The Interaction of Participants of Inclusive Corporate Ecosystems

Nathalia V. Khmelkova\textsuperscript{a*}, Konstantin I. Perevozchikov\textsuperscript{a}, Elena S. Kiseleva\textsuperscript{b}, Sergey V. Berkalov\textsuperscript{b}, Yan R. Chemezov\textsuperscript{c}

\textsuperscript{a} Liberal Arts University, 3, Geleznodorognikov str., Yekaterinburg, Russia, umnichka-72@mail.ru, 8-912-290-1065
\textsuperscript{b} National Research Tomsk Polytechnic University, 30 Lenin Ave., Tomsk, Russia, rosakiss@yandex.ru, 8-913-843-1246
\textsuperscript{c} National Research Tomsk State University, Lenin Avenue, 36, Tomsk 634050, Russia, yan_house@mail.ru, 8-923-403-6049

* Corresponding author: Nathalia V. Khmelkova, umnichka-72@mail.ru

Abstract

It is proved that deep shifts in inter-organizational and interpersonal interactions in the sphere of appearance of co-opetition, which is a symbiosis of competition and cooperation, influenced by the dramatic aggravation of the entire spectrum of social problems, occur. It is indicated that it is impossible to achieve overall economic and social well-being without solving these problems. It is proved that the convergence of competition and cooperation rests on a fundamental basis, due to the synergistic nature of these universal social and economic organizations of human lives. It is shown that desire of subjects to take an active part in solving social problems serves as an important impetus to the formation of co-opetitive networks of cooperation, business in particular. These include corporate ecosystems and inclusive business models. It is shown that the latter specifically involve different social groups in the implementation of socially-oriented programs. This paper considers three structures, where the realization of inclusive business processes like individual effort, the alliance and the multilateral platforms may occur. It is noted that in conditions of limited resources, social partnership is more preferable, especially in the form of meaningful alliance of business and non-profit organizations. It is emphasized that the model of a multilateral platform for scaling social projects can be used. As part of the practical implementation, the author's project of the social network, consolidating the efforts of the business, non-profit organizations and individuals to help those in need of the treatment of various diseases, is presented.

Keywords: Co-opetition, corporate ecosystem, inclusive business models, cause-related alliance, multilateral platform, social network.
1. Introduction

The modern world is full of uncertainty and dramatic challenges. Increased competition, vanishing boundaries and the globalization of the economy, the rapid development of information technology, accompanied by their penetration into all spheres of life – all this is revolutionizing markets, strategy, consciousness and behavior. One of the "diseases" of the global civilization of the new millennium is a permanent worsening of the social problems associated with environmental degradation, increasing social inequality, lack of equal access to education and health systems, which is reflected in the actualization of the task of achieving economic and social well-being of nations and peoples.

The aim of the paper is to provide a broad theoretical and methodological context and methodological issues, which expediency of implementation of the author's project of the social network, ensuring an interaction of the parties interested in helping people with various diseases, is justified. The authors believe that the establishment of such platform with a unique functionality will attract philanthropists among businesses, non-profit organizations (NPOs) and individuals, to this area. This will expand the circle of people who will be assisted. Separately, technical and economic components of the project are emphasized.

To achieve this objective, the authors have solved the following tasks. First, deep shifts in the nature and character of inter-organizational and interpersonal interactions that contribute to the general consolidation of efforts of various sectors of society to address pressing social problems are justified. Second, new forms of institutionalization of such efforts in the form of corporate ecosystems and inclusive business models are studied. Third, the technology and economics of the proposed project the social network is described; the benefits in comparison with existing solutions are specified.

2. In-depth changes in the nature of inter-organizational and interpersonal interactions: from co-opetition to ecosystems and inclusive business models

2.1. Co-opetition is a new concept of competitive cooperation

In an effort to confront the complexity and social injustices of today's world, organizations, people and governments are no longer willing to do it alone, finding new sources of competitive advantages in various forms of association and collective action. We affirm that the aggravation of social problems and the desire of stakeholders to make a contribution in their decision contribute to the emergence and institutionalization of a new phenomenon, known as "co-opetition" ("competition" + "cooperation").

The nature of this phenomenon has not been studied sufficiently. Publications on the subject are few and sparse. The acute shortage of academic work is obvious, proving the deep nature of the changes taking place.

