

# Sustainable Development of the Firm

## Study of the Example of the Construction Firm

Aneta Marichova

PhD, Associate Professor of Economics

Social Sciences Department

University of Architecture, Civil Engineering and Geodesy, UACG  
Sofia, Bulgaria

**Abstract:- The concept of sustainable development poses new challenges to every firm and new social, ethical, economic and environmental problems. At the same time, it is the new driving force aimed at implementing a sustainable strategy that allows the creation, offering and realization of additional economic, social and environmental value for the client, stakeholders and society as a whole, and building competitive advantages. According to the author, these problems can be solved more easily if managers build a system of dynamic capabilities, oriented towards the sustainability of the firm. Therefore, the main goal of the research is: 1) How can building dynamic capabilities support this process in the firm and what components should they include?, and 2) To develop a practically applicable model that includes recognizable, understandable and measurable for the firm and managers components of dynamic capabilities that ensure sustainable development and the realization of competitive advantages and firm's goals in the three dimensions - economic, environmental and social, taking into account the specifics and dynamics of the environment.**

**Keywords:-** *Dynamic Capabilities, Ensuring Sustainability, Functional Competencies, Competitive Advantages, Sustainable Development of the Firm.*

### I. INTRODUCTION

Today, the firms operate in conditions of growing scarcity and rising cost and price of resources, globalization and geographical isolation, a result of company localization and insufficient capacity to adapt to smaller, fragmented markets. The distribution and use of scarce resources is in practice carried out by the market, i.e. private individuals, managers, which in their behavior are guided mainly by self-interest and the main goal is to achieve higher profits for the company and shareholders. Usually, social and environmental goals are subordinated to this main goal, which limits ability to solve these problems effectively. Most often, solving them is a function of legal requirements, pressure from customers, competing firms and society as a whole, which allows the firm to maintain its reputation.

For a long time the social role of the company is practically limited to creating employment, paying taxes and compliance with the law. Today, society's expectations have changed significantly. In the conditions of globalization and

information, the requirements of the people for control over the activity and behavior of the firm, social protection, research activity, participation in the management increase [1].

Every firm develops successfully on the basis of the people it works with and the relationships between them. The activity of the company must create equal conditions for development, improvement of working and living conditions of people and their development not only as professionals but also as individuals. Especially important is the ability to build trust in relations with internal and external stakeholders. In other words, in today's dynamic conditions, synchronicity and coordination of actions and interests between business, people (consumers) and society is increasingly needed, which can be achieved through sustainability.

The sustainable development of the company is a long-term process that requires organizational and managerial changes, development of strategies and policies that are aimed not only at achieving economic but also environmental and social goals imposed by the external environment, from various directly and indirectly related subjects. This requires not just transforming the old business model (as is often done - to be complemented by social and environmental priorities such as environmental management, respect for people and nature and social justice), but creating a qualitatively new model in which the concepts of sustainability and the circular economy play an essential role in mission formation and decision-making.

The concept of sustainable development poses new challenges and new social, ethical, economic and environmental problems for every firm. At the same time, it is the new driving force aimed at implementing a sustainable strategy that allows creating, offering and realization of additional economic, social and environmental value for the client, stakeholders and society as a whole, and building competitive advantages. According to the author, these problems can be solved more easily if managers build a system of dynamic capabilities, oriented towards the sustainability of the firm, which however, requires their updating and development.

Therefore, the main goal of the research is: 1) How can building dynamic capabilities support this process in the company and what components should they include?, and 2) To develop a practically applicable model that includes

recognizable, understandable and measurable for the firm and managers components of dynamic capabilities that ensure sustainable development and the realization of competitive advantages and firm's goals in the three dimensions - economic, environmental and social, taking into account the specifics and dynamics of the environment.

## **II. THEORETICAL FRAMEWORK FOR THE STUDY OF DYNAMIC CAPABILITIES AS A FACTOR FOR SUSTAINABLE DEVELOPMENT OF THE FIRM**

In recent years, the new technological and information realities, the dynamics of the external and internal environment, have imposed the need to build "dynamic capabilities" defined as "a system of the company's ability to integrate, build, develop and changes its external and internal resources and competencies to the changes in the business environment" [2], which ensure its development, growth and the building of competitive advantages. In the new conditions, they are a function not only of physical, material resources, but above all of the development of intangible resources based on the exchange of ideas, knowledge and communication. The dynamic capabilities allows to make a connection of external and internal resources with the organization and management in the firm, and the opportunities to build competitive advantages.

