Opportunities for Enhancement of Competitiveness in Forestry in Bulgaria

Konstantin Kolev[1]

University of Forestry, 10 Kliment Ohridsky Blvd., Sofia 1797, Bulgaria

[1]konstantinklv@yahoo.com

Abstract. Competitiveness of forestry is prerequisite for multiple benefits to society. Its quantification by means of factor analysis and linear ordering in multidimensional space in previous studies [14, 15] reveals the main factor for the unsatisfactory ranking of Bulgarian forestry in terms of competitiveness in comparison with 15 EU member states and it is insufficient investments. In this relation an attempt is made to answer the questions: 'Which are the reasons for insufficient investments in forestry in Bulgaria?' and 'What have to be done to enhance investments and competitiveness of forestry in Bulgaria?'. Based on questionnaire survey among specialists working in forestry and hypotheses testing through χ^2-analysis is established that among the main reasons for insufficient investment in Bulgarian forestry are some market failures (rent seeking and opportunism). To overcome them and to increase the competitiveness of forestry according to respondents it is appropriate the territorial divisions of state forest enterprises to invest in forestry equipment and to increase the share of economic activities carried out with their own workers and equipment.

Key Words: market failures, competitiveness, state forest enterprises, representative sample, χ^2-analysis.

1 Introduction

In previous studies, on the grounds of national forestry competitiveness estimation in 15 states members of EU is established unsatisfactory ranking of the Bulgarian forestry (13 place) which does not correspond to the possessed forest resources. The main reason for that are the insufficient investments [14, 15]. Because of that the goal of current article is to reveal the reasons for insufficient investments in forestry in Bulgaria and to suggest recommendations, which will enhance investments and competitiveness of forestry in Bulgaria.

2 Theoretical framework of the research

The reasons, which determine the insufficient amount of investments in forestry, are manifold and complex. To identify them and to gain insights on how to overcome them is necessary to create a structure in which an analysis must be carried out. O. Williamson provides such a structure with four levels of institutional analysis [38]. Its essence is described in the lines below.

The first level of Williamson's institutional analysis is called 'social embeddedness'. It deals with informal institutions. According to D. North they derive from definite traditions, own codes of ethics, customs, habits and people's faith [21, 22]. The informal institutions evolve over

time and play important role in structuring interactions among the economic subjects and have implications for overall socio-economic outcome [11, 21]. Here should be mentioned that informal institutions change very slowly and have evolutionary cycles that last hundreds even thousands of years. Usually this level is taken as given [23].

The second level of institutional analysis reflects the institutional environment, i.e. the formal institutions or the formal rules of the game – especially property. The formal institutions are presented by constitutions, legal laws and institutions to enforce political system, human rights and property rights (their definition and enforcement) [1, 37, 38]. The theoretical grounds of this level of institutional analysis are the economics of property rights. When property rights of natural resources are defined this one who wants 'to use a resource has to pay the owner to obtain it. Chaos disappears; and so does the government except that a legal system to define property rights and to arbitrate disputes is, of course, necessary' [cited in 38]. In other words, when property rights on natural resources are well defined and secure through the market forces resources get the highest price. This provides resources owners with incentives to do investments on purpose to improve resources condition [9, 16, 34].

The economics of property rights assumes costless and easy enforcement of rights, which is rejected by the followers of transaction cost economics like O. Williamson [4, 37] and R. Coase [8, 36]. According to them, the property rights are realized by means of contracts, which are accompanied with transaction costs. They are costs for searching, bargaining, monitoring and enforcing contracts or, generally speaking, they are the costs for economic system governance [37]. Because of that the third level of Williamson's analysis deals with 'the governance structure' [37, 38]. The stress is put on contracts between stakeholders and their enforcement on purpose of getting 'governance structures right' and minimizing transaction costs in the system [37, 38]. From the point of view of forestry the contracts are broken due to information asymmetry, lack of foresight, rent-seeking and opportunism [5]. This increases the uncertainty in the system [21] and transaction costs, and does not stimulate investments in it.

The last level deals with allocation of resources. Here are applied the neoclassical economic provisions, which govern the functioning of economy and mainly the study on decisions' variables – prices and output [37, 38].

