International Journal of Advanced and Applied Sciences, 7(2) 2020, Pages: 20-27

Contents lists available at Science-Gate

International Journal of Advanced and Applied Sciences

Journal homepage: http://www.science-gate.com/IJAAS.html

The strategic planning of market-oriented oil, gas, and coal technology organizations

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A R T I C L E I N F O

Article history:
Received 9 September 2019
Received in revised form
30 November 2019
Accepted 7 December 2019

Keywords:
Strategic planning
Development
Integration
Diversification
Goal formulation
Strategy formulation
Program development
Implementation
Reaction and control

A B S T R A C T

This paper aims to provide industrial organizations in general, and more particularly the oil, gas, and coal technology organization, with ideas that may be applied in the process of planning new activities through intensive development, integration, and diversification. In addition, our purpose is to get the aforementioned organizations familiar with the strategic planning of their activity based on planning the process and analyzing the internal environment (strengths and weaknesses), followed by the formulation of goals and strategies, the development and implementation of the program, the resulting reactions and control. The formulation of the strategy is in line with its adequate implementation. Organizational plans, related to the current work of the organizations, will allow these companies to determine the value of sales and the expected profits. However, profits often happen to be lower than the expected values. After all, the portfolio plan will also include activities that need to be left aside and subsequently be replaced by others.

1. Introduction

Developing plans for the market-oriented oil, gas, and coal technology organizations, which are related to their current business, will allow such companies to determine the value of sales, as well as the expected profits. Often, however, profits happen to be lower than expected. The portfolio plan of the organization will also include activities that will be eliminated over time and will need to be replaced by others. If there is a gap between the value of the expected sales and that of the estimated sales, the management of the organization will have to either leave aside those activities that determined the difference or implement new ones.

The existence of a strategic planning gap as regards the sales performed by the oil, gas and coal organization is indicated by a lower curve than the value of sales anticipated for a period of ten years, based on the current business portfolio of the organization. The upper curve is the number of sales that the organization wants to makeover a specific time-span. In such a case, it appears that the organization wants to grow much faster than the current volume of its activities, with the intuition of doubling the sales volume during this period. In an attempt to achieve this goal, a series of questions might arise: How can the oil, gas and coal-technology organizations eliminate the existing strategic planning gap? Why does the oil, gas and coal technology organization implement a strategic planning process? How does the oil, gas and coal technology organization analyze the internal environment? How does it formulate its goal, its strategy? How does it manage to elaborate on the plan, and how does it implement it? Why does the oil, gas and coal technology organization need to evaluate the results, and track the evolution of the environment in which it operates while the strategy is being implemented? (Yin, 2005; Campbell, 1975; Ghenea, 2011).

The answer to these challenges can be found if a study hypothesis is established. If the oil, gas and coal technology organization needs to reduce the existing strategic planning gap, it must implement a strategic planning process by analyzing the internal environment, in order to formulate its objectives, its strategy, develop the plan, and implement the strategic plan. As part of its strategy implementation, the organization must evaluate the results and track the evolution of the business environment in which it operates (Yin, 2005; Campbell, 1975).

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2. Planning the new activities

The plans of the market-oriented oil, gas, and coal technology organization, which are related to its current business, will allow it to determine the value of sales and profits to be made. Often, however, the profits happen to be lower than the expected values. After all, the portfolio plan will also include activities that will be eliminated over time and will need to be replaced with others. If there is a gap between the value of the sales to be achieved and the estimated values, the management of the organization has the possibility of either leaving aside those activities that produced the gap or create new ones, as indicated in Fig. 1 (Kotler, 2000; Kotler and Amstrong, 2001).

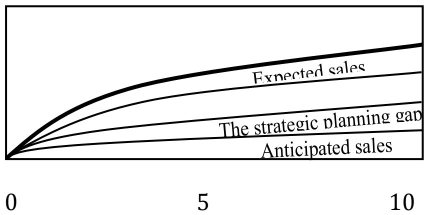


Fig. 1: The strategic planning gap

Fig. 1 shows the strategic planning gap for the sale of oil, gas and coal products. The lower curve represents the value of sales anticipated for the next ten years, on the basis of the current business portfolio of the oil, gas and coal-technology organization. The upper curve represents the value of sales to be made by the organization over the same period of time. In this case, the organization wants to grow much faster than the current volume of its activities, with the intuition of doubling the sales volume during this period. How can the oil, gas and coal-technology organizations overcome the existing strategic planning gap?

