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INSTITUTIONAL FAILURES AND TRANSACTION COSTS OF BULGARIAN “PRIVATE RESEARCH INSTITUTES”

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Abstract: The paper analyses the reasons for poor performance of private research institutes in Bulgaria. In this regard the Institutional Economics methods are used. A connection between smart growth policy goals and Bulgarian membership in EU is made. The gaps in the institutional environment are identified as well as measures for their elimination are proposed. The main accent of the study is put on the identification of transaction costs, arisen as a result of the failures of the institutional environment where Bulgarian private research institutes operate. An additional objective of the publication is to identify the cumulative impact of transaction and social costs concerning the same transaction. Special attention is paid to the need of distinguishing the joint effect and at the same times it to be distinguished by the aforementioned factors in order to be taken into account in future econometric researches. A definition of the term “private research institutes” so as to be distinguished from Think-Tank organizations is proposed.

JEL Codes:E14, O17, K23

Keywords: Private research institutes, Institutional Economics, Smart growth, Transaction costs

Introduction

According to the European Commission research and development shall be based on the “smart growth” [1]. Creating an economy based on knowledge and innovations is extremely necessary for Bulgaria which is a member-state of the EU for ten years.

The Bulgarian economy is the most energy and resource intensive one in the EU. The share of exported goods with low added value is still too high [2]. The implementation and registration of high-tech patents as well as the rationalization of processes at Bulgarian companies is limited.

Having in mind the aforementioned, it is not a surprise that the economic growth rate in the country is too low and in the last 5 years it is around 2% on low base, which means growing economic divergence of Bulgaria from the other member-states.

According to the EUROSTAT the total costs for research and development in Bulgaria are under 1% of GDP in 2016, which means that they are significantly lower than the average values of 2% of GDP for EU-28.

The smart growth priority based on knowledge and innovations is directly connected with the present institutional research infrastructure, part of which are the “research institutes”.

As a result of a survey conducted by the Bulgarian Chamber of Commerce and Industry (BCCI) in 2015 compared to previous years, Bulgarian companies rely less on partnerships with research institutes for implementing innovations. [3]

The main objective of the study is to identify what causes the poor performance of private research institutes in Bulgaria.

The main object of the research is the research institutes and **the subject** is the functioning and effectiveness of private research institutes.

The thesis of the study is that the low effectiveness of private research institutes in Bulgaria dues to the improper structuring of the institutional environment, which results in higher transaction costs and market failures.

The assignments of the present study are the following:

- To analyze the failures of the institutional environment where the private research institutes function while revealing the failures of the legislation;
- To identify the main groups of transaction costs, raised as a result of the failures of the institutional environment where the private research institutes in Bulgaria function;
- To identify the cumulative impact of both “transaction costs” and “social costs” at the same transactions.

The main restrictions of the research due both to the paper format – conference paper and the insufficient public information about private research institutes in Bulgaria. In this regard the study is focused on the institutional aspects for functioning of these organizations developed in the legislation.

1. Review of the scientific literature related to the topic of the research

As a result of the review of the scientific literature, no publications with similar hypothesis, assignments of research and conclusions were found.

The most appropriate publication is that of M. Perez (2014r.)[4]. The author examines Think-Tank forums as a way the transaction costs in European policy to be decreased. The transaction costs decrease is carried out by the participation of Think-Tank organizations as intermediaries among European institutions, people and business. In this way the author concerned that information asymmetry, information costs, management costs, consultancy and concentrated lobbying influence of certain groups could be decreased as well as the opportunistic behavior. The main accent in the publication is put on the effects of the Think-Tank forums as nets rather than on the functioning of the certain organizations. The scope of the research covers mainly the EU and the assessment of effects concerns government and EU policy, which fact makes the conclusions of the study hardly applicable to certain member-states. The private research institutes are only marked as a variety of the Think-Tank organizations without being analyzed independently or in comparison with the other types of Think-Tank organizations. No matter that the author has specified that some of the Think-Tank organizations reveal no scientific or expert potential (table 3, pp.155), he does not make any negative conclusions.