The second and third levels of O. Williamson analysis provide a complete analysis of property rights, which is the essence of the new institutional economics (NIE). Both levels are dealing with improvement of formal institutions. They have matter for entrepreneurship [28, 29], trade [17] and economic development [25, 26]. Due to this the scope of this article is limited to them. Furthermore the second and third levels of the institutional analysis allow formulation of basic working hypothesis for the insufficient investments in forestry of Bulgaria. They are verified on the basis of questionnaires filled by representatives of different groups connected with forestry and application of χ^2-method.

3 Chi-Square Method and Cramer's Coefficient

In its essence this is a method for statistical verification of hypotheses. It is applied to qualitative variables, measured on nominal or ordinal scale. In order to realize the χ^2-method, the stages for hypotheses verification should be passed and χ^2_{em} should be calculated. It must be emphasized that the application of χ^2-method involves two important restrictive conditions.

Firstly, the theoretical values for every cell ($f_{ij}^{'}$) must not be smaller than 1 and, secondly, if there are values of the theoretical frequencies smaller than 5, they should not be more than 20% of the cells [32, 33].

The strength of the link between the variables, about which the presence of dependence is found, is established through the Cramer's coefficient [3, 24].

The data about the insufficient investment and low competitiveness in Bulgarian forestry are collected through direct inquiry. The first study is carried out during the period April – May 2021. The second study is foreseen to be carried out during the period April – June 2022. The respondents in the first study are 171 specialists connected with forestry. Part of the results from the questionnaires is presented in the current article.

4 Results and Discussion

On the basis of the study's theoretical framework is formulated the research thesis, which states: Among the main reasons for insufficient investments in forestry are inefficient legislative protection of forest resources property rights, rent-seeking, opportunism, and asymmetry of information. The limitation of market failures might be achieved through investments of territorial division (State Forest Enterprises (DGS) and State Hunting Enterprises (DLS)) of state enterprises (DP) for management of state forest territories in their own equipment for realization of silvicultural activities and timber harvesting. It is supposed that DGS/DLS are able to create competition among the economic subjects in forestry through increasing the share of stewardship activities performed with their own equipment and workers (of DGS/DLS). The thesis is verified through the answers of the following eight questions:

On **1st** question: 'How do you assess the level of investment in Bulgarian forestry? nearly 86% of the requested answered with 'low' and 'very low', which confirms the quantitative data from previous studies about investments in forestry [13, 14, 15]. The **2nd** question: 'How efficiently does the current legislation protect property rights of forest resource (wooden and non-wooden) in Bulgaria?' is connected with the second level of institutional analysis. The answers of 2nd question are presented in table 1 and table 2.

From the actual frequencies in table 1 is obvious that the opinion of respondents is divided in two parts. More than 45% from the inquired think that the property rights of forest wooden resources are efficiently and very efficiently protected by the legislation while 53.3% from the respondents are on the opposite opinion. The situation with non-wooden resources is similar. Nearly 70% from the inquired persons share the opinion that the property rights of non-wooden resources are not efficiently protected by legislation while according to 30% from them they are efficiently or very efficiently protected by the legislation (see table 2). The sustainable management of forest resources including investment demands good identification and allocation of property rights. By means of them is reduced the open access to forest resources and are established competitive markets [30]. From here arises the first working hypothesis. According to hypothesis zero (H_0) between the legislative protection of property rights of forest resources and the level of investment in Bulgarian forestry there is no connection. The alternative hypothesis (H_1) is opposite. It sounds that between the legislative protection of property rights of forest resources and the level of investment in Bulgarian forestry there is dependence. The theoretical frequencies concerning the connection between property rights of wooden resources

and investment in forestry are calculated in table 1, and about property rights of non-wooden resource and investment in forestry in table 2.

Table 1: Actual and theoretical frequencies

Variables			How efficiently does the current legislation protect the property rights of wooden forest resources in Bulgaria?				Total
			Very inefficiently	Inefficiently	Efficiently	Very efficiently	
How do you assess the level of investment in Bulgarian forestry?	Very low	Actual frequencies	9	16	8	0	33
		Theoretical frequencies	4.4	13.5	13.3	1.7	33.0
	Low	Actual frequencies	11	44	51	8	114
		Theoretical frequencies	15.3	46.7	46.0	6.0	114.0
	High	Actual frequencies	3	10	10	1	24
		Theoretical frequencies	3.2	9.8	9.7	1.3	24.0
Total		Actual frequencies	23	70	69	9	171
		Theoretical frequencies	23.0	70.0	69.0	9.0	171.0