- The first method is to identify new opportunities for the development of oil, gas and coal products - opportunities for intensive development.
- The second method relates to identifying the possibilities of creating or acquiring related activities (marketing, transport, etc.) - possibilities for development through integration.
- The third method consists in the acquisition of recreational activities (tourism, sport, etc.) - opportunities for diversification development (Bremond and Geledan, 1990; Bușe, 1994).

2.1. Intensive development

The first step is the organization's analysis of the possibilities to improve the outcome of current activities. The model used is called "Product/Market Expansion Grid", as shown in Table 1 (Kotler, 2000; Kotler and Amstrong, 2001).

The organizations' leaders first consider the possibility of gaining a larger market share with the existing products - the market penetration strategy. Furthermore, they analyze the possibility of identifying or creating new markets for the current products - the market expansion strategy. Finally, the possibility of creating new products for the existing markets - the strategy for the renewal of the products sold - is being considered. Subsequently, the possibility of marketing new products for new markets - the product diversification strategy - will be analyzed.

Table 1: Product/market expansion grid

	Current products	New products
Current markets	1. The market-penetration strategy	3. The product renewal strategy
New markets	2. The strategy of extending the market	(The diversification strategy)

2.1.1. The market penetration strategy

In this situation, the management is looking for ways to increase the market share for products traded by the organization on its current markets. The organization may try to stimulate current customers to buy more oil, gas and coal products within a given time frame. This tactic works for those customers who do not buy frequently and who can be convinced of the benefits of buying a larger quantity of the above products.

Secondly, the organization may try to attract the competition's customers, a possible action if there are weaknesses in the product marketed by these competing firms or in their marketing programs.

Finally, the organization can try to convince those who do not use oil, gas, and coal heating products to start using them. This means that there are sufficient users who do not have their own central-heating system yet.

2.1.2. The market expansion strategy

The leadership of the organization, through the competent department, must look for new consumers, whose needs can be met by the products currently marketed by the organization.

In an initial stage, groups of potential users should be identified, while their interest in the products marketed by the organization is stimulated. If so far the organization has only sold products to individual users, it has to offer products to other agents. If the organization has sold only through its distribution stations and commercial sections (warehouses), it will also address other categories of distributors (distributors through their own networks, commissioners, etc.). The organization must also start selling in other geographical areas.

2.1.3. The product renewal strategy

In addition, the management of the organization should also look at the possibilities of marketing new products: Oil, gas and coal products with new features.

After analyzing these three intensive development strategies, the managers of the organization can identify more possibilities for development; however, these may still not be enough. Therefore, development opportunities through integration must also be considered.

2.2. Development through integration

In many cases, sales and profits of the oil, gas and coal-technology organization can be increased by upstream, downstream or horizontal integration in the field of activity, as shown in Fig. 2 (Kotler, 2000; Kotler and Amstrong, 2001).

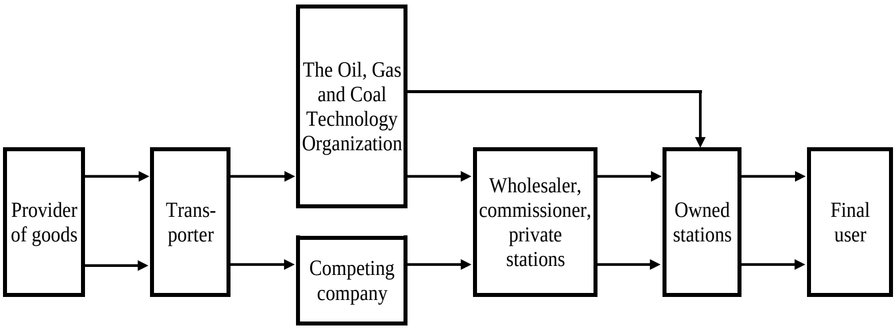


Fig. 2: Upstream, downstream or horizontal integration

The oil, gas and coal-technology organization may acquire one or more of its suppliers of complementary products/shipments, in order to gain either profit or control over them - upstream integration. The organization can also purchase some of its commissioners - profitable private stations - downstream integration.