The first impression of the main accent of Perez’ publication is that Think-Tank organizations and private research institutes function in an idealized world, where everything is good and positive and his/her main goal is the transaction costs to be minimum. According to the author Think-Tank organizations strive for continuous increase of their reputation and to be identified by new ideas which fact brings them benefits compared to their partners, members or sponsors.

As far as the present study is concerned, the conclusions of M. Perez could not be accepted as generally valid as they are disputable. On the contrary, Think-Tank organizations increase transaction costs not decreasing them. Most of them function opportunistically dealing with lobbying, black PR and unfair competition for which statements examples will be given later in the publication. Altruism will be rational for their activity and their functioning in public benefit if they are perceived as an alliance of experts, academic and elite. In most cases however, the experts are in good positions at business organizations, academic – at universities and the elite participate in the government and they have no free time for extracurricular activities. Then Think-Tank organizations consist of people without any expert, academic or leadership qualities, who have not professionally realized themselves in the economy or policy, but they want to have the same incomes as businessmen and

politicians. Namely in this case the opportunistic behavior and lobbying is what matters and brings them incomes. This results in significant increase of the transaction costs in the economy contrary to the conclusions of M. Perez.

Having in mind the aforementioned publication of M. Perez (2014r.), the present study does not duplicate it neither as a focus of research (*M. Perez study does not examine "private research institutes" in details*), nor as a scope of research (*its scope concerns the EU as a whole but not a certain member-state*), nor as correlations (*it examines the relations between Think-Tank organizations and EU management bodies*), nor as conclusions (*it presents Think-Tank organizations as positive way the transaction costs to be decrease*).

The next publication related to the current study is that of M.Jacob (2013) [5]. The author analyses possibilities for coordination and increase of investments in scientific research and innovations through extension of the international cooperation. In the publication special attention is paid to the important role of increasing capacity for innovations as a way for anti-crisis economic policy and sustainable development.

This publication does not duplicate the present study as the accent is put on the diversification and development of financial instruments, related to research and innovations. It examines slightly the issue, concerning transaction costs related to research and innovations (namely on pp.19 and pp.24). Transaction costs are examined as far as the complicated infrastructure for funding research and innovations gives rise or decrease to the transaction costs without making relationship with the transaction costs impact on other economic sectors or on the market.

Having in mind the aforementioned, the publication of M.Jacob (2013), does not duplicate the present study.

Another publication related to the present research is that of M. O.Sellenthin, (2006) [6]. The author examines the impact of patent rights regime in Sweden and Germany over the incentives to carry out researches which result in patents. The concept of the study is related to the idea of economy based on knowledge as a way economic growth to be achieved. The research is restricted to the complicated structure of the patent process management. No matter that a relationship between transfer of knowledge and innovations among universities and business is done, the transaction costs are examined in order who is responsible for them (business, universities or researchers) in allocation of patent rights. In this process, the author examines the activity of legal universities without considering Think-Tank organizations or bogus research institutes. No correlations between transaction costs impact and other economic sectors and the market are made.

Having in mind the aforementioned, the publication of M. O.Sellenthin, (2006), does not duplicate the present study.

Similar to the previous publication is that of Jiatao Li (2010) [7]. The author examines Global R&D Alliances in China - Collaborations with universities and research institutes. The concept of the study is again related to the idea of economy based on knowledge as a way an economic growth to be achieved. This research again is restricted to the complicated structure of the innovation process management. Transaction costs are implicitly examined as a perspective applied to explore when multinational corporations select universities rather than local firms as partners in international R&D alliances. In this process, Jiatao Lie examines the activity of legal universities without considering Think-Tank organizations or bogus research institutes. No correlations between transaction costs impact and other economic sectors and the market are made.

Having in mind the aforementioned, the publication of Jiatao Li, does not duplicate the present study.

