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Development of Science-Intensive Strategy in Machinery-Building Company in Contemporary Russia

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Abstract: The paper suggests a system of science-intensive strategy of machinery building company developed for different hierarchical levels: within microlevel it is considered to be growth rate of revenue obtained as a result of investment; on macrolevel it is considered to be qualitative and quantitative growth of the capital functioning in the society, efficient use of investment resources, creation and protecting favorable investment climate.

Key words: Machinery building · Investment strategy · Hierarchy · Profit · Investments · Investment resources · Investment climate · Strategic management · Strategic goals · Capital growth · Microlevel · Strategic tasks

INTRODUCTION

The importance of correct investment strategy at enterprises is defined by a number of factors. Above all, as the efficiency of making investment decisions can recoil during several years, it causes specific limitations [1, 4]. On the one hand, the enterprise has limited investment resources determining investments in cheap low efficient technologies. On the other hand, there is an aspect of timeliness that proves the complexity and inconsistency of strategic analyzing and strategy development of the machinery building company. It stipulates the timelines of the research theme and the choice of its goals and tasks.

The goal of this article is to define theoretic and methodic basis of the science-intensive strategy of the machinery building company at various hierarchy levels that must guarantee increment in profit from the investable funds directed to the consumption on the micro level; quantitative and qualitative increment of the capital functioning in the society, efficient use of investable funds, creation and support of advantageous investment climate on the macro level.

RESULTS AND DISCUSSION

The investment activity of a company (firm) is quite a longstanding process and that's why it must be performed taking into account a definite perspective. Formation of such activity directions with the regard to the perspective is a process of the investment strategy development.

Focusing on the directions of the investment strategy and performing strategic tasks of the mid-term period, the formation of a machinery building company's investment profile defines the range of basic investment projects within separate investment programs. Terms and scopes of separate investment programs and projects implementation including tasks of their implementation in a short-term (current) period are worked out simultaneously [2]. Focusing on the investment profile made by the company and tasks of its implementation in the current period, operative management of the investment programs and projects implementation provides the development of events on the investment programs implementation in terms of separate projects and if necessary, the preparation of solutions related to "the way out" from separate programs or projects.

An initial factor of the investment strategy formation is the general strategy of the company (firm) economic development. In relation to it, the investment strategy bears subsequent character and must be agreed with it according to its goals and implementation stages. Herewith, the investment strategy is regarded as one of the basic factors providing efficient development of the company according to the general economic strategy chosen by it.

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The initial stage of the company (firm) investment strategy development is the determination of the general period of its formation. This period depends on a number of factors. The main factor of determining the period of the investment strategy formation is the predictability of the development of the economy in general and investment market, in particular. In the context of the current unstable development of the country economy, this period must not be too longstanding and in average it must not be more than 3-5 years (to compare, it is necessary to mention that the investment strategy of the largest companies from countries with the developed market-driven economy is developed for the period of 10-15 years).

The results of researching some companies show that the greatest period (more than 10 years) is specific for the development of the investment strategy by so-called institutional investors (investment funds, investment companies, etc.); the smaller period (5-10 years) is peculiar for companies and firms that perform their activity in production and extractive industry; and the shortest period (3-5 years) is peculiar for companies and firms that perform their activity in the customer goods production, retail and services provision to the general public. However, under our conditions such economic branch differentiation of the medium period of the investment strategy formation must be considered rational. And, finally, one of the factors to determine the period of the investment strategy formation is the company size. The investment activity performed by large companies is usually predicted for a longer period [6].

The most efficient ways to fulfill strategic purposes of the investment activity are developed in accordance with two directions. One of them comprises the development of strategic directions of the investment activity and the other one includes the development of strategies to form the investment resources. This stage is the most responsible and difficult.

The works related to the development and the system implementation include the following stages: organizational and methodic preparation of the project; the development of the machinery building enterprises strategies and integrated education as a whole; the development of the network (system) of the organization business processes; business processes regulation; processes measuring (statistics set); processes rationing and personnel motivation.

At the first "Organizational and methodic preparation of the project" stage the enterprise top managers make the decision about the reasonability to develop and implement the process-focused approach to the management of the enterprise competitiveness. To manage the project, the project organizational structure is developed and typical documents and some internal standards including the following forms: a strategy card, subdivision provisions, personal administration plan, job-related instructions, process instruction, process record certificate are worked out (adapted).

At the first stage works related to all project stages and the second stage fulfillment are planned in details. In accordance with the results of the first stage, it is necessary to do the following actions: to make a decision about the project beginning, to appoint the project manager, to form the methodic group, to teach top managers and the methodic group members, to develop the system (network) project of the top level processes, to develop typical forms of documents (a strategy card form, process regulations template, templates of personal administration plans, template of a process instruction); to develop documented procedures (standards) of the organization (documents management, process records management, correcting actions performance); to form working groups on the processes; to teach middle managers and members of the working groups; to make the plan of the project implementation.

The purpose of the second "Strategy development" stage is to define the strategic goals and basic ways to achieve them. The goal achievement means the following actions: to collect information on the external surrounding and internal state of the enterprise; to define strategic goals of the enterprise; to analyze strategic goals and define basic ways to achieve them; to correct strategic goals and form a strategy card, to tie strategic goals to business processes; to develop indicators of the strategic goals achievement that can be measured; to plan the achievement of a number of strategic goals, to check the indicators system with the aid of the enterprise financial and economic model; to confirm the strategy card; and to confirm the indicators system of the strategic goals achievement.

