

**WELLSO 2017**  
**IV International Scientific Symposium Lifelong Wellbeing in  
the World**

**SUSTAINABLE ECONOMIC DEVELOPMENT STRATEGY**

Elena Rozhdestvenskaya (a)\*, Vladimir Tsitlenok (b), Casati Fabio (c)

\*Corresponding author

(a) Tomsk Polytechnic University, 634050 Lenin Avenue, 30, Tomsk, Russia,  
elena.rojdestvenskaya@gmail.com,+7(3822)606-482

(b) Tomsk State University, 634050 Lenin Avenue, 36, Tomsk, Russia, vlatsit@mail.ru,+7(382) 252-98-52

(c) University of Trento, Via Sommarive 9, Trento, Italy, fabio.casati@unitn.it, +39 0461 281111

***Abstract***

The macroeconomic system based on cognitive capital determines a new need for a qualitatively new state regulation of the national economy. Ignoring this need will make it impossible to achieve leadership positions on the world market for the Russian economy. The goal of the research is to develop mechanisms for the formation of Russia's pro-competitive policy in the context of the need for structural reform of the economy - a transition to a knowledge-based economy. Without an institution of state paternalism, the mechanism of production of cognitive capital, the current economic system will move towards a knowledge-based economy in the most profitable sectors, i.e. There will be a reproduction of the raw material economy of Russia, but at a higher technological level. The protection of a competitive market mechanism will not lead to a knowledge-based economy in all sectors. The change in the character of capitalist relations is inevitable and theoretically justified in the work of various researchers. State management of innovation development of the economy will make it possible to carry out a structural transition, otherwise the self-reproduction of the existing system will take place at a new level. The strategy of the scientific and technological revolution of the Russian Federation should be based on a strong theoretical foundation to ensure a transition to sustainable development in the new conditions - the conditions for the formation of a subsystem of the knowledge economy.

© 2018 Published by Future Academy [www.FutureAcademy.org.UK](http://www.FutureAcademy.org.UK)

**Keywords:** Sustainable development, knowledge economy, competition policy, well-being theory, welfare of society, cognitive capital.



## 1. Introduction

Given this complexity, the goal of sustainable development seems to many to be further away now than when the concept was formulated in 1987 (World Commission on Environment and Development 1987). Later, in the work of Hughes, it is examined the role of the state as a function of pro-competitive orders magnitude (or pro-competitive regulation, according to the Hughes, 1995). Indeed, no one knows how sustainability can be achieved. What is certain is that it will be difficult and entail a hugely complex process of adaptive management, with scientists involved at all stages: detecting emerging problems, designing and implementing specific measures, monitoring the consequences, and drawing lessons for the future (ICSU, 2010). It will also require innovation: new technologies, new infrastructures, different business models, new regulatory frameworks, altered value systems, and changed patterns of consumption. Thus, academic institutions will have a central role to play in helping societies live more sustainably.

Milton Friedman (1970) held the view that the profit goals and social responsibility of firm have inherent tension, that is, two forces with opposite directions while relying on each other. At the same time, the connotation of undertaking corporate social responsibility (CSR) is merely participating in public welfare activities and regarded them as a part of the firms' expenditure. However, Chen et al. (2002) showed that the corporate social responsibility would bring long-term competitive advantage, and therefore they cannot form the endogenous thought towards corporate social responsibility. A firm or corporation can not be responsible for society as a whole, it is the task of the state and government (Porter & Kramer 2006; Li & Xie, 2014; Kitzmueller & Shimshack, 2012). To prove abuse of market power, it must be demonstrated that the behaviour had that purpose rather than simply having that effect. In addition, it must be proven that the firm with market power 'took advantage' of that power (Fels, 2015).

Successful governance systems typically involve regulatory, top-down strategies, normative, bottom-up strategies, or some combination of the two. What is needed to achieve sustainable results is a diagnostic approach that matches institutions to specific biophysical and socioeconomic conditions in contrast to an ideological approach that advocates the application of one system of property rights to all situations (Young, 2011; Karagiannis & Guidi, 2014).

The independence and pro-activeness in approach of sustainable development institutions is essential in ensuring the supremacy of sustainable practices in decision-making. Considering the similarities in historic, economic and social developments of the former socialist countries, the recommendations put forward by this paper could be of particularly relevance for the countries of Southeast, Central, and Eastern Europe (Vuković & Perović, 2010).