It is important to understand that they transform the very essence of ideas about the nature of antagonistic cooperation and competition at the level of forms of economic activity and thinking of its participants. As for the essence of "co-opetition", our position here lies in its sense as a holistic concept. It is aimed at overcoming the simplistic view of competition and cooperation as mutually exclusive patterns in the interaction of subjects. We believe that recognition of the possibility of dialectical
interpenetration allows describing more complex structures. This approach is more in line with the complexity of "roles", strategies, behaviors and objectives of the actors on the market today.

A kind of manifesto of the new vision was formulated by the eminent American scholar W. E. Deming in «The New Economics for Industry, Government, Education». The author writes: «Competition, as we see now, is destructive. It would be better if everyone started to work together within the system to all be the winner. What we need is cooperation and the transition to a new style of management» (Deming, 2000).

A. Brandenburger and B. Nalebuff in his book «Co-opetition: Revolutionary Mindset that Redefines Competition and Cooperation: The Game Theory Strategy that's Changing the Game of Business» popularized and "secured" term "co-opetition" in the conceptual research unit. In the book, the authors outlined the concept of cooperation for the first time in a systematic way the competitive. The concept is based on the idea of the absence of the hard opposition of competition and cooperation. Brandenburger and Nalebuff built their new revolutionary philosophy on methodological platform game theory, according to which there can be multiple winners in the co-opetitive interaction of partners (Brandenburger, & Nalebuff, 1996).

We see a deep philosophical base in "co-opetition", which should be taken into account in the analysis of this phenomenon. It seems that we need a broad theoretical and methodological context to study it. Competition and cooperation are the universal properties of the world, characterized by the numerous contacts and relationships, covering all aspects of human life. Competition and cooperation play a role of universal social mechanisms used to regulate relations between people; they are basic social and economic forms of organization of their life.

We consider "Co-opetition" an integral part of the global synergetic picture of the world. Its active development began in the second half of last century, when H. Haken coined the term "synergy" to designate a new interdisciplinary scientific direction, studying the evolution of open systems, flowing through a non-linear law. He showed that the alternation of order and chaos is a fundamental principle of any development. It should be noted that the current research on this topic is no longer confined to a study of their mutual transitions. They focused on the analysis of more subtle and complex issue of leveling as a result of such transitions differences between these aspects of reality and the exercise of their synthesis. Thus, the expediency of consideration of the "co-opetition" phenomenon with synergetic products is obvious. In the analysis of "co-opetition" as a theoretical concept it is important to elicit a significant side of the phenomenon, its generic characteristics. Its key distinctive element is expressed in the most accurate way in the definition by G. B. Dagnino and G. Padula. They point out that the competition involves actors' actions in accordance with the individual goals and personal aims. The cooperation is based on the realization of the common interests of the participants. "Co-opetition", in contrast, occurs in the partial congruence or coincidence of their goals. Thus, co-opetitive interactions are stored as personal interests, as well as organizational and strategic independence of participants (Dagnino, & Padula, 2002).

In applied research, based on the observation of the activities of modern corporations, it is stated that co-opetition is just a set of tactical steps, involving the ability of a subject to tack skillfully in its relations with its partners between competition and cooperation, depending on the current challenges.
This approach seems to us not deep enough. Within the framework of such an interpretation, it is difficult to explain the institutionalization of a large number of forms of economic activity supported empirically, with the nature of the network. Relevant in this context is the interpretation of networks given by R. S. Achrol and Ph. Kotler. According to them, the network organization is a coalition of economic units with their objectives, which operate without hierarchical control, but they are involved in a system with common goals through multiple horizontal communication, interdependence and sharing (Achrol, & Kotler, 1999).

Networks' rapid development and considerable research hype is connected with their studying. It is due to the fact that such a hierarchy networks provide interdependence to participants "playing" by the general rules. Simultaneously, they have considerable flexibility and adaptability to environmental transformations. This unites them with a market mechanism. We support the view that was expressed by R. S. Achrol and Ph. Kotler. The essence of this view is that classic network organizations similar to coalitions by their nature, where coalition is a voluntary association established to achieve common goals and solve common problems.

