

Innovative Strategies of Transnational Companies and Synergy Effect of Technologisation

Alexander M. Zobov^{1*}, Ekaterina A. Degtereva¹, Vasily S. Starostin² and Veronika Y. Chernova¹

¹Marketing Department, Peoples' Friendship University of Russia, Moscow, Russian Federation;
veronika_urievna@mail.ru, a_zobov@mail.ru, degseb@mail.ru

²Institute of Marketing, State University of Management, Moscow, Russian Federation;
Vs_starostin@guu.ru

Abstract

Objectives: Innovative strategies of transnational corporations as a research subject presented in this paper are aimed at developing the most promising ways to enhance competitive positions of the companies and help them to enter new markets. **Methods/Statistical Analysis:** The article highlights the main types of TNCs' strategies for innovative integration that form the synergy effect of technologisation. It manifests itself in the knowledge transfer used by TNCs, with such knowledge produced in a home country of a parent company, and its further commercialization. In addition, the authors offer to consider the kinds of the innovative strategies used by TNCs today in terms of the classification of innovative behaviours of economic entities (violents, patients, explorants, and commutants). **Findings:** The authors have specified the signs of TNCs' functioning in the global market of innovations, described with the dynamic, aggressive, and multi-faceted competitive environment. Their actions have the attributes that determine the progressive development of the society. The authors have also disclosed the specifics of their influence on national economies. **Applications/Improvements:** In contrast to the available definitions, the authors give reasons for the systemic nature of the innovation strategies. The research pays the special attention to the synergy effect of technologisation implemented with two main types of R&D units at TNCs, i.e. Home-Based Exploiting (HBE) and Home-Based Augmenting (HBA). The findings might be used by TNCs to draft strategic concepts for their development

Keywords: Competition, Innovative Strategies, Market of High-speed Consumer Goods, Technologisation, Transnational Companies

1. Introduction.

So far, the innovative strategies have become of particular importance for modern TNCs. Firstly, they significantly change the production profile and influence consumer patterns. They are based on technological novelties intended to reduce production costs, distribution or marketing. Secondly, these strategies aim to give new benefits to customers and enable TNCs to enter new market sectors. In general, this allows obtaining the synergy effect from technologisation processes.

Modern concepts consider innovations as an imperative for TNCs' successful functioning subject to a competitive interaction in global markets¹. The imperatives of the global innovative corporate leadership have increasingly become a subject of daily professional activities among managers at all levels at TNCs' headquarters and their overseas representative offices.

An effective use of the innovation factor has been getting one of the main competitive advantages of TNCs in the 21st century. TNCs have an opportunity to use such a promising source of innovations, as scientific, technical

* Author for correspondence

and human capacities of their subsidiaries, including overseas. Thus, they encourage innovation processes in overseas markets and recipient countries by establishing strategic alliances, knowledge incubators, and global innovation networks.

Today in the global market of innovations, TNCs function in the dynamic, aggressive, and multidimensional competitive environment and their actions are described with the following features. Firstly, TNCs and their strategic management simultaneously focus on all the competitive parameters: production costs, product quality, delivery time, know-how development, market barriers, and stabilization of the financial situation. Secondly, TNCs carry out global innovative strategies by different vectors at different levels: in the sphere of resources, in goods and services markets, in merged companies, etc. Thirdly, the positions of TNCs' competitors face dynamic changes, the situations in the global markets become less predictable, and forecast periods get shorter². Today, biotechnology, nano materials, education, sociology, medicine, and computer technologies are the main areas for innovations. Fourthly, the aggressive expansion of market competitors grows in the global market of innovations, legal conditions are being violated, and consequently, competition priorities face changes too.

The principles of continued innovations, the goal-oriented and systematic search for endogenous and exogenous sources of innovations turn the factor of the TNCs' intensive development within the global competitive environment into a progressive alternative to their extensive growth. Thus, the internal and external fundraising channels, factors and sources for the TNCs' innovative growth are combined and technologies are expanded. Recently, TNCs have significantly revised their approaches to general innovation policies introduced by them³.

