

Business models evolution in a context of multi-sized platforms use for micro-enterprises

Annotation:

Information technologies play a great role in modern economics. They change business environment, modify existing business models and create new ones. Their advantages are rapid changes in processes, fast decision making and cooperation between a large number of participants. Last decade introduced multi-sided IT platforms, cloud and network technologies. They motivated great changes in economic including new productivity factors such as product (service) quality, price and time. To survive companies tried to find new management tools that would help to create new competitive advantages. Active development of multi-sized platforms could help to small companies to compensate the lack of resources. They help to find new solutions to compensate low qualification of managers, find new specialists or ready business models.

Keywords:

SME, multi-sided platforms, business models

Submission text:

Information technologies play a great role in modern economics. They change business environment, modify existing business models and create new ones. Their advantages are rapid changes in processes, fast decision making and cooperation between a large number of participants. Last decade introduced multi-sided IT platforms, cloud and network technologies. The cloud and network technology development created specific opportunities for communications and cooperative use of informational resources by people from different territories and social groups. From another side of the process are business opportunities to use information networks as resources that can develop business processes and create new business models. Yablonsky [Яблонский С.А., 2013] in his paper shows that not only big and mid-sized companies use multi-sided platforms (MP), but micro-enterprises successfully use a great number of information systems. The top-ranked IT-companies develop MP that could be classified by technological features as searching engines, social networks, open cloud MP and data storage platforms, and they are interested in collaboration between large product developers and a big number of small product users.

The business model in a traditional context is defined as a set of an abstract representation of business processes organized under specified conceptual basis. The model should have the same characteristics as a real management system has. Usually, the business model is designed and developed by an organization presently, and in the future, in a conceptual, graphical or cooperation arrangements and further real processes could be designed or changed in the same way. The model logically describes how it produces goods and distributes them to customers or how the service process goes; how the economic, consumer or social value is created during the production process.

The formation of a separate scientific direction devoted to business models, as well as the corresponding terminology, began relatively recently, in the 70-80s. During the last century,

nevertheless, the theoretical foundations of modeling processes are well developed. In determining the essence of this concept in modern literature, two approaches stand out:

1. Process-oriented. This approach involves the consideration of the organization's activities in terms of business processes and technologies, i.e. it is directed to the organization and is focused on technology. This approach can be attributed to the PUSH management concept, as it builds the model based on production process features. The model assumes first the production of the product, and then the search for ways to sell it.

2. Customer-oriented. This approach gives the orientation on the value that the enterprise creates for external customers, and on the results of the business, i.e. it is a business-oriented approach. This approach can be attributed to the PULL concept of management, according to this issue the business model is created based on the needs of the customer, the product is produced at the request of the customer in accordance with his wishes.

The modern development of the economy led to the fact that in the first place came three key success factors. They are the quality of products (services), price and time. Those factors stimulated the development of several new management approaches, that allowed to achieve competitive advantages in the field of product quality, organizational costs, fast decision-making and quality of business processes. Table 1 shows that the key role in the adaptation of business models to modern conditions belongs to information technology, and the innovative process of the last decades has been the active development of multi-sided platforms. MP in the literature are understood as organizations that own an infrastructure that allows to unite and coordinate the actions of participants, the process of creating value in which is directly and closely related to the outcome of such interaction [Yablonsky, 2013; Hagiu, 2004].

Table 1

Evolution of management and automatization of business processes

Stage	IT era \ Period	Characteristics
I	Hand-operated Second half of 19 th century	All processing of information was carried out manually. Communication was carried out by sending packages (letters).
II	Mechanic Late 19 th century	The appearance of a typewriter, a telephone, the modernization of the public mail system that lead to the increase in labor productivity.
III	Electric 40 – 50 th of 20 th century	The period of wide use of electric typewriters, Xerox copy machines and portable Dictaphones. Fast document processing and an increase in quantity and quality of labor improve management effectiveness.
IV	Electronic Second half of 20 th century	The appearance of big computers situated in centralized computer centers. This period is famous for the creation of automated management systems - man-machine complex under specialists supervision. In the period were mainly developed accounting management functions and statistical data processing operations. Analytical work and the decision-making process take place separately from the actual situation and are not supported by the communication process. There are no data aggregating tools. A new

		model is required for each new task.
V	Computer The mid-70s of 20 th century	In this period went fast development of personal computers (PCs) and necessary computer equipment. The idea of automated management system was re-developed and placed in the focus the distribution of computing potential, increase the uniformity of information processing technology and decentralization of management. Decision support systems and expert systems had got great development in this period. There was a stage of personalization of PCs. It became possible to analyze the results of various decisions and get answers to questions like «What will be, if...?»
VI	Networking The mid-90s of 20 th century till present time	Intensive development of Internet technologies, cloud technologies and social networks (Vkontakte, LinkedIn, Facebook). The network has become both a standard data transmission tool and a mechanism for commercial activities of organizations. The network can be the most operational communication tool while managing business processes. This period is characterised by the development of the multisided platform.

