Methods of increasing the construction organization efficiency in terms of using outsourcing

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Abstract. The current trend in optimizing construction business in Russia indicates a growing orientation of construction organizations to foreign experience in the use of outsourcing as a technology to transfer to outside the specialized organizations some certain types of activities or functions of their business along with responsibility for the result of the latter. The article proposes a methodology for improving the construction organization efficiency in terms of the industrial outsourcing use. Within the methodology framework, indicators that can be used to identify the effectiveness of the outsourcing use in these organizations are indicated. The authors believe that to substantiate the using outsourcing expediency, functional modeling of the business processes under consideration is used. It was determined that the construction company can focus on two types of outsourcing - full and partial form, which is explained by their high degree of influence on the current economic activities of the construction company. The process of carrying out or implementing business process outsourcing in a construction organization as a part of developing an outsourcing project should include several stages, for each of which the options are offered by the construction organization’s management according to the scenario of using outsourcing or abandoning it.

Introduction
Toughening competition in global markets, the new information and communication technologies emergence and the active use of work network principles determine the search for new tools to improve the modern enterprises competitiveness. One of these tools is outsourcing. The establishment issues and outsourcing development in Russia are dealt with by A.A. Kizim, E.V. Kazakovtsev [1], A.A. Kirillov [2], E.E. Koba [3], I.D. Kotlyarov [4], T.F. Kutuzov, O.N. Rudenko [6], L.S. Churkina [7], N.V. Lutskaya [9], N.V. Mandrik [10], V.S. Poleschuk [11]. It is necessary to note the specifics of studying the features of the outsourcing use in the construction industry, which significantly reduces the number of researchers to a few people - I.V. Lineva [8], V.V. Sinyaeva V.E. [12-14], Solov'eva, I.S. Lebedeva [15].

When deciding on the outsourcing use, it is necessary to take into account the possible risks, and it requires the development of a special approach that facilitates the process of developing a management decision on an outsourcing partnership. It is possible to assess the effectiveness of implementing outsourcing by increasing the efficiency of an organization’s activities, increasing labor productivity, but this can be done only when the outsourcing mechanism has already been launched and there are some results from its implementation. We believe that it is already a bit late to assess the using outsourcing feasibility. Consequently, a substantial analytical work should be done to develop a decision
on optimizing the construction organization activity using production outsourcing, which precedes the stage of analyzing the existing outsourcing cooperation. In our opinion, such work should lead to the construction business productivity growth. The article will address the issues of production processes transferring part to the outsourcers, i.e. it will be about manufacturing outsourcing.

Materials and Methods
The theoretical and methodological basis of the study was the works of well-known domestic scientists, economists and civil engineers, dedicated to the disclosure of the essence and content of outsourcing, its development trends, as well as the works devoted to the management tool state and development potential analysis in the construction industry.

The article uses the methods of systematic, monographic, structural and logical research. Each of the methods will be used based on functionality.

Results and Discussion
An important point in determining the using production outsourcing feasibility is the construction organization production resources assessment. It should be noted that the assessment should have a multi-faceted character.

Figure 1 shows our proposed methodology for increasing the construction organization’s operation efficiency in terms of using industrial outsourcing. Thus, consistently going through all the stages of the proposed methodology, relying, if necessary, on the different performance indicators groups; it is possible to substantiate a management decision on attracting a production outsourcer to the construction organization activities. The construction company management needs to pay attention to the activities associated with the outsourcing contract conclusion preparatory stage. An important role is played by the development of decision-making technology, in which outsourcing is considered as one of the alternatives to eliminate this or that problem, reducing the gap between the existing and the desired system state.

Existing weaknesses in management decision-making methods can be leveled by using an analysis of the correlation between the external and internal environment influence and the outsourcing use in response to their negative impact in construction organizations. It is important to take into account that the essence of the decision to use outsourcing in a construction organization is to use the highly qualified specialists specialized organizations services and to carry out the individual business processes.

To substantiate the expediency of using outsourcing, it is necessary to use the considered business processes functional modeling. Consequently, the construction organization specialists should describe and decompose all the processes and subprocesses within the company in the form of interconnected and integrated models in order to improve management and identify the reserves to reduce the costs of the managed and control subsystems.