However, the specific models that can exploit the potential of co-operative cooperation to involve a wide range of stakeholders in the joint solution of social problems remains an open issue. Studying of the problems of interaction between businesses and non-profit organizations in the context of the implementation of these models are of interest as one of the important aspects.

2.2. Corporate ecosystem - co-operative cooperation network

We link the inclusion of the various parties in co-operative cooperation with the development of numerous strategic alliances and networks, forming a dynamic environment that provides resources and organizational prerequisites for the overall success of all participants in the interaction. The mechanism of functioning of co-operative cooperation networks allows likening them to their biological ecosystems with a certain degree of conditionality.

In Biology, an ecosystem is viewed as a community of organisms that interact with each other together with the environment in which these organisms live and interact. In the early 90-ies of the last century M.Rothschild, author of "Bionomics" concept, proposed the use of evolutionary biology approaches for the analysis of economic phenomena. In his book «Bionomics: Economy as Ecosystem», he argued that traditional economic schools are based on the concepts of classical physics. They consider the universe as a perfect, predictable mechanism, and the economy is viewed as a machine. In fact, it is akin to "evolutionary ecosystem", and markets are "inhabited" with a huge number of highly specialized organization organisms.

To advance this idea, J. F. Moore developed a theory of entrepreneurial ecosystems. In 1996, in the work «The Death of Competition», he compared the business environment to a living natural environment (ecological system), in which there is not only fight, but also the evolution of cooperation and interdependence (Moore, 1996). J. F Moore believed that the old type of competition "my product against yours" does not take into account the context or environment in which businessmen conduct business. However, it is critically important, as "even excellent businesses can be destroyed by their external environmental conditions ...". Therefore, in the business, like in wildlife, company success also
Selection and peer-review under responsibility of the Organizing Committee of the conference

depends on the environment. Therefore, managers need to think of the company as a member of the ecosystem, which link the interests of all participants and members of the business community. Instead of a strategy aimed at creating unilateral advantages, the company needs to grow and sustain the ecosystem. It combines the influence of the environment, competition and evolution. J. F. Moore called this phenomenon "co-evolution" (Rothschild, 1992).

The obvious merit of the scholar is a comprehensive presentation on the members of the ecosystem. J. F. Moore suggested that "... an economic community, based on the foundation that make interacting organizations and individuals, the organisms business world ... The ecosystem of any enterprise involves consumers, market intermediaries (including agents and the channels of commerce, as well as those who sell related products and services), suppliers and, of course, the firm itself. All of these elements can be thought of as the primary elements of living in the ecosystem. This ecosystem of any enterprise also includes the owners and other parties in interest and, powerful structures, which have to be considered in a given situation, like government departments and regulatory agencies, associations and organizations to ensure compliance with standards and representing consumers and suppliers. In one way or another, direct and potential competitors in the ecosystem include, as well as any other important members of society."

We note that, since the advent of the past business ecosystem theory, its relevance has increased many times over twenty years. Threats to the environment, which companies are forced to confront today, increased significantly. This understanding was clearly expressed by Ph. Kotler, H. Kartajaya, I. Setiawan, the authors of the concept of marketing 3.0, the occurrence of which is considered by scientists themselves as a reaction to rapid and painful changes experienced by the world, the growth of poverty, climate change and environmental pollution, the increase in inequality and the digital revolution (Kotler, Kartajaya, & Setiawan, 2010). They note that companies that want to change the world for the better cannot do it alone. They have to cooperate with each other, with shareholders, suppliers, customers, vendors, employees, public institutions.

It seems important to us that Ph. Kotler, H. Kartajaya, I. Setiawan emphasized the idea that the company should have a proactive stance in relation to its external environment and select partners to address the objective of forming a common mission, vision and values.

In the understanding of the need for close cooperation with a wide range of partners, Marketing 3.0 relies heavily on the methodological relationship of marketing background. The essence of the relational approach lies within building, maintaining and developing the privileged interactions with customers, employees and marketing partners. We find it important to include the social dimension in the modern concept of relationship marketing. Therefore, we share the view that was formulated by E. S. Kiseleva and O. V. Anikina regarding the need to allocate a separate group of subjects, where campaigns should develop relationships, the "need" with those subjects. This group may include both individuals and organizations. We propose to include into the group sick children and adults, single parents, the disabled, pensioners, people with no fixed place of residence, social institutions, charitable organizations, medical institutions, environmental organizations, educational institutions, animal shelters, etc. The aim of cooperation with the "needy" is the solution of important social problems.
In addition, we agree that the principle of marketing relationships aiming to take care of society is important (Kiseleva, 2015).

