

Development Mechanisms of Social Innovation

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Abstract: The aim of this study is to identify the mechanisms of social innovation through a simulation of their development trends. To achieve this goal, an original interpretation of social innovation was developed together with a list of the exogenous factors affecting socio-innovative development. The authors obtained exogenous linear models with two or three independent variables showing how the features of the development of national and regional economies impact on the results of social innovation activity and demonstrating the effect of different types of social and innovative projects on regional development indicators.

Keywords: social innovation, exogenous factors, developmental trends

1. Introduction

The formation of an institutional environment conducive to the socially innovative development of the economic system is a promising and relevant research direction, both in theoretical as well as practical terms. Unstable economic conditions require that existing institutions be capable of rapid transformation and adaptation to new realities. At the same time, the crisis state of the Russian economy is reflected at the level of welfare of the population, thus clearly exposing underlying social problems. Social innovations, projecting, on the one hand, new rules and principles of interaction between economic agents in terms of ensuring the social and cultural needs of the population, and, on the other, an alternative method for producing public goods, increase the level of social welfare (Moore & Westley 2001) and are thus of interest to economists and researchers.

However, despite its relevance, a theoretical elaboration of the economic and management aspects of social innovation theory remains to be fully developed. Among the researchers exploring the phenomenon of social innovation in detail, we note the work of G. Mulgan, P. Koch, G. Huknes, J. Phillips, M. Moore, R. Nelson and L. Earl.

As shown in our previous study, most of the sources of social innovation consist in civic initiatives (Popov et al., 2015). This phenomenon is driven by internal processes and conditions for the development of social innovation, as well as factors that have a direct impact on the effectiveness of socially innovative development. However, economists' views on the issue of the impact of social innovation on economic development diverge. On the one hand, social innovations are perceived as a deviation from the market economy norm, running contrary to the traditional understanding of the effectiveness of economic processes (Sachs 2005). According to the alternative view, the presence of social innovation is an indicator of civil society, filling the void between the market and the State (Boettke & Rathbone 2002). Thus, the need to study the characteristics of sustainable development of social innovation initiated by citizens is a sufficiently in-demand and topical theme, resulting in the need for a more detailed analysis of this area of expertise.

The aim of this study is to identify sustainable tendencies of social innovation initiated by citizens. To achieve this goal, an original interpretation of social innovation is presented, a list of factors affecting their development drawn up and an empirical study carried out, allowing the most significant factors of development mechanism of social innovations and main trends to be identified.

2. Approaches to the definition of social innovation

The timeliness of the study in the designated area of expertise is confirmed by the increasing number of forums and conferences dedicated to the problems of social innovation: “Social Innovation Residency” (Canada), “Social Innovation Summit” (San Francisco, USA), Forum for Regional Social Innovation (Omsk, Russia). There is also a growing number of agencies and organisations involved in supporting social innovation: the Office of Social Innovation and Civic Participation in the White House in Washington, DC; the Ministry of Social Development and Social Innovation in British Columbia; Centres for Social Entrepreneurship and Social Innovation at higher education institutions (Russia); the Agency for Strategic Initiatives; and many more.

The growing interest in this subject owes a debt to the rapid transformation of modern social and economic systems due to the increasing rate of technological change, acceleration of the globalisation process, intensity of information flows, as well as the active development of the network of relations between economic agents.

In these circumstances, the theory of social innovation remains in its infancy. At the present time, there is still no generally accepted interpretation of social innovation in the scientific literature. In this regard, as part of our analysis, we identified three main approaches to the definition of the term. Representatives of the first approach (Mulgan, 2006; Caulier-Grice & Murray, 2010) interpret social innovation as innovation oriented towards the attainment of social goals. Within the framework of the second approach, R. Heiskala and Centre for Social Innovation at Stanford University refer to social innovations as those innovations that take place in the social space (Heiscalá 2007; Phills J 2008). This interpretation of the concept is close to that of the “institute”. Representatives of the third approach (Koch & Hauknes 2006) consider social innovation to include innovations in the public sector. In this case, social innovation serves as a public good. In this study we refer to social innovation in terms of those *new ideas, opportunities and activities in the social space that increase the possibility of using resources to address economic, social, cultural and environmental issues* (Popov et al., 2015). Under “social space” is understood a set of interrelated social processes, relationships and social practices and attitudes affecting activities that lead to the creation of social innovation.