Later, other authors define dynamic capabilities as the ability of any firm to identify the need for change, evaluate alternatives, and make appropriate decisions to adapt to external change, which includes strategic and organizational internal change (creates, develops, expands and modifies its resources) [3]. M. Zolo and S. Winter define dynamic capabilities as a system for training and creating stable internal and external connections, through which it generates higher operational efficiency, which allows to achieve long-term firm's goals [4].

K. Eisenhart and J. Martin define them as a specific company process through which the company integrates, reconfigures, acquires and releases resources, as well as organizational, strategic procedures through which the company creates new resources and configurations in order to realize competitive advantages and higher profit in the conditions of constant market dynamics [5]. For the first time, they define dynamic capabilities as "common, fundamental to all companies, but combined with a specific organization" [6]. In other words, good practices are available to everyone, they are common fundamental characteristics of dynamic capabilities, but their different application, result of accumulated experience, knowledge, skills in each firm makes them unique.

Dynamic capabilities are also defined as a process of company behavior in order to adapt, absorb new, reconfigure and change resources and distinctive competencies, in response to external dynamics, but this process is developed and implemented in a specific way because the mechanism for resource transformation is specific to each market and each company [7].

The brief review of the literature shows that some authors connect the dynamic capabilities with the change and the opportunity for the firm to carry out its daily activities more efficiently, and another with its ability to adapt to changes in the environment and to realize long-term competitive advantages. These two sides of dynamic capabilities are closely linked and dependent. This suggests that it is appropriate to consider dynamic capabilities hierarchically, at different levels.

In their study, Protoerow, Liokas et al. offer the dynamic capabilities to be considered not just hierarchically, but as composed of functional competencies (a concept introduced by the authors and replacing the concept of operational capabilities), including market, technological, innovative resources/factors that allow the company to operate in a competitive environment, and dynamic capabilities (integration, training, coordination and reconfiguration process) that are not directly involved in production [8]. They stimulate the process of organization, management and effective combination of resources and thus create conditions for change and development of functional competencies. For the first time the idea develops that dynamic capabilities ensure the realization of company goals only through the intermediary role of functional competencies.

In their research, the authors are unanimous, that the dynamic capabilities are related to the strategic management, strategic behavior and strategic decisions of the firm to create, develop and change resources in response to changes in the external (micro- and macro) environment, which determines the direction of development in order to build competitive advantages and realization of firm's goals (expressed in financial indicators).

Here we will note that building competitive advantages means the ability of the company to create and offer higher value to its customers with a strategy that is not applied by current competitors. Sustainable competitive advantages mean an opportunity for the company to create and offer higher value to its customers, compared not only to current but also with potential, future competition, which, even if it applied the same strategy, could not achieve the same results. In the conditions of constant dynamics in the external environment it is difficult to assume that a firm can maintain unique characteristics of its resource for a long time, and therefore maintain sustainable competitive advantages.

It is especially important to emphasize that in the predominant researches the dynamic capabilities are considered as a factor for the improvement of the economic firm' results. Today, however, the problem of sustainability and sustainable development of the firm imposes the need to simultaneously address economic, environmental and social challenges and realize the competitive advantages in the three dimensions. Therefore, the main question is: How can building dynamic capabilities support this process in the firm, what components should they include?

To answer this question, the difference between the dynamic capabilities and the functional competencies or operational capabilities of the firm must first be clarified. Each company carries out daily activities in which with a given combination of resources produces and sells the created product. The set of market, technological and organizational competencies that allow the company to carry out its core activities can be defined as operational or functional competencies. The daily business activity would "always develop on the same scale, the company would always produce the same product, would sell it in the same way, to the same customers and markets" [9], which is obviously inefficient and impossible in the conditions of constant dynamics in the external and internal environment, and which requires building dynamic capabilities.

The dynamic capabilities ensuring sustainable development of the firm are related to its ability to change, to develop its economic, environmental and social functional competencies in response to the growing demands of stakeholders [10]. From such a point of view, functional competencies allow the company to do what it was created for and make a living, and the dynamic capabilities providing sustainability can be defined as capabilities of a higher level. In other words, functional activities ensure operational efficiency, and dynamic capabilities manage their change (economic, environmental and social) by expanding and reconfiguring the resource base in response to environmental dynamics.