Despite the positive research results received (Acocella, 2017), the problem of forming the Strategy for Sustainable Economic Development under the conditions of the development of the macroeconomic knowledge subsystem has not become an object of scientific interest.

## 2. Problem Statement

The relevance of the chosen research topic is explained by the processes of dominance of large transnational capital in the modern world economy, which significantly distorted the mechanism of

competitive-market self-regulation and caused the emergence of the need for active state participation as an institutional subject of organizational support for a competitive market organization of capitalist production.

The first theoretical model of the competitive-market order, developed by the classics of ordoliberalism, was built without taking into account the peculiarities of the reproduction of cognitive capital, t. The expanded reproduction of the entire national capital was of an extensive nature.

The transition to an intensive type of reproduction of national capital is possible only if the development of its cognitive form is outstripping, which implies systematic state support, for which only antimonopoly institutional regulation becomes insufficient.

Thus, the transition of capitalism to the stage of innovative development required a significant change in the competitive-market mechanism in the direction of its transformation into an institution of state-protectionist competitive-market order. Under the new conditions, the Strategy and the Economic Development Program are changing in the context of the transition to the macroeconomics of knowledge. Problems of theoretical study of the mechanism of state regulation of the innovation environment and the role of the university in this process as a producer of scientific and technical knowledge determined the content of this study.

For Russia, the relevance of the research is the need for an accelerated formation of a long-term development strategy based on the dominance of the system of cognitive-industrial relations necessary for its entry into the leading economies of the planet.

### **3. Research Questions**

The macroeconomic system based on cognitive capital determines a new need for a qualitatively new state regulation of the national economy. Ignoring this need will make it impossible to achieve leadership positions on the world market for the Russian economy. The goal of the research is to develop mechanisms for the formation of Russia's pro-competitive policy in the context of the need for structural reform of the economy - a transition to a knowledge-based economy. Without an institution of state paternalism, the mechanism of production of cognitive capital, the current economic system will move towards a knowledge-based economy in the most profitable sectors, i.e. There will be a reproduction of the raw material economy of Russia, but at a higher technological level. The protection of a competitive market mechanism will not lead to a knowledge-based economy in all sectors. The change in the character of capitalist relations is inevitable and theoretically justified in the work of various researchers. State management of innovation development of the economy will make it possible to carry out a structural transition, otherwise the self-reproduction of the existing system will take place at a new level. The strategy of the scientific and technological revolution of the Russian Federation should be based on a strong theoretical foundation to ensure a transition to sustainable development in the new conditions - the conditions for the formation of a subsystem of the knowledge economy.

## **4. Purpose of the Study**

The present stage in the development of capitalistic relations presupposes a change in production relations on the basis of the incorporation of a new form of capital - cognitive capital. Traditional institutional structures of economic management are oriented toward market capitalistic relations. There is a growing need to modernize the economic institutions of state management of the production process. The "ideal model" of the economic order, proposed by ordoliberalists and developed in further studies, does not take into account the aspect of changing the nature of production relations and is based on the economically efficient allocation of limited resources. Cognitive capital has unconventional properties of self-reproduction, which is the basic condition for the transition to sustainable economic development. Competitive-market mechanism is not able to manage the production process of cognitive capital, tk. The cognitive component does not have obvious costs and profitability - it is difficult to assess when decision makers make economic decisions. The competitive-market mechanism ensures the production and use of cognitive capital in the most profitable sectors (profitable already). Structural reorganization of the economy to a knowledge-based economy is impossible without the state paternalism of the production process of cognitive capital in all sectors of the economy.

Thus, the development of a new Strategy for Sustainable Economic Growth, taking into account changes in the structure of the national economy's capital, is required. The main role in the implementation of this Strategy belongs to the state and the future of the Russian macroeconomics of knowledge will depend on the effectiveness of economic policy.

The scientific novelty of the research is to work out a mechanism of pro-competitive (state-regulated competitive-market) order as a key element of the Strategy for Sustainable Economic Development. Scientific and technical knowledge, its use in practical activities, ensures sustainable economic development and the growth of the international competitiveness of the national economy. Achieving macroeconomic equilibrium implies a transition to a protectionist competitive-market order that ensures the harmonization of the processes of static and dynamic equilibrium. In these conditions, the state as a guarantor of public order, including in the economic sphere, performs the function of the institutional regulator of the whole system. Knowledge-based subsystems need a state participation, protection of creative forms of production. It is planned to develop a system of state measures to support and develop the cognitive forms of the national economy, to work out the concept of sustainable development, taking into account external and internal shocks, to determine the role and functions of higher education in this process.

