efficient resolution of the dispute, if the property rights are precisely defined. If property rights are clearly defined, and transaction costs are equal to zero, the structure of production will remain unchanged, regardless of the changes in the distribution of the property rights. In other words, the initial allocation of the property rights does not affect the structure of production, since in the end, each of the property rights will be allocated to the owner ready to offer the highest price for it, based on the most efficient use of the given property rights. The property rights, analogously, will be changed, shared, combined and regrouped in a way that brings the largest economic gains for the economic entities. A condition for the successful functioning of a market is to have precisely regulated property rights and the possibility of the exchange at mutually acceptable prices. The exchange is based on the specific property rights, which rely on certain rules and which do not allow arbitrary appropriation of the property without consent of the owner. Thus, if two economic entities "discover" mutually favorable conditions for the exchange, they shall agree on its terms, which means creating certain rules that structure their interactions during the contracted period.

The costs of a certain transaction must be lower than the benefits it provides, i.e. an owner disposes of the property only if he or she thus achieves satisfaction greater than the benefit of using it. Consequently, the use of property rights is the function of the size of TT. Only when we realize the role of the transaction costs, will we make the conclusion, not about the importance of the actual holder of the property rights, but about the importance of the specification of the property rights to the resource. From this point of view, it does not matter who in the first stage of the reform of ownership got the rights to govern – a collective, an enterprise administration, a state or a banking structure, because these rights will be later given to the most interested proprietor.

Coase's theorem, thus, affirms a market under attack of those who do not realize that the "failure of the state" is the true cause of malfunctioning of the market. It also emphasizes the importance of private property which must not be blamed for the disturbed rela-

tions, because private rights may be useful to the society, since they initiate individuals to take into account social costs [6, p. 90].

Coase's theorem has certain limitations. The largest among them is the use of the assumption on the perfect functioning of markets that implies the minimum costs of informing, negotiating and protection of the property rights. Unfortunately, practice shows that a market is not a perfect coordination mechanism, about what the theorists prefer to write within the framework of the well-established concept of "market failures". The concept of "market failures" is very suitable to explain the occurrence not only of the transaction costs [5, p. 41], but also the need to establish the institutions. Namely, market failures, reflected in the deviations of Pareto optimal allocation of resources, impose costs to the economic entities, which would not exist if the failure had not happened. As we called these costs transactional costs, we can rightfully say that transactional costs are at the same time the consequence and the measure of the imperfection of the market – the more imperfect the market, the higher the transactional costs of the economic entities, and vice versa. Binding the transaction costs for the imperfections of the market mechanism automatically means that it is necessary to establish institutions in the market that "fails". Namely, as the economic entities do not have at their disposal a market that would at all times optimally regulate the relations between them, it is necessary to find the adequate substitutes to this "foundering" coordination mechanism. In other words, when market imperfections are manifested, a certain gap is realized – *niche*, which a state intensively fills with the set of its institutions. Therefore, it turns out that the more imperfect the market, the greater the role of the state and its institutions, and *vice versa* [9, p. 161]. Apart from substituting the market when it does not function, institutions can serve as its complement in the direction of achieving greater allocative efficiency.

From the foregoing, it follows that the high level of transaction costs is not only a proof of the imperfect functioning of the market, but also *the quantitative expression of the absence of institutions*. For example, the absence of institutions that regulate the sphere of credit granting is in practice followed by high transactional costs in the form of unpaid debts. Similar effects are caused by the underdeveloped institution of arbitration, because it forces economic entities to bear the consequences of the failure to meet the contract, or more often, to increase the expenses for securing the additional guarantee. Thus, transaction costs are crucial for the emergence of institutions [11, p. 66], i.e. they are the cause of establishing *social demand for institutions*. The higher transaction costs imply the greater demand for the efficient institutions in the economy and society and vice versa. This practically means that an institution is perceived as a structure that minimizes transaction costs and that is evaluated by this criterion. [18, p. 34]. Moreover, an institution reaches the maximum level of efficiency when the transaction costs are equal to zero. But the question is: is it optimal to eliminate the transaction costs of an economic system? Why do some economists interpret the rise of the transaction costs by 4.9% in 2010 as a sign of reviving the world economy? [20, p. 28]

Coase's theorem makes the analogy between the phenomena of friction of the physical objects and transaction costs. In physics, the friction reduction is expressed by increasing the coefficient of a useful effect, while in economy the reduction of the transaction costs is expressed by increasing the efficiency of institutions. Based on Coase, the abstract model of the economic system with zero transaction costs created for institutionalists is a dangerous stereotype on the necessity of the maximum reduction of this form of

consumption. If it is necessary to reduce the friction and make it equal to zero in physical systems, in the economic systems transaction cost shall be optimized. The positive "growth of this type of costs leads to the deeper division of labor and the development of many forms of human behavior" [19, p. 308] and thus it is objective to introduce measures for their minimization. At the micro level, expanding the company entails the growth of transaction costs of monitoring, accounting, market research and the manner of starting up the production. In general, there is an optimal level of transaction costs for each business entity in various stages of the development. Based on many factors, the values of average costs are formed i.e. their standards for certain forms of economic activities [20, p. 29].