Table 2: Actual and theoretical frequencies

Variables			How efficiently does the current legislation protect the property rights of non-wooden forest resources in Bulgaria?				Total
			Very inefficiently	Inefficiently	Efficiently	Very efficiently	
How do you assess the level of investment in Bulgarian forestry?	Very low	Actual frequencies	13	13	7	0	33
		Theoretical frequencies	8.3	14.9	9.1	.8	33.0
	Low	Actual frequencies	27	50	33	4	114
		Theoretical frequencies	28.7	51.3	31.3	2.7	114.0
	High	Actual frequencies	3	14	7	0	24
		Theoretical frequencies	6.0	10.8	6.6	.6	24.0
Total		Actual frequencies	43	77	47	4	171
		Theoretical frequencies	43.0	77.0	47.0	4.0	171.0

After theoretical frequencies are defined, it is calculated that χ^2_{em} for table 1 is equal to 11.678 and for table 2 is respectevely 8.084. From the tables for χ^2-distribution for level of significance $\alpha = 0.05$ and six degrees of freedom is established that χ^2_t is equal to 12.59. As $\chi^2_{em} < \chi^2_t$ the hypothesis zero (H_0) is accepted and the alternative (H_1) is rejected. In other words there is not a link between the legislative protection of property rights of forest resources and the level of investment in Bulgarian forestry.

From the answers of 2nd question of the inquiry card becomes clear that the property rights of forest resources in Bulgaria are not so efficiently protected. At the same time according to O. Williamson and R. Coase, the realization of property rights is accompanied with transaction costs [4, 8, 36, 37]. In this relation the **3rd** question of the inquiry card is: 'How do you assess the level of transaction costs in Bulgarian forestry?'. On this question 34% from the inquired respondents answered with 'very high' and 'high' and 66% with 'low' and 'very low'. From these contraversive responces can not be drawn up conclusions about the governance of Bulgarian forestry and in particular about the certainty in the system. The last ones is

precondition for investment in forestry and have to be provided by institutions. Indirectly about the level of certainty can be judged by the extent of rent seeking, opportunism and information asymmetry in forestry. These terms are closely related with the third level of O. Williamson analysis and in particular with verification of three working hypotheses that guide this study and are consecutively presented below.

The idea of '**rent seeking'** is introduced by Gordan Tullok in 1967 and more than 50 years later it is relevant than ever. Different scolars study different aspects of the phenomenon and its effect on economic theory, empirical analysis, control of violence, corruption, regulation, rent extraction, economic development, inequality and so on [2, 10, 19, 25]. Without belittling the achievement of different authors in present paper under category 'rent seeking' is accepted the classical understanding that a contestable rent generates rent-seeking activities aimed at obtaining the rent. These activities involve unproductive use of real resources and cause a social loss. Rent-seeking costs are dificilt for measurement but by means of contest theory and some assumptions about the social actions of rent seekers, the size of the social cost can be calculated from the value of the disputable rent. Typical examples of contestable rents are providing monopoly rights, priviledged budget distribution, protectionist trade policies, national resource rights etc. [2]. Concedering the negative effects of this market failure it is important to check whether there is a link between the answers of question **4th** from inquiry card: 'To what extent in Bulgarian forestry there are market failures as rent seeking?' and answers of **1st** question from the inquiry 'How do you assess the level of investment in Bulgarian forestry?'. Because of that the hypothesis zero (H_0) sounds that between the level of investment in forestry and the extent of rent seeking there is no connection. The alternative hypothesis (H_1) is opposite. It sounds that there is dependence between the investment in forestry and the extent of rent seeking. In table 3 the theoretical frequencies are calculated. It is established that χ^2_{em} is equal to 16.283 and from the tables for χ^2-distribution it is established that χ^2_t is equal to 9.488. This means that between the level of investment in forestry and the rent seeking there is a connection. The value of the Cramer's coefficient is 0.218, which according to H. Akoglu [3] determines the strength of the link as strong.