A publication analyzing Bulgarian research institutes is that of V. Prodanov (2008г.) [8]. The author however examines research institutes as a whole and put the accent on the correlations among: funding - number of researchers – results, rather than on the reasons for unsatisfactory funding of research institutes or failures of the institutional environment and their impact on the transaction costs. The study does not analyze Think-Tank organizations or bogus research institutes.

In this regard the present publication does not duplicate any other study, conducted on the same topic or with the same thesis of research.

2. Structure of the institutional environment for the functioning of “private research institutes” in Bulgaria

Private research institutes could be determined as effective organizations to decrease companies’ transaction costs for rationalization and innovations implementation in the production process. Contrary, if their activities are ineffective transaction costs could be created or increased and cause certain market failures. Their identification will be made in the conclusions of the study.

The institutional economics examines the institutional environment as set of rules and mechanisms for their management which are formed in a way that influence the market order. (D.C.Northand J.J.Wallis.,1994) [9].

The main rules for the establishment and functioning of Bulgarian institutes (public or private) are laid down in the current Higher Education Act [10].

In accordance with the Act:

- The institute is a basic unit of the university which gathers the academic staff in order long-term research activity to be carried out;
- The institute structure, the constitutions and functions of its management bodies are determined by the Academic Council of the University;
- The Council of Ministers in Bulgaria opens, transforms and closes institutes as a result of the proposal of Minister of education through the National Evaluation and Accreditation Agency;

Other legislative rules, concerning establishment and functioning of research institutes are as follows:

- The Bulgarian Academy of Science is structured in institutes [11]
- Research institutes could be established at Council of Ministers and at various Bulgarian ministries [12]

According to the aforementioned, there is a legislative definition of the term “institute” which defines it as a main unit of the universities structure. Each institute could be opened, transformed or closed by the state authorities no matter if it is a unit of the structure of public or private universities.¹ The Bulgarian legislation allows also the existence of institutes that

¹Examples of institutes at the state higher schools are:

- Institute for Intellectual Property and Leadership at University of National and World Economy (UNWE);
- Confucius Institute at Sofia University St. Kliment Ohridski;
- Economic Research Institute at Bulgarian Academy of Science (BAS);

Examples of institutes at the private higher schools:

are directly subordinated to the Council of Ministers or to the relevant ministries, established by the government.²

All of the examples, mentioned in the footnotes fully comply with the defined institutional structure for the establishment and functioning of a “research institute”.

The main question that rises is if there are research institutes in Bulgaria which are not founded in accordance with the established legislative rule and what are the results of this fact.

What would be the costs to overcome the opportunistic behavior of entities who compete unfairly with the legal research institutes and at the same time function under much more stringent institutional requirements and without guarantee for the quality of goods produced compared to the market counterparties who has made contracts with them because they are called “institutes”.

What is typical for the potential contracting parties of “research institutes” is that they search for specific service (innovation or rationalization) and get to know who can provide them as an “institute” as this term is traditionally related to research potential. The presence of official specific restricted institutional framework is important for certainty of the results from potential contracts. But when this framework is only decorative, it creates risk for the economic turnover.

Important for legal research institutes, which are established in accordance with the Bulgarian legislation, is that they are institutionally forced to invest in specific assets (employees with academic degrees or scientific infrastructure) and they expect economic return of their investments. However if these research institutes meet unfair competition by fictitious companies or NGOs, which are licensed through a far simplified procedures, the legal research institutes could not return their investments and could hardly keep their market shares and provide innovative services with high quality.

To be analyzed more precisely the correlation among “private research institutes” with the institutional environment failures and transaction costs, they must be scientifically defined.

In the scientific literature, it is accepted the “private research institutes” which are registered legally as a NGO or a company, to be perceived as a subdivision of Think-Tank organizations. According to one of the widespread definitions (D. Stone, 2006), Think-Tank organizations are non-government organizations and groups, which could be research, lobbying and advocacy, that aim to protect certain social policies, political strategies, economic, industrial and military issues [13].