Reconfiguration and development of new functional competencies in response to the dynamics in the environment is the ultimate goal of dynamic capabilities, which is realized through a constant process of learning, assimilation, dissemination and integration of new knowledge and technologies based on experience and routine, which allow the process of change to take place. The accumulated knowledge and experience in the firm can be a strong tool for strategic renewal through experiments, innovation in solving specific problems and finding new ways of development, i. e. through learning. In addition, a new organization and management must be created, i.e. coordination of people and material resources to implement the new decisions.

The most complicated problem for the company, related to extremely high risk, is the decision to change and the search for completely new opportunities for development and neutralization of threats. A source of information, which facilitate the company in making these important decisions for reconfiguration of functional competencies is the dynamics of the external environment. The main problem for any company is the development of an effective system for monitoring, evaluation of alternatives and threats to development, and forecast of expected changes in the external environment through learning.

These three components of dynamic capabilities - monitoring, evaluation of alternatives and evaluation of alternatives, are directly related to the dynamics of the external environment and are a function of senior management. According to the author, they can be defined as dynamic capabilities of a higher, second level (or second order), which reconfigure the firm's competencies in response to changes in the external environment.

The other three components - integration, coordination, and reconfiguration can be defined as dynamic capabilities of a lower, first level (or first order) that are related to the internal organization and are developed by expanding and improving managerial capabilities.

The dynamic capabilities of second level affect the dynamic capabilities of first level and in their interconnection and dependence, help the firm to expand, change and reconfigure existing functional competencies into new ones that better respond to changes in the environment and provide more efficient use of existing resources. Functional competencies (market, technological, innovation, organizational and managerial competencies) are defined as capabilities of zero level (order), which ensure the operational efficiency of the company. The functional competencies of the firm have common characteristics, but specific development and change, the result of the specific construction of dynamic capabilities of the second and first level, which, however, can only ensure the realization of competitive advantages (economic, social and environmental) and performance.

The author defines the dynamic capabilities, ensuring sustainable development of the firm (rather than sustainable competitive advantages) as a complex, multidimensional construction of interrelated and complementary specific activities which include ability to identify and analyze the need for economic, environmental and social change, to develop own system of solutions to reconfigure functional competencies, in response to changes in external and the internal environment, and take the necessary actions to adapt to them [11].

This definition of dynamic capabilities includes:

- 1) The ability of the firm to carry out certain activities in a specific way, a function of capacity and above all managerial skills, perceptions that must ensure successful change and adaptation of resources and functional competencies.
- 2) Specific organizational process related to the selection and creation of new synergistic combinations (reconfiguration) of resources and assets of the firm. This process is built in a unique way into the overall firm's process, which makes it difficult to imitate and replace, i.e. the firm creates a strategic resource, which can provide predictable results and build competitive advantages.

Each component of dynamic capabilities is different, unique and offers a specific way to reconfigure functional competencies and create new ones.

In the structure thus defined, dynamic capabilities of second level (ability to monitoring, evaluation of alternatives/threats, learning) can be assessed or measured through surveys, interviews with the management team of the firm (business unit), in which they answer questions and describe: the frequency with which carry out the process of monitoring and scanning the external environment (demand, competitors, technology, behavior of stakeholders), the speed with which the company adapts to environmental, social and economic requirements.

The dynamic capabilities of first level (integration, coordination and reconfiguration) can be assessed by analyzing the developed and introduced new management systems, training and retraining, knowledge, experience of employees, motivation of human resources, new decision-making organization, which ensures efficient allocation of tasks, resources and people and to realize the desired reconfiguration of the company's resources. Reconfiguration of existing functional competencies (market and technological) and the creation of new ones is assessed by developing long-term strategies, strategic actions and reactions of the company to external changes, to the actions of competitors, flexibility of short-term decisions, adaptation of the company and people to requirements for sustainable development.

The functional competencies of the firm include assessment of market competencies (consumers, brand, image, reputation, efficiency of long-term, stable contracts

and relationships with suppliers, etc.), technological competencies (use and degree of technology renewal, environmental protection, use of new raw materials and recycled materials, reduction of costs, expansion of production, etc.), and the assessment of managerial and organizational competencies should include the overall assessment of managerial skills for effective administration, coordination and control of all activities, at all levels.

The dynamic capabilities ensuring sustainable development of the firm do not have a direct, but an indirect connection with the competitive advantages. Their role is related to influence, change of the existing resource base and its transformation in a way to ensure sustainability as a factor for building competitive advantages in the three dimensions and performance, and the connection between them is realized through the mediating role of functional competencies.