Table 3: Actual and theoretical frequencies

Variables			**To what extent in Bulgarian forestry there are market failures as rent-seeking?**			**Total**
			Very high	High	Low	
How do you assess the level of investment in Bulgarian forestry?	Very low	Actual frequencies	9	24	0	33
		Theoretical frequencies	5.4	21.3	6.4	33.0
	Low	Actual frequencies	24	65	25	114
		Theoretical frequencies	22.0	70.0	22.0	114.0
	High	Actual frequencies	0	16	8	24
		Theoretical frequencies	5.6	13.7	4.6	24.0
Total		Actual frequencies	33	105	33	171
		Theoretical frequencies	33.0	105.0	33.0	171.0

Without going into details about the agency theory under the term '**opportunism**' in current paper is accepted the understanding of O. Williamson and namely 'self-interest seeking with a guile' [cited in 35] in other words 'parties are opportunistic when they act to their benefit yet to the detriment of the other party in the relationship' [7]. From here emerge the third working hypothesis for current paper. By means of χ^2-method it is verified if there is a relation between the answers of **1st** and **5th question**: 'To what extent in Bulgarian forestry there are market failures as opportunism?'.

According to hypothesis zero (H_0) between the level of investment in forestry and the extent of opportunism, there is no connection. The alternative hypothesis (H_1) is opposite. It sounds that between the extent of opportunism and the level of investment in forestry there is dependence. In table 4 are presented the actual and the theoretical frequencies.

It is calculated that χ^2_{em} .is equal to 18.216. From the tables for χ^2-distribution is established that χ^2_t is equal to 9.488. As $\chi^2_{em} > \chi^2_{em}$ the hypothesis zero (H_0) is rejected and the alternative (H_1) is accepted. In other words, there is a link between the extent of opportunism and the level of investment in forestry. Its strength is determined by the Cramer's coefficient. It is 0.231, which means that the dependence between the degree of opportunism and the level of investment according to H. Akoglu [3] is strong in terms of strength.

Table 4: Actual and theoretical frequencies

Variables			**To what degree in Bulgarian forestry there are market failures as opportunism?**			**Total**
			Very high	High	Low	
How do you assess the level of investment in Bulgarian forestry?	Very low	Actual frequencies	11	21	1	33
		Theoretical frequencies	7.3	22.2	3.5	33.0
	Low	Actual frequencies	24	81	9	114
		Theoretical frequencies	25.3	80.7	8.0	114.0
	High	Actual frequencies	3	13	8	24
		Theoretical frequencies	5.3	12.1	6.5	24.0
Total		Actual frequencies	38	115	18	171
		Theoretical frequencies	38.0	115.0	18.0	171.0

The last working hypothesis for current study is related with '**information asymmetry**'. This concept is central in the field of strategic management, organization behavior, organization theory, entrepreneurship, corporate social responcibility and human resource management. At the same time the concept has created foundational elements of agency theory, transaction cost economics, institutional theory, resource-dependence theory and so on [6]. The importance of the idea about 'information asymmetry' is not subjected to discussion and in present paper under this term is understood 'a situation in which respective parties own different amounts and types of information over time about a project or contract' [27]. Through χ^2-method it is verified if there is a relation between the answers of **1st** and **6th question**: 'To what degree in Bulgarian forestry there are market failures as information asymmetry?'.

According to hypothesis zero (H_0) between the degree of information asymmetry and the level of investment there is no connection. The alternative hypothesis (H_1) is opposite. It sounds that between the degree of information asymmetry and the level of investment there is dependence.

After theoretical frequencies are defined (see table 5), it is calculated that χ^2_{em} .is equal to 11.124 and from the tables for χ^2-distribution it is established that χ^2_t is equal to 12.59. The conclusion is that there is no relation between the information asymmetry and level of investment in Bulgarian forestry.

Table 5: Actual and theoretical frequencies

Variables			**To what degree in Bulgarian forestry there are market failures as information asymmetry?**				**Total**
			Very high	High	Low	Very low	
How do you assess the level of investment in Bulgarian forestry?	Very low	Actual frequencies	12	12	6	3	33
		Theoretical frequencies	4.1	13.1	7.5	8.3	33.0
	Low	Actual frequencies	9	68	28	9	114
		Theoretical frequencies	14.0	66.0	26.0	8.0	114.0
	High	Actual frequencies	0	19	5	0	24
		Theoretical frequencies	6.9	9.9	5.5	1.7	24.0
Total		Actual frequencies	21	99	39	12	171
		Theoretical frequencies	25.0	89.0	39.0	18.0	171.0

