

Role of the Manager for Development of Innovative Construction Firm

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Abstract -In modern conditions the success of each firm is a function of its innovativeness. The development and realization of any innovation is a results ability to identify and analyze the need for changes, to develop a system of solutions for reconfiguring resources and competencies in response to changes in the external and internal environment, and to implement the necessary actions to adapt to them, i.e. to build and develop its dynamic capabilities. In studies of dynamic capabilities is given relatively little space and attention to the way they create, develop, and their role in the work of new, starting his business firm (most authors focus on the problems in big, established companies). Therefore in the study the author aims to: 1) Development of a model of building dynamic capabilities in new, innovative firm that includes recognizable, understandable and measurable components for managers, 2) Empirical research of the developed model of the dynamic capabilities in the work of two innovative companies operating in the market of building construction.

Keywords - Competitive advantages, Construction market, Dynamic capabilities, Entrepreneurial capabilities, Innovative construction firm, Model "4P", Performance

I. INTRODUCTION

In modern conditions the success of each firm is a function of its innovativeness. The development and realization of any innovation is a result of corporate ability to identify and analyze the need for changes, to develop a system of solutions for reconfiguring resources and competencies in response to changes in the external and internal environment, and to implement the necessary actions to adapt to them, i.e. to build and develop its dynamic capabilities. In studies of dynamic capabilities is given relatively little space and attention to the way they create, develop, and their role in the work of new, starting his business firm (most authors focus on the problems in big, established companies). This is a serious shortcoming in theoretical research because the new firm especially needs the creation and development of unique capabilities that allow it to adapt successfully to the dynamics of the external environment in order to survive and/or to realize growth, taking advantage of their innovation.

Each newly emerged firm has an idea for the realization of innovation. The innovation process in the company is associated with the development and introduction of new products/processes as a result of monitoring of marketing and technological changes, assessment of opportunities and threats, and primarily the acquisition of new knowledge, integration with internal knowledge to find the right way and direction for development. The innovation change demand, create new markets and transform relationships between customers and suppliers, but at the same time the process has been accompanied by difficulties, uncertainty, high risk and increasing costs. Since its creation, the theory of dynamic capabilities of the firm is associated with the development of innovation as a key factor to reduce uncertainty and increase opportunities for realizing competitive advantages and performance. The management team of newly established firm must solve several key issues[1]: 1) what capabilities to develop, what elements to include in the system of dynamic capabilities, 2) what specific decisions and methods, approaches to apply taking into account the specificities of the firm, 3) how dynamic capabilities can change the company resources and to develop innovation. Therefore the

aim of the study is: 1) Development of a model of building dynamic capabilities in innovative firms that includes recognizable, understandable and measurable components for managers 2) Empirical research of the developed model of the dynamic capabilities in the work of two innovative companies operating on the market of building construction.

II. THEORETICAL FRAMEWORK OF THE STUDY

In this chapter we will develop the theoretical basis and will deduce: 1) practicable model of building dynamic capabilities in innovative firm that includes recognizable, understandable and measurable components of managers, 2) based on the model will define working hypotheses that will be empirically tested on the market of building construction.

Dynamic capabilities are the "ability of each company to identify need of changes, evaluate alternatives and to take appropriate decisions to adapt to external changes, which include strategic and organizational internal changes" [2]. They are related to the company's ability to use its tangible and intangible resources and to develop, expand and change its resource base in order to get the desired result. Starting point in the creation of dynamic capabilities is the "entrepreneurial activity"[3], which includes solutions for production, choice of resources, appropriate skills development, training, organizational knowledge to develop the resource base and which allow quick adaptation to dynamic external environment and constantly changing conditions. Material resources of the firm predate the dynamic capabilities, but over time the links between them are becoming more complex and intricate. At the center of this complex process stand entrepreneurial capabilities and activities of managers who focus on [4]:

1) Adaptive capability. This is the ability to monitor changes in the environment and assess the possible development alternatives. It is associated with the collection of information, data on changes in tastes, preferences, consumer demand, competitive actions and reactions and the emergence and development of new technologies. The collected information identifies opportunities for the development of innovation (product and/or process) and the firm.