On this basis, the author develops a conceptual model "Dynamic capabilities - Functional competencies - Sustainable development of the firm" and defines the following hypotheses, which must be tested empirically on the example of the construction firm:

Hypothesis 1: The dynamic capabilities of second level have a positive relationship with the sustainable development of the firm and building competitive advantages.

Hypothesis 2: The dynamic capabilities of first level have a positive connection with the sustainable development of the firm and building competitive advantages.

Hypothesis 3: Functional competencies have a positive relationship with the sustainable development of the firm and building competitive advantages.

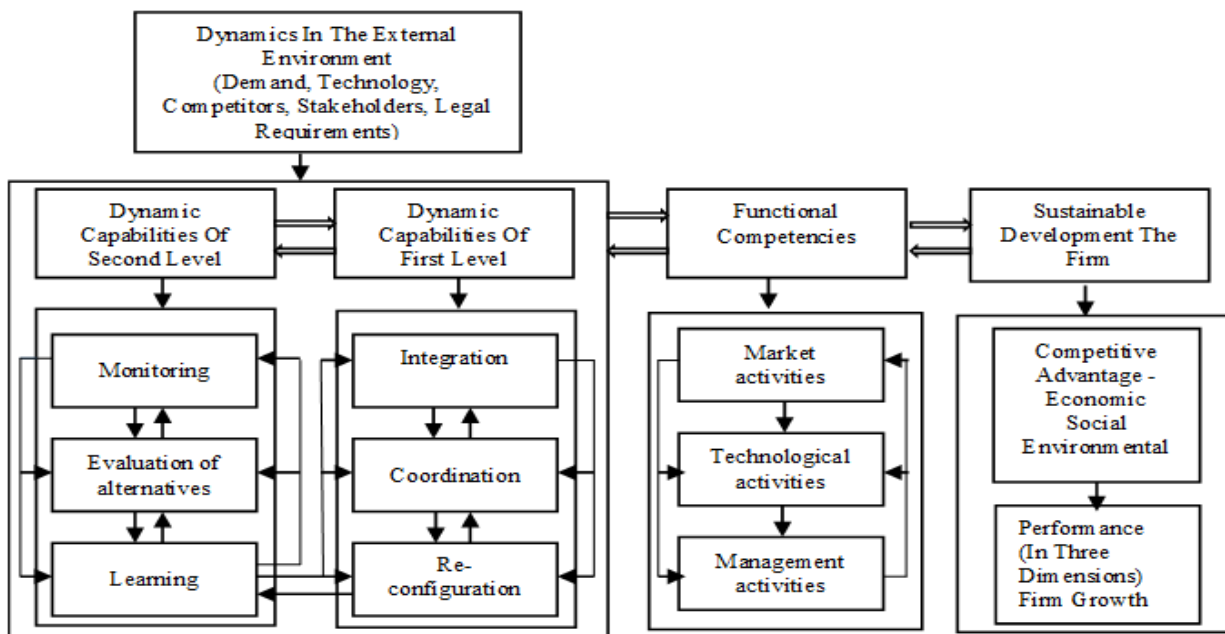


Fig. Conceptual model "Dynamic capabilities - Functional competencies - Sustainable development of the firm"

### III. APPLICATION OF THE CONCEPTUAL MODEL FOR THE ANALYSIS AND ASSESSMENT OF DYNAMIC CAPABILITIES AS A FACTOR FOR SUSTAINABLE DEVELOPMENT OF THE CONSTRUCTION FIRM

#### 3.1. Method and restrictive conditions of the study

The empirical research was conducted using a developed and applied methodology for evaluating the defined hypotheses. The aim is to assess the impact of dynamic capabilities on building a sustainable construction firm and competitive advantages in the three dimensions - economic, social and environmental. The companies included in the study work in different market segments (civil engineering market and building construction market - residential and non-residential) on the construction market in Bulgaria and have different specialization, different history, different territorial location and different business model. An equal number of small, medium and large construction companies have been studied, which have different resources and competencies related to production, organization and management, and have different market positioning and different opportunities for sustainable development. The information is collected and processed by workshops, shared opinions, evaluations, experience of managers, employees in the surveyed companies, publications and analyzes in specialized publications. A survey was conducted among managers, which includes questions related to the opportunities for sustainable development of the firm as a function of the dynamic capabilities and problems they face. The questions are constructed as wordings to which respondents refer, noting their answers from 1 to 5 on the Likert scale. One part of the questions is related to the legislative problems of sustainable development (access to information, knowledge, standards, norms, practices, training opportunities, etc.) and another part to the specific actions that the firm believes it should take, to meet the challenge.