3. Factors in the development of the social innovations

The effective development of the concept of social innovation presupposes reliance on innovation development theory, the main questions of which have been addressed in sufficient detail in the literature. The main argument for the use of the provisions of this theory consist in certain similarities between technological and social innovation (Moore & Westley 2001).

The conditions for the development and implementation of social innovation, which are common to technological innovation, include: the level of development of national and regional innovation systems, the quality of national and regional innovation legislation, the stability and flexibility of the institutional framework, the availability of innovational infrastructure, etc. Hence the impact of social and economic development – in particular, the innovation system (Razak et al. 2015) – on the effectiveness of realisation of socially innovative projects.

The social innovation process is a set of interrelated activities involving the transformation of ideas into a new social product or service.

In his development of the concept of economic dynamics, as well as the formation of the theory of economic development, J. Schumpeter considered an innovation as one of the stages of the lifecycle of scientific progress, along with invention and diffusion. (Schumpeter 1911).

Developing Schumpeter's ideas, it can be shown that emerging knowledge passes through such phases as invention, imitation and adaptation. (Popov, Vlasov, 2015).

In narrowing the object of research to social innovation processes, the authors of “The Open Book of Social Innovation” identify the following phases: motivation, supply, testing, maintenance, scaling and systemic change. Social innovations are considered in terms of an impulse capable of generating significant social changes (Caulier-Grice & Murray 2010).

In this study, the following phases of social and innovative processes were identified: initiation, invention, imitation and adaptation. At the invention stage, the developer vests the idea in concrete form: the idea of the project is revealed, the basic documentation formed, the project team put together, etc. At the invention stage, the productive project is directly realised. The imitation stage involves the dissemination of the innovation among consumers, as well as the copying of the proposed solution in other territories or by the forces of other economic entities. The needs of society and characteristics of socio-economic systems are constantly changing; therefore, it is necessary for social innovations to adapt to these changes. Such a “resurrection” is generally implemented within the framework of the adaptation stage. When developing new ideas, the adaptation stage switches with the initiation stage.

The dependency of the effectiveness of the social and innovation processes on external socio-economic, institutional and cultural conditions has led to the isolation and analysis of the factors influencing the processes of development, implementation and dissemination of social innovation.

We understand as exogenous those factors that characterise the features of the institutional space, which develops and implements social innovation. An analysis of the scientific literature according to the given problematic permitted the following groups to be systematised: public administration, socio-economic conditions, development of human capital, innovation infrastructure and informal institutional environment (Figure 1).