2) Absorptive capability. This is the ability of the manager to recognize and evaluate external information, to assimilate new knowledge and apply it in practice. The development of the training system, creating capacity for acquisition, utilization and sharing of knowledge and creating a new way of thinking is the most significant factor for the development of new initiatives and programs and the renovation of existing resources and functional competencies (market, technology, management).

3) Innovative capability is the ability to change the way in which the problem is solved. It defines the required reconfiguration of existing opportunities in order to increase the efficiency, speed and value of the innovation activity. Basis for the development of innovation capacity is propensity to risk on the part of managers and their desire to find, develop new solutions, new, different combinations.

Monitoring, evaluation of alternatives and learning are directly related to the dynamics of the external environment and are a function of the adaptive, absorbing and innovative capacity of the senior management team. They can be defined as dynamic capabilities of higher - second level, which reconfigured the company competencies in response to changes in the external environment.

These conclusions make it possible to put the first hypothesis: **Dynamic capabilities of second level in new, innovative firm is a function of entrepreneurial capabilities (adaptive, absorptive, innovative capabilities).**

Adaptive, absorptive and innovation capability of managers in new, innovative firm are the main factors, components that provide constant possibility of the firm to "integrate, reconfigure, update, develop and change its resources in accordance with changes in the external environment"[5]. Although common to all firms these factors are developing differently, unique in each firm. Building dynamic capabilities depend heavily on the managers and their evaluation of changes in the external and internal environment and on this basis the development of corporate strategy, which includes specific solutions and actions based on known best practices, general knowledge and skills. Therefore, dynamic capabilities are specific organizational process related to the selection and creation of new synergistic combinations (reconfiguration) of the resources and assets of the firm. The processes of integration, coordination, and reconfiguration are related to internal organization and can be defined as the dynamic capabilities of the first level, that develop through the expansion and improvement of management capabilities.

The most complex problem for the manager associated with the extremely high risk, is the decision to change and reconfiguration functional competencies/resources, which means searching for entirely new capabilities for technological development, entering new markets, developing new product or in short innovation. These solutions and related actions are a function of the built dynamic capabilities and functional competencies that innovative companies need to develop in the following four areas (Model 4P - Product, Process, Position, Paradigm) [6]:

1) Product development (Product) directs the company to the development of specific business competencies that create conditions for the establishment of a new or change, modification, improvement of an existing product, in accordance with customer needs.

2) The development process (Process), as the second element of the model includes a series of horizontal technical work. The realization of this innovative direction in new firms associated with the demand for information, knowledge for the development of new technologies, choice of suppliers, external partners or a decision to participate in the development of open innovation.

3) The third element of the model "4P" - Position - is associated with the process of successfully positioning the company product.

4) Especially important is the last fourth element - Paradigm - definition of strategic goals and strategic development. Strategic development should include activities related to the protection and expansion of market position and improve the organization and management of human resources.

Therefore, the second hypothesis can be formulated: **Dynamic capabilities of first level in new, innovative firm is a function of the managerial and organizational activities.**

The analysis and conclusions allow us to define dynamic capabilities as intellectual inputs in the firm that improves its main business, through a process of reconfiguration of internal and external resources and capabilities (or newly acquired), which in its turn have a back impact by developing and create new dynamic opportunities. The components of the dynamic capabilities in this complex, multidimensional structure are:

1) Monitoring, 2) Evaluation of alternatives and 3) Learning. These three activities are a function of the entrepreneurial ability of managers and defined as dynamic capabilities of second level,

4) Integration 5) Coordination, 6) Reconfiguration, which are a function of the internal organization and managerial activity of the firm and are defined as dynamic capabilities of first level.

They cannot claim to be exhaustive, but recognizable, understandable for the firm and managers and can provide realization of final goal - reconfiguration of functional competencies (marketing, technology, management). Each component of the dynamic capabilities is different, unique to each firm and offers a specific way for reconfiguration of functional competencies and creating new ones. This is the basis to develop a model of the dynamic capabilities, which includes understandable and measurable components into account the specificities of the new, innovative firm(Fig.1).

