

Modern methods of cost saving of the production activity in construction

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Abstract. Every time economy faces recession, cost saving questions acquire increased urgency. This article shows how companies of the construction industry have switched to the new kind of economic relations over recent years. It is specified that the dominant type of economic relations does not allow to quickly reorient on the necessary tools in accordance with new requirements of economic activity. Successful experience in the new environment becomes demanded. Cost saving methods, which were proven in other industries, are offered for achievement of efficiency and competitiveness of the companies. Analysis is performed on the example of the retail sphere, which, according to the authoritative analytical reviews, is extremely innovative on both local and world economic levels. At that, methods, based on the modern unprecedentedly high opportunities of communications and informational exchange took special place among offered methods.

1. Introduction

Efficiency of entrepreneurial activities is defined by the business structure in a great measure. Available demand causes growth of producer's prices at the existence of mass deficiency of the product. If we consider the investment-construction activity as an example, then deficit can be associated with an absence of the construction management tools in an adequate degree. The consequences may include high cost of loan capital, narrow group of the professional performers of the separate functional slots, limitation of an offer of the land plots, facilities of engineering, transport and other infrastructure, lack of skilled personnel, and many other things. In such conditions, construction companies which can perform building and not experiencing essential competitive pressure, but which realize created products, works and services quite successfully and quickly, have the opportunity to set relatively high level of the prime costs. As a result, profit maximization leads to the possibility of ignoring of separate expenses, which could be eliminated. Company is oriented on the exchange acceleration and thereby eliminates some of the relatively high costs. If concentrate an attention on such aspects, then it is necessary to create an additional administrative functionality and perform business reformatting. Usually, fast and short-term money do not contribute it. In this regard, methods, which allow to reduce expenses of production cardinal become necessary when the flow of fast money stops.

2. Methods

Situation, when construction companies did not passed issues of cost reduction to the foreground, have been observed in mass form in the past decade. Population had quite solvent demand for the formation of continuous demand for housing projects. As a result, there was a steady growth of prices for objects, and construction companies gained traction continuously. It was obvious for business, that such situation



can not continue indefinitely, but professional association of builders intuitively continued to increase business activity trying to get the most out of the circumstances. From scientific point of view, situation of the last decade was not the result of any accidental circumstances, and as it was pointed above, it was reflection of the existing organizational-economic system [1]. Economic relations of the state, economic entities and home economics expressed in the preferential freedom of actions and availability of favorable factors monumentally for the part of enterprises. Systematically organized (economic) activity at the weakness of state regulation and lack of choice from the part of home economics allowed to firstly satisfy in better extent the interests, particularly, of the companies, and then of the other participants.

In subsequent periods, particularly after 2008, business activity began to experience a major setback, and the amounts of realization of the construction products began to decline [2]. Famous events brought a change of the existing organizational-economic structure with it, where the characteristics of the new predetermined the following facts:

- decrease in the purchasing power of citizens;
- recession in demand for construction objects with relative abundance of space and corresponding positive delta in value (so-called luxury housing);
- growth of demand for more limited resources in the domestic market, especially for the loan capital;
- increase of the level of competition in the market of construction products, works and services;
- earnings dilution of the construction companies up to the level, which does not allow to ensure the future development of business, and leaves only operation on the edge;
- mass shift of the business to the segments of the economy-class housing;
- bringing out to the foreground the goals of reducing of costs of the production activity by the companies.

In the conditions of the new organizational-economic system, professional builders' community is focused on the acceleration of the turnover not primarily. Saving of the business, finding new market segments, maintaining competitiveness are the essential features of the established strategy. At that, companies massively began to seek for the ways to reduce multiple various costs, including which were neglected in previous years, in the period of changes of the organizational-economic structures and in the situation of search of the opportunities to remain competent in the new structure, which was formed after 2008. Except of the business reconstruction, search of the new forms of construction, which stipulate lower construction costs, legal avoiding of the circumstances of ensuring of built-up areas with social infrastructure objects became urgent, for example through the building of residential areas under the guise of apartments, etc. With that, available perspectives do not allow the companies to be fixed on the architecture, built under the new requirements of the organization model, which is also a characteristic of the existing organizational-economic structure, and it looks as other structures, which will be formed in future, too. Market trends do not reflect alternatives clearly. For example, experts say [3] that prices for the housing in Moscow will drop on 30-40% to 2022, predicts the analytical center "Housing market proxy". Overproduction of square meters in the new Moscow territories (South and southwest regions) is also practically assured for everyone. However, in contrast to the new territories, Moscow keeps deferred demand for the available housing with good quality. The fact is that in the period from 2005 to 2014 such housing in Moscow almost have not been built, only business class was built. Housing for a relatively prices appeared in Moscow nowadays and there occurs overflow of the demand within the MRHW. But when the deferred demand will be realized, things which are now happening in the New Moscow will recur, as well as the things, which happened to the remote sites near Moscow two or three years ago, when the demand for them felt sharply. It is possible to avoid this scenario, but only under condition of the reducing of the housing amount in the Moscow region on the nearly 30-35% from the planned peaks in the next years [4].

Decline in the construction amounts, which is projected in the Moscow region in the near future, also can affect other regions of the country. If some overproduction can be a reason for the Moscow region, then drop in purchasing power adds to all other cases that reflects primarily on the regions. In general, trends of the both Russian and world economic indicate that there is no reasons for increase of the occupational level of the population. General drop in revenues follows that.