## **5. Research Methods**

### **5.1. Research hypothesis**

The methodological and theoretical basis of the work is the concept of the theory of ordoliberalism, supplemented by ideas of the theory of the knowledge economy, evolutionary-institutional theory, the theory of imperfect competition. The research hypothesis is based on the idea of the theory of the evolutionary economy about the need to transform the relationship of spontaneous state

regulation of the market of imperfect market competition to the institution of state-protectionist competitive-market order in the macroeconomics of knowledge.

**5.2. Systematization of known solutions**

With all the existing differences in assessing the significance of state participation in economic life, in all directions of economic theory, the latent recognition of the need to include institutional and legal instruments of state regulation in the organizational structure of commodity-money relations is common. Protectionist policy as a function of the state was recognized in the theory of mercantilism. In the theory of a social contract, the state acts as a guarantor of private entrepreneurship.

For the first time, the function of the state as a guarantor of the "economic order" was substantiated in the theory of German ordoliberalism, which substantiates the necessity and the possibility of using political power to create conditions for fair competition, i. Implementation of competition protection policy. In the future, the state was charged with various types of economic policies.

**6. Findings**

**6.1. Institutional design of well-being**

Welfare and well-being should be distinguished, seeing in welfare theory a purely pragmatic material assessment of the standard of living, and by well-being understand the degree of satisfaction with both the material and the spiritual side of life (Rozhdestvenskaia, 2017). In a word, welfare is the availability of material values, and well-being is welfare plus all other values (Table 01). Then, well-being is a broader concept, including the standard of living, the quality of life, the way of life, and so on (Lucas, Oishi, Diener, 2016).

Table 01. The definition of welfare in economic theory

The direction of economic thought social welfare theory	Treatment of the welfare category
1 <sup>th</sup> step	
Smith Adam (Smith, 1904)	Welfare as the value of assets. Economic well-being
2 <sup>nd</sup> step	
Bentham Jeremy (Bentham, 1907); Pigou Arthur C. (Pigou, 1932)	The welfare state is a society in which all citizens of the country can expect to receive a minimum income and the necessary public services.
3 <sup>rd</sup> step	
Oyken V. (Oyken, 1995)	The economic order has the ability to effectively provide society with limited benefits and continuously improve the general welfare.
4 <sup>th</sup> step	
Bergson Henri (Bergson, 1911) Samuelson Paul A.	Welfare state. Welfare economics is a branch of economics that uses microeconomic techniques to evaluate well-being (welfare) at the aggregate (economy-wide) level. A typical methodology begins with the derivation (or

(Samuelson, 1947) Arrow Kenneth J. (Arrow, 1970)	assumption) of a social welfare function, which can then be used to rank economically feasible allocations of resources in terms of the social welfare they entail.
5 <sup>th</sup> step	
Buchanan James MacGill&Tullock Gordon C. (Buchanan et al, 1962); North Douglass Cecil (North,1980)	The welfare state as an instrument for redistribution in society in defense of the individual interests.
6 <sup>th</sup> step	
Diener Ed (Diener& Tay, 2016) Casati Fabio (Baryshev et al, 2016)	Wellness. The well-being of society is realized through the well-being of individuals, individuals, who, through the prism of subjectivism, assess the degree of satisfaction with their lives. The economic content of the category is revealed in the possibilities of economic self-realization, that is, the opportunities that the system provides for the implementation of any desired socio-economic roles, regardless of social affiliation.

The urgency of the study of the problem of the welfare of the population is due to a change in the traditional way of the economic system, the intensive development of scientific and technological progress. The problem of the institution of state support of continuous prosperity has not become the subject of scientific explanation (Rozhdestvenskaia, 2017). The increased relevance of the topic is due to the social need objectively presented to the state when the capitalist system is replaced with a movement toward a system of macroeconomics of knowledge. The purpose of this work is to identify the patterns of the formation of institutional support for economic growth in the transition to a knowledge economy. Stable economic growth causes the development of society in the model of continuous prosperity. But without the state institutional registration, the conditions for sustainable economic growth are not ensured, which leads to destabilization of the macroeconomic system (Lobanova et al., 2015; Barysheva&Borisova, 2014). The task of the study is to reveal the logic of the formation of a system-forming institution of state support for a market mechanism in the knowledge economy (Tsitlenok, 2011).