Through χ^2-method application is established that rent seeking and opportunism are one of the main reasons for insufficient investment and low competitiveness of Bulgarian forestry. The main research question is how to overcome these market failures? In correspondence with the accepted research thesis the limitation of market failures in forestry is connected with creation of rationally organized enterprises for multi-purpose forest use, which generate profits only through strict calculation of revenues and costs. On practice this means creation of competitive order in forestry [12, 18, 20, 31]. Its achievement is possible through the investment of DGS and DLS in their own equipment and expansion of the share of stewardship activities carried out with their own workers and equipment. One of the criterions for truth of the thesis above is the opinion of the specialists working in forestry. It is verified with the last two questions from the inquiry card. On question **7th**: 'Do you think that through investments in forest equipment the territorial departments (DGS/DLS) of state enterprises will be able to constraint the market failures as rent seeking, opportunism and information asymmetry?' 80.3% answered with 'possible' and 'absolutely possible' and 19.7% of the inquired persons answered 'impossible' and 'absolutely impossible'. At the same time on question **8th**: 'Is it possible territorial departments (DGS/DLS) of state enterprises to create competition among the economic subjects in forestry through increasing the size of economic activities done with own equipment and workers?' 87.7% of the respondents answered with 'possible' and 'absolutely possible' and 12.3% of them answered with 'immposible'.

5 Conclusions

On the grounds of the theoretical framework of the research and the questionnaire survey the following conclusions can be done:

- The level of investment in Bulgarian forestry is low. The insufficient investment is precondition for low competitiveness of Bulgarian forestry.
- The institutions do no create security and predictability in the system of forestry. The property rights of forest resources are not well protected and some market failures as rent seeking, opportunism and information asymmetry are met.
- The main reasons for insufficient investment are opportunism and rent-seeking. The limitation of these market failures is possible through establishment of structure of institutional rules that enables transition towards rationally organized enterprises. Through strict calculation of revenues and costs they should be motivated for goal-oriented rational social actions, which lead to competition, effective protection of property rights on production factors and investment. More precisely at present stage of development it is necessary the territorial division of state enterprises (DGS and DLS) for management of state forest territories to invest in their own equipment and to increace the share of stewardship activities carried out with their own workers and equipment.

Acknowledgements

The publication contents results from research that is financed by Scientific and Research Sector (НИС) of University of Forestry – Sofia, contract № НИС-Б-1140/05.04.2021.

References

[1] A. Agboola, *Neoclassical Economics and New Institutional Economics*, Property Management 33 (5), 2015, 412-429.

[2] T. Aidt, *Rent seeking and the economic of corruption*, Constitutional Political Economy 27, 2016, 142-157. DOI 10.1007/s10602-016-9215-9

[3] H. Akoglu, *User's guide to correlation coefficient*, Turkish Journal of Emergency Medicine, 18, 2018, 91-93.

[4] N. Argyres, T. Zenger, *Capabilities, Transaction Costs, and Firm Boundaries*, Organization Science, vol. 23, № 6, 2012, 1643-1657.

[5] B. Behera, S. Engel, *Institutional analysis of evolution of joint forest management in India: A new institutional approach*, Forest Policy and Economics, 8, 2006, 350-362.

[6] D. Bergh, D. Ketchen, I. Orlandi, P. Heugens, B. Boyd, *Information Asymmetry in Management Research: Past Accomplshments and Future Opportunities*, Journal of Management Vol. 45, № 1, 2019, 122-158.

[7] R. Chohan, *Opportunistic Behaviour in Industrial Marketing Relationships*, Doctoral Dissertation. Department of Business Administration, Technology and Business Sciences, Lulea University of Technology, Sweden, 2020.

[8] R. Coase, *The problem of Social Cost*, Journal of Law and Economics, 2013, 837-877.

[9] H. Demsetz, *Towards a theory of property rights*, American Economic Review, Papers and Proceedings, 57, 1967, 347-359.