Finally, the organization may acquire one or more competing firms - horizontal integration. After analyzing the different ways of integration, the organization may identify additional sources of sales growth over the next ten years. If these sources prove to be insufficient, the diversification strategy should be considered.

2.3. Development through diversification

This strategy applies if business opportunities outside the scope of the organization can be identified. Such a possibility implies, on the one hand, high attractiveness to the new field of activity and, on the other hand, the ability of the organization to capitalize on the opportunity. There are three types of diversification development strategies (Kotler, 2000; Kotler and Amstrong, 2001).

The concentric diversification strategy

The oil, gas and coal-technology organization is looking for new products that have property or marketing links with existing product lines, even if these products address a new category of consumers.

The horizontal diversification strategy

The organization is looking for new products for the current customers, which have nothing to do with the current line of marketed products.

The conglomerate diversification strategy

The organization can even carry out diverse activities.

3. The strategic planning of the activity

The oil, gas and coal-technology organization applies the following strategic planning process as in Fig. 3 (Kotler, 2000; Kotler and Amstrong, 2001).

3.1. The mission of the oil, gas and coal-technology organization

The oil, gas and coal-technology organization defines its specific mission in accordance with the Regulations regarding the Organization and Operation (Măgdoiu and Rada, 2018a).

3.2. The analysis of the external environment

The organization's leadership recognizes the environmental elements that must be taken into account in order to achieve the proposed objectives. The marketing service will look at the main forces of macro-demographic, economic, technological, political, institutional, social, cultural components, as well as the components of the microenvironment - customers, competitors from distribution channels, suppliers, which will affect the organization’s ability to obtain profits.

The organization needs to develop a marketing information system that tracks the main trends and developments of the environment. For each of them, management must identify opportunities and threats.

3.3. Opportunities

The market opportunity is a market segment characterized by a particular need, on which the organization can carry out a profitable activity.

Opportunities can be ranked according to their attractiveness and the likelihood of organizational success. The possibility that the organization might have success depends not only on the extent to which its potential meets the success criteria of the target market but also on the fact that that this potential should be higher than that of competitors operating in the same market.

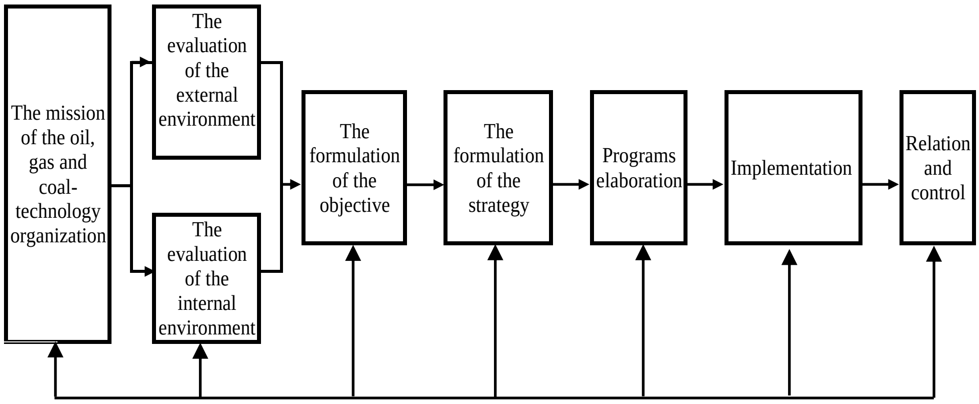
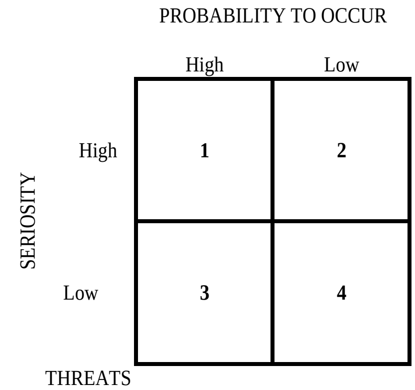


Fig. 3: The process of strategic planning

The winner will be the organization that will demonstrate the ability to offer the highest value to customers, and who will continue to preserve its customers in time. See Fig. 4. The matrix of opportunities (Kotler, 2000; Kotler and Amstrong, 2001).