To describe business processes in a construction organization, special economic tools are required, among which we can single out the “ABC” method or the functional cost analysis (FCA). The basis of this method is the description of the costs associated with the creation and use of any object that performs specified functions, consisting of the necessary for its manufacture and operation costs and additional, functionally unjustified, unnecessary costs that arise from the unnecessary functions introduction, not directly related to the object designation, or related to the imperfection of the design, technological processes, materials used, methods of organizing production.

The building business process models stage and the boundaries of the latter should be commensurate with the construction organization structural units’ activity areas, taking into account the responsibility zones of their managers. In this case, it is advisable to conduct a business process study, based on the existing functional-oriented organizational structure, since it should be clearly understood that business processes are not equivalent to the list of work performed by a certain structural unit in a construction organization. Thus, in the business processes structural modeling matter with respect to various functional sub-systems, the construction organization should focus on the allocation of outer-inter-functional processes.
| Method stage | Stage characteristic |
|--------------|---------------------|
| Stage 1. The industrial business processes implementation economic efficiency evaluation in the construction organization | When analyzing the economic efficiency of the implementation of industrial business processes in a construction organization, it is necessary to operate the actual profit, since the estimated and planned profits (planned accumulations) somehow distort the real situation, implying the predicted values. Deviations from acceptable profitability ratios and their dynamics should be the initial source of indignation, indicating that changes are needed in relation to business development in order to increase its efficiency. |
| Stage 2 The calculation of the used efficiency fixed assets indicators involved in the production business processes implementation | It is necessary to identify the factors affecting the decline in the construction organization efficiency. The construction company management needs to find out whether the fall in the production business processes efficiency implementation indicators is associated with a decrease in the efficiency of the property complex use of the company participating in its implementation. Analysis exposes all sources of reserves to increase the construction organization efficiency. |
| Stage 3 The construction organization potential adequacy determination to conduct activities to improve the efficiency of the fixed assets use | To calculate the construction organization rating, it is necessary to use the following groups of indicators: 1) the security of the organization with its own funds; 2) the security of the organization of borrowed funds; 3) the adequacy of the authorized capital of the organization; 4) investment attractiveness of the organization; 5) the formation of the main and working capital of the organization; 6) capital turnover of the organization; 7) liquidity of the balance sheet; 8) the solvency of the organization; 9) return on assets, capital and sales. |
| 4 stage. The choice of cooperation based on the criterion of dependence or independence of strategic decision making in the interaction process | The construction organization should proceed from the results of the following analysis: 1) it is necessary to consider the conditions and level of market development; 2) it is necessary to analyze the need to change the structure of the property. A factor indicating the need to change the structure of the property is unsatisfactory indicators of extensiveness and intensity of use of machinery and equipment. |
| Stage 5 The choice of the type of cooperation based on the lack of the strategic decision-making dependence | There are two options for cooperation in the framework of production outsourcing: 1) partnership based on the full responsibility of the outsourcing customer to the customer of construction-subcontracting, 2) outsourced partnership with distributed responsibility. The reference point in choosing an outsourcer can be: 1) the compliance of the outsourcer qualification with delegated authority; 2) the use of new technologies; 3) the period of existence in the market; 4) a positive history of implemented projects, the presence of positive customer feedback; 5) rating of economic sustainability; 6) the cost of services provided. |
| 6 stage. The works block execution on the preparation and implementation of outsourcing in a construction company | After a reasonable approach to the decision on the outsourcing use, the construction organization management should: 1) determine what type of outsourcing is necessary at this stage (full or partial) for the integrity of the business processes transferred to the side; 2) to give a reasonable economic and strategic assessment of the use of outsourcing; 3) to develop measures for the adaptation of the organizational structure. |
Figure 1. Methods of improving the efficiency of the construction organization in terms of the industrial outsourcing use

This approach to defining and delineating the ‘boundaries” of business processes will allow a fairly objective way of calculating the calculation procedure of the preliminary economic rationale for the outsourcing re-implementation, as well as outline the main prerequisites for analyzing the required business process regarding the strategic importance and implementation quality (competence level) in the organization with the aim of distributing all the activity processes to the main and auxiliary processes, as well as to those that correspond to a given level of quality carried out or the competencies that require improvement in order to increase the specified level of quality of performance or awareness.