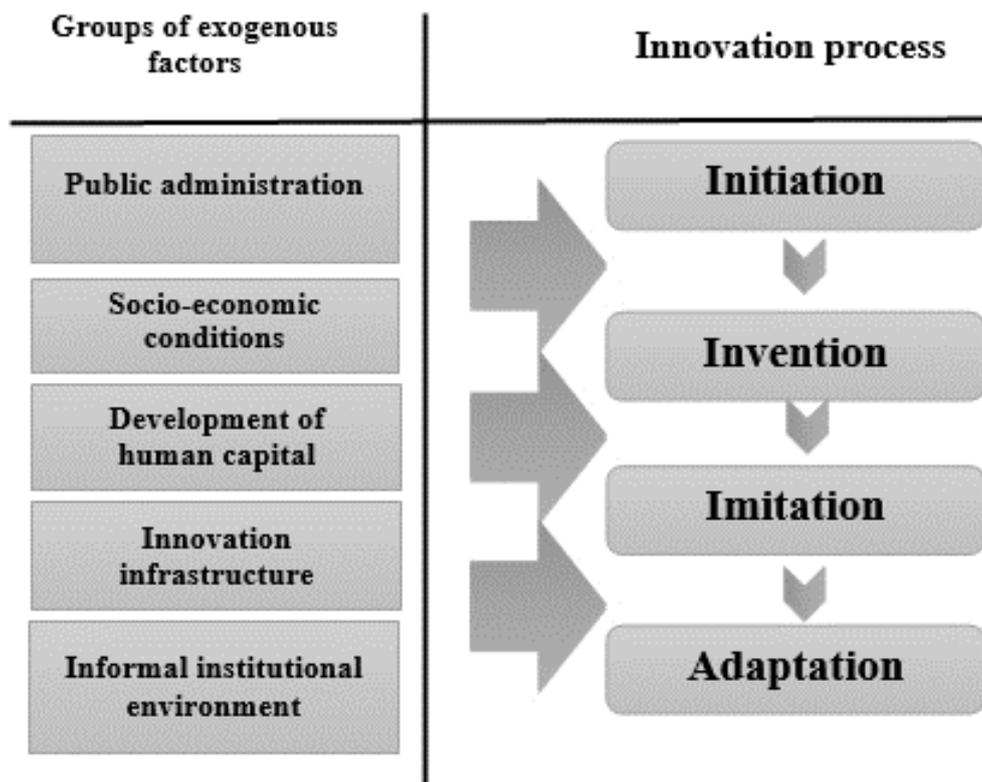


Figure 1: Exogenous factors influencing the innovation process

Public administration. The State is a major player, assigning the trajectory of social innovation development. At the present stage of social development, State intervention and all public policy relate to the need to eliminate market failures, produce public goods, act on externalities, control monopolies, deal with information asymmetry and mitigate all types of market instability. The role of the State in creating social innovation is multifaceted. In the first place, the State is a direct source of social innovation. Secondly, the State may have an impact on business. Thirdly, the State creates conditions (infrastructure, enactment of bills, etc.) for the development of social innovations..

Due to the fact that the development level of public administration bodies has a direct impact on socially innovative development, the question arises as to the necessity of formulating indicators characterising their performance. One of the primary general indicators consists in the state governance index calculated by the

World Bank (Knowles & Owen 2010). This indicator shows the development level of a formal institutional structure.

When evaluating governance, a primary factor consists in the innovators' level of confidence in the authorities, the quality of their interaction with the authorities, as well as taxation and other legislation applying to social innovators (Antadze & Westley 2010; Caulier-Grice & Murray 2010). In addition, the Organisation for Economic Cooperation and Development (OECD 1999) recommends taking into account the adequacy of State intervention into the activities of social innovators. Excessive attention can lead to an inhibition of innovation development. Moreover, in an environment where social and innovation activity is low, the need is for financial support of social innovation on the part of the State. (Antadze & Westley 2010; Caulier-Grice & Murray 2010; Deiglmeier & Miller 2008).

The indicators used to assess the public administration are presented in Table 1. The table also shows the source of the data used in the analysis.

Table 1: Indicators characterising the quality of governance

Indicator	Data Source
Index of Public Administration	World Governance Indicator
Confidence level in State bodies in the region (%)	Survey
Interaction with authorities	
Time of agreement of the realisable project with the state body (days)	
Financial support in the form of start-up capital	
Development level of legal framework for social innovators	
Difficulty of obtaining support from public authorities	

Socio-economic conditions. The development of a social innovation project is determined by access to human, financial and other types of capital in order to accelerate the development and implementation of social innovation (Bekkers et al. 2013). This confirms the importance of the level of economic development. At the same time, social tensions, poverty and the general insecurity of the population are motivators for social innovation initiated by citizens (Caulier-Grice & Murray 2010; Mulgan 2006). However, socio-economic conditions may also act as a barrier to social innovation (Bekkers et al. 2013). In this section, factors of particular note include the following: the number of people with incomes below the subsistence minimum and the consumer price index. At the same time, it is necessary to be cognisant of the Gini coefficient, which reflects the social stratification of the population. The amount of social payments to the population also serves as an indicator relating to the social situation, since characterising the economic security of vulnerable populations (Table 2).

Table 2: Indicators of socio-economic conditions

Socioeconomic Conditions	Source
Gini coefficient	Russian Federal State Statistics Service
Number of people with financial incomes below the minimum subsistence level as a percentage of the total population of the region	
Amount of social payments to the population and taxable incomes of the population, 1000 rubles	
Consumer price index	
Investment risk index	Expert RA
investment potential	

Level of human capital development. This set of factors is one of the most important, as evidenced by both foreign (Feinson 2003; Fischer 2001; Howaldt & Schwarz 2010; Mulgan & Albury 2003; Caulier-Grice & Murray 2010) and Russian researchers (Berdashkevich 2011; Henkin & Polterovich, 1999). The main role of human capital in innovation is caused by the flow of new knowledge, a sufficient level of competent staff, the creation of positive externalities, increasing collaboration and networks, etc. The main impetus to the development of human capital is policy in the sphere of education and science; the share of population with higher education; the number of personnel engaged in research and development. The data are presented in Table 3.

