

# MODELING AND INFORMATICS

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## Model of strategic managing the competitiveness of the integrated company

*The author's interpretation of strategic managing the competitiveness of the mining company is offered, the theory-methodological bases of the model are developed, and application of the resource theory of strategic management, value-based management, and also the theory of real options are proved. The model of strategic evaluating and managing the competitiveness should be based on interest multiplicity of stakeholders which are carriers of financial, intellectual, social and natural capital.*

*Model, strategic managing the competitiveness of the mining company, stakeholders, the resource theory, the value-based management theory, the real options theory.*



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Strategic management plays a key role in the integrated companies that are dominant in the mineral-raw complex (MRC) and are the backbone for the national economy, and these companies provide the effective and rational use of mineral resources.

In our view, strategic managing the competitiveness of the mining company is a system of tools and actions aimed at improving the resource and dynamic competitiveness of the company during the growing competitive status and fundamental value of the company,

taking into account the dynamics of internal and external environment and the use of option management.

The model of strategic managing the competitiveness of the mining company is based on the following theoretical and methodological basis:

- the resource theory is the fundamental theoretical basis – it is the most modern concept of strategic management;
- the management theory focused on the value-based management is the methodological basis;
- the real option theory providing flexibility of management decisions and accounting the dynamics of internal and external conditions and factors, including the institutional environment is the instrumental basis.

Strategic management includes analysis toolkits and mechanisms of managing the object.

Choosing the model [1] and key indicators of strategic analyzing the competitiveness of the integrated company, the variety of key methodological approaches should be considered. In general, these models can be divided into three groups.

The first group includes models using indicators of company's financial situation and focusing more on the interests of debt holders and creditors [2].

The second group includes models of corporate governance based on the VBM-management, aimed at maximizing owners' welfare and increasing the investment attractiveness of the company and actively introduced in the progressive corporations of the world [3].

The third group includes integrated models aimed at combining the interests of many interested parties in an integrated company.

<sup>1</sup> The model in this case is the relationship of specific, but as a rule, not formalized in mathematical form elements: rules, forms, principles, institutions, etc.

In our view, a strategic analysis of the competitiveness and efficiency of the integrated company should take into account the interests of all interested groups (stakeholders) and be based on them. This modern approach is based on a common definition given by R. Freeman that defines stakeholders as “interested groups of people or individuals that can help the company to achieve its objectives or themselves are affected by this process” [2]. It should be noted that the stakeholders have various forms of interests in the company not only now but also in the future, and it determines the need of their integration into strategic management.

There are different terms to identify various types of stakeholders and their influence on the company [2, p. 126-127]. Classification of the General Electric Company divides the stakeholders into shareholders, employees, customers and the public. Resource classification identify the stakeholders according to the type of strategic resources they provide, they include investment (objects of investment), reputational (resources of relations) and intellectual (transformational resources). Classification according to the criteria of risk-sharing reflects the relationship between risks of the company and risks of company stakeholders as results of the company activity determines risks of stakeholders. Classification according to the criteria of influencing strength is based on the stakeholders' impact on the results of the company activity in a favorable or unfavorable direction. In addition to these, there are classifications of stakeholders according to their interdependence, shared responsibility and other characteristics.

Communication and dependence of own interests and goals of stakeholders with the results of the company activity determine their motivation and their potential to act as resources for the company. Specificity of interrelation between stakeholders and the company has a complex, many-sided and mainly non-financial nature.

Therefore there are primary categories of stakeholders, which include some persons among the investors, personnel, clients, suppliers which are the most interested in the company activity and without whom the company cannot function in the future. The secondary category cannot support the company policy and share its program; therefore their influence is not so essential.

The uniqueness of strategic resources provided by the stakeholders and the company risk-sharing allows to consider them as special investors, offering a unique investments.

In the mineral-raw complex the sites of subsurface resources owned by the state are actively developed, and they are also controlled by the mining companies in the mineral assets. Therefore, the dominant stakeholder and participant of interrelationship in the integrated company is the state and this fact must be taken into account in the process of negotiating interests in a model of strategic management. Interests of different stakeholders can be opposed, not conforming to the common goal of maximizing the value of the company. Possible conflicts between western authors are ambiguous and their interpretations can be divided into the following types [2, p. 128-135].