1	2	3	4
The competition works out a better distribution system	Prolonged economic crisis	Increase in costs	Legislative regulations

Fig. 4: The matrix of opportunities

As regards the best market opportunities for the organization, it seems that these are the ones presented in box 1; the opportunities in box 4 are too irrelevant to be taken into account. The rest of the opportunities will be pursued in the event of their capitalization, as the degree of attractiveness and probability of success would increase.

3.4. Threats

For the oil, gas and coal-technology organization, certain developments in the external environment are real threats.

The threat is perceived as a hindrance resulting from an unfavorable trend or development of the environment that, in the absence of defensive market action, would lead to a deterioration in sales or profits.

Threats are ranked according to the seriousness and likelihood of their occurrence (Fig. 5) (Kotler, 2000; Kotler and Amstrong, 2001).

As indicated in Fig. 5, the threats in Box 1 are major, may have a strong impact on the organization, and their occurrence is very likely.

The organization must develop plans to counteract them by establishing possible defense measures before or during the occurrence of any undesirable event. The threats in box 4 are minor and can be ignored. Boxes 2 and 3 are threats that do not require countermeasures for the moment but must be carefully monitored so that they do not reach a high level of threat. By comparing the main opportunities and threats, the degree of attractiveness of the activity can be achieved. Ideal activity is characterized by major occasions and minimal threats. Speculative attractiveness involves both occasions and major threats. The mature activity involves minimal opportunities and threats. Unbalanced activity is characterized by the presence of few opportunities, and of major threats (Măgdoiu and Rada, 2018b).

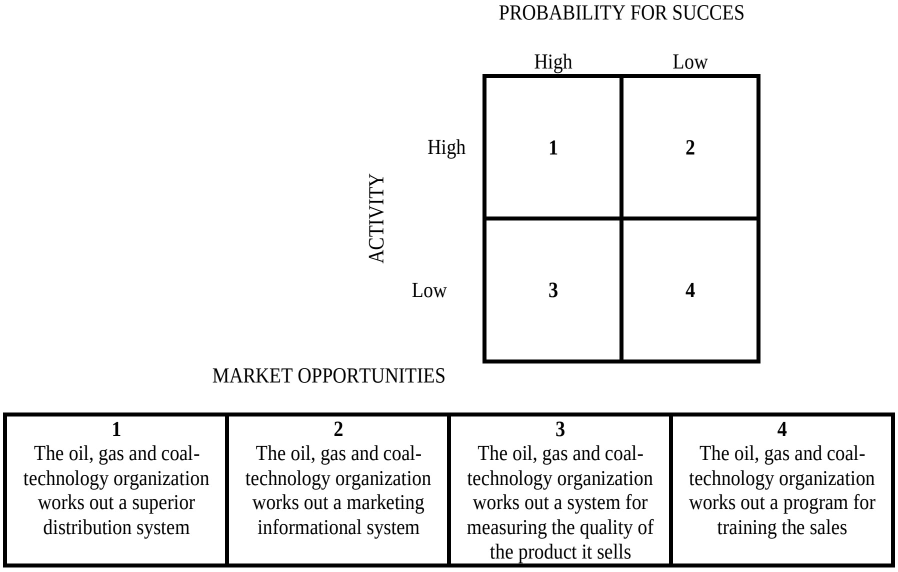


Fig. 5: The matrix of threats

3.5. Analysis of the internal environment (strengths and weaknesses)

Identifying environmental opportunities is only one of the faces of the problem for the oil, gas and coal-technology organization; the other is given by its capacity to capitalize on these opportunities. The organization needs to periodically evaluate its strengths and weaknesses, and this can be done by completing the form were shown in Table 2 (Kotler, 2000; Kotler and Amstrong, 2001).