As a counterweight to Coase's theorem, one can speak about the Majewski's (Маевский) theorem [21, p. 267] which says that "the more efficient economic institutes in evolutionary terms have a greater influence on the increase of the transaction costs"[22, p. 19]. For an additional explanation of such a non-standard position, it is useful to divide the transaction costs into specific and general and the efficiency of institutions on adaptive and evolutionary. Special transaction costs are the transaction costs per the monetary unit of investment. Overall transaction costs are the total costs of conducting transactions on the market. The adaptive efficiency of institutions is connected to minimizing the transaction costs of a special economic system that operates within the achieved level of complexity. Finally, the evolutionary efficiency of institutions, as pointed out by Majewski (Маевский), reflects their ability to integrate i.e. to coalesce with the processes of deepening the division of labor, development of cooperative relations and complication of the economic system, leading to a general increase in transactional costs [20, p. 30].

In short term, institutions increasingly show their limiting function, which causes an increase in specific transaction costs and reduction of the adaptive efficiency of institutions. The reduction of the adaptive efficiency of institutions shows that the existing technological system is worn-out and obsolete. According to Glaziew's (Глазьев) approach "a replacement of a technological system requires, as a rule, adequate changes in the social and institutional systems, which not only removes the social tension, but also helps the massive introduction of the technology inherent in the new technological system and in accordance with the current necessities of life" [16, p.17]. On the other hand, Peres speaks of the institutional recomposition as the phase of the realization of the effect of synergy between the real and the financial capital. The main task of the institutional recomposition is in creating conditions for market expansion and in gaining the control over the real (productive) capital, which depends on the society and government ability to introduce and direct institutional changes in order to earn the trust and highlight the importance of the creation of the real wealth [12, p. 76]. It is noticeable that, compared to the techno-economic, socio-institutional sphere is more stable and it adapts, with the strength of the social inertia, more slowly to the variable conditions [12, p. 18]. The obsolescence of the old and formation of the new technology under the influence of the economic and social stimuli, leads to the emergence and diffusion of new technologies, which run the sociopolitical processes for the reconstruction of the institutional structure. This sequence of events may, among other things, have the character of a chaotic process with results which are hard to predict.

Developing the ideas of Peres, Sergijenko (Сергиенко) shows that the evolution of the technological regimes is implemented by the changes of the relation of the formal and informal institutions. In the stage of genesis of the new technological wave, innovators examine the expressed funding deficit, which motivates them to cooperate and create new institutions. In the long run, new institutions provide the means for producing more efficient information technology. The use of more efficient information technology reduces the risk in functioning of the institution, which, for example, reduces expenditures of writing contracts and increases the number of transactions in an economic system. Increasing the volume of transactions leads to the increased adaptive effectiveness of institutions, thus deepening the division of labor and intensity of the relations of cooperation. Finally, deepening the division of labor and the development of the cooperative lead to an increase in the overall transaction costs of an economic system.

CONCLUSION

Technology, human capital and other forms of property are only potential long-term factors of economic development. The fundamental factors are efficient institutes which shape economic initiatives and contractually regulate the possibilities for equitable distribution of wealth. At the same time, it is noted that in the short run institution express their limiting function to a greater extent. It causes an increase of the specific transaction costs and has an impact on the reduction of the adaptive efficiency of institutions. However, in the long run, institutions do not represent a limiting factor to such an extent, but create the conditions for greater freedom of action and more intensive development of economic activities. In other words, the increase of evolutionary efficiency of institutions contributes to increasing the level of complexity of an economic system, and the increasing complexity of an economic system increases the volume of transactions, leading to an increase of general and reduction of specific transaction costs. Therefore, it turns out that based on the analysis of the behavior of institutions in the short and long term, it is possible to formulate a conclusion on the model of Majewski (Маевский), in the sense that economic efficiency of institutions is measured by their ability to maximize the general transaction costs and minimize the specific transaction costs in economy.

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TRANSAKSIONI TROŠKOVI I EFIKASNOST INSTITUCIJA

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Ekonomisti neoklasične škole, u nameri da ekonomskoj nauci daju status egzaktne naučne discipline, pravili su razliku između proučavanja činjenica i proučavanja vrednosti, naglašavajući da je prevashodni domen ekonomske nauke proučavanje činjenica. Od Maršala, preko Pigua i Robinsona, ekonomska nauka dobila je status nauke o izboru ili utvrđivanju racionalnih odluka. U ortodoksnom modelu racionalnog odlučivanja uloga transakcionih troškova u ekonomskom razvoju društva se tumači na pogrešan način. Stoga je cilj ovog rada da dokaže da pad efikasnosti instituta u kratkom roku povećava posebne transakcione troškove, dok porast njihove efikasnosti u dugom roku smanjuje posebne i povećava opšte transakcione troškove.

Ključne reči: transakcioni troškovi, adaptivna efikasnost institucija, evolutivna efikasnost institucija, tehnologija, ljudski kapital, teorema Majevskog, Kouzova teorema.