1. Radical positive position, its followers believe that the maximization of the capital cost corresponds to the maximizing the claims of all other stakeholders' categories. This interpretation is the result of the contract theory of the firm; in addition it is assumed that all of the obligations are guaranteed satisfied. Therefore, the only party having the right for residual claims to the assets of the company is the company's owner bearing the risk from their making decision.

2. Radical negative position, its followers believe that the conflict of interests between the owners of capital and other stakeholders is inevitable. This interpretation is based on a new version of the contract theory of the firm based on the assumption of incomplete contracts.

The company is not considered as the sum of resources, assets and sources involved under any conditions from different markets, it is considered as the object with new features due to the combination of specialized and complementary assets. Unsolved problems in this case are the ownership rights and control over specific resources (non-financial, natural, social), with not always regulated status, so each owner of resources (stakeholders) has his own interest, sometimes non-formalized, non-protected, non-coincident with the interests of company's owners.

3. Compromise position is characterized by a variety of interpretations. Thus, the resource theory assumes that stakeholders can form as well as limit the resources so the mechanisms of motivation are need, and they provide greater efficiency and competitiveness of the company. The concept of corporate social responsibility shows that the quality of corporate social responsibility of the company is related to financial performance, profitability and capital value of the company. Therefore the introduction of stakeholder interests as an active element into the concept of value management can be considered as a condition to achieve maximization of shareholder's capital value in the long-run period.

Thus, the model of strategic analyzing the competitiveness of the integrated company must be based on the interest multiplicity of stakeholders who carry the financial, intellectual, social and natural capital; this model must consider the optimal balance between them, now and in the long run. This "model provides a solution of the problem ... to create a harmonious company in which management cycle is submitted to the structuring the space of multiple interests and achieving the balance in it. Balancing the interests forms a special quality of relationships with stakeholders of the company (network), which transform into a new factor of company's value in the transition to innovation economy" [2, p. 152].

The efficiency of the activity and the degree of market power of the company, features and efficiency of achieved integration and diversification influence on a strategic analyzing the competitiveness and the competitive status of the integrated company.

Therefore, the strategic analyzing the competitiveness of the integrated company should differ from this analysis within the focused company and be realized in the following way:

- analyzing the influence of integration and diversification and their results on the competitiveness of the company;
- rationalizing the approach to analyze the competitiveness of the integrated company;
- adapting the estimating model of the fundamental value of the company, taking into account the concept of value-based management (VBM);
- developing an integrated (stakeholder) model.

Building the model of strategic analyzing the competitiveness of the mining company and its main tools are presented in the *table*.

Three types of competitive advantages provide the competitiveness of the integrated company: resource advantages – the possession of the resources of special quality or quantity (natural or acquired); operational advantages – the efficiency of using the available resources, strategic advantages – the availability and quality of a particular development strategy of the subject as the carrier of competitive advantages. Therefore it is necessary to realize the qualification and identification of strategic and competitive advantages as a basis for strategic competitiveness: the identification of specific and strategic assets, the connection between them and their assessment. Analysis of the existing valuation models of certain asset types qualified as a fix specific and strategic showed the absence of a generalized approach to their evaluation as a separate economic category.

Indicators of lagging indicator system used for diagnosis and monitoring of resource opportunities (potential) and value of the company at the moment should reflect the major interests of the stakeholders based on the systematic approach reflecting the interaction of systems and their environment.

The model of strategic managing the competitiveness of the mining company

No	Stage of model building	Tools
1	Qualification and identification of strategic competitive advantages	1.1. Identification and analysis of specific assets 1.2. Identification and analysis of strategic assets 1.3. Analysis of conditions for conversion assets from specific into strategic
2	Development of lagging indicator system, diagnostics and monitoring of resource capabilities and value of the company in the present on the base of resource theory	2.1. Analysis of resource potential of the company 2.2. Valuation of raw-mineral assets 2.3. Valuation of the company according to the resource theory
3	Development of the system of leading indicators and establishment of target strategic indicators	3.1. Determination of resource capabilities of the company for the future 3.2. Monitoring of changes in the competitive environment (competitive strategic analysis) 3.3. Establishment of target strategic indicators
4	Analysis of institutional constraints in the forming and using the strategic assets	4.1. Analysis of the current institutional environment 4.2. Monitoring and analysis of institutional changes
5	Valuation of the company based on the theory of value-based management	5.1. Choice of model of the company valuation 5.2. Valuation of the company on the chosen model according to the strategic assets, resource capabilities, changes in the competitive and institutional environment
6	Strategic decisions on managing the competitiveness and value of the company	6.1. Development of alternative strategic projects 6.2. Choice of the strategic project in relation to the use of optional methodology 6.3. Development of tactical direction of strategic managing the competitiveness and value of the company

The system of leading indicators provides the setting of target meaning of strategic indicators.