2. Analysis of TNCs' innovative strategies

The global experience shows that achieving and retaining the global corporate leadership in business is an extremely challenging task even in case of well-functioning national innovation systems. Traditionally successful marketing strategies and tools⁴, lobbying schemes, and political and psychological methods of influence appear to be

ineffective in the long-term prospective. This situation is the clearest in Japan. The country is losing its high competitive status, which was nearly 40 years long because there are no leaders of the global level. It is worth saying that Japanese TNCs (though ranked the second in the world by the number of global innovators) have been increasingly lagging behind the US companies (Figure. 1).

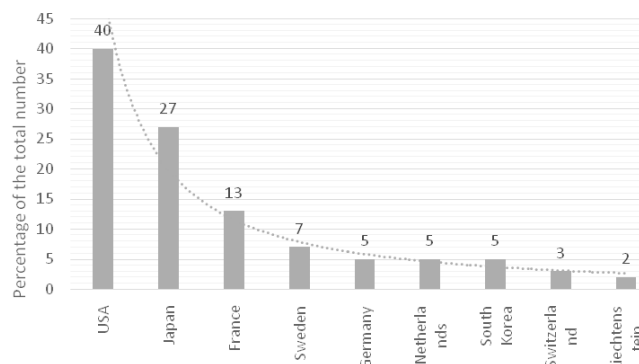


Figure 1. Geographical distribution of top 100 TNCs that implement innovative development strategies².

The traditional centralized scheme of TNCs' R&D has become less efficient due to several reasons.

Firstly, the consumer, whose consumer culture corresponds to a level of innovation, substantially contributes to adjustment of new products to the market requirements. Such consumer is no longer just a national person, exclusively associated with the TNC's home country. Secondly, the issue of the home country is rhetorical today and this fact is not only related to a large number of major international mergers and acquisitions, which have made changes to its content. Many TNCs have concluded that there was a need in a greater use of sophisticated international specialization in science and technology. For instance, today it is more profitable for many TNCs (Control Data, Motorola, etc.) to locate their research laboratories in the United States, computer-programming centres in India, centres for industrial design in Italy, etc. This allows expanding a range of involved talents, at the same time reducing the costs for new product development, which is one of the main corporate objectives⁵.

Therefore, in practice, components of the TNCs' innovation strategies attract an increased interest as they give an opportunity to allocate resources effectively, control tangible and financial flows to ensure long-term competitive advantages to corporations.

3. Result

Let us review the most common modern innovative strategies applied by TNCs. Depending on the external and internal environment, the TNC may choose the opportunistic or creative type of its innovative strategy.

In general, the opportunistic innovation strategy includes partial, incremental changes, which improve previously assimilated products, processes, and markets within established corporate structures and directions⁶. In this case, innovations are considered a form of the forced response to changes in the external business environment, which contribute to retention of previously achieved market positions.

Within the opportunistic innovative strategy, one may point out the following.

1. *Protective strategy* is a set of measures to counter the competitors, its aim is to enter an established and mature market with the same or new products. Depending on the TNC's market positions and opportunities, this strategy can be developed in two main directions: Making conditions, not acceptable for the competitors, forcing them to surrender, in the market of these products; Reorientation of production towards competitive products, while keeping previously achieved positions or with a minimal refusal from the previously achieved ones⁷.

Time is considered the main feature in the protective strategy and the success factor. All projected activities are held within a short time, so TNCs should have a certain scientific and technical groundwork and a sustainable position to achieve an expected result.

2. The *innovative imitation strategy* assumes that the TNC bets on successful innovations of its competitors and copy them. The strategy is quite effective for those TNCs that have necessary production and resource facilities for mass output of copied products and their sales in the markets, which the main developer has not yet entered. TNCs that choose this strategy have lower R&D costs and risks. However, the probability to get high profits is also reduced as production costs are higher in comparison to the developer's ones, the market share is relatively small, while consumers of the copied products have quite a natural distrust in it. The innovative imitation strategy involves techniques typical for the aggressive marketing

policy. These techniques allow the manufacturer to gain a foothold in a free market sector⁸.

3. The *strategy of waiting* is focused on a maximum decrease in the risk level in terms of the highly uncertain external environment and the consumer demand for innovations⁹. TNCs expect to wait until the innovation produced by a small-size company, enter the market. They want to push the developer aside in case of its success. The strategy of waiting is similar to the strategy of innovative imitation as in both cases TNCs, above all, strive to make sure that there is a sustainable demand for the new product of the developer, which has had the majority of the costs to create and commercialize the innovation. However, unlike the imitation strategy, where the TNC aims to satisfy a certain market sector not covered by the main company, the transnational corporation, which chooses the strategy of waiting, strives to exceed the developer in the innovation output and sales. Herewith, the start of active actions against the developer is of particularly importance. Therefore, the strategy of waiting may be either short-term or long-term.