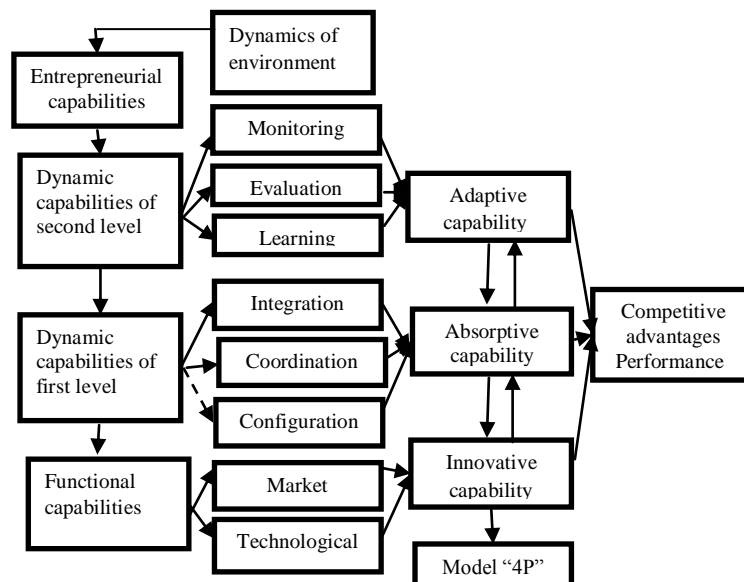


Fig. 1. Model of dynamic capabilities in new, innovative firm

III. APPLICATION THE THEORETICAL MODEL OF THE DYNAMIC CAPABILITIES IN INNOVATIVE FIRM AND TESTING OF THE HYPOTHESES

In this chapter of the study, the developed model is applied to the analysis and evaluation of the process of building dynamic capabilities in two new, innovative construction firms working in the market of building construction and

working hypotheses are tested. The survey is exploratory, searching for evidence about the potential of innovative construction company to build dynamic capabilities in order to create competitive advantage and performance, taking into account their specific characteristics.

3.1. Method and restrictive conditions in the study

The surveyed firms participate actively in the construction market in Bulgaria from 2008-2010 years. One of them operates in the market of public and residential buildings. It is created by a young entrepreneur who has so far worked in a large, well-established construction company, which allows make a comparative characteristic of the process of building dynamic capabilities in innovative and the large, established company in the market. The aim of the firm is to offer only innovative products with high specialization, high quality, focused on the client's wishes and for flexible solutions to each individual problem. It is focused on principles: Quality control and customer feedback. Employed in the company (about 10 people) are trained and ready to implement new, efficient, innovative technologies and solutions in harmony with the environment.

The other company is created in 2009-2010 years by changing its corporate identity and marks a new stage in its development. The company is specialized in the design and creation of specific structures applicable in non-residential construction, especially in the design and construction of logistics centers, with which she fills a market niche in which demand is greater than supply. The company works with a staff of 20 people and uses technological equipment that meets the highest modern requirements, especially in the production of building materials. The aim is to modernize, improve and enhance the quality of products and services in order to adequately respond to market trends and optimal satisfaction of investors through innovation and innovative approach.

First hypothesis: Dynamic capabilities of second level in new, innovative firm is a function of entrepreneurial capabilities (adaptive, absorptive, innovative capabilities) was tested through interviews with managers at different levels in the company (business unit), in which they answer questions and describe the frequency with which they carry out the monitoring and scanning the external environment, the frequency with which is implemented the introduction of new products in a given market and the necessary change in its marketing practices, technologies and others.

The second hypothesis: Dynamic capabilities of first level in new, innovative firm is a function of the managerial and organizational activities was tested by an analysis and assessment of the systems that improve business organization, allow effective integration of individual and collective knowledge in coordinating the process of efficient allocation of scarce resources. Were assessed management skills for effective administration, coordination and control of all activities at all level. Reconfiguration of existing resources and functional competencies and creation of new ones was evaluated by developing and implementing long-term strategies and flexible solutions in the short term.

3.2. Methods used by managers to build the dynamic capabilities in the firm

In a changing external environment, managers in the new firms cannot build a complex system of dynamic possibilities suddenly and fully. The first problem for any manager is to determine the scope of dynamic capabilities and connections between components. In emerging firms he is limited and focused on several components of their overall structure (such as monitoring, learning). In contrast, in established companies on the market scope of dynamic capabilities and focus on them is big enough and wide.