According to the author of the present study, the following definition of “private research institute” could be given:

A definition:

„Private research institute“ is a research organization, established in accordance with the Higher Education Act, which is a unit of the university structure and is long-term related to the university in order research to be carried out by employees with academic degrees, whose results comply with the approved research requirements of the legislation and university.

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- Bulgarian Institute of Egyptology at New Bulgarian University (NBU);
 - Institute of research and PhD students education at University of Library Studies and Information Technologies;

²Examples of institutes at Council of ministers and at the relevant ministries:

- Institute of public administration at Council of Ministers;
- National Statistical Institute (NSI) at Council of Ministers;
- Institute of plant protection at Ministry of agriculture and foods;
- National institute of Justice at Ministry of Justice;

In accordance with the proposed definition for “private research institute” by the author, Think-Tank organizations can have scientific focus and employ persons with academic degrees. But when these organizations are not units of the university structure or long-term related to the university, they could not include in their names the term “Institute”. In this way the risk of establishing “private research institutes” which implement the opportunistic behavior in the form of “black PR” or malicious unfair competition in favor of other commercial or political organizations will be eliminated. In this case the author has in mind the possible use of these supposed “private research institutes” in relation with the carrying out of “**Hybrid war**”, which will be a big problem for countries such as Bulgaria, Poland, Ukraine, Latvia, Estonia and etc. For more information about the “Hybrid war” concept see B. P. Fleming, (2011) [14].

3. Influence of the failures of institutional environment where Bulgarian private research institutes function over the market stability order.

The study will focus on the question if it is possible private persons in Bulgaria to establish “institute” in the form of a company or non-government organization (NGO), which is not established in accordance with the Higher Education Act, is not a unit of the university structure and its employees do not possess academic degrees.

As a result of an inquiry, made in the Commercial Registry at the Ministry of Justice, it was approved that such registrations are possible [15]. „The institutes“ registered as companies and not related to the structure of universities and higher schools are **over 530**.

They are registered in accordance with the legislative requirements for registration a company, laid down in the Commerce Law Act [16]. This means that their main activity is performing any commercial acts by occupation but not research. When they are registered the judicial authority neither checks them for compliance with the Higher Education Law, nor if their employees have the necessary research capacity.

For example the Energy Infrastructure Institute which is registered as a private limited company and has five members, it has recorded in its main activity research in the field of energetic and anything else not prohibited by the Law.

This institute has gained number of public procurements for lots of money at some Bulgarian agencies. At the same time its name is very close to the name of the Institute of Electrochemistry and Energy Systems at Bulgarian Academy of Science (BAS), where many researchers with academic degrees work, have serious research capacity and not enough funding.

The assignors of public procurements – the ministries accept intuitively that as the name of the company consists of the term “institute” it means that this company has the necessary research capacity even though it does not comply with the requirements of the Higher Education Act.

This leads directly to market distortions and unfair competition because of the failures of the institutional environment.

On one hand the structure of the institutional environment is restrictive (closed) so as it could create certainty for the parties making contracts with the “institute”. On the other hand the institutional environment permits the existence of companies, registered as institutes in accordance with the Commerce Law Act which could hire employees with elementary education (up to seventh grade in elementary school) and performing anything else not forbidden by the Law, for example even trading with alcohol and cigarettes.

In accordance with the Promotion of Scientific Research Act, "A scientific organization is a legal person who carries out research according to the current legislation" [17]. And the "institutes" according to the Higher Education Act, mentioned before, are such organizations.

The companies registered as "institutes" in accordance with the Commerce Law Act do not get funding by the Promotion of Scientific Research Act because of its strict requirements but they could easily gain public procurements at the state agencies and ministries through the EU Funds while competing with the research institutes, registered in accordance with the Higher Education Law.