It should be noted that an increasing number of companies see their mission in philanthropy and corporate philanthropy, despite the financial crisis and economic turmoil. In empirical studies, the growth of liability of the effects of economic decisions taken in a broad social context is fixed. As for companies, an interest in social problems is no longer just a tool for creating a positive image. The issue of deep integration of "good works" in the corporate business model is becoming relevant. In our opinion, this is what determines the preconditions to active inclusion in the business ecosystem of non-profit organizations. In the field of cooperation between NPOs and business structures there is a whole range of new research questions. One of the priorities is the study of specific forms of institutionalization of such a cooperation, including the inclusive business models and inclusive corporate ecosystem.

2.3. Inclusive business models and inclusive ecosystem

In the traditional sense, formulated by the United Nations Development Programme, it is considered that an inclusive business model is the one which implies the inclusion of low-income population groups in the value chain as consumers, employees, suppliers or entrepreneurs. In a broad sense, it is considered that inclusive business processes are those, which are implemented with the involvement of different social groups in socially-oriented programs that benefit both business and society.

We agree that the traditional idea of the inclusive business models, although it is associated with philanthropy and corporate social responsibility, is more precise, and focuses business only on solving the problem of poverty. Based on this, we choose a broad interpretation, which allows taking into account the entire spectrum of disease on society issues, the solution of which may involve business and its partners.

In the report «Tackling Barriers to Scale: From Inclusive Business Models to Inclusive Business Ecosystems», Ch. Gradl and B. Jenkins noted that inclusive ecosystem is similar to any other corporate ecosystem. However, it is distinguished by a specific composition of the participants. In addition to business, NPOs and charities play an important role in functioning of this ecosystem. Their activities are aimed at setting environmental and social standards, changes in social and cultural norms, sponsorship and lobbying of social projects (Gradl, & Jenkins, 2011).

The report rightly points out those appropriate structures are required for the success of inclusive systems. They will ensure their manageability, resource circulation, information and financial flows between the parties. The authors propose to allocate private initiative of individual companies, alliances, project-based companies with one or more organizations and platforms that allow a large number of different players to coordinate their activities with each other. This emphasizes the complementary nature of these structures.

The usage of the first structure can be slowed down by the limited resources of the company that is a serious limitation in times of crisis and economic instability. It is known that in the case of lack of funds, business is inclined to curtail the program of corporate philanthropy. There is an attractive alternative in this case, a company's partnership with a non-profit organization. In such alliances, which
we call cause-related, we see a new type of synergy that allows associating a company with a solution to any problem beneficial to society or the "good work" depending on the focus of the selected non-profit organization for cooperation. We understand cause-related alliances as a formal or informal agreement between a commercial organization and one or more non-profit organizations for the development and implementation of specific programs or projects involving solution of social problems, which are important not only for the target audience, but also for society as a whole. The simplest mechanism for the implementation of such alliances is the allocation of a certain part of income from the sale of certain goods to fund of a non-profit organization that uses the proceeds to solve a significant social problem. In the case when companies are interested in scaling its social projects, the third structure will be appropriate for them, which assumes the creation of "multilateral platforms" on their basis or on the basis of non-profit organizations or government agencies. According to the approach by A. Hagiu and J. Wright, a versatile platform ensures a direct interaction of two or more different types of groups of members or parties (Hagiu, & Wright, 2011). In the case where it is socially valued, participants interacting on the site of a multi-platform, are aimed at the creation of the joint efforts of both economic and social value. The basis of the platform can be a product, technology or service. Network platforms play a special role in the information economy.