Social networks (Vkontakte, LinkedIn, Facebook) which allow firms to place advertisements, create communities and use additional services (for example, resume search), payment services (PayPal, Visa) or sites for finding business partners can be understood as multi-sided platforms. The existence of multi-sided platforms is caused by the needs of business and is not the discovery of recent years [Kovalenko AI, 2016]. Attention paid to MP now is explained by the impetus to the development that they received from the wide use of information technology capabilities. For example, the handango.com site, owned by Handango, founded in 1999, provides brokerage services for mobile devices software developers and buyers of these applications. Well-mastered IT products in terms of business use today are search Internet systems. Any company using Yandex Direct or Google AdWords can post information about itself and its products (services), contextual advertising and find consumers. The development of social networks provides even greater opportunities, especially for small, medium and microenterprises. Creation of a group in a social network allows to the company not only to disseminate information to potential customers and consumers, but also receive feedback from the members of the group and take it into account in planning their activities. The main advantages, which in the market economy give the multi-sided platforms use for a company can be summarized as follows:

1. Cost-efficiency congestion [Haigu, 2004] allows participants to reduce the time to find the best offer for buyers and to find a loyal target audience for the seller;
2. Receiving benefits that can not be obtained otherwise, for example, access to unique information, to large supply chains or to a broad target audience;
3. The emergence of a variety of wave and network effects associated with the free dissemination of information on the Internet [Yablonsky, 2013];
4. Overcoming the insufficiency of resources by attracting them for a short period of time, as well as sharing risks [Casals, 2011].

Micro-enterprises are a very special sector of the Russian economy. Over the past 7 years, they have had the lowest investment in fixed assets - only 1.8 - 3% of the total for the economy, and the lowest specific indicator of investments per company: 0.145 million rubles, compared with 0.350 million rubles for small and 35.56 million rubles for medium-sized enterprises. In 2008, they had the highest

turnover per employee ratio; it was 2,044 thousand rubles, which is 14% more than in the group of small enterprises and 43% higher than in the group of medium-sized enterprises. The turnover of micro and small enterprises for 5 years has steadily grown and amounted to 26,392.2 billion rubles in 2014, which is 40% higher than in 2010 - 18933.8 billion rubles. Due to its flexibility and mobility in decision-making, it is easier for small and micro enterprises to control the production process and quickly reconfigure it due to changes in demand in the market. They are characterized by high maneuverability of production in comparison with large enterprises. That is why the advantages of multi-sized platforms are objects of great interest to microenterprises that are characterized by extremely low survival rates and very often by the low level of managerial competencies of their owners. For such companies, the use of MP will compensate for the lack of competence due to well-established processes or short-term involvement of specialists. For example, in Germany, in an empirical study, the use of platforms was identified as one of the most important factors in the survival of small businesses [Buliga, 2014].

Based on the results of a study conducted by Google in October 2015, the use of multi-sized platforms allows significantly expand geographic markets for companies that do not have enough resources for individual work on the internationalization of business, for example, the opening of own production or representation abroad. Another reason for using MP for small businesses is to support innovative technologies, new types of business, or search for investors for small projects. For example, a new development of the business model is obtained on the basis of a direction such as the Internet of things (IoT) that allows them to find partners with the help of the MP and to share costs for automating business processes with them, thereby freeing up working time for specialists, allowing them to focus on more interesting and creative tasks. Such non-standard approaches allow to speed up the processes of production of goods and services, customer service and, thereby, reduce the company's total costs, which is very important for small businesses, and especially for microenterprises.

Business owners say that the use of MP gives them greater control over processes compared to traditional methods, greater involvement of each employee in the process of creating value for clients increases transparency of transactions and gives access to more goods and services. Entrepreneurs consider e-commerce and investment activity to be the main types of activity that will benefit from the use of MP, and the creation of the company's reputation and brand promotion, recruitment, logistics and information support of business processes are leading in terms of business processes [Kalyvides, 2015]. Thus, a study of the potential of micro-enterprises for microenterprises seems relevant and timely, capable of identifying the interrelationship between the survival of microenterprises and the use of updated business models based on MP, which allows creating new value for customers.

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