[10] O. Dimakou, *Bureaucratic corruption and the dynamic interaction between monetary and fiscal policy*, European Journal of Political Economy, 40 (Part A), 2015, 57–78.
[11] D. Friel, *Understanding institutions: different paradigms, different conclusions*, Revista de Adminisração, 52, 2017, 212-214.
[12] K. Kolev, *Research on economic conflicts in Bulgarian forestry*, Forest Science, 3, 2010, 65-82. (in Bulgarian)
[13] K. Kolev. *Factors Hindering Investments in Forest Equipment in Bulgaria*, Innovativity in Modeling and Analytics Journal of Research, vol. 2, 2017, 12-21.
[14] K. Kolev, *Estimation of Forestry Sector Competitiveness in Some European Country*, Innovativity in Modeling and Analytics Journal of Research, vol. 4, 2019, 28-37.
[15] K. Kolev, M. Tsoklinova, Al. Delkov, *Factor analysis of forestry competitiveness*, Forest Science No 2, 2020, 143-164.
[16] A. Larson, D. Bromley, *Property rights, externalities, and resource degradation: Locating the tragedy*, Journal of Development Economics, Volume 33, Issue 2, 1990, 235-262.
[17] A. Levchenko, *Institutional Quality and International Trade*, Review of Economic Studies, vol. 74, 2007, 791–819.
[18] G. Milchev, *GIS in the strategy for sustainable management of enterprises*, collection of reports from the 17th International Scientific Conference "Management and Engineering '17", issue 2, 2019, 647-653. (in Bulgarian)
[19] M. Mitchell, *Rent seeking at 52: an introduction to a special issue of public choice*, Public Choice 181, 2019, 1–4. https://doi.org/10.1007/s11127-019-00646-y
[20] N. Neykov, E. Kitchoukov, P. Antov, V. Savov, *Efficiency analysis of the Bulgarian forestry and forest-based industry: a dea approach*, International Conference on Innovations and Science and Education. March 20-22. Prague.Vol 7: CBU International Conference Proceedings, 2019, 228-235.
[21] D. North, *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, 1990.
[22] D. North, *Institutions*, Journal of Economic Perspectives, 15 (1), 1991, 97-112.
[23] O. Ojuri, O. Morgan, *The Effects of Transaction Costs on Investor Sentiment: Evidence from the Nigerian Electricity Service Industry*, Civil Engineering Research Journal, Volume 8, Issue 4, 2019, 001-0010.
[24] C. Okeke, *Alternative Methods of Solving Biasedness in Chi-Square Contingency Table*, Academic Journal of Applied Mathematical Sciences, Vol. 5, Issue. 1, 2019, 1-6.
[25] J. Robinson, D. Acemoglu, *Rents and economic development: The perspective of why nations fail*, Public Choice, 181, 2019, 13-28. https://doi.org/10.1007/s11127-019-00645-z.
[26] D. Rodrik, A. Subramanian, F. Trebbi, *Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development*, Journal of Economic Growth, vol. 9, 2004, 131–165.
[27] M. Sceral, J. Ercoyuncu, E. Shehab, *Identifying information asymmetry challenges in the defence sector*, Procedia Manufacturing 19, 2018, 127-134.
[28] V. Simon-Moya, L. Revouelto-Taboada, R. Guerrero, *Institutional and Economic Drivers of Entrepreneurship: An International Perspective*, Journal of Business Research, vol. 67, 2014, 715-721.
[29] F. Stephen, D. Urbano, S. van Hemmen, *The Impact of Institutions on Entrepreneurial Activity*, Managerial and Decision Economics, vol. 26, 2005, 413-419.
[30] D. Thiam, *Property Rights, Institutions and Forest Resources Management in Developing Countries*, Natural Resources, 5, 2014, 107-118.

[31] M. Tsoklinova, *Study of the components of competitiveness: productivity and generate economic growth*, Eleventh International Scientific Conference of Young Scientists, The economy of Bulgaria and the European Union: Competitiveness and innovation, financial institution, Sofia, 2015, 471-478.
[32] M. Tsoklinova, Al. Delkov, *Factors Inducing on Consumption of Ecosystem Service Tourism*, Journal of Balkan Ecology, Volume 22, № 3, 2019, 291-301.
[33] N. Turhan, *Karl Pearson's chi-square tests*, Educational Research and Reviews, Vol 15 (9), 2020. 575-580.
[34] B. Vrigazova, *Property Rights: Factors Contributing to the Generation of Income from Ownership of Property*, Innovativity in Modeling and Analytics Journal of Research, vol. 2, 2017, 22-39.
[35] D. Wagner, *The Opportunistic Principal*, KYKLOS, Vol. 72, № 4, 2019, 637-657.
[36] O. Williamson (editor), S. G. Winter (editor), *The Nature of the Firm. Origins, Evolutions, and Development*, Oxford University Press, 1993.
[37] O. Williamson, *Transaction Cost Economics: How it Works; Where it is Headed*, De Economist, 146 (1), 1998, 23-58.
[38] O. Williamson, *The New Institutional Economics: Taking Stock, Looking Ahead*, Journal of Economic Literature, vol. XXXVIII, 2000, 595-613.