The largest social project that is being implemented currently on the multilateral platform principles, is the movement of Scaling Up Nutrition or SUN, which was established in 2010. Its purposes are collective efforts of the parties to improve the nutrition and the fight against hunger. 55 countries and 2,000 organizations supported this movement and made the problem of nutrition one of the social priorities. Forty six multilateral platforms were created at the national level. Each platform includes a network of donors, civil society, the UN system and business. One of the donors of the program is the Bill & Melinda Gates Foundation, which marked the issue of food security as a priority of its activities. Food and Agriculture Organization, World Food Programme, The World Health Organization, The United Nations Children's Emergency Fund are involved in the implementation of the program on the part of the United Nations. According to the annual report of the movement, 47 companies participated in the program on the part of the business in 2014; and by the end of 2015, it is planned to increase their number up to 99. In 2015, 11 countries supported the creation of business networks involved in the implementation of national nutrition programs.

Thus, deep theoretical and methodological validity of the general consolidation of efforts of various stakeholders in addressing pressing social problems and issues in the modern world is obvious. Business and non-profit organizations can play an important role in this interaction. In the practical implementation of this idea, concrete initiatives, which could come from any of the parties to launch real projects of such an interaction, are required.

3. Draft a social network assistance to the needy in the treatment of diseases

3.1. The relevance and technical component of the project

We offer a project of a social networking, which may be of interest to both companies and non-profit organizations as well as individuals, allowing attracting and consolidating their efforts to address the problems of persons in need in the treatment of various diseases. The relevance of the project is not
in doubt. According to the roadmap, developed and presented by charities in March 2016 by non-governmental organizations and experts, there is over a million of severely ill Russians who need pain relief.

Social networks are one of the good options for the implementation of a multilateral platform concept. In social networks, there is a number of important advantages: an open nature, the ability to interact with the members of the network and audience targeting.

The site will be implemented in PHP language, Javascript, and Ajax. The architecture of the site database is shown in the figure.

![Fig. 1 The architecture of the site database](image)

The following pages will be created on the website:

1. General pages:
   a. News page, where publishes reports on the amount of funds raised.
   b. Internal messages.
   c. Patrons’ rating.

2. Pages of people with diseases:
   a. Profile.
   b. Photo.
   c. Blog.

3. Pages for patrons:
   a. Search page with diseases of people.
   b. Donations analytics website.
   c. Payment arrangement page.
There will be a system for data encryption to ensure data security on the web site. All servers are located in Russia, which is consistent with the law. The site will maintain the cache, which will speed up its work significantly.

According to the developers of the project, the social network users will be divided into two groups: people with illnesses who need help and those who are willing to help them (businesses, non-profit organizations, individuals). Each group will have its own interface of the site. People with the disease will provide information about themselves and their illness. In turn, individuals and businesses will be able to help them financially by means of the site, and NPOs will draw attention to the solution of any particular problem; to hold a rally to raise funds.

Site work will be carried out as follows:

1. People's diseases.
   After registration, a person is requested to complete additional information, and namely, to describe briefly the problem and specify the disease, attach documents and photos (of any kind) and indicate the required amount of funding (per month) for treatment. Patrons will have greater confidence when choosing the person who needs help with accounts with full information. It is worth noting that these fields are not required. After filling in the additional data, a summary account is listed. After that, it is available for search based on the various filters, such as gender, age, city of residence, the "complexity" of the disease, the necessary amount of financial resources and disease.

2. Patrons.
   Registration of accounts is not required for patrons. They are free to browse user profiles and donate. If the patron registers an account, he gets an access to the statistics and analytics of offerings. In addition, if desired, the patron gets into the top list showing the number or amount of donations.

3.2. The economic component of the project

Implementation of the donations is expected to be conducted as follows. An organization or an individual, using search filters, finds the person suitable for the parameters (gender, age, city of residence, kind of illness, the required size of funds, picture). In order to verify the quality of information, an organization or an individual can go to the profile of the person, who needs help, and find detailed information, see the medical records if they are attached, or send a message. After selecting a recipient, the patron will be transferred to the page with the payment, which will offer to choose the most convenient way to transfer funds. After paying, an organization or an individual will be able to subscribe to the news of the person for whom a donation was made.

All news will be published in the news line of the online member. After the payment is confirmed, a patron will be awarded points, which he can exchange for a certificate of NPOs, various products from site’s identica, and the ability to transfer these points to the following donation (converted into cash equivalent).

With each transaction, the site suggests to retain about 10 to 12%, 5% of which will be spent on the maintenance of the site, 5% are given as gifts for patrons, 2% is the fee charged by the payment system.