4. *The strategy of the direct response to consumers' needs and demands* is used to produce industrial equipment. TNCs can use this strategy at their subsidiaries and representative offices, which fulfil individual orders for large companies that have certain business independence, quickly respond to specific business needs, and are able to adjust their production and R&D to the content of proposed orders. The specifics of these orders or projects is that the scheduled operations mainly cover the stages of commercial development and sales of the innovation, whereas specialized units in charge of innovations within the TNC itself do all the R&D¹⁰. TNCs' subsidiaries and representative offices, implementing this strategy, are not subject to the essential risk as the most costs account for the above-mentioned stages in the innovation cycle.

In the unstable commodity-money relationships and permanently emerging crisis phenomena typical for recent decades, innovations have been a starting point to improve TNCs' competitiveness; expand and consolidate their market positions; achieve new applications for manufactured products, i.e., an active tool for transnational business development. It is therefore evident that nowadays the innovative strategies of the creative type are of particular interest and in demand.

Let us review an example of the creative innovative strategies, which increase TNCs' competitiveness. Nowadays with the revolution in processes and technology, the specifics and dynamics of the global competition depends on levels of the *technologic pyramid*¹¹. As a result, TNCs need to coordinate activities, related to qualitative economic transformations at various levels of the *technologic pyramid* with strategies of external and internal innovative integration.

The TNCs external strategy of innovative integration expands the international activities using innovative competitive advantages of their partners in overseas markets.

TNCs can apply the following strategies to achieve their goals: (a) The *borrowing strategy*, which involves a usage of the partners' innovative potential when the company learns how to produce science-based products from the developed countries and encourages development of scientific, technical and industrial sectors of economy to maintain the entire innovation cycle; (b) *Transfer strategy*, based on the overseas scientific, technical and production potential and its involvement with direct foreign investments and the transfer of the advanced technologies¹².

The TNC internal strategy of innovative integration focuses on establishing the overseas innovative representative offices or subsidiaries. This implies the growth strategy. It means that in the most cases, the corporation uses its own scientific, engineering, and production facilities, develop high technologies to ensure the output of science-based products¹³. The strategies of innovative integration are mostly used by those TNCs, which are involved in technical fields. They systematically coordinate these strategies upright and a flat. The strategy of a flat innovative integration involves a merger of manufacturers of various goods. These companies are at the same level of research intensity and included in the common distribution and profit-generation system. This integration is reinforced with overseas production of goods similar to those produced in the home country of the TNC-founder. The strategy of the upright innovative integration implies that TNCs are involved in mergers and acquisitions of companies operating in different industrial innovation cycles, for instance, affiliation of suppliers (raw materials, semi-finished products) or absorption of leading companies in innovations or firms that distribute an innovative product¹⁴. At the same time, it should be

mentioned that the efficient innovative integration by TNCs depends on sustainable functional relationships in the structure of world business represented with its core, semi-periphery and subjects of the global interaction. The core includes TNCs, which make innovations (new goods, services, production methods and management practices) and develop the advanced production systems. Innovations and new technologies allow TNCs to maintain their monopoly in the most effective and profitable industries. The semi-periphery (owing to TNC's subsidiaries that function in its structure) provides mass production following the technologies given by the parent TNCs.

Besides, in terms of transnational business, some regions face the introduced corporate strategy of innovative integration. It covers TNCs' national markets, which have a significant share of the global commercial and innovation potential. The nature of innovative integration within a company depends on intensification, mobility and flexibility in expanding cooperation in formal regional economic integration. The advantages of TNCs in global competition are achieved in regional integration projects, when people in charge attract direct foreign investments and avoid available barriers in the global economy between the countries and individual integration groups¹⁵.

Paying attention again to the specifics of modern global competition, we should mention that increasing economic instability and uncertainty in the external environment have led to new competition forms. Confrontational strategies aimed at an aggressive exclusion of a rival from the market do not meet the requirements of the innovative and sustainable development and innovation competition at the present stage of globalization. They give way to the integration and cooperation strategies. The authors assume that corporate Aikido-based strategy by Becker-Ritterspach is the most promising innovative strategy for TNCs in this regard. It is based on the new philosophy of competition (putting the competitor under control instead of destroying it)¹⁶, as well as the strategy of open innovation networks based on the open innovations concept¹⁷.

