

# ANALYSIS OF COMPETITIVE STRATEGIES OF STARTUPS UNDER CONDITIONS OF GLOBAL CHALLENGES

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## ABSTRACT

*The paper identifies the main differences between a start-up company and a traditional enterprise and identifies the features of their competitive strategies. The main aspects of determining the development strategy of start-up competitive advantages based on economic and mathematical modeling are considered. On the example of the start-up project “Multiservice of Intelligent Management of Finances and Needs”, the task of which is to create a new model of human behavior independent of the money factor and create an environment of internal incentives for the individual that contribute to the creative solution of certain tasks, the developed model was tested. The proposed integrated approach to assessing economic efficiency is relevant in the context of the formation of an innovative environment for the development of start-ups and allows creating competitive advantages.*

**Keywords:** Start-Up Companies, Competitive Strategies, Innovative Development, Innovative Business Ideas, Indicator.

**JEL Classifications:** M21

## INTRODUCTION

Current trends in world economic development show that the practice of strategic management of economic systems has undergone significant changes. In the context of the formation of a global innovation environment, increased competition between countries of the world economy on the world markets of high-tech products is especially important in the development and implementation of innovative strategies for the development of economies based on dynamic efficiency as a source of competitive advantage.

In the conditions of intensified competition, one of the main problems for countries and economic entities is the creation of mechanisms for obtaining competitive advantages in the field of high technologies. Without a deep study of global innovation processes and innovative strategies at various levels, forecasting the development of the global economy becomes impossible. Therefore, the issue of developing theoretical and scientific-practical aspects of this issue is being updated.

Under the current conditions of globalization, a key factor in dynamic competition is the innovativeness of the economy, and in these conditions, it is start-up projects that are able to generate unusual ideas.

## REVIEW OF PREVIOUS STUDIES

The term start-up stipulates that a person or a company has a certain business idea that it wants to develop and promote in the market, but it is still only engaged in market research and finding ways to promote its idea, including seeking funding sources (Yang et al., 2019). Most often, start-ups are completely innovative business ideas or significantly improved existing ones.

At the same time, the external orientation of the innovation policy is closely related to the policy of accumulating technological competencies within the framework of Quintuple Helix.

The main differences of a start-up company from a traditional enterprise are: implementation is characterized by a high level of uncertainty of the project of creating an innovative product or service (Drobyazko et al., 2019 a & b); innovativeness of the project, due to the use of innovative technology, innovative commercial model or a new way to meet customer needs (Frederiksen & Brem, 2017); existence of significant potential demand for the created product/service or forecasting its intermittent growth in the short term (Ghezzi & Cavallo, 2018)); “*lean thinking*” among the creators of a start-up company (Hilorme et al., 2019a), an ability to learn in the process of activity, to collect opinions from customers and conduct an experience-based product development process (Hilorme et al., 2019b); Makedon et al., 2019); no need for financing at launch, the creation of a prototype of a minimally viable product or service in a short period of time at a low cost level (Mansoori, 2017); making a further decision on financing the project based on consumer feedback (investments can reach hundreds of millions of euros) (Zhong et al., 2018); The boom of start-ups plays an important role in economic development: start-up enterprises create innovations, create jobs and fill the idea of competition with life.

## METHODOLOGY

The study was conducted on the basis of the use of general scientific methods of cognition, a systematic approach to the analysis of economic phenomena and processes, as well as the basic tenets of modern economic theory and an interdisciplinary approach.

Let’s consider the main aspects of determining a development strategy for a competitive advantage of a start-up based on economic and mathematical modeling. The market aspects of modern infrastructure indicate that the assessment is characterized by a significant list of comparable options when achieving a positive result.

## RESULTS AND DISCUSSIONS

One of the most relevant contemporary aspects of the development of the theory of competitive advantages is the concept of co-creation of value, based on the idea that all companies involved in the production process of a particular product, including suppliers, manufacturers, intermediaries, take part in creating value, as well as the client and various other companies and organizations, including financial institutions, higher education institutions, research centers, consulting, marketing and advertising firms. Thus, the concept of co-creation of value assumes that market participants enter into mutually beneficial relations based on an understanding of the totality of advantages.

Based on certain aspects, we will consider the strategic development of start-ups in the condition of intensified competition. The performance indicators of strategic development of start-ups were considered. They play a key role both in the process of implementing evolutionary

development and in the issue of maintaining a high level of effectiveness of strategic development.

One of the main and most important reasons for the development and success of start-ups is the relative slowness of large corporations, which often do not develop certain ideas due to their lack of verification, and sometimes focus on the production of existing products without thinking about inventing and introducing new ones. That is why start-ups as a new organizational form of innovation due to their mobility in terms of implementing new ideas compete with large corporations.