For example, for the EU structural funds absorption in Bulgaria for Operational Programme "Environment 2014-2020" of Ministry of environment and water of Bulgaria, most of the beneficiaries must be "research institutes"[18]. At the same time there is no definition of the term "research institute" in the Operational Programme. And while in the Commerce Registry are registered 530 companies with the name "institute" (most of them consisted of 2 to 3 persons with elementary or secondary education) each applicant must be approved as beneficiary or executor of environmental projects along the axis of biodiversity conservation without the necessary research capacity.³

This creates risks of costs non-recognition of Operational Programme "Environment 2014-2020" in the priority axis "biodiversity conservation" by the European Commission, which will result in increase of the deficit on the state budget.

Much better is the situation in Operational Programme "Good governance 2014-2020" at Ministry of Labor and Social Policy where expert approach is applied [19]. In this programme all of the institutes which can be potential beneficiaries are defined in order companies which are registered in accordance with the Commerce Law Act and concern themselves as institutes cannot apply for funding.

In the field of public-private partnerships and transport management also raise few questions that deserve to be analyzed (see Korolova, P., 2016). [20]

As a result of the mentioned above, the following questions raise, related to the market order distortions:

- Are the resources in EU funds for Bulgaria in the different operational programmes protected when in some of the programmes the beneficiaries as research institutes are not clearly defined and is it possible a beneficiary to be a NGO or private company, registered in accordance with the Commerce Law Act;
- Are the public funds of the state budget for public procurements protected when the main obligations are fulfilled by competent "research institutes". Or is it possible the public procurement to be gained by a NGO or a private company, concerning itself as a research institute without the necessary research capacity;
- Lastly raises the question if such suspicious "institutes" that provide educational courses do not mislead citizens for the quality of education as well as the employers who will hire them.

4. Identifying the transaction costs as a result of the failures of the institutional environment where the Bulgarian "private research institutes" function

The main objective of the study mentioned in the introduction was to identify what causes the poor performance of private research institutes in Bulgaria. As a result it was

³ Despite on page 39 of Operational Programme "Environment 2014-2020" in priority axis "quality of waters" the beneficiaries are mainly the institutes at BAS, on page 67 and page 68 in priority axis "biodiversity conservation" the main beneficiaries are generally defined as "research institutes".

approved that the poor performance is due mainly to the improper structure of the institutional environment where the private research institutes function.

As it was mentioned above, the inquiry in the Commerce Registry at Ministry of Justice proved that 530 institutes are registered as companies and NGOs without complying with the requirements of the Higher Education Act and necessary research capacity.⁴

As a consequence of the failures of the institutional environment threats for the market stability order could raise because of the unfair competition and opportunistic behavior of the suspicious “institutes” which are NGOs or companies without research capacity compared to the “institutes” which are parts of the universities.

This raises uncertainty in economic turnover and increases both transaction costs and the risk of poor quality fulfillment of the signed contracts.

Based on the analysis, the following groups of transaction costs are identified as a result of the failures in the institutional environment where the Bulgarian “private research institutes” function:

First hypothesis:

Transaction costs increase with the level of certified inadmissibility when grants from EU funds in the various operational programmes of ministries are used to fund beneficiaries with no research capacity but identified themselves as “institutes”. As a result the society undertakes the expenses about the reported inadmissibility of the EU grants. This also causes damages to the state budget as the amount of funding for other public priorities is restricted (e.g. for healthcare, culture and etc.). Thus society receives less or poor public services.

In this way the transaction costs are approaching the concept for social cost. However they remain transaction costs because they go along with the written contract what is the assignment of public project to private contractors funded by EU funds.

Second hypothesis:

Transaction costs increase together with the level of not enough funding of legal “research institutes” which are units of the university or BAS structure and must comply with strict requirements resulting in significant total costs.

At the same time they could not gain public procurements from the state agencies and ministries, which prefer to give them to NGOs or companies which perceive themselves as “institutes” because these entities provide lower prices for execution of the public procurements. And the control of the state authorities over the fulfillment of the projects is usually underestimated.

This also leads to public losses as the society receive services with poor quality which corresponds with the social cost, created by the market order distortions.