The research hypothesis is based on the main provisions of the evolutionary theory, which provides a scientific explanation for economic growth as a consequence of competition and for the displacement of less competitive entities through superiority in technology. The author's idea is based on the provisions of the theory of German ordoliberalism, with the actualization of the concept of the knowledge economy. The reliability of the work is confirmed by the use and in-depth analysis of the considerable volume of theoretical, economic and special information contained in official statistical publications, in monographs, articles and reports of researchers on the problem of state-regulated competitive-market order of the knowledge economy, a system analysis of the practice of developing and implementing antimonopoly policies of US governments, The EU and Russia.

Knowledge is designed to save more labour than it cost. This is the condition for stable reproduction of the system. Creative work must be controlled by capital. Firms, enterprises, the state appropriates to itself creative work which should become the exclusive property which realizes it in the material or non-material goods and services. But the system of knowledge production requires strict state management, since market forces can not regulate categories that are not measured by cost estimates.

## **6.2. Institutional frameworks of the Strategy**

Knowledge is designed to save more labour than it cost. This is the condition for stable reproduction of the system. Creative work must be controlled by capital. Firms, enterprises, the state appropriates to itself creative work, which should become the exclusive property, which realizes it in the material or non-material goods and services (Rozhdestvenskaia, 2016a).

The danger for capitalism is not the economic side, such as low growth rates, inefficiency, high unemployment. These problems can be solved within the framework of the capitalist model. Various aspects are being destroyed in the successfully operating system of capitalism: the family, the way of life, the spirit of free enterprise; Categories are initially irrational, but under the pressure of the system of the capitalist order they acquire the features of rationalism.

Ordoliberalism, proposed by V. Oyken (1995) and his colleagues, proceeds from the belief that only an economic order based on the freedom and responsibility of each individual can effectively provide society with limited benefits and steadily increase the overall welfare. At the same time, a person with his moral attitudes and instincts in himself, in the absence of any restrictions on the part of the state, as claimed by classical liberalists, is not a source of freedom and competition, since he will consciously always strive to limit it. To avoid this, certain institutional conditions are required, which thus regulate the economic activities of individuals (naturally, realizing their own interests), which, in the long run, all benefit from this.

A socially-oriented state assumes the encouragement and development of institutions that provide all the conditions for self-realization, self-creation, not subject to market logic and rent-seeking. It is necessary to create a state institution for management of communication, cooperation of creative workers that ensure the increment of cognitive capital. Value does not play the productivity or the number of these creative workers, but the quality and relevance.

In principle, capitalism cannot treat knowledge and its functioning differently than with capital. Refusal to evaluate, count and appropriate productive forces is impossible, one can not get rid of categories of political economy. Therefore, for the capitalist system, it is important to "capitalize" knowledge so that it meets the basic, system-forming conditions under which capital exists and functions as capital. In other words, knowledge is called upon to save more labour than it cost its acquisition. This is the condition for stable reproduction of the system. Creative work should be controlled by the capital and the state. The state-protectionist competitive-market order is a category in which the market institution and the state institution are integrated. It is an institution that integrates the mechanism of the imperfect competition market with state-directed, purposeful pro-competitive regulation aimed at maximizing the development of innovation activity of all entities.

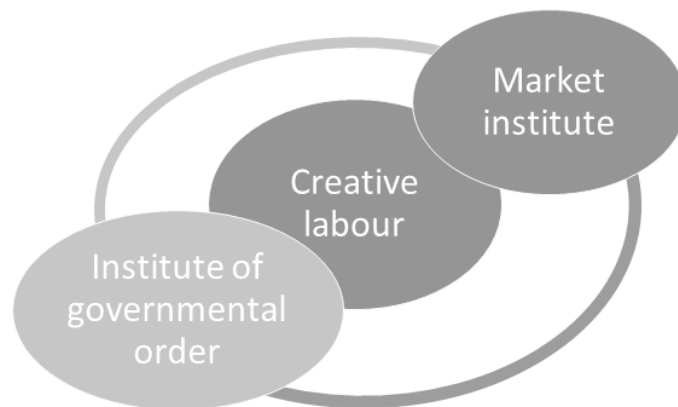
The market does not provide conditions for relevance to creative work, but only signals the profitability/unprofitability of the project. But the development of creative potential at the first stages requires significant expenditures, and the results are not guaranteed.