The purpose of the third stage is to make documents regulating the managers' and employees' activity related to the process of the competitiveness management. It is necessary to do the following actions for that: to develop the conceptual scheme of work of the competitiveness management system (it is necessary to concretize the general scheme taking into account the enterprise specificity); to develop the list of the system regulating documents; to develop additions/corrections

Table 1: OJSC KAMAZ sales profit for 2013-2017, mln, RUR.

Scenario	2010	2011	2012	2013	2014
maximum	6,738.58	6,940.74	7,218.37	7,507.10	8,107.67
optimistic	6,542.31	6,705.87	6,974.10	7,253.07	7,543.19
the most probable	6,351.76	6,510.55	6,673.32	6,940.25	7,217.86
pessimistic	6,166.76	6,320.93	6,478.95	6,640.92	6,806.95
minimum	6,093.63	6,245.97	6,402.12	6,562.18	6,726.23
inertial	6,033.30	6,184.13	6,338.74	6,497.20	6,659.63

for the process regulations template; to develop the plan for the creation of regulating documents and the work organization; to develop the regulating documents for the system of the enterprise competitiveness management system; and to confirm regulating documents for the system of the competitiveness management system.

The purpose of the fourth "Processes measuring (statistics set)" stage is to get statistic information about the processes operation and results, the processes clients' satisfaction. The received statistic information allows to define normal indicators value and establish target criteria for all indicators. This stage includes the following actions: to develop the plan of works related to the processes measuring; to develop the system of collecting information related to the processes (the system of collecting information is developed for each process under the guidance of the process owner); to teach employees about the procedures to collect and process information; to collect statistic information related to the processes; and to analyze statistic information related to the processes.

The purpose of the fifth "Rationing and motivation" stage is to ration the processes indicators and to develop the motivation system. This stage includes the following actions: to develop the standards on the processes indicators; to develop the system of motivation for each process; to teach managers and employees; to confirm the system of motivation.

CONCLUSIONS

Strategic management of a machinery building enterprise is a methodology of organization, planning, stimulation, coordination, control over labor, financial and material and technical resources as a combination of interrelated processes (analysis of the environment (external and internal), determination of the mission and goals, analysis and the choice of strategy, strategy implementation, estimation and control of the strategy implementation) that allows to focus the enterprise operation on the customers' enquiries, perform flexible regulation and timely changes on the micro level being adequate to the external environment influence and get competitive advantages contributing to the achievement of the economic operators' goals in the longstanding perspective.

The suggested organizational and economic mechanism of strategic management is based on the use of the balanced system of indicators that allows to increase the efficiency of the competitive strategy implementation on the basis of the comprehensive regard of the interrelation of enterprise business processes being a part of integrated entities; planning and control of the use of specialized and decentralized resources of a group of companies; confirmation of tactic and strategic goals of separate enterprises and integrated entity as a whole.

The suggested methodology of organizing a process-focused management of machinery building competitiveness that uses the description of business processes in the IDEF3 notation helps to reflect logical subsequence of procedures performance and managing influences in time, define and analyze points of influences flows of the attendant document flow on the scenario of technological business processes, find situations that require to make decisions influencing on the operational lifetime of the process including the change of functional, technological and exploitation features of the machinery building products, contribute to making optimal decisions while re-organizing technological processes, develop imitation models of technological processes.

The results of the implementation of the suggested tools and mechanisms of strategic management of the innovation-focused machinery building enterprise development were predicted according to six basic scenarios taking into account the suggested changes of the external environment at the equal implementation of the suggested strategic management tools:

- Maximum, assuming that by the end of the five years' period all key factors of the external environment of the indirect influence defined in the context of this research will be maximum advantageous;
- Optimistic, assuming that by the end of the five years' period four of five key factors of the external environment of the indirect influence defined in the context of this research will be maximum advantageous;
- The most probable, assuming that by the end of the five years' period three of five key factors of the external environment of the indirect influence defined in the context of this research will be maximum advantageous;
- Pessimistic, assuming that by the end of the five years' period two of five key factors of the external environment of the indirect influence defined in the context of this research will be maximum advantageous;
- Minimum, assuming that by the end of the five years' period only one of five key factors of the external environment of the indirect influence defined in the context of this research will be maximum advantageous;
- Inertial, assuming that by the end of the five years' period neither of five key factors of the external environment of the indirect influence defined in the context of this research will be maximum advantageous.

Sales profit of the innovation-focused machinery building enterprise has been chosen as a prediction target. The results of predicting for 5 years' perspective (through the example of OJSC KAMAZ) are presented in Schedule 1.

The represented data show that OJSC KAMAZ sales profit differ almost by RUR 5 billion for 5 years of the maximum and inertial scenarios implementation with accrual character. It is substantially equivalent to the current annual sales net profit of this enterprise. In comparison with pessimistic scenario at the implementation of optimistic scenario the profit of the innovation-oriented machinery building enterprise under consideration increases by RUR 2.5 billion.

Thus, the development of the investment strategy for the science-intensive machinery building enterprise guarantees positive dynamics of the financial and business activity development, contributes to forming and effective implementation of the company resource potential.

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