Table 2: Analysis form

	Appreciations					Importance		
	Force majeure	Minor force	Neuter	Minor weaknesses	Major weaknesses	High	Average	Low
Commercial capacity								
1. The reputation of the firm								
2. The market share								
3. The quality of products								
4. The quality of services								
5. The efficiency of the price policy								
6. The efficiency of production								
7. The efficiency of promotion								
8. The efficiency of the selling force								
9. The efficiency of innovation								
10. The coverage of demand at the geographic level								
Financial capacity								
11. The availability of capital								
12. The cash flow								
13. Financial stability								
The selling capacity								
14. Means								
15. The scale economies								
16. Capacity								
17. The qualified selling force								
18. The capacity to sell in accordance with the chart								
19. Commercial abilities								
The organizational capacity								
20. Visionary management								
21. Involved employees								
22. Orientation capacity								
23. Flexible/dynamic organization								

The management or the external consultant should analyze the organization's commercial, financial, sales and organizational capabilities, each being considered a force majeure, a minor force, a neutral factor, a minor weakness, or a major weakness. If the organization is strong from the commercial point of view, it will have all ten factors appreciated as major forces.

The results obtained by vertically summing the assessments may help one identify the strengths and weaknesses of the analyzed activity. The analysis implies not only that the organization has to correct all its weaknesses; it also suggests that it should not make a title of glory from all its strengths. The real issue is to find out whether the organization should confine itself to those occasions for which it has the necessary force to take advantage of, or if it needs to focus on better opportunities for whose exploitation, it will have to develop certain strengths.

Sometimes activity does not bring the expected satisfaction, not because the departments dealing with it are not efficient, but because departments do not act as a team. Successful firms are those who have built up their own internal capabilities beyond those of competition, in addition to basic capabilities.

Each company must be able to carry out elementary processes such as creating new products, honoring orders, solving customer problems in a timely manner, etc. Each of the processes mentioned above is creating value and involves teamwork. Although each compartment can have its own basic capacity, the problem is to acquire a superior ability to carry out the marketing process (Măgdoiu and Rada, 2018c).

3.6. The formulation of goals

After defining the mission and analyzing the internal and external environment of the organization, the specific objectives for the planned period are established, this operation being called the formulation of the goals.

The oil, gas and coal-technology organization pursues not only a single objective, but also a group of objectives such as profitability, sales growth, market share increase, risk reduction, reputation, etc. The organization sets goals and targets. In order to make these systems functional, goals must be hierarchical, measurable, realistic and compatible. The organization has to sort its objectives hierarchically, starting from the most important ones. The mission of the organization is to sell oil, gas and coal products. It also aims to offer quality services to customers. The main goal is to increase sales efficiency, from which a range of other objectives derives. This approach allows the main goal of the organization to be implemented in terms of specific objectives set for each employee, as shown in Fig. 6 (Kotler, 2000; Kotler and Amstrong, 2001).

- **Goals must be measurable:** The term "purpose" is used to define specific objectives characterized by a certain extent over time. Transforming objectives into measurable elements makes it easier for planning, implementation, and control to function.
- **Goals must be realistic:** The set levels must be the result of analyzing the opportunities and strengths of the Organization and not a projection of wishes.
- **Goals must be compatible:** It is impossible, for example, to "maximize both sales and profits", "achieve the largest volume of sales at the lowest cost" or "create the best service in the shortest possible time" (Măgdoiu and Rada, 2018a).

All these goals are in an antagonistic relationship.