Table 3: Indicators characterising the level of human capital development

Development of Human Capital	Source
Volume of expenditures on science from the regional budget (millions of rubles)	Russian Federal State Statistics Service
Proportion of research spending from the federal budget (%)	
Ratio of spending on science to GDP (%)	
Number of employees engaged in research and development (thousands of people)	
Budgeted expenditure on education (millions of rubles)	
Expenditure on education (% of GRP)	
Number of people employed in education (thousands of people)	
Graduates of Bachelor’s, Master’s, and specialist degrees (thousands of people)	
Number of organisations engaged in research and development	
Number of higher professional education institutions	

Innovation infrastructure The presence of an innovation infrastructure is also one of the important criteria of innovation development. The innovation infrastructure comprises the set of interconnected structures serving and ensuring the implementation of innovative projects. The innovation infrastructure affects all stages of the social innovation process (Mulgan 2006). Thus, the following indicators (Table 4) were identified as the development indicators of the innovation infrastructure:

Table 4: Indicators characterising the innovation infrastructure

Innovation Infrastructure	Source
Proportion of investment funds known to the enterprise	Survey
Proportion of technological parks and technopoles, providing organisational support known to the enterprise	
Presence of an organisational form for implementation of social innovation	
Duration of project implementation (months)	

Informal institutional environment According to the Organisation for Economic Cooperation and Development (OECD 1999), a major barrier to innovation consists in problems with collaboration between the various economic agents, resulting from the particular features of both formal and informal institutional environments. In these circumstances, informal institutions and social capital often act as substitutes for formal institutions (Dorward et al. 2003; Fafchamps 2006). Here it is possible to isolate two basic phenomena indicating the influences of the informal institutional environment. Firstly – the degree of positive perception on the part of innovation communities. A number of researchers have noted (Mulgan 2006; Sanders 2008; Phills J 2008) that this factor is one of the most important in terms of affecting the development of social innovation (Polishuk, 2011). Secondly – social capital that assigns the possibility of relationships and collaboration. As Fafchamps has noted (Fafchamps 2006), the level of trust is one of the major measurable indicators of social capital. Thus, in order to assess the level of informal institutional environment, we used the indicators presented in Table 5.

Table 5: Indicators characterising the quality of the informal institutional environment

Informal Institutional Environment	Source
Level of trust between the partners in the region (%)	Survey
Level of positive perception of the institutional environment (%)	

The presented review of factors allowed a basis for further empirical analysis of institutional conditions for socio-innovative development to be formed.

4. Research methodology

In this study, sociological, economic and mathematical, statistical analysis methods were used to identify sustainable development trends of social innovation initiated by citizens. In addition to data obtained from the empirical study, the study used data provided by the Federal State Statistics Service.

Financial metrics are important indicators of social innovation. The dynamics of these indicators reflects not only the financial stability of social innovation, but also the degree of development of social innovation. Due to the fact that the vast majority have combined sources of funding, both from individuals and from public and government funds, the primary basic financial indicator of the development was considered as the budget of the socially innovative project. It is precisely through the budget figure that the demand for the social innovation is reflected, not only by citizens, but also by the State.

During the course of the study, the authors compiled a questionnaire comprising closed questions concerning the income and expenditure of social innovators, sources of support, the number of personnel and the level of confidence in the authorities, partners, etc. This study involved 18 social enterprises, including socially oriented non-profit organisations operating in the Sverdlovsk region. Social projects participating in the study were divided into three groups according to the size of their budget: small-, medium- and large-scale innovations. The first group included organisations with a budget of up to 100 thousand rubles per year. The second group consisted of organisations with a budget of 100 to 300 thousand rubles per year. The third group comprised social innovations having a budget of over 300 thousand rubles.

In order to determine trends in the development of social innovations on the considered territory, linear models having two or three independent variables were constructed using multiple regression analysis. These show how the features of the development of the national and regional economy are reflected in the results of social innovation, as well as how socially innovative projects influence the level of development of the region. Verification of variables, such as the graphic distribution method, was carried out in the course of the regression analysis, allowing the type of dependency to be selected and errors minimised. When verifying the multicollinearity of the models, correlation analysis was carried out according to the studied factors. Then endogenous factors that showed little relation to the dependent variable were excluded from consideration. As part of establishing the quality of the model, the degree of interrelation of factors with the dependent variable and accuracy of the model coefficients were determined, samples were tested for the absence of statistical outliers and the autocorrelation of residuals was eliminated. The econometric models obtained in the course of analysing data will be represented in the following paragraph.