Website developers paid particular attention to the support of various Internet wallets. In their view, this will attract additional funding. After analyzing the existing systems in the field of charity used by
companies and non-profit organizations, we came to the conclusion that these payment systems haven’t been involved sufficiently until now. Internet purses potential is shown on the example of a streaming gaming service Twitch. On this site people are divided into two groups: those who broadcast the game online, and those who are watching these broadcasts. With donationalerts (donations online systems) about 146 million Rubles have been raised during one and a half year. All of these funds were spent to "support" broadcasters.

The ease of site functionality is that patrons will have a full access to the list of people with diseases and donations’ analytics. Thus, in the case of interest, the company will be able to assess the potential audience and the estimated amount of the necessary funds in advance. This feature is implemented through the introduction of filters and donations search analytics page.

Authors see the way of strategic development of the project in the development of different affiliate programs with business and non-profit organizations.

Business participation will be ensured in the following way:

1. The sale of goods with a company logo, a percentage of sales is charged by NPOs. This option will be implemented through:
   a) Placing a link to the business partner's site.
   b) Establishment of a web-resource for an interaction with organizations. On the basis of the resource, the realization of the online store and placing brief information about the campaign are possible.
   c) Starting an online store based on the social network.
   d) Building of landing pages with a catalog of goods for every special offer on the basis of a social network.

2. Rewards for the most active supporters. It can be various certificates for discount, and branded products. This possibility will be due to the scoring system, when a patron gets a certain number of points for a donation, which can be exchanged then for one of the offered products (certificate, t-shirts and others.). At the same time, each product will have its cost.

3. Donation of funds in favor of the social network. In this case, the social network itself distributes the funds among people with diseases. A report on the movement of funds is published.

In return, a business partner gets the opportunity to advertise on the site on different pages (the main page, in the search section, in the news section, the section of analytics and others.). Also, the company can publish news.

All statistics on the raised funds and the results of every special offer will be placed in the general news. Thus, it will be available for everyone, even for unregistered users.

Participation of non-profit organizations in the project will be organized as follows:

1. By mutual advertising, when an advertisement is placed on the NPO pages of the social network, and vice versa.

2. Due to the "exchange" of the people with diseases, when the social network database adds people with diseases from the NPO database. In this case the account is marked with the mark of the charity fund logo, part of the funds transferred to its account.
3. By placing links to NPOs in the first search box. For example, if a non-profit organization is engaged in solving the problems pointed out by the donor in the search filter.

To summarize, we note that the proposed project is new to Russia. When creating its functional authors have provided a number of unique features:

1. Accumulation of the large amount of information about the patrons and the needy at one site, which removes the need for an independent search of non-profit organizations and an individual.

2. Large amount of online wallet that allows attracting new audiences that have not previously been involved in charity.

3. A simplified search by means of using filters.

4. An ability to help with a specific amount of money.

5. An ability to break donations into small amounts of money.

6. An ability to implement partnership programs, including those aimed at motivation of business and individuals to actively participate in charity.

7. The donation system on the principles of competition.

In conclusion we note that the interaction of the participants within the framework of inclusive corporate ecosystem stands as a brand-new resource for solving social problems, the potential of which has yet to understand, discover and use. It is obvious that the formation of these ecosystems has a deep base, transforming the very essence of the concepts of competition and cooperation. There is a new reality of competitive collaboration in which business is moving towards an understanding of their responsibility for the decisions and the need to consolidate with the widest possible range of partners in the implementation of social projects and programs designed to help all categories of the "need."

The proposed project is the social network made by the authors and it has a broad and unique functionality and can be used for the development and launch of platforms related to any acute problems of society. However, it is important that the number of initiatives to create inclusive corporate ecosystems at various venues, increase. Achieving a critical mass of these projects will allow achieving a breakthrough in achieving economic and social well-being of society and its citizens.

Acknowledgements

This work was performed as part of the scientific theme of the Humanitarian University 2.3. "Economic-mathematical modeling of applied problems of the economy." This work was performed by the author in collaboration with Tomsk Polytechnic University within the project in Evaluation and enhancement of social, economic and emotional wellbeing of older adults under the Agreement No.14.Z50.31.0029

References