According to the corporate Aikido-based strategy, the TNC strengthens its positions because it focuses on self-development and self-improvement, neutralizes the competitor's strong sides, and places it under the command. Competition is considered a required

institution to improve TNCs and encourage new products and technologies. The corporate Aikido-based strategy mostly considers competitors as a source of new ideas and a further stimulus for development.

The TNC's strategy of the open innovation networks implies making a wide network of partners who share ideas and technologies on a market basis and the outsourcing development in science. Besides, it suggests active involvement of consumers in the innovation process (democratization of innovations) and further commercialization of technologies outside the corporation, in which the innovation was implemented (first used). Global value-added chains and global supply chains (effectively introduced business models of production networks) based on sub-contract cooperation and contracts with independent companies are the examples of the introduced open innovation networks strategy.

Thus, the abovementioned innovative competitive strategies rely upon consolidated competitive advantages, TNC's development and self-improvements in a constructive interaction with competitors instead of destroying them to achieve and strengthen itself as a leader. It does it when it receives innovative ideas to create new products, technologies, and business models.

As we have mentioned above, TNCs represent complex systems regardless their domain and act according to their organizational management strategies focused on development, sustainable prosperity and satisfied consumers. In today's competitive environment, such strategies are mostly intended to support or facilitate competitive advantages against other companies or the product competitive value. The mentioned goals force TNCs to adjust their organizational strategies to the strategies of the external environment and the internal dynamics, and find ways to invest efficiently their management resources to achieve on time the scheduled strategic indices. For this purpose, TNCs quite often start to introduce innovations in business organization and coordination. The creative innovative strategy is one of such innovations. It is based on available knowledge and navigation structures to manage the process of creating TNC's values in a segment and in an area.

The navigation structure usually visualizes algorithms that relate to the procedures of the TNC's response to challenges of the external environment; the processes of solving the internal TNC's problems; the stages to

prepare the system of alerts on a current status, goals and development strategies of the TNC problems and present it to the general public¹⁸. The creative innovative strategy allows TNCs to make a set of the creative patterns to solve specific tasks and develop the designated values. The general pattern of the TNC's creative innovative strategy includes the environment, in which challenges emerge, incoming impacts and messages received as a response. In this case, the model's core processes all the information received from the knowledge system and navigation structures and generates the output data, based on this information. Inputs of the model are made of the challenges and common information flows. In this case, the challenges produce the control inputs, which predefine strategic directions in the TNC development and enable to create expected values. The outputs of the creative model are also divided into two groups: shared information outputs and messages that define the structure of main success indicators and the TNC performance. The inputs and outputs interact with the model's core through the shell, which filters and prepares the relevant information. The creative model's core includes a necessary variety (according to Ashby's law) of control mechanisms and contours that simulate operations of the complex system (TNC) and manage its performance.

Thus, the creative innovative strategy enables to improve the TNC management contour and monitor the balance in the development of the TNC values and the efficiency of their management¹⁹ as both the environment and the TNC itself are changing in the implementation of the goals. This, in turn, can make changes to the predefined values.

5. Discussion

The authors believe that modern innovative strategies of TNCs depend on the innovative behaviours. D. Suarez, a well-known American researcher, suggested the following classification for the innovative behaviours among business entities, in terms of which it is advisable to consider types of the innovative strategies used by TNCs: violents, patients, explorants and commutants²⁰.

Violents are entities with mass production, the developed infrastructure and significant research facilities. Violents' activities focus on the mass market and satisfy standard mass requirements. For instance, TNCs in machine engineering, oil and gas industries and

natural monopolies can be referred to as the violent. Violent TNCs have the high innovation potential. With it, on the one hand, they develop innovations with available financial resources, scientific achievements and facilities. On the other hand, they introduce innovations and proceed with commercialization. Violent TNCs can be innovators and investors in the innovation process. Thus, we can say that violent TNCs mostly use the innovative strategies, which involve intensive R&D, and the strategies of absorbing smaller companies, which schedule entering the market with their innovative products or technologies, and are at the stage of a pilot prototype. The latter type of the innovation strategy assumes that the absorbed company bears all the expenditures for R&D, while the TNC only uses its resources at the final stage of innovation commercialization, mass production. Another widely used innovation strategy among violent TNCs is the strategy when they locate their R&D laboratories in the countries with the highly qualified personnel.