The construction organization can focus on two types of outsourcing - full and partial form, which is explained by their high degree of influence on the construction company current business activities. Full outsourcing is an outsourcing type, which involves the transfer to an outsourcer of separate business processes (production, service, information, management) entirely, with also placing on him full responsibility for their implementation [5, 7, 9, 10]. The purpose of such outsourcing is to reduce management levels, simplify internal planning processes, disaggregate and decapitalize the organization and reduce costs.

Partial outsourcing is a type of outsourcing whereby an outsourcer transfers specific parts of an organization’s business processes. At the same time, a number of interrelated tasks are performed by the organization independently. The partial outsourcing purpose is the desire of the customer to maintain influence on the planning, management and control, to concentrate advanced technologies in their hands [2, 4, 11, 12].

Therefore, in each specific case, it is important to take into account the business process “owner” business role, which is fully responsible for it and is empowered with respect to this procedure. “Owner” is important for the entire business process successful implementation, and above all, its performance, efficiency and adaptability to the business needs. The “owner” of the process ensures interaction with the structural divisions’ heads through which this business process passes. When making a business process to be outsourced, this process owner is no longer an individual official within the organization, but in general, the entire outsourcing organization to which business processes are transferred, or, in the case of partial outsourcing, responsibilities the process owner is distributed between the customer and the external contractor in accordance with the outsourcing contract. And in this case, the tasks assigned to the “owners” of the process as a whole should be preserved.

Summary
We believe that an examination of the implementation feasibility is necessary for both full and the outsourcing partial forms. On the basis of the results obtained, the management is able to conclude on certain outsourcing process implementation advantages.

The process of conducting or implementing business process outsourcing in a construction organization in the framework of developing an outsourcing project should include several steps, including: 1) preparatory; 2) informational; 3) analytical; 4) creative; 5) research; 6) advisory; 7) implementation.

The main content of the preparatory stage for the business processes outsourcing implementation in a construction organization is the preparatory work. At this stage, the object of analysis is finally determined, a comprehensive survey of the construction production and management state is carried out. The analysis object is the functional, target or production units, i.e. the certain subsystems that are responsible for the business process execution and are designated as potential objects for the transfer, in whole or in part, to outsourcing.

The collection, systematization and the data characterizing business processes study is carried out at the information stage. When studying the data, it is necessary to give a description of the composition and content of the work performed by the object of analysis to determine the analysis object essence and the development, substantiation and management decision-making processes nature in the business process implementation to build a structural-functional model.
At the analytical stage of the outsourcing project implementation, a business process de-composition, at which it is necessary to establish the level and causes of the discrepancy between the business processes significance and their implementation costs is carried out. The business processes cost estimate is made by calculating the costs of their implementation according to the expenditure items for each decomposed function of the analysis object.

At the outsourcing project implementation creative stage in a construction organization, the consideration is given to options for improving the business process in the framework of outsourcing. Taking into account the tasks set at the previous stages, the possibility of implementing a full or partial transfer of the business process to the side is considered, the ideas are put forward about the ways to control and further control the analyzed business process when entering into an outsourcing contract. This stage is characterized by close interaction of various specialists regarding the objective solution development. A preliminary outsourcing implementation examines the costs magnitude category per implementation of business processes, the business process quality or competence level, as well as the construction organization main indicators level.

The direct cooperation model development in the framework of the outsourcing project implementation between the outsourcing customer and the outsourcer is carried out at the research stage. Also here is the final organizational and economic assessment of options for the outsourcing scheme implementation, the selection of the most rational proposals for implementation. Taking into account the previously developed criteria, restrictions and risks, all possible options according to the scheme of outsourcing cooperation can be divided into groups: 1) real and possible to implement; 2) possible to implement, but in these conditions not implemented; 3) theoretically possible, but at the present moment practically unrealizable; 4) unreal.

The recommendation phase involves the preparation of an outsourcing project for implementation. At this stage, the final efficiency and effect of the business process outsourcing measures implementation, the responsible performer of the events being considered by the customer of the outsourcing customer are determined, and a decision is made on the outsourcing project implementation.

The conclusion and implementation of an outsourcing contract for a building organization-customer must be coupled with an actual increase in its degree of sustainability or, at least, must guarantee the level that existed before outsourcing, since sustainability is a significant characteristic in the context of the companies’ interests, partners of the construction organization activities.

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