Only the institution of pro-competitive order (state-regulated competitive-market order) is able to overcome the contradictions of state regulation and market self-regulation to the development of a system of sustainable growth and welfare economics.

Social institutions provide the necessary conditions for the development of the individual as a person endowed with creative potential. The quality of this institutional social system will depend on the development of creativity, but not the very fact of its existence.

The state provides institutional conditions for the production and reproduction of cognitive capital, the core of the future macroeconomics of knowledge. The need for state support for a competitive market order is explained by the entropy of the current macroeconomic balance under the influence of scientific and technological progress, which is not amenable to market regulation. Nevertheless, economic growth is based on endoresource technologies in the macroeconomics of knowledge, which presents a new public need - the protection of cognitive production relations, the liberalization of competitive-market relations on the basis of recognition of the temporary monopoly position of the technological leader.

Macroeconomic balance is ensured by the institution of state-regulated competitive-market order ("pro-competitive order" -Rozhdestvenskaia, 2016b), which organizes the economic system in conditions of imbalance of old institutions in response to endogenous social reactions under the influence of scientific and technological progress (Fig. 01). The formation of new institutions is inevitable, but the state's ability to provide institutional support to cognitive and productive relations with a strategy of transition to sustainable economic growth and ensuring the continuous welfare of society is of fundamental importance.



**Figure 01.** Institute of pro-competitive order

## 7. Conclusion

The scientific novelty lies in the theoretical justification of the aspects of the mechanism for the formation of the Strategy for Sustainable Economic Development as an objective need in response to the challenges of capitalist structural adjustment. Achievability of the solution of this problem is based on a solid foundation of the scientific results achieved by the research of team members as the next logical stage, for the implementation of which it is necessary to attract additional funds. The planned results are achievable by the members of this scientific team, as there are developments in the field of scientific substantiation of the system of compensatory support for the reproduction of the cognitive form of capital, as well as the role and functions of the university in innovative development. The combination of



macro and micro approaches to the assessment of factors of innovative economic development will result in the substantiation of the mechanism for the formation of the Strategy for State Economic Development based on sustainable growth.

## Acknowledgments

The research is executed on the basis of Tomsk Polytechnic University with the financial support of the Ministry of Education and Science of the Russian Federation within performance of scientific research works on the project «Assessment and Improvement of Social, Economic and Emotional Wellbeing of Elderly People», contract No. 14.Z50.31.0029. In a part findings are carried out at Tomsk Polytechnic University within the framework of Tomsk Polytechnic University Competitiveness Enhancement Program grant