Next is particularly important to clarify the methods and mechanisms that can use the new firm to create and/or develop their dynamic capabilities and change the resource base. These firms are more inclined to *improvise* in their activity because do not have rich resources and experience, time for reflection and planning of any decision [7]. This requires as a basic mode of action application of the principle "*trial and error*", which allows the accumulation of experiences, information about the actions and the corresponding reactions that can be used without any effort at a later stage of development of the company for similar solutions in similar situations.

Young firms due to lack of time, resources and experience are more likely to learn on the go, but over time the accumulated information and knowledge will allow them to more accurately predict the outcome and plan various experiments, unlike the "old" firms with the experience and knowledge that often apply the method of experiment and take a final decision based on comparing different results.

Overall comparing different ways approaches that firms use to build the complex and multidimensional construct dynamic capabilities can conclude that the *experiment* presupposes and requires a higher level of organization and control compared to improvisation and principle "*trial and error*". The decisions that take new firms are unsystematic, unplanned, impulsively and often dramatic. This suggests that the speed and depth of change are greater

in less structured knowledge and less experience in new, young firm. Big, radical unexpected change is more likely to happen in firms that are not well organized structure and who now learn and change under the influence of external stimulus [8]. The main factor for building dynamic capabilities has the manager and his own skills, knowledge and abilities to see the prospects for development of their own company.

3.3. Main results of the study

Testing the first hypothesis: Dynamic capabilities of second level in new, innovative firm is a function of entrepreneurial capabilities (adaptive, absorptive, innovative capabilities) indicates that the management team of both firm carry out continuous monitoring, scanning the dynamics of the environment and processing large amounts of information. Adaptive ability allows identification new opportunities for development of the company, depth study of the impact of macro factors - the market and technological development of the local and global level. The construction market this process involves analysis and detection of latent demand, technological developments, and analysis of government and regulatory mechanisms the impact of general economic and social factors, the requirements for environmental protection and others [9]. At the micro level, the monitoring process includes analysis of the market structure and the level of competition, possible actions and reactions of competitive behavior, relationships with suppliers, opportunities construction of vertical integrated systems, investments in research, etc. The managers believe that only monitor the external environment is not enough because is possible, the need for change is induced and/or internal reasons of dissatisfaction with the company's position, the current state of resources and others. The simultaneous monitoring and evaluation of external and internal environment allows to make and assessment of the company's capability to respond to the dynamic changes with the existing potential, or its development, expansion or creation of new configurations. Adaptive and absorbing capacity allow managers using the information gathered to develop different scenarios, evaluation of technological change, learning from partners, customers and competitors.

Testing the second hypothesis: **Dynamic capabilities of first level in new, innovative firm is a function of the managerial and organizational activities**, proves:

1) Product. Both firms develop specific firm competencies as a condition for creating a new or modification, improvement of already existing product, in accordance with the needs of customers and business partners. The first company focuses on the requirements of sustainable construction and preservation of the national cultural and historical heritage, and the second focuses on offering unique, flexible solutions, covering the full construction process and tailored to individual wishes of each client.

Creating and offering new product requires integrating, coordinating the activities of all units and employees in the company and search for new the most appropriate configuration of the resource. Its implementation is carried out with the active participation of many actors (both inside and outside the company), with complex relationships and interrelated processes in the vertical chain to create value. Product development is closely linked with the development of market competencies - market segmentation, target market selection, advertising, flexible pricing, and after sales service. The main objective is constantly improving the quality of the offered product, effective use of available material, human and financial resources, growing image in society, increasingly recognizable brand on principles - quality, reliability and efficiency.

2) Process. Any change and development in the process can lead to the creation and development of new technological competence of the firm, which provides increasing its productivity and efficiency and enables it to create and offer greater value to customers compared with its competitors. In recent years, firms are oriented towards expanding its activities in guidance related to less investment in physical equipment, but requiring more intangible assets, which means implementing effective, innovative technologies and development of sustainable construction. They strive to apply the latest materials and technologies in building practice, the result of information exchange, learning and integration of new knowledge that provide short deadlines and quality implementation of projects and optimize processes in the company.