Patient TNCs are business entities that produce unique products. Patients occupy a narrow market niche and serve non-standard consumers. Patient TNCs are the corporations that choose making products with specific features. Due to uniqueness of the innovation offered by TNCs, the competition in their segment is low giving further benefits. It is common for patients to focus on the narrow market segment. Their development goes within this segment. Then, there are two ways for them: either to diversify, that is, learn another activity and turn into the violent, or gradually reduce the operations and leave the market. Patients are highly dependent on the market conditions because of their highly specialized business. The danger of being absorbed by the violent is another problem for them. Therefore, it is advisable for patient TNCs to use the strategy of polycentrism, using which they may meet the unique needs in a specific market.

The explorants are business entities, the aim of which in their existence is to develop crucial innovations at every turn. Their specifics lie in the fact that their innovative potential mainly involves intellectual resources to develop innovative products. In the number of the explorants, one may include innovator TNCs that carry out initial stages of the innovation process. The most popular innovative strategy of the explorant TNC means creation of research centres and venture capital offices formally independent from the parent corporation. This strategy facilitates new developments (even those that are not currently required

by the parent TNC or that are not its priority) as effectively as possible. Among such well-known explorant TNCs, there are explorants Bell Labs, Lucent Technologies, and Xerox Technology Ventures.

Communitants are such business entities that copy new products or offer new services based on available products. So far, the strategy of imitation has been the most common for Chinese TNCs. They are mainly involved in making legal copies of products manufactured by well-known producers. The influence of the communitants on the innovation process in general might be evaluated as negative; however, they facilitate the innovations' diffusion. They mainly use imitative innovative strategies.

The progressive *technologicalisation* of the global economy resulted in the consolidated R&D systems established by TNCs. Overseas research laboratories play a significant role in these systems. This is mainly caused by the increased importance of savings in production scales, reduced life cycles of products and rapid obsolescence in technologies. Although in some cases internationalization of technology depends on a shortage in qualified research and engineering staff in recipient countries, the process is highly dependent on communication networks and control systems that provide a smooth transfer of information between remote units and comprehensive implementation of R&D. As early as 10-15 years ago, representative offices and subsidiaries of TNCs only made research to use the potential of the parent corporation in markets of recipient countries, supporting the production process itself and introduced processes for an imported technology. Today, rapid transfers of some R&D types point out to a change to the very nature of innovations: apart from the necessary engineering support to representative offices and subsidiaries, there is the increased importance of consolidation of their innovative activities within the entire TNC's structure with the ongoing specialization of representative offices limited with their manufacturing competencies.

6. Conclusion

As a result, the synergy effect of technologicalisation manifests itself in use of two main types of R&D units by TNCs. The first ones are units that transfer knowledge produced in the home country of the parent corporation and are involved in their further commercialization HBE. The second are those that increase the volume of technical

science knowledge of the entire TNC using overseas sources of such knowledge (home-based augmenting, HBA). Thus, the purpose for the first type of the overseas subsidiaries (HBE) is to adjust new technologies and products got from the TNC *think tank*, to the demand specifics in overseas markets and start producing them. The purpose of the second type of representative offices (HBA) is a *disclosure and interception* of the innovation waves from overseas *think tanks*, colleges and laboratories of world competitors to transfer them then to the central R&D unit at the TNC home country (the unit is called the central knowledge incubator). HBA subsidiaries are actually *incorporated* into the local, national or regional research knowledge environment in countries that receive foreign funding from TNCs. They get access to the source of innovations, and then use it within the framework of the global innovation process, transferring new knowledge to other units of their corporation.

Thus, summarizing the findings from the completed research, we can make the following conclusions. The final development and choice of the innovative strategy by TNCs are related to the need in the coordinated structural and infrastructural activities and decision-making on necessary production facilities²¹, their distribution by specific types of products; the choice of the system to measure business performance, labour incentives, and appropriate processes to develop products.