In this way transaction costs go along with the legal research institutes efforts to receive assignment of public procurements, which is a deal under written contract.

Third hypothesis:

Transaction costs increase with the level of poor quality execution of the various educational courses provided by NGOs or private companies which perceive themselves as “institutes” and about which citizens misunderstand their research capacity or relationship with universities or higher schools. In particular the losses citizens suffer are both the not enough knowledge of the graduates and the illegal document they receive for completing the course.

⁴ It must be marked that the Higher Education Act does not exclude the existence of “private research institutes”, moreover no difference between public and private research institutes is made there only if the institute is a unit of the university or higher schools structure.

In this way the transaction costs go along with the poor quality execution of the contract, signed between the citizens and the suspicious research institutes.

Fourth hypothesis:

Transaction costs increase the possibility of private companies and NGOs perceiving themselves as “institutes” to carry out any activity not forbidden by the legislation. For example to sell alcohol and cigarettes as well as second hand clothes on the market. This undermines the image of legal research institutes which are units of the universities structure and results in bad financial consequences for them. E.g. decrease in the amount of donations and turning them to research institutes in other countries. Also decrease in the demand services of the legal research institutes due to a flag in their public prestige.

In this way transaction costs go along with the potential contracts for research services, provided by the legal research institutes and are related to the decreased credibility as a potential contracting party. This leads to significant reduction in the number of contracts signed as well as to financial losses.

Fifth hypothesis:

Transaction costs increase together with the damages caused of misleading pseudo-researches carried out by private companies and NGOs that perceive themselves as “institutes” which are used for unfair marketing or unfair political propaganda (“hybrid warfare”). This leads to popular fallacies of the society and business and market distortions.

In this case the transaction costs must be again distinguished with the social cost. The social cost is related to the distortion in the carried out elections by imposing popular fallacies by the suspicious research institutes. This infringes citizens’ choice of the proper political candidate who does not possess the necessary qualities to take state occupation.

Transaction costs come to the front when illegal research institutes are used to carry out unfair marketing. This hits bona fide companies through unfair competition and results in financial losses.

Special attention is paid to the issue, concerning the distinction between transaction costs and social cost. In two of the five hypotheses a cumulative effect is typical for both the transaction costs and the social cost. Studying the total cumulative effect as well as the distinction of this effect between both factors could lead to changes in the econometric models concepts in this field.

This issue needs independent research, which could be carried out by the author of the current study or by other researchers.

Conclusions

As specific recommendations in order the failures of institutional environment where Bulgarian private research institutes function to be eliminated, the present study proposes the following:

- Compliance with the restrictions of legislation while registering companies and NGOs, which perceive themselves as “institutes”. The Higher Education Act is a specific and restricted toward the general provisions of the Commerce Law Act and the Non-profit Legal Entities Act. The regulations of the Higher Education Act is also codification towards research institutes and do not tolerate the general provisions of the Commerce Law Act and the Non-profit Legal Entities Act.;
- Re-registration of all the 530 companies and NGOs which perceive themselves as “institutes” and have no relationship with universities in accordance with the rules of

the Higher Education Act. Close down those “institutes” which have not the necessary research capacity.

Research institutes have an important public function in the period of continuous economic transformation of the Bulgarian economy which main goal is to move away from production of goods with low added value to knowledge-intensive and innovative products in order smart economic growth to be achieved. This is also the main objective of all European countries, indicated in the “Europe 2020” strategy.

Bulgaria could not reach the smart economic growth if the country relies only on mining and manufacturing industries and allows distortions in the institutional environment where the private research institutes function.

Decrease of the transaction costs is important not only for the rationalization of property rights of entities but also for the elimination of market distortions and achievement of public contracts effectiveness. That is why the present publication identified the problems of the institutional structure of the business environment which could be a subject of future econometric study which would quantitatively measure the defined five groups of transaction costs.

Without smart growth, the Bulgarian economy will be far behind the European and global economic model based on innovations created by legal research institutes and development centers with real research capacity.

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