Guideline for the successful development of both studied construction firms is the development of complementary innovations and strategy of integration and cooperation. The ability of managers to identify, develop and utilize their specific assets in combination with other specific assets of other firms participating in the vertical chain of value created is unique and usually very difficult to imitate.

Building an effective vertical chain is an important factor in stimulating innovation, particularly "open innovation", increased specialization and technological development inside and outside the firm.

3) Position. The process of successful positioning requires attracting potential customers and turning them into real, innovative orientation, to find new partners for development or improvement of the product, organizational changes in distribution, advertising, additional services and facilities which meet the needs of customers. For this

purpose, the surveyed companies build long-term partnerships with its customers - large investors and households on the basis of honesty, loyalty and customer feedback. Every company strives to find the optimum solution for clients and works so that they will feel the engagement of employees at all their individual projects and the possibility of flexible solutions for each individual problem.

4) Paradigm. The innovation process in the surveyed companies includes not only investment and development of new products/processes, but also investing in the development of intangible assets and the development and implementation of a new business model. Both functions are effectively integrated within the corporate organization. Each company develops new processes management, organization of production that stimulate and support the process of development and implementation of new technologies and new products. Each firm strives to create his, own, unique model, through the analysis of multiple alternatives and informed assumptions about the behavior of competitors, customers, revenues and expenses, mechanism of adaptation to the external environment and the relevant decisions.

Primary means of realizing corporate purpose are organizational and management changes that include construction of a decentralized corporate structure, coordination of internal resources of the "bottom-up", training of personnel, assimilation and integration the external and internal knowledge, create strong loyalty among customers and maintaining the company's reputation [10], effective management of innovation and investment process.

IV. CONCLUSION

In the study, the author seeks answers to questions: how the new firm, which started its activity can build a system of dynamic possibilities, what is their scope, what methods to use managers and how they can influence and develop innovation and its resources. In the new, innovative firm, building a system of dynamic capabilities depend primarily on entrepreneurial skills and management and organizational activities that focus on the development of adaptive, absorptive and innovation capability. The author defines the company's ability to monitor changes in the external environment assessment of opportunities for development and learning (assimilation, use of new knowledge) as the dynamic capabilities of second level function of entrepreneurial ability. Their development allows the use of new information and knowledge, which is the basis of successful innovation process in the company. The company's ability to carry out the process of integration, coordination, and reconfiguration of resources determines the dynamic capabilities of first level. They are specific to each firm related to its internal organization and grow through the expansion and improvement of managerial skills. The dynamic capabilities of first and second level help the company to expand, modify and reconfigure existing resources and functional competencies into new, which respond well to changes in the environment and ensure the realization of corporate goals.

The main specific the model of the new company which now starts its activity relates to the identification of the management processes and activities - model "4P", that encourage and stimulate innovation and thus the dynamic capabilities. Basis for analysis, testing the model and defined hypotheses and conclusions is information, which is collected from the author's research and interviews with managers at different levels in the company (business unit). The empirical analysis proves that new firm is learning on the move, using methods of "trial and error", improvisation and imitation. Spontaneous, unplanned decisions of managers, lack of experience and routine, however, may allow them to realize the great radical changes that provide competitive advantages. Such behavior implies less chance of failure and loss, compared with companies that do not experiment, do not improvise, for fear of failure or due to greater confidence. The first firm focuses its innovative work to continuously improve the characteristics and quality of the product, according to the needs of customers, and the second firm, covering the full cycle of construction and investment process aims to create develop and improve the process, creating and additional facilities to their customers.

A major factor in the success of the innovative firm is the development of knowledge and the right combination and integration with internal knowledge, skill and experience that allows: 1) establishing a long-term vision for development (against the short one), 2) the creation of multidisciplinary teams (not functional), 3) use of complementary innovation, introducing new technologies and creating a unique product (opposite strategy imitation). In each specific company manager has to create its own rhythm and habit for building a system of dynamic capabilities taking into account the specifics of the organization, which manages.

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