It should be noted that, when attempting repetition of the patterns obtained in this study, results may vary. This is due to the dependency of the received data on the special characteristics of the sample. However, the general trends are predicted to be close to those presented in this study.

5. Results

5.1 Trends in the development of social innovations

5.1.1 Trends in the development of small-scale social innovations

In the course of the empirical research, which characterises the conditions of socially innovative development of the territory, as well as the processing of the data, the following results were obtained.

For small-scale social innovation, a positive correlation of the budget to the number of personnel engaged in research and development in the region, as well as the level of social payments obtained, was demonstrated.

$$\text{SSI} = -631,350.95 + 32.96 * \text{NP} + 0.032 * \text{WP} \quad (R^2 = 0.92, \text{prob.} = 0.021)(1)$$

where SSI – small-scale social innovation budget;

NP – number of personnel engaged in research and development, pers.

WP – amount of welfare payments to the population and taxable incomes of the population, 1000 rubles

5.1.2 Trends in the development of medium-scale social innovations

The development of medium-scale social innovations is also influenced by welfare payments and the number of personnel engaged in research and development. However, the impact of those factors that show the values of the regression coefficients in the resulting model is more significant.

$$\text{MSI} = -2,286,247.83 + 117.68 * \text{NP} + 0.09 * \text{WP}$$

(R² = 0.80, prob. = 0.06)(3)

where MSI – medium-scale social innovation budget;

NP – number of personnel engaged in research and development;

WP – amount of welfare payments to the population and taxable incomes of the population, 1000 rubles

5.1.3 Trends in the development of large-scale social innovations

The analysis of the third group of social innovations demonstrated the most significant connection with such factors as the investment potential of the region and the number of personnel engaged in research and development.

$$\text{LSI} = -12,814,422.86 + 445.72 * \text{NP} + 1590780 * \text{IP}$$

(R-squared = 0.85, prob. = 0.03)(5)

where LSI – large-scale social innovation budget;

NP – number of personnel engaged in research and development;

IP – regional investment potential

5.2 Social innovation and development of the region

In the course of the study, a dependency of the activity of social innovators on different indicators characterising economic processes in the regions was also demonstrated. Medium- and large-scale social innovations had a particularly notable impact on per capita income in the region.

$$\text{I} = 0.012 * \text{MSI} + 0.0075 * \text{LSI}$$

(R-squared = 0.93, prob. = 0.07)(7)

where I – average per capita income;

MSI – budget of the medium-scale social innovation;

LSI – large-scale social innovation budget.

The development of large-scale social innovation has a positive effect on the unemployment rate.

$$\text{UR} = 13.05 - 0.0000025 * \text{LSI}$$

(R-squared = 0.81, prob. = 0.001)(8)

where UR – unemployment rate;

LSI – large-scale social innovation budget;

At the level of economic activity, the population are only affected by medium- and large-scale social innovations.

$$\text{LEA} = 65.69 + 0.0000017 * \text{MSI} + 0.00000091 * \text{LSI}$$

(R-squared = 0.99, prob. = 0.000)(9)

where LEA – level of economic activity of the population in the region;

MSI – medium-scale social innovation budget;

LSI – large-scale social innovation budget;

When analysing the relationship between social innovation and internal regional productivity, a positive trend was observed with budgets applying to medium-sized socially innovative projects.

$$\text{GRP} = 2.09 * \text{MSI}$$

(R-squared = 0.99, prob. = 0.000)(10)

where GRP – gross regional product;

MSI – budget of the medium-scale social innovation;

6. Discussion

As noted above, the study and identification of patterns of social innovation provides an understanding of the drivers of the social innovation process as well as barriers thereto. In the case of social innovations that are comprised of civic initiatives, the impact of barriers and drivers for various types of projects also varies. In addition, on the basis of the analysis, we can draw a conclusion about the impact of social innovation on the overall development of the region.

Small-scale social innovations (SSI) take the form of initiatives whose scope is quite narrow. This segment of social innovations is generally characterised by the small number of people involved, whose composition tends to be relatively stable.