## References

- Acocella, Nicola (2017). The rise and decline of economic policy as an autonomous discipline: a critical survey. *Journal of economic surveys*, 31(3), 661-677. DOI: 10.1111/joes.12168
- Arrow, K. J. (1970). *Social Choice and Individual Values*. New York, NY:Yale University Press.
- Baryshev, Alexey A.; Barysheva, Galina A.; Casati, Fabio (2016). Well-being: From Not-Being to Reality. Proceedings of the 2016 conference on information technologies in science, management, social sphere and medicine (itsmssm), *ACSR-Advances in Computer Science Research*, 51, 514-519. DOI: 10.2991/itsmssm-16.2016.83
- Barysheva, G.A., Borisova, L.M. (2014). *Society and Continuous Human Well-being, Proceedings of the International Scientific Symposium "Society and Continuous Well-Being of Man"*. Tomsk: Press TPU
- Bentham, Jeremy. (1907). *An Introduction to the Principles of Morals and Legislation*. Oxford: Clarendon Press. Retrieved from <http://www.econlib.org/library/Bentham/bnthPML.html>; accessed 29 June 2017; Internet.
- Bergson, Henri (1911). *Creative evolution*. translated by Mitchell A. New York, NY: Holt
- Buchanan, J., Tullock G., (1962). *The calculus of consent: logical foundations of constitutional democracy*. Liberty Fund, Incorporated.
- Chen, W.Z.; Wu, J.H.; Ren, P.Y. (2002). Stakeholder Model of the Corporate Social Performance. *China Ind. Econ.*, 7, 57–63
- Diener, E; Tay, L. (2015). Subjective well-being and human welfare around the world as reflected in the Gallup World Poll. *International journal of psychology*, 50(2), 135-149. DOI: 10.1002/ijop.12136
- Fels, A. (2015). Current Issues in Competition Policy. *Australian Economic Review*, 48, 410–416. DOI:10.1111/1467-8462.12135
- Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*. Retrieved June & July, 2017, from <https://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html>
- Hughes, O.E. (1995). Pro-competitive regulation as a role of government. *Australian journal of public administration*, 54(3), 364-369
- ICSU: International Council for Science. (2010). *Earth system science for global sustainability: the grand challenges*. International Council for Science. Paris, France. Retrieved from [http://www.icsu.org/publications/reports-and-reviews/grand-challenges/GrandChallenges\\_Oct2010.pdf](http://www.icsu.org/publications/reports-and-reviews/grand-challenges/GrandChallenges_Oct2010.pdf).
- Karagiannis, Y., Guidi, M. (2014). Institutional change and continuity in the European Union: The super-commissioner saga. *ACTA POLITICA*, 49(2), 174-195
- Kitzmueller, M., Shimshack, J. (2012). Economic Perspectives on Corporate Social Responsibility. *Journal of economic literature*, 50(1), 51–84. DOI: 10.1257/jel.50.1.51

- Li, S.; Xie, X. (2014). Social responsibility, political connection and liability financing of the private firms. *Nankai Bus. Rev.*, 17, 30–40
- Lobanova, Z.I., Gasanov, E.A., Golub, L.A. (2015). Institutional Mechanisms for Ensuring Innovative Macroeconomic Development Style and Continuous, *Welfare of the Population, Fundamental Studies*, 12(4), 772-775.
- Lucas, R. E.; Oishi, S., Diener, E. (2016). What we know about context effects in self-report surveys of well-being: comment on Deaton and Stone. *Oxford economic papers-new series*, 68(4), 871-876. DOI: 10.1093/oep/gpw023
- North, D.C. (1980). *The economics of public issues*. New York, NY: Harper & Row Publishers.
- Oyken, V. (1995). *Basic principles of economic policy*, ed. L.I. Zedelin and K. Herrmann-Pillat, Moscow, M:Progress
- Pigou, A.C. (1932). *The Economics of Welfare*. London: Macmillan and Co. 1932. Library of Economics and Liberty Retrieved 29 June 2017 from <http://www.econlib.org/library/NPDBooks/Pigou/pgEW.html>
- Porter, M.E., Kramer, M.R., (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Bus. Rev.*, 84(12), 78–92
- Rozhdestvenskaia, E.M. (2016a). A pro-competitive order as an institute of the economy based on knowledge. *SHS Web of Conferences*, 28, 01087. DOI: 10.1051/shsconf/20162801087
- Rozhdestvenskaia, E.M. (2017). Cognitive Capital and its Profitability. *The European Proceedings of Social & Behavioural Sciences EpSBS*, 9, 613-616. DOI: 10.15405/epsbs.2017.01.82
- Rozhdestvenskaia, E.M. (2016b). *Pro-competitive order as a condition for the continuous well-being of society*. Tomsk: OOO "STT".
- Samuelson, P. A. (1947). *Foundations of Economic Analysis*. Cambridge: Harvard University Press.
- Smith, A. (1904). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Edwin Cannan, ed. London: Methuen & Co., Retrieved from <http://www.econlib.org/library/Smith/smWN.html>.
- Tsitlenok, V.S. (2011). On the essence and content of the category "sustainable development of the world economy". *Bulletin of Tomsk State University*, 4 (16), 76 - 82
- Vuković, B., Perović, L. (2010). Building institutional framework for sustainable development in Montenegro. *Thermal Science*, 14(3), 593-611
- World Commission on Environment and Development. (1987). *Our common future*. Oxford: Oxford University Press.
- Young, O. (2011). Land use, environmental change, and sustainable development: The role of institutional diagnostics. *International Journal of the Commons*, 5(1), 66–85. DOI: 10.18352/ijc.244