#### 3.2. Main results of the research

Managers are unanimous that the sustainable development of the firm can be the result of creating a construction product that meets the principles of sustainable construction, which aims to restore and maintain harmony between natural and built environment, and to create settlements that establish human dignity and promote economic justice [12]. In practice, this requires significant changes and above all a comprehensive approach in the organization of construction activities - from the stage of design, construction, operation and demolition of a building, which integrates a wide range of design, construction, operation and maintenance practices. The successful implementation of this complex process can be the result of building a system of dynamic capabilities, which will allow the creation of competitive advantages - economic (high consumer assessment of the firm and the product), social (healthier life, better work atmosphere) and environmental (reducing the negative impact on the environment).

The processing and analysis of the results fully confirms the first hypothesis: "Dynamic capabilities of second level

have a positive relationship with the sustainable development of the firm and building competitive advantages."

In the conducted interviews at different levels (business unit) in the respective firm the management team describes the frequency with which it carries out the process of monitoring and scanning the external environment, the frequency with which the introduction of new sustainable production and consumption practices and the necessary change in the used marketing practices, technologies, etc. All this outlines new directions for corporate development and growth, a function of changes in the external environment (demand, technology, competitors, stakeholders, legal requirements), which usually turns out to be one of the most complex tasks.

The identification of the new opportunities for development of the company is based on in-depth research, analysis of the change in demand, development of technologies, as well as analysis of state and regulatory mechanisms, the behavior of stakeholders, economic and social changes, new requirements for environmental protection, etc. According to the managers, the ability to monitor and evaluate the alternatives reveals the opportunities for development through specialization of the assets and their complementarity with other tangible and intangible assets that are inside and outside the company.

The sustainable development of the firm today is based mainly on the development of intangible assets, and a central place in them is occupied by the company's ability to learn and generate new knowledge. This process includes above all the ability to develop knowledge, skills, know-how, both within the firm and with other firms, research institutes, research laboratories, public organizations. Internal knowledge is not enough to cover the ongoing changes and respond to them adequately. The combination of external and internal knowledge, which develops qualitative new knowledge, is the basis for making an informed investment and market-oriented decision. The learning process in the construction firm is aimed at the development of specific knowledge necessary for sustainable development, which determines the scope of strategic development and facilitates the assessment of possible alternatives and necessary changes.

According to the managers, sustainable development requires involvement in the construction process and constant active communication in the first place with direct stakeholders - investors, end customers, shareholders, suppliers of equipment and raw materials. The need for communication with indirect stakeholders - governmental, non-governmental institutions, media, citizens' associations for a clean environment, reduction of the negative effect of the construction activity, control over the activity of the construction firm, working conditions, etc., is also growing, which have often been underestimated so far. Of particular importance is the development and maintenance of active links with research institutes and universities, which facilitate access to highly qualified specialists and information on market innovations. This is a key factor in stimulating

initiative, innovative thinking, which can ensure the active participation of everyone and the implementation of any valuable idea in the direction of sustainability.

The construction firm should not be a passive, but above all an active economic entity that informs, directs consumers, society as a whole to the problems and innovations of the construction market, which changes their tastes, preferences, attitudes. The main task of the managers is a complete change in consumer behavior: from short-term thinking and planning to long-term thinking and decision planning.

The goal of every responsible firm should be training and development of innovative and ecological thinking in the organization and management of the entire construction process, based on legislative and regulatory measures aimed at applying the principles of sustainable construction, as well as renovation of old construction in accordance with these requirements. These actions provide not only a positive environmental effect, but also an economic and social effect by saving energy and resources in production and in the process of exploitation (consumption) of buildings and facilities [13].

The absence of an adopted uniform standard, developed adequate legal norms, guidelines for design, construction and maintenance of sustainable construction sites does not allow effective cooperation of all participants in the vertical chain of construction activities and leads to demotivation of participants in the process - investor, owner, user, architect, designer, builder, building/site manager, etc. For these reasons, active government intervention is needed, pursuing a targeted and consistent policy that unites all participants at all stages of the construction process. Feedback is needed for the process of creating sustainable construction objects, analysis of the financial costs of their construction, maintenance and management throughout the life cycle and comparison with the costs of creating traditional objects, as well as introduction of a unified system for assessment and certification, which will stimulate and support the realization of future sustainable projects.