Qualitative and quantitative parameters indicate that it is necessary to search for effective solutions on an alternative basis. The integrative matrix of possible useful results of the used solutions is characterized by a system of inequalities:

$$\begin{cases} P_{PP} = P_{PP}(a), P_{IQ} = P_{IQ}(a), P_{OY} = P_{OY}(a), P_{IP} = P_{IP}(a), P_{GRI} = P_{GRI}(a), \\ P_{PI} = P_{PI}(a), P_{CP} = P_{CP}(a), P_{EPI} = P_{EPI}(a), P_{TP} = P_{TP}(a), P_{EKI} = P_{EKI}(a). \end{cases} \quad (1)$$

Where:  $P_{PP}$  – legal system indicator,  $P_{IQ}$  – educational and scientific system indicator,  $P_{OY}$  – organizational and management indicator (micro level),  $P_{IP}$  – information support indicator,  $P_{GRI}$  – state administration indicator,  $P_{PI}$  – market indicator,  $P_{CP}$  – social development indicator,  $P_{EPI}$  – economic indicator,  $P_{TP}$  – technological state indicator,  $P_{EKI}$  – environmental indicator.

Comparing  $a_i$  and  $a_j$  on an alternative basis, we have a system of probabilistic models of possible situations, for example:

$$\begin{cases} P_{PP}(a_i) > P_{PP}(a_j), P_{IQ}(a_i) < P_{IQ}(a_j), P_{OY}(a_i) < P_{OY}(a_j), P_{IP}(a_i) > P_{IP}(a_j), \\ P_{GRI}(a_i) > P_{GRI}(a_j), P_{PI}(a_i) > P_{PI}(a_j), P_{CP}(a_i) < P_{CP}(a_j), P_{EPI}(a_i) < P_{EPI}(a_j), \\ P_{TP}(a_i) < P_{TP}(a_j), P_{EKI}(a_i) > P_{EKI}(a_j). \end{cases} \quad (2)$$

Let's suppose that start-up management at the international level monitors social and economic factors.

If the conditions  $P_{CP}(a_i) = P_{CP}(a_j), P_{EPI}(a_i) \neq P_{EPI}(a_j)$  are met, it is difficult to compare the innovative systems we have chosen.

As a criterion for the effectiveness of decisions made, there may be a criterion for the maximum economic effect  $E_{max}$ , equal to the difference between the income and expenditure financial and economic effect of the budget:  $P_{CP}(a_i) < P_{CP}(a_j), P_{EPI}(a_i) > P_{EPI}(a_j)$ , that is, from the point of view of financial and economic effect, the option exceeds the same indicator  $a_j$ , but gives way to  $a_j$  on quality. Therefore, priority (advantage) cannot be attributed to the option with the index  $i$ .

With a limited number of scenarios and a fixed probability, the expected integrated economic effect of the strategy option is calculated using the mathematical expectation formula:

$$E_w = \sum E_k P_k \tag{3}$$

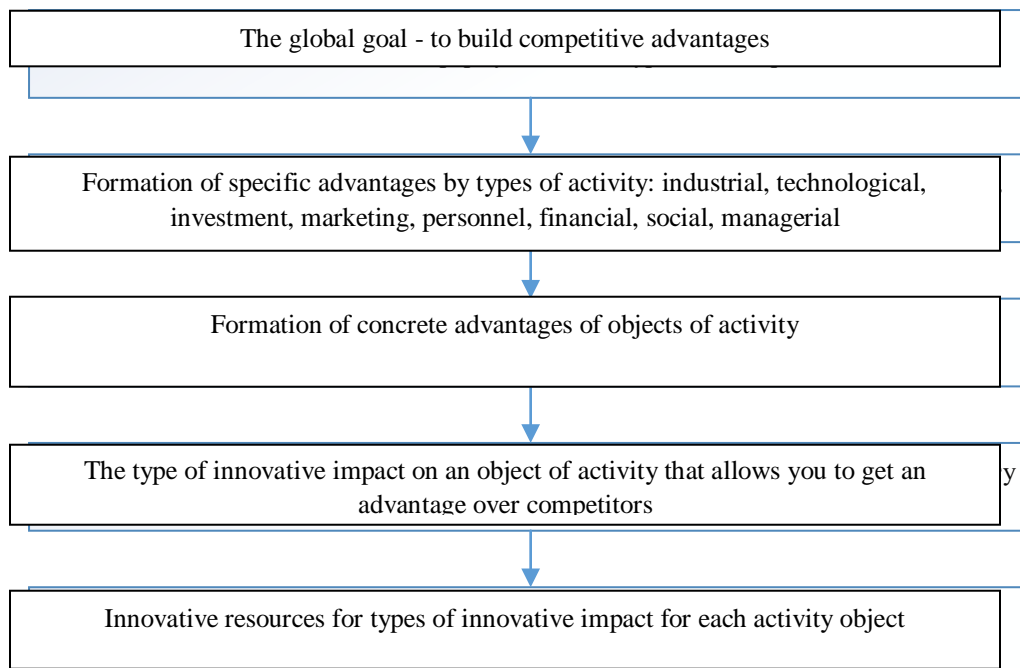
Where,  $E_w$  - Expected integral economic effect of the functioning of innovation infrastructure;  $E_k$  - integrated economic effect of the functioning of innovation infrastructure at the  $k$ -th scenario;  $P_k$  - probability of innovation infrastructure competitiveness of the  $k$ -th scenario.