Changes in external factors (circumstances) can affect the interests of economic agents, and correction of regulating conditions stimulate the company to achieve the efficiency of the system based on the harmonization of private economic interests and the collective social and institutional interests [4].

Institutional restrictions creating the artificial competitive advantages affect greatly on the strategic managing the competitiveness of the company. The influence degree of institutional restrictions is determined, first of all, by economic activities, its strategic importance for the national economy in the present and in the future, by the backbone character of industry and other strategic factors. From the all elements of the institutional environment in the MRC as the most significant ones there are: subsoil use, taxation and organizational structure. These elements of the institutional environment are closely interrelated and mutually determined by each other; the condition and dynamics of their change depend greatly on the state policy according to the MRC.

The valuating of the integrated company based on the theory of value-oriented management is carried out on common theoretical basis. Elements of the model (core modules) remain the same (analysis, strategy, finance, corporate governance) [5], and the content become more complex and adaptable to the conditions of the integrated structure.

**Evaluation module** in which the choice of model and methods for determining the value of the company for the owners, monitoring the value change, the analyzing the mechanisms to create new value are realized, should be supplemented by new models, factors and drivers of value, taking in account the nature and degree of interaction between participants of the integrated company.

**Strategic module**, establishing the communication between the value of the company for owners and corporate and business strategy of the company is supplemented taking in account the interests of many stakeholders, variety of strategies, possibility of their combinations, and the impact of greater uncertainty of the environment.

**Finance module**, reflecting fiscal policy, is supplemented by new tools, which using is associated with domestic markets of financial resources and the access to Russian and international capital markets, etc.

**Corporate managing module** is complicated by harmonizing the interests of a greater number of agency conflicts.

**In the evaluation module** can be used the traditional model of the company valuation. In addition, in connection with the publicity of the most integrated companies, for their evaluation are more suitable models, based on market capitalization, unlike evaluation models of focused companies based on the estimated value. The stock market has a special, institutionalized connection of the securities with their assets of the real economic sector [7]. As a rule, the capitalization of the companies is estimated according to expected revenue in the long-term (strategic) perspective.

It should be noted that the evaluation of integrated companies according to the external market indicators (capitalization) is characterized by several features.

Firstly, the strategic perspectives are less predictable because of the greater uncertainty of several areas of development and the need to consider both systematic and nonsystematic factors. As a result, the market attention can be focused on short-term profits without adequately considering the prospects of company development that leads to their undervaluation.

Secondly, often the integrated companies formed by means of mergers and acquisitions reduce the capital cost and efficiency that is caused by overpriced supply, non-receipt of synergy effects, and the complexity of combining different corporate cultures [8, p. 15].

Thirdly, public companies with a clear operational and financial activity in the market are valued higher than private companies.

Fourthly, companies not having sufficient liquidity as the companies that did not pass through the procedure of the initial public offering (IPO), as well as newly established companies with an expected external growth through mergers and acquisitions, operating in the MRC, have maximum attraction for investors (Russian and foreign ones).

Fifthly, the most liquid securities are the securities of the parent or center company, but not the rights to specific assets, which are usually owned by mining companies, and are low-liquid [7].

Sixthly, in any market which is not efficient, as in the domestic market, a deviation in stock prices from their fundamental value is possible.

These features suggest that it is not enough to rely only on market capitalization and evaluation of the stock market in the process of analyzing the value and competitiveness of the integrated companies.

**Strategic module** differs greatly for the integrated and non-integrated company [9]. The strategy of the integrated company is managing the business portfolio; these businesses compete with each other for resources of the center. The strategy of the focused company is the set of strategic initiatives aimed at achieving stable competitive advantage in this segment in relation to specific consumers and foreign competitors. The choice of corporate strategy is based on the analyzing their potential contribution to value creation at the corporate level.

**Finance module** reflects the specifics of the forming the integrated company in domestic markets, empowering the borrowed sources, increasing the share capital, realizing some projects, forming the portfolio of earning assets, etc. The system approach is needed for budgeting and capital rationing, according to such financial effects, such as cross-financing, cross-sponsoring, cross-holding, cross-hedging.