The analysis and processing of the results confirm the second hypothesis: "Dynamic capabilities of first level have a positive relationship with the sustainable development of the firm and building competitive advantages" and allow us to draw the following conclusions:

The dynamic capabilities of the first level are related to the ability of managers to carry out a process of integration, coordination and reconfiguration of the firm's resources. According to the expressed opinion of construction managers, sustainable development requires a radical change in the strategic behavior, organization and management of the construction firm, as well as the development and implementation of a new sustainable business model in which the concept of sustainability is a driving force for the firm and decision making. It includes new processes of management and organization of production, which stimulate and support the process of development and implementation of new

technologies and new products. This business model completely transforms the dominant neoclassical model of the company, and not just complements it with social and environmental priorities [14].

The sustainable business model includes actions and decisions, implementation of a sustainable strategy aimed at efficient use and reconfiguration of tangible and intangible resources of the firm, interaction between all participants in the vertical chain from the beginning to the end of the production process. The new organization allows the creation of a new product on the principle of the circular economy, offering and realizing additional economic, social and environmental value for the client, stakeholders and society as a whole, and building competitive advantages of the firm.

Every successful sustainable business model is developed from „the outside to the inside“. The first step is to analyze and segment the market, selecting the target market and clearly defining what the target customers want and seek. The second step is to analyze the firm's activities, resources, competencies and evaluate the possibilities for creating the desired product and /or the need for change. The third step is to build an effective integrated vertical chain that can only provide stability. The end result of realizing a sustainable business model is to create, offer and realize higher additional economic, social and environmental value for the client and society [15].

According to the surveyed managers, one of the main obstacles that must be overcome in order to make sustainable development of the firm a reality is the break with the traditional approach of relationships in the vertical chain of connections and relationships and creating an integrated management chain (based on competition) that covers the entire construction process (from the production and supply of materials, equipment, design, production of the next product, the creation of the final product and its sale to the end user, demolition of the object, recycling and reuse). The integrated management chain includes investors (clients), construction firm - contractor and subcontractors, end customers, supplier companies, related organizations and activities. They participate from the beginning to the end of the construction process by building connections - up and down and creating value in the form of product and services for the end user. Thus, the scope of the chain management covers the production and supply of materials, the production of the final product, its sale to the end user, its use and waste management, generation in its life cycle. Each participant in this chain depends on the other participant and active cooperation is needed in order to achieve higher efficiency, which is achieved through long-term contracts, long-term relationships, continuity of joint work and exchange of information.

The firms in the integrated vertical management chain exchange information and coordinate within the created chain, which provides maximum benefit for all participants in it. In addition, accurate estimates for the execution of transactions and for the evaluation of the efficiency of the chain are determined. The end results are improvement in

customer service, reduction of inventories throughout the chain, offering a better product, building competitive advantages for the participating firms and achieving higher profits throughout the product life cycle. Higher efficiency is a function of creating long-term partnerships between all participating companies based on common interest and good personal relationships. These relationships mean working together to solve problems, share information and take risks. In view of the good end result, the active participation of the suppliers of construction materials in the whole process of design and realization of the object from the beginning to the end together with the construction firm-contractor is especially important.

Building and effectively managing an integrated chain based on competition is an important factor in stimulating innovation, reducing the asymmetry of information and transaction costs, increasing specialization, developing technologies inside and outside the company and their application in creating of a sustainable construction product. The surveyed construction firms focus on integration and cooperation with other companies (mostly smaller ones), due to the fact that most innovations today are complementary and not interchangeable. There is a significant difference between an innovation made in another company or scientific unit and used by the given and "open innovation", realized with the participation of all subjects in the integrated vertical management chain - suppliers, customers, research institutes. Open innovation can create a qualitatively new product/process through a qualitatively new combination of complementary innovations in search of a solution to consumer problems. The ability of managers to identify, develop and use their specific assets in combination with other specific assets of other firms involved in the integrated vertical management chain is unique and often very difficult to imitate.

In order to reduce the contradictions between different subjects and opportunistic behavior, coordination is needed within the firm by building internal integrated systems of motivation and incentives, coordination of different goals of different groups and the company as a whole and support the creation of corporate identity, culture and loyalty.

The process of learning, assimilation, dissemination and integration of external and internal knowledge is realized through the qualification of staff as a major factor for its stimulation and motivation in the long run. The goal of every firm's management in the first place is to create a well-coordinated team of professionals with experience, knowledge and skills. The creation of special skills for work in different units, as well as the creation and management of working teams specializing in various functional activities, allows the successful solution of the set tasks and performance.