For example, salaries of various experts stopped their growth a long ago. Companies can increase production output per worker, but it occurs not at the expense of the better equipment of the particular worker, but at the expense of the increasing in performance of individual tasks by various mechanical and automatic independent systems. This statistic is primarily observed in the developed countries. Salary of an ordinary worker in the USA has reached its maximum value in the 1973. In 2013 prices the ordinary worker, involved in production in the private economic sector, has received an average salary of \$767 per week. At that, half of the economically active population of America belonged to the number of such workers. The next year real average salary fell down and continues to decline since then. Just the same ordinary worker earns only \$ 664 four decades later, i.e., their salary decreased nearly on the 13% during this time [5].

In these circumstances, construction companies should consider two main points:

- purchasing power will not be increased in the medium term. The most important challenge of modernity still stays cost cutout and saving of the costs on production;
- progressive companies start to apply different means, which use labor more actively. Improving of organizational means of the production-construction activity leads to increased competitiveness of business.

In this situation some of companies cannot be able to compete, because they function on the basis of economic relations of the past structure. Cost saving becomes not just a trend that needs to be followed continuously. Cost saving should be performed with an outlook on the new types of economic relations, which forms as part of their new generations. On that basis, methods of management, oriented on the total cost saving must be formed. Important feature of the organizational-economic structure, according to the researches, is the mutual use of the best ideas and solutions that lead to the overall growth of the economy. That's why analysis of the best achievements of individual organizational-economic structures is extremely needful for usage of new economic solutions with priority rates.

3. Results

According to the experts [6], for example retail (retail is an activity in retail trade. Retailers are companies whose activity is based on the retail trade. These are clothing shops, supermarkets, car dealers, etc.) is one of the most advanced sectors of the economy. In the latter (data for 2014) rating of the most innovative companies of the USA, eleven companies from top-50 are retailers. WalMart, the world largest retail chain, invests 10 bil. dollars per year in innovations. And in recent times it has been reported that fully-robotized stores Amazon Go, which master USA successfully, are about to open in London. And this is not just a store with cash registers working without operators, to which domestic buyers had time to accustom. To get into the trading hall of the Amazon Go, special application must be installed on the mobile device and Amazon account must be attached to it. Then numerous sensors, computer-managed instruction and image identification technologies come in. Buyer takes everything that needs and leaves and the system automatically withdraws required sum from the account. Russian networks do not have such capabilities and only gradually adopt better practices. But interstitial flow of innovation is observed. As for developments available in the retail sector, it is possible to tell that they form in their own organizational-economic structure of the retail business. Economic studies allow us to affirm that the best ideas of this structure can be applied effectively, for example in organizational-economic structure of the construction activity. So far as the Russian retail market, three projects can be considered. The first is the creation of the system for selection of locations for the shops which assesses on the basis of information on population density, traffic (vehicular and pedestrian), other characteristics which influence the attendance of shops and their turnover, prospect of the selected point. As a result of the implementation of this system, forecast accuracy is improved significantly and today it amounts 90%. These solutions are very demanded by the construction workers. At building of the residential districts, at pointed placement of separate objects, etc. developers have to understand how to place these or that buildings effectively, how to use flow of traffic and people and to offer them certain benefits more effectively. The second project is proper online services, ordering transport for shipment like GoCargo, which works under the rubric of the well-known service taxi ordering service Uber.

Entrepreneurs, owning one or more trucks, and small and medium-sized carriers are registered in the system. At the necessity, system selects transport for which order is optimal, based on its location, weight and volume of goods, desired conditions of shipping, at the same time considering how favorable the proposal of applicants for its receiving. Now service provides 20% of transportations of the company, and by the end of the year this share will be brought up to 50%.

These solutions are not less in demand for builders too. Logistics traditionally occupies a large share of the company's costs. It is required to create special logistics units, which are seeking ways of the traffic optimization. Automation of these processes both reduces the load on the company's full-time employees and makes them partially expendable, and reduces costs for the shipping services.

Third project is the project of human resources management. Personnel for the retail companies is now picked up by the robot. It is about the employees of the lower level. Considering the staff turnover in the X5 network, which consists of the nine thousand shops, HRs have to consider up to 50 thousand candidates for employment per year. Manual processing of such array of profiles is time consuming and in some cases leads to mistakes due to incorrectly processed data. Robot selects suitable summaries with the entered in the program criteria and immediately sends a notification to the candidates via e-mail. So freed from routine human resources representatives now can focus on search of the outstanding managers that requires creativity and delicate adjustment of the procedures. In construction there is also a lot of hand work, season factor, requirements on category and qualification depending on the project, stage of work and other circumstances which lead to the necessity for intense staff management performance. Application of various automated systems can solve a lot of problems connected:

- with poorly controlled matter of the attraction of unskilled personnel, including from abroad;
- with poor control of the number of workers, who are really employed at construction sites;
- with accounting of the real needs of personnel in different sectors, territorial aspect, etc.

4. Conclusions

All of these decisions can really lead to the cost saving, because they connected with the most cost-intensive and capital-intensive industry issues. There is no necessity in making inventions from scratch. Many solutions already exist in other sectors, and at ensuring of their adaptation to the conditions of the construction industry, they can provide a breakthrough in the management system. Effective approaches of construction operations conduction can be borrowed from other industries and fields of activity. Modern world is very promoting this, because digital technologies make data exchange rate unprecedentedly high. At that, interdisciplinary researches and relevant decisions within scientific works in general take the important place. It allows to reckon on the presence of positive result within this work too. Cost saving of the construction has prospective. Despite the fact that the construction industry for a long time operates in conditions of the rigid and sometimes excessive retrenchment, study shows that the development of world science and practice allows to get new decisions of the effective activity. It is necessary to perform an analysis not only in the proper field, but also in the related fields of business to use them in a timely manner.

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