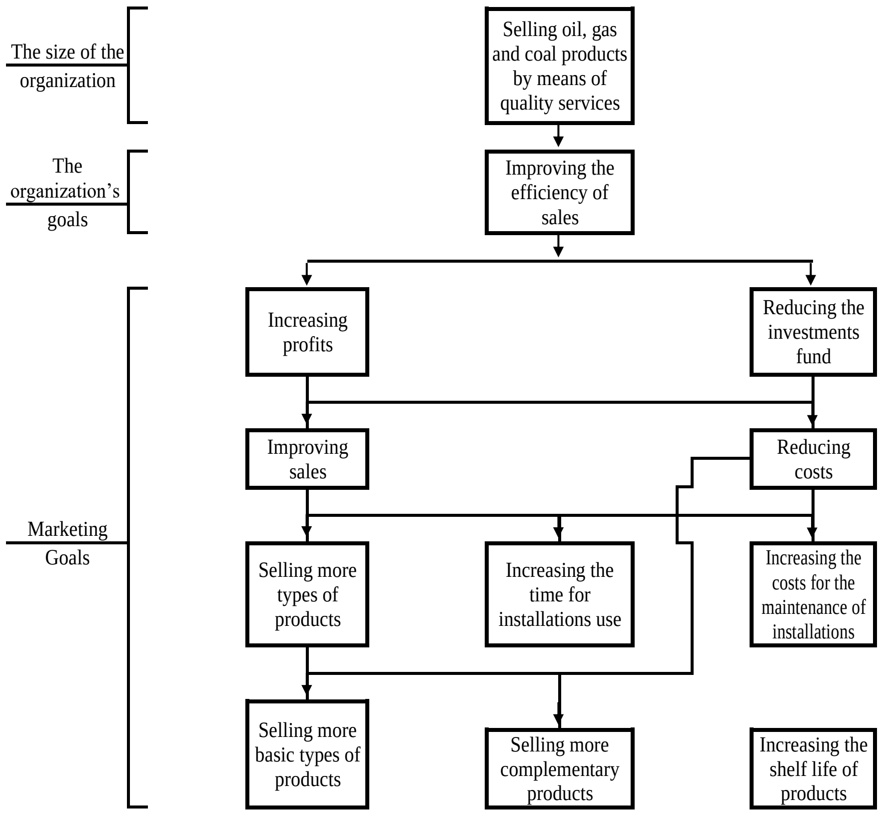


Fig. 6: Setting the objective

3.7. The formulation of the strategy

The goals define what the oil, gas and coal-technology organization wants to achieve, and the strategy shows the way it has to follow. The organization must develop an appropriate strategy for achieving the objectives. It prefers the following strategies (Kotler, 2000; Kotler and Amstrong, 2001):

- **The lowest total cost strategy:** The activity is geared towards obtaining the lowest selling and distribution costs so that the price of oil, gas and coal products is below the competition and gains the highest market share.
- **The differentiation strategy:** The organization focuses on achieving superior performance in terms of a range of customer benefits, appreciated by a large proportion of consumers. The organization is trying to maintain its leadership in sales, prices, services, etc.
- **The focus strategy:** The organization focuses on one or more narrow segments of the market rather than on large markets. Being aware of the specific needs of these segments, the organization may then opt for one of the strategies outlined above.

Organizations that apply the same strategy to the same market or market segment make up a strategic group, with the largest profits, in this case, being the most effective strategy for the organization. Organizations that do not apply a well-defined strategy will experience loss (Măgdoiu and Rada, 2018b).

3.8. Elaborating the program

Once the strategy has been established, the organization has to evaluate the programs that will support the chosen action line. Thus, if it has established the objective to perform sales of oil, gas, and coal in a region, it has to develop programs aimed at strengthening the activity of the marketing service, attracting new customers, marketing top products, provide thorough training to sales staff, and develop advertisements to highlight its leading role in product sales. A more extensive discussion of such programs can represent a subject for a future paper (Măgdoiu and Rada, 2018a).

3.9. Implementation

Sometimes, it is possible that a well-defined strategy and supporting programs are not effective, as the organization fails to put it into practice. The strategy is only one of the seven elements that are essential for the good management of the organization. The first three elements - strategy, structure, systems - form the "hardware" (in an analogy with the field of computers), the other four - the style, the staff, the skills and the common values - make up the "software". The first element of the "program" - style, presupposes that the employees of the organization share the same way of behavior and thinking. The second element - the staff, requires the organization to hire the most capable people, preparing them and entrusting them with the appropriate tasks. The third element - the skills, means that employees have the skills that are necessary in order to accomplish the strategy of the organization. The fourth element - the common values, refers to the fact that employees have adopted similar values as regards their activity and tend towards the same goals. When these four elements are present, the organization is more successful in implementing its programs (Fig. 7) (Kotler, 2000; Kotler and Amstrong, 2001).

3.10. Reaction and control

As the strategy is implemented, the organization must evaluate the results, and track the evolution of the environment in which it operates. One thing is certain, namely, that at some point the environment will change. In this case, the organization will have to review its implementation modalities, programs, strategies, and even its goals.

The strategic correspondence between the organization and the environment in which it evolves may inevitably become degraded, as the market has always changed faster than the seven elements of the organization. Thus, the organization has to find the means whereby it can become efficient even when it apparently fails to achieve maximum productivity. In this case, it is better for the organization to do what it should rather than focus on the right way of doing things (Măgdoiu and Rada, 2018c).