The sustainable construction firm is certified according to international standards in the following areas: ISO 9001: 2015, Quality Management Systems, ISO 14001: 2015 Environmental Management Systems and BS OHSAS 18001: 2007 Occupational Health and Safety Management Systems.

The application of an integrated management system provides flexibility, efficiency in the company's activity. In practice, these management and organizational actions are realized through coordination, integration and reconfiguration of internal resources in a specific, individual way for each firm, which makes the resource unique and difficult to imitate.

The analysis and processing of the results confirms the third hypothesis: "Functional competencies have a positive relationship with the sustainable development of the firm and building competitive advantages" and allow us to draw the following conclusions:

In the construction market, the problems facing each firm are significant, which requires serious strategic changes in order to improve and develop market, technological, innovative and managerial competencies. For this reason, it is necessary to reconfigure functional competencies, and reconfiguration as an end point of the chain of dynamic capabilities is realized through the introduction of new "sustainable" technologies, development of intangible assets - training and qualification of staff, organizational and managerial changes.

The final construction product is a complex system of various elements, components, details with strong functional dependence. Standard construction practices, guided by short-term economic goals, often show little concern for the economic, social or environmental impact of the built-up area. Sustainable construction seeks to end these practices by integrating a wide range of design, construction, operational and maintenance practices to ensure a healthier life, a better working atmosphere and reduce environmental impact.

Therefore, according to the surveyed managers, it is especially important to apply the Building Information Modelling (BIM) and an integrated design principle in their work. This is an approach in which key entrepreneurs, professional designers, architects, landscape architects, surveyors, constructors, civil engineers work together from the beginning to the end of the construction process. In the traditional design approach, in the initial phase the possibility to evaluate a building as a whole is very small. The uncoordinated work of different designers leads to constant repairs and sometimes the necessary changes are noticed too late, when the construction itself starts and their removal can be much more expensive. Therefore, sustainability in construction starts from the earliest stages of the project and requires the responsible involvement of all participants in the process. This allows in practice to realize sustainable consumption and production in construction, which includes all stages of the product life cycle: raw materials, resources → product design → production → consumption, reuse → waste management and recycling → creation of new raw materials and resources for other productions [16].

In the ecological assessment of the impact of construction on the environment, the assessment of the construction materials produced and used by the companies occupies a particularly important place, because the characteristics of the final construction product are a function

of them. According to the managers, this is a significant problem because a large part of the construction materials used today cannot be classified as meeting the requirements of sustainable construction and development. Building materials that provide sustainable construction are characterized by low energy costs for production, durability and insignificant costs for their maintenance. In addition, they must contain a relatively large amount of recycled materials, and they themselves must be produced in an environmentally friendly way, allowing them to be fully recycled and reused.

Organizational changes should be aimed at creating a decentralized firm's structure and development of specialization. In the conditions of constant changes in the environment in which the exit from the accepted schemes and models of behavior work, would allow the managers to be able to find a new interpretation of the ongoing processes, events, facts and on this basis to predict and outline the new directions of sustainable management in the production and consumption of the product. These decisions must be accompanied by clear assessments and forecasts of the reaction of competitors, customers, suppliers and government agencies that set and control product standards and general rules of the game.

Since the centralized structure presupposes the isolation of the managers at the highest level from the other lower units, the main tool for sustainable development of the firm is to build a multi-division structure, which requires modern organization of simultaneous teamwork (rather than consistent development and implementation of innovations), decentralization of collection rights, analysis of information and decision-making, flexible distribution of responsibilities and tasks, developed an effective system of incentives to achieve the desired results, etc.

In the conditions of a dynamic environment, the managerial changes must be aimed at improving the connections and relations between the managers and all company units, the active participation of all subjects and units in the company "bottom-up". This is a factor that provides easier coordination and adaptation of internal resources and competencies to external changes, development primarily of intangible assets, which in turn have a reciprocal impact and develop tangible assets. The efforts of managers should be aimed at creating high customer loyalty and maintaining the firm's reputation by analyzing the constant flow of information from the market, consumers, competitors, suppliers, consumer's evaluation data for the company and on this basis quick feedback. The role of the leader in making quality management decisions, motivation and creating incentives for employees in the company in order to achieve the goals is extremely important.