The identified dependencies demonstrate that the number of staff employed R & D has a tangible impact on the development of small social innovation. This category of citizens plays a key role in generating new ideas for initiating social innovation as well as in their implementation.

The second most important factor is the amount of social payments. Social payments are a type of State intervention in the market by means of which public support is provided for vulnerable people. Thus, the dynamics of social benefits reflects the government's response to social tensions as well as serving as a tool for solving social problems. In general, it can be argued that the vector of development of small-scale social innovation is determined by the level of human capital development and social tension in society.

The development of medium-scale social innovations also corresponds to the criteria pointed out above; however, it interacts with the data factors more closely. Due to the fact that this group of innovations has a wider scope, it can be argued that the impact of the above factors is more significant for it.

The analysis of large-scale social innovations also demonstrates the effect of the number of personnel engaged in R&D. However, in contrast to small and medium-sized innovations, here the second factor is the investment potential of the region, which is calculated by the rating agency "Expert". This rating quantitatively considers nine groups of indicators: natural resource, labour, production, innovation, institutional, infrastructural, financial, consumer and tourism. Consequently, one of the key factors for the development of large-scale social innovation is the set of conditions that determine the economic development of the territory and the conditions for investment. As a result, it may be legitimately claimed that large-scale social innovations capable of producing positive socio-economic changes are not possible in the absence of an integrated regional development infrastructure.

This study also confirmed the impact of social innovation on the economic development of the region; above all, it impacts on the level of unemployment and the economic activity of the population. This phenomenon confirms international experience in socio-innovative development. According to European Commission estimates, the social sector supports around 11 million jobs in Europe alone. In general, the social innovation sector is rapidly being transformed under the external needs of society and is growing quickly as a consequence. Hence, we can draw a conclusion concerning the importance of social innovation in the development of the social sector of the territory under study.

7. Conclusion

The investigation conducted for the purpose of determining contemporary social innovation developmental trends made it possible to obtain the following results.

Firstly, isolating and systematising factors in the development of social innovation, characterising exogenous conditions for socially innovative development.

Secondly, determining the influence of the factors identified in the development of social innovators who participated in the empirical research. As a result, exogenous development models of social innovation are developed, which also show the effect of different types of social and innovative projects on regional development indicators.

The theoretical significance of this study consists in an extension of the theory of innovation in relation to the public sector, as well as in the formation of a methodological platform for further detailed analysis. The practical significance of the results consists in the possibility for their use by public administration bodies in realising effective policies by overcoming barriers and creating favourable conditions for socially innovative development. These developments are of great importance for social entrepreneurs, non-profit organisations and government agencies involved in initiating social and innovative projects, as well as investors who contribute to the inflow of funds in this area.