The peculiarity of the integrated company functioning, which should be reflected in the strategic evaluating the competitiveness is developing the domestic capital market [10], providing the reallocation of resources between different projects and also the control over cost of investments. The increased domestic capital markets create opportunities to monitor and regroup the assets compared to foreign markets, to reduce agency costs, to increase the efficiency and liquidity of the companies because the capital moves into more efficient units. The relative efficiency of domestic capital markets is related to the asymmetry of information; in addition, such markets perform a protective function, reducing the risk of depletion of capital in relation to the cyclical and transient change in investment sentiment.

Active domestic capital market is characterized by the dependence of the subsidiary company investments on its own cash flows and cash flows of other subsidiary companies. At reallocation of resources between units the activity of domestic capital market grows. In this case, the sensitivity of investments to group cash flows exists only when subsidiary companies are affiliated with the coordinating center.

The effectiveness of the domestic capital market is reflected in the fact that investments of the subsidiary company depend on the amount of overall resources available to the holding; respectively, the growth of investment opportunities in a subsidiary company leads to a decrease in investments in other companies of the holding. If the company is financially limited, it cannot finance all the projects, and it is necessary to allocate resource. The efficiency of internal capital markets implies an increase in company value.

One of the features of the integrated company is realizing the several projects or complex of them. At the same time there are additional investment opportunities, and also some challenges. Thus, one loss-making project can provide strategic benefits for the corporation as

a whole; projects can serve each other's sources of generating financial resources, strengthening or weakening the effect from the whole investment industry. However, the choice of the optimal project or direction for a specific company does not provide taking the optimal decision for the entire system (the corporation) as a whole.

Optimization of the investment project complex in the corporation provides the optimal combination of projects within budget in the given time interval, the connection between external financing with the capabilities to mobilize financial resources (cross-financing), the management of the project efficiency through the redistribution of income and expenditure between them (cross-sponsoring), the possible increase in debt financing through cross-shareholding (cross-holding), as well as risk reduction and stability increase of the entire project as a whole (cross-hedging) [11].

The integrated company expands significantly opportunities to attract new sources of investment, and this provides the growth of financial stability in an unstable environment. For integrated mining companies are characterized by high capital intensity and the high proportion of specific assets. Capital structure becomes the tool by which the company management aims to reduce the costs of investing into specific assets.

**Corporate managing module** is complicated by harmonizing the interests in a great number of agency conflicts, including the coordination of the owners', managers' minority and majority shareholders', managers', competing departments and business units, shareholders' and debt holders' interests [2]. Each participant has his own interests and expectations from the corporation. According to that how controversial and realistic expectations the participants have, what is the system of their rights and responsibilities, the order to harmonize their interests determines.

Strategic evaluating the competitiveness in relation to definition of fundamental value (setting a fair price) for the integrated (composite) companies is extremely difficult in principle [8, p. 13], because it requires accounting and forecasting the structure of incomes and losses; the asset structure of integrated companies, the cyclicity of industry development; evaluating the potential of the internal and external growth, different levels of risk and profitability of business areas, systematic and non-systematic factors, optional capacities of firms, agency conflicts, the possible synergistic effects; price of capital.

This evaluation is needed to justify and make strategic decisions on managing the competitiveness and the value of an integrated mining company: alternative strategic projects are being developed; choosing the strategic project is based on the using the optional methodology; tactical directions of realizing the management strategy of competitiveness and value of the company.

The resource theory lays the foundation for the qualitative analyzing the strengths and weaknesses of the organization, allowing to allocate resources that are important for forming the competitive advantage of the company. The resource theory allows identifying specific and strategic resources and assets which are necessary to forming and maintaining the competitive advantages in the long-term period and more effectively managing them.

The value-based management theory has tools reflecting the value and competitiveness of the companies. Value analysis can identify the key factors of value and competitiveness; it can take into account potential reserves, opportunities and competitive advantages of the company. This theory provides a link between the systems of financial and strategic management and identifies investment decisions.

Optional methodology provides the possibility of accounting the influence of the environment dynamics and the reaction of mining company management.

The problem of irreversibility of investments has a great importance for mining projects; this determines the importance of correct realizing the optional approach and valuating the management flexibility. Using the method of real options improves the tools of strategic management in the mining companies due

to adequately accounting the risks, providing flexibility and consistency of strategic decisions, fast switching and continuously changing [12]. The analysis of real options encourages management to explore the uncertainty factors, ensuring the creation and growth of the value and competitiveness in the mining company.

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