4. Conclusion

Developing current business plans for market-orientated oil, gas and coal-technology organizations allows such companies to determine the value of both sales and the profits to be made. Often, however, these sales and subsequent profits happen to be lower than the expected values. The portfolio plan must also include activities that will be eliminated over time and will need to be replaced by other enterprises. The existence of a gap between the value of the sales desired and the expected volume of the sales might determine the management of the organization to leave aside those activities that produced the gap or create new ones.

The existence of a strategic planning gap for the sale of oil, gas and coal products is represented by a lower curve than the value of sales anticipated for a ten years' period, based on the current business portfolio of the organization. The upper curve is the number of sales that the organization wants to makeover an established period. In this case, the organization wants to grow much faster than the current volume of its activities, with the intuition of doubling the sales volume during this period.

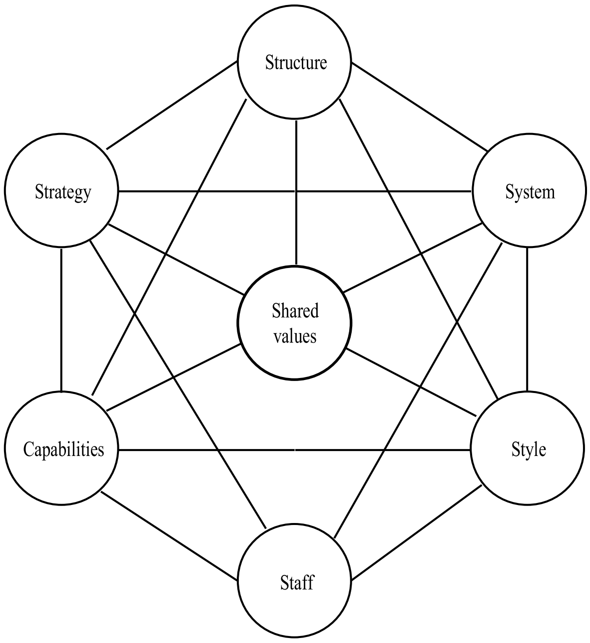


Fig. 7: The McKinsey model

In an attempt to achieve a goal such as the aforementioned one, the following questions may be taken into account: Is it possible for the oil, gas and coal-technology organization to eliminate the existing strategic planning gap by applying a strategic planning process, analyzing the internal environment, formulating the goal, strategy, drafting the plan, and implementing it? Is it necessary for the oil, gas and coal-technology organization to evaluate results, track the evolution of the environment in which it operates?

Compliance with ethical standards

Conflict of interest

The authors declare that they have no conflict of interest.

References

Bremond J and Geledan A (1990). Dictionnaire economique et social. Hatier publisher, Paris, France.

Bușe G (1994). Dicționarul complet al economiei de piață. Editura SocietateaInformația, Bucureşti, Romania.

Campbell DT (1975). Degrees of freedom and the case study. Comparative Political Studies, 8(2): 178-193. https://doi.org/10.1177/001041407500800204

Ghenea M (2011). Antreprenoriat: drumul de la idei către oportunități și success în afaceri. Universul Juridic, București, Romania.

Kotler P (2000). Marketing management: The millennium edition. Prentice Hall, Upper Saddle River, USA.

Kotler PH and Amstrong G (2001). Principles of marketing. 9th Edition, Prentice Hall, Upper Saddle River, USA.

Măgdoiu LD and Rada IC (2018a). Economic engineering qualification of economist engineers. LAP LAMBERT Academic Publishing, Saarbrücken, Germany.

Magdoiu LD and Rada IC (2018b). The continuous entrepreneurial education and training of economist engineers through the design and accreditation of a master's program. International Journal of Advanced and Applied Sciences, 5(7): 97-107. https://doi.org/10.21833/ijaas.2018.07.012

Magdoiu LD and Rada IC (2018c). The necessity of developing the economic engineering specialization in the current context of Romania's economic structure. International Journal of Advanced and Applied Sciences, 5(5): 48-60. https://doi.org/10.21833/ijaas.2018.05.007

Yin RK (2005). Case study research: Design and methods. Sage Publications, Thousand Oaks, USA.