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References

- Antadze, N. and Westley, F. (2010) 'Funding social innovation: How do we know what to grow?', *The Philanthropist*, Vol. 23, No. 3, pp.343–356.
- Battistella, C. and Nonino, F. (2012) 'Open innovation web-based platforms: the impact of different forms of motivation on collaboration', *Innovation: Management, Policy & Practice*, Vol. 14, No. 4, pp.557–575.
- Bekkers, V.J.J.M., Tummers, L.G. and Voorberg, W.H. (2013) *From Public Innovation to Social Innovation in the Public Sector: A Literature Review of Relevant Drivers and Barriers*, Erasmus University, Rotterdam, Netherlands.
- Berdashkevich, A.P. (2011) 'The universities of Russia: areas and prospects of development', *Russian Education and Society*, Vol. 53, No. 2, pp.12–25.
- Boettke, P.J. and Rathbone, A. (2002) *Civil Society, Social Entrepreneurship, and Economic Calculation: Towards a Political Economy of the Philanthropic Enterprise*, Working Paper 8, The Philanthropic Enterprise, Fairfax Country.
- Caulier-Grice, J. and Murray, G. (2010) *The Open Book of Social Innovation* [online] <http://youngfoundation.org/wp-content/uploads/2012/10/The-Open-Book-of-Social-Innovation.pdf> [accessed 13 October 2016].
- Dorward, A., Kydd, J., Morrison, J. and Poulton, C. (2003) 'Institutions for markets or markets as institutions: linking development policy to theory and praxis', *Development and Change*, Vol. 36, No. 1, pp. 1-25.
- European Commission. (2011). *Employment and Social Developments 2011*. <http://doi.org/10.2767/42590>
- Fafchamps, M. (2006) 'Development and social capital', *Journal of Development Studies*, Vol. 42, No. 7, pp.1180–1198.
- Feinson, S. (2003) 'National innovation systems overview and country cases', in Xxxxx, X. (Ed.): *Knowledge Flows and Knowledge Collectives: Understanding the Role of Science and Technology Policies in Development*, Rockefeller Foundation, New York.
- Fischer, M. (2001) 'Innovation, knowledge creation and systems of innovation', *Annals of Regional Science*, Vol. 35, No. 1, pp.199–216.
- Heiscalà, R. (2007) 'Social innovations: structural and power perspectives', *Social Innovations, Institutional Change and Economic Performance*, Edward Elgar, Cheltenham, UK.
- Henkin, G.M. and Polterovich, V.M. (1999) 'A difference-differential analogue of the Burgers equation and some models of economic development', *Discrete and Continuous Dynamical Systems*, Vol. 5, No. 4, pp.697–728.
- Howaldt, J. and Schwarz, M. (2010) *Social Innovation: Concepts, Research Fields and International Trends*, Aachen University, Aachen, Germany.
- Knowles, S. and Owen, P.D. (2010) 'Which institutions are good for your health? The deep determinants of comparative cross-country health status', *Journal of Development Studies*, Vol. 46, No. 4, pp.701–723.
- Koch, P. and Hauknes, J. (2005) *On Innovation in the Public Sector*, Publin Report No. D20, NIFU STEP, Oslo, Norway.
- Moore, M.-L. and Westley, F.R. (2001) 'Public sector policy and strategies for facilitating social innovation', *Horizons: Innovative Communities, Agents of Change*, Vol. 11, No. 1, pp.1–11.
- Mulgan, G. (2006) 'The process of social innovation', *Innovations: Technology, Governance, Globalization*, Vol. 1, No. 2, pp.145–162.
- Mulgan, G. and Albury, D. (2003) *Innovation in the Public Sector*, Strategy Unit, Cabinet Office, London, UK.
- Nobel Prize Committee. (2006). Retrieved from https://www.nobelprize.org/nobel_prizes/peace/laureates/2006/yunus-lecture-en.html
- North D. (1990) *Institutions, institutional change and economic performance*, Cambridge University Press, New York, USA.
- OECD (1999) *Managing national innovation systems*, Paris, France.
- Phills J.A., Deiglmeier, K. and Miller, D.T. (2008) 'Rediscovering social innovation', *Stanford Social Innovation Review*, Vol. 6, No. 4, pp.33–43.
- Polischuk L.I. and Menyashev, R. (2011) *Does Social Capital Have Economic Payoff in Russia?*, Working Paper, Higher School of Economics, Moscow, Russia.
- Popov E.V. and Vlasov M.V. (2015) 'Analysis of institutional cycles of evolution of inventions', *Montenegrin Journal of Economics*, Vol. 11, No. 1, pp.117–123.
- Popov, E., Stoffers, J., Omonov, Z. and Veretennikova, A. (2016) 'Analysis of Civic Initiatives: Multiparameter Classification of Social Innovations', *American Journal of Applied Science*, pp.1136–1148.

Evgeny Popov et al.

- Popov, E., Omonov, Z. and Veretennikova, A. (2016) 'Institutional supporting of social innovations', *Proceedings of the 4th International Conference on Management, Leadership and Governance*, pp.271–279.
- Prahalad, C.K. (2004) *The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits*, Pearson Prentice Hall, New York.
- Razak, A.A., Rowling, M., White, G. and Mason-Jones, R. (2015) 'Public sector supply chain management: a triple helix approach to aligning innovative environmental initiatives', *Foresight and STI Governance*, Vol. 10, No. 1, pp.43–52.
- Sachs, J.D. (2005) *The End of Poverty: Economic Possibilities for Our Time*, The Penguin Press, New York.
- Mulgan, G., S. Tuckers, R. Ali and B. Sanders (2007) *Social Innovation: What It Is, Why It Matters and How It Can Be Accelerated*. 1st Edn., The Basingstoke Press, London, UK.
- Schumpeter, J.A. (1911) *The Theory of Economics Development*, George Allen & Unwin, London, UK.
- Simanis, E. and Hart, S. (2008) *The Base of the Pyramid Protocol: Toward Next Generation BoP Strategy* (2nd ed.), Cornell University, Ithaca, New York.