The choice of a particular innovative strategy by TNCs depends on the external and internal environments. As a result, TNCs can choose either the opportunistic, or the creative type for their innovative strategy. Into the opportunistic innovative strategies, one may include the protective strategy, the strategy of innovative imitation, the strategy of waiting, and the strategy of the direct response to consumers' needs and demands. The creative innovative strategies include external and internal strategies of the innovative integration. TNCs can use the aikido-based innovative corporate strategy and the open innovation networks strategy to consolidate their competitive positions and enter new markets. The creative innovative strategy will improve the organizational component of the TNC's innovation-oriented development.

7. References

1. Tatarintsev VA, Yegorova EM. Role and significance of TNCs innovation activities in the system of international economic relations in global exchange of technologies and innovations. *Economics of Sustainable Development*. 2014; 4(20):224–30.
2. Soboleva YP, Parshutina IG. Marketing approach to forecasting of regional market consumption potential. *Indian Journal of Science and Technology*. 2015 Dec; 8(10):1–10.
3. Oki K. Managing internal competition in multinational corporations: the role of home bases. *International Journal of Productivity and Quality Management*. 2015; 15(2):1–252.
4. Gvozdetzkaya IV, Golovushkin IA, Maykova SE, Okunev DV. System analysis of marketing tools for commercialization of intellectual property items at a National Research University. *Indian Journal of Science and Technology*. 2016 Mar; 9(12):1–10.
5. Zeveke OY, Kozhaev YP. Innovation activities of TNCs. Saarbrücken, Deutschland; 2013. p. 1–20.
6. Sokolov KO. Continuum of innovative strategies. *Modern Society, Education and Science: Proceedings of the International Science and Practice Conference: in 16 Parts, Australia*; 2015. p. 138–9.
7. Khromenkova O. Choice of innovation strategy in corporate innovation management system. *Pressing Problems and Prospects of Institutional Changes in Modern Economy: Proceedings of International Correspondence Science and Practice Conference, US*; 2015. p. 658–65.
8. Gubanov RS. On implementation of marketing innovation strategies in entrepreneurs' structures. *Marketing in Russia and Abroad*. 2015; 3:67–72.
9. Batkovsky AM. Typology of innovation strategies implemented by high-tech enterprises. *International Science and Practice Conference Modern Problems of Science and Education, in Sterlitamak. Khabarovsk: Khabarovsk State University of Economics and Law*. 2015; 30(1):38–46.
10. Nizhegorodtsev RM. Strategies of innovative development of large-scale science-based companies: Institutions and mechanisms of change management. *Russian Journal of Management*. 2015; 3(1):2–15.
11. Konina NY. The sixth technological mode and management of modern companies. *Economic and Law Issues*. 2014; 69(1):43–6.
12. Maria SP. Integration striving towards the innovative future. *New Science: Experience, Traditions, Innovations*. 2015; 1(1):38–40.
13. Zapadnyuk ZEA, Sorvirova VV. Integration as a catalyst of innovative development in the European Union. *Bulletin of Economic Integration*. 2014; 7(76):127–35.
14. Gaponova SN, Shabanova NV. Integration as a basis for innovative development. *Economy and Society*. 2014; 2–1(11):1120–2.
15. Korolev VI. Corporate integration as a factor of their innovative activity development. *Management in Russia and Abroad*. 2014; 11(1):19–23.
16. Becker-Ritterspach F. An organizational politics perspective on intra-firm competition in multinational corporations. *Management International Review*. 2011; 4(51):533–59.

17. Bucheli M, Kim M. Attacked from both sides: a dynamic model of multinational corporations' strategies for protection of their property rights. *Global Strategy Journal*. 2015; 5(1):23–43.
18. Pawaskar RP, Goel M. Improving the efficacy of destination marketing strategies: A structural equation model for leisure travel. *Indian Journal of Science and Technology*. 2016 Apr; 9(15):1–10.
19. Zhukova EA. Mechanism to form strategies of company's innovative development in terms of globalization. *Journal of Economy and Entrepreneurship*. 2014; 1–3(42–3):619–21.
20. Suarez D. Persistence of innovation in unstable environments: Continuity and change in the firm's innovative behaviour. *Research Policy*. 2014; 43(4):726–36.
21. Kuzmin EA. The model favored level assessment on the issue of adaptive selection of the fundamental operating conditions for economic agents. *Economic Analysis: Theory and Practice*. 2012; 38(293):55–64.