The firm's ability to successfully combine, recombine and reconfigure its functional competencies (market, technological, innovative and managerial) and thus create new more effective organizational structures is the result of building dynamic firm's capabilities in a specific way. Unfortunately, this is still a serious problem and difficulty for many managers. Its solution is a major factor for sustainable

development of the firm and building competitive advantages in the three dimensions – economic, social, environmental.

#### IV. CONCLUSION

In today's dynamic conditions, every firm faces serious challenges related to the growing scarcity of resources used and the need to reconfigure them in order to accelerate the process of implementing the principles of sustainable development.

The author's study aims to analyze the role of dynamic capabilities for sustainable development of the firm by developing a practically applicable model that includes recognizable, understandable and measurable components for the company and managers.

The author defines the dynamic capabilities, ensuring sustainable development of the firm (rather than sustainable competitive advantages) as a complex, multidimensional construction of interrelated and complementary specific activities which include ability to identify and analyze the need for economic, environmental and social change, to develop own system of solutions to reconfigure functional competencies, in response to changes in external and the internal environment, and take the necessary actions to adapt to them. On this basis, the author develops a practically applicable model that includes recognizable, understandable and measurable for the company and managers components of dynamic capabilities that ensure sustainable development of the firm, building competitive advantages and performance in three dimensions - economic, environmental and social, taking into account the dynamics of the environment. Each component of the dynamic capabilities (second and first level) is different, unique and offers a specific way to reconfigure functional competencies and create new ones. The ultimate goal of dynamic capabilities is change, and the reconfiguration of functional competencies is the end point in the chain of dynamic capabilities and their main element.

The developed conceptual model "Dynamic capabilities - Functional competencies - Sustainable development of the firm" allows the definition of three hypotheses, which are empirically tested on the example of the construction company. A survey was conducted among managers, which includes questions related to the opportunities for sustainable development of the company as a function of the dynamic capabilities and problems they face. Multifactor analysis proves the key place and importance of dynamic capabilities for building a sustainable construction firm and competitive advantages by developing and reconfiguring functional competencies, and empirical research proves the need to further develop the concept of dynamic capabilities, ensuring sustainability and how the managers can take advantage of them.

The dynamic capabilities of the second level include the ability of managers for monitoring, evaluation of alternatives and learning, which are also defined as the intellectual resources at the entrance of the firm. The sustainable firm's development today is based mainly on the development of



intangible assets, and a central place in them is occupied by the company's ability to learn and generate new knowledge. Particularly important place in building dynamic capabilities of second level, ensuring sustainability is the constant active communication in the first place with direct stakeholders - investors, end customers, shareholders, suppliers of equipment, raw materials and indirect stakeholders - government, non-governmental institutions, media, associations of citizens for a clean environment, etc.

The dynamic capabilities of the first level are related to the ability of managers to carry out a process of integration, coordination and reconfiguration of the company's resources. According to the expressed opinion of construction managers, sustainable development requires a radical change in the strategic behavior, organization and management of the construction firm. Central is the creation of an integrated vertical management chain and the development and implementation of a new sustainable business model, which allow the creation of a new product on the principle of the circular economy, offering and realizing additional economic, social and environmental value for the customer, stakeholders and society as a whole, and firm's competitive advantages.

Significant problems in the construction market require a process of reconfiguration of functional competencies through the introduction of new "sustainable" technologies learning, staff training, knowledge exchange, integration and cooperation with other companies, as well as organizational and managerial changes. Managers are unanimous that the sustainable development of the firm can be the result of creating a construction product that meets the principles of sustainable construction, which in practice requires significant changes and above all a holistic approach to the organization of construction - from the design stage, construction, operation and demolition of a building, which integrates a wide range of design, construction, operation and maintenance practices.

The successful realization of this goal requires building a system of dynamic capabilities, which will allow building competitive advantages - economic (high consumer assessment), social (healthier life, better working atmosphere) and environmental (reducing the negative impact on the environment environment). Although managers clearly understand and realize this need, it is still a serious problem and difficulty for many of them. The developed model of dynamic capabilities, ensuring sustainable development of the firm has the task to facilitate this process. It includes the indicated general characteristics (or known good practices) of dynamic capabilities, which, however, should be applied specifically in different companies, because they differ in their history, experience, knowledge, routine, specialization, etc., and have different organizational characteristics, abilities and skills. In each specific company, managers should develop specific solutions and apply specific methods, approaches, analytical procedures and routine actions in order to build the system of dynamic capabilities and its integration into the overall organizational structure to ensure the sustainability of the firm.

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