On the example of the start-up project “*Multiservice of Intelligent Management of Finances and Needs*”, the task of which is to create a new model of human behavior independent of the money factor and create an environment of internal incentives for the individual that contribute to the creative solution of certain tasks. The market potential is more than 50 million users of B2C and B2B segments. Marketing research and surveys show high indifference to the subject matter of the project.

Table 1 shows the calculated comparison for two options (national and international) of the start-up development strategy, which proves the effectiveness of the international strategy.

<b>Table 1 COMPARATIVE ANALYSIS OF OPTIONS FOR THE STRATEGY OF THE INNOVATION STRUCTURE</b>			
<b>Strategy</b>	<b><math>E_k</math> (Determined based on marketing analysis)</b>	<b><math>P_k</math> (Determined based on an analysis of strategies)</b>	<b><math>E_w</math></b>
National	300	0.5	150
International	500	0.7	350

Source: Author's calculations



**FIGURE 1  
METHODOLOGICAL ASPECTS OF THE STARTUP DEVELOPMENT STRATEGY  
BASED ON DYNAMIC EFFICIENCY (AUTHORING)**

The content characterization of the innovation process or cycle should be expanded to include the whole complex of modern management technologies, works and activities and a rationally structured system of resource planning, managerial and financial accounting, marketing, the life cycle of innovation in the market (integrated management system), Figure 1.

Thus, the proposed integrated approach to assessing economic efficiency is relevant in the context of the formation of an innovative environment for the development of start-ups and allows creating competitive advantages.

## RECOMMENDATIONS

In our opinion, companies should move from competition for expanding their share in well-known markets in a more differentiated marketing strategy through the implementation of strategic management. We propose to implement this aspect on the basis of Agile development, a flexible development methodology, including a series of approaches to the development of IT products focused on the use of interactive development, the dynamic formation of requirements and their implementation as a result of constant interaction within self-organizing working groups, consisting of specialists of various profiles.

A flexible methodology is focused on the user as a source of competitive advantage. It is estimated that more than 40% of start-ups fail because their founders are trying to solve interesting, but irrelevant problems.

## CONCLUSIONS

The study found that dynamic efficiency is based on modern models of innovative systems and the use of new knowledge and ideas in the global economic space in order to obtain the greatest benefits, which necessitated the expansion of the area of responsibility not only in the framework of innovative, but also foreign economic policy.

Historically, a national innovation system often played an important role in maintaining and consolidating a competitive advantage and was considered as a driving force for achieving economic superiority. However, new competitive technologies, as a rule, are not created by just one entrepreneur or organization, but are developed using complex mechanisms based on interorganizational networks that go beyond national spheres of influence.

The processes of globalization, which lead to increased competition in world markets, dictate the need for appropriate institutional transformations. The most important components of the institutional environment in the framework of the international strategy are those that provide an environment for strategies-postindustrial and neoindustrial, that is, environments (institutions of intellectual property, venture capital, innovative marketing, programs, business models, innovation market) promoting fundamental practically oriented research in all industries.

The analysis showed that in industrialized countries, the national innovation system, as a rule, covers business innovation, telecommunication and trade networks, technology transfer centers, innovation and technology centers, technology parks, business incubators, training centers, consulting organizations, financial institutions, venture capital funds and a number of other elements of the subsystem.

Thus, with the development and complexity of innovation processes at the national and global levels, global innovation networks are formed that define new principles for building relations between the subjects of the national innovation system, in particular, the state, science and business. The network model of innovative development involves multi-vector knowledge

flows, low transaction costs, spontaneous association of agents for the implementation of an innovative project, in particular based on modern IT solutions.

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