

The Application of Technology and Strategy in the Business Management of SMEs

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Abstract

In this study, a detailed answer was given concerning the relationship between technology and business strategy in the Management of SMEs. Entrepreneurship and innovation, which is now common all over the world, have been centered upon to promote further economic growth. Also, reduction of unemployment can only be based on the entrepreneurial society. The entrepreneurial society and the entrepreneurial economy are characterized with entrepreneurs who have a large number of new businesses. An entrepreneur is a person who is willing to take the risk of starting business ventures and in establishing new businesses. Entrepreneurship is defined as the totality of entrepreneurial knowledge, skills, and abilities to successfully conduct a business. The problem here is that the information is much dispersed and it is difficult for both small business managers and academic researchers to have a rapid overview of developments in this field. The basic characteristics of entrepreneurial companies is having a variety of small businesses entrepreneurships / trades that do not employ many workers rather than even employing up to hundreds of employees. The success of entrepreneurship is based on the constant changes and response to changes. To find out more about the problem this manuscript was analyzed from the theoretical aspect, with a comparison of approaches. The conclusion is that strategic management is relevant for all SMEs. Essentially, all of these changes involve the innovation of products and services and high quality new products that can only validate the market.

Keywords: technology, strategy, entrepreneurship, innovation, management, business.

Introduction

Small and medium enterprises (SMEs) operate with very limited business resources. The main characteristic that can affect SMEs is the lack of resources. These resources are mainly financial resources, but also include all other resources such as knowledge, manpower, and machinery. Strictly speaking, the management of small and medium-sized enterprises takes the form of company management in terms of limited resources. Careful use and exploitation of the existing resources is conditioned from various factors such as socio-economical and natural circumstances, which are an advantage for the growth of several economical fields in Kosovo. Here, farming and processing of agricultural products can be distinguished (Ukaj, 2010).

The entrepreneur is not a multinational corporation, but an individual who is focused on making profit. To survive, he has to have a different view and also make efforts to implement the principles different from those applied by the President of large

and even medium corporations. In this sense, the main obstacles to the development of small and medium enterprises in the domestic market include: lack of financial resources, lack of knowledge, lack of markets, and lack of adequate institutional infrastructure. The adoption of legislation for business support is based on European practices and was sponsored and supported by different European Agencies such as ADA (Austrian Development Agency), ATA (Academic Training Association-Netherland), which are ongoing with the Project BSC (Business Start Up Centre), KCBS/USAID with their cluster project in Kosovo, and their support of VSAT Project (Voucher Scheme of Advisory and Trainings) (Ukaj, 2010).

The management of the company due to the lack of resources affects the definition of the organizational small and medium sized enterprises: a small number of employees (especially in micro firms), employees performing multiple functions at the company (not uncommon for the owner himself performed by several functions), and some activities which have been moved outside the company. In other words, small businesses due to lack of funding or unprofitability of forming a stronger organizational structure, driven by the logic of profit, have increased a significant part of the activities related to the business of the company located outside the company. Here, it should be noted that SMEs can function the most even when they relocate outside of the company. The only business function that cannot be left to others, and that has to remain within the company, is Research and Development. This is because it is a function which together with a good marketing strategy forms the backbone of growth and development of companies. Implementing strategic management in the SMEs has become a necessity. This situation is a consequence of the serious challenges that exist in the market, the business environment forces, and other influencing factors that can be identified in terms of the actual economic development. This is seen especially in the transition economies, where SMEs are very predominant and are also very young and inexperienced (Lobontiu & Lobontiu, 2001). Achieving competitive advantage in the global economy requires an innovative approach to business, primarily when it comes to knowledge. For the sake of future prosperity and survival, strategic planning refers to the effort needed by authors that entails far more than immediate matters – short-term firefighting in the form of controlling unexpected disruptions in the smooth running of the organizations (Craig & Grant, 1993). In this regard, management in SMEs has to be oriented based on the direction of investment in knowledge and improvements in labor productivity and knowledge. “Without a strategy, a manager has no thought-out course to follow, no roadmap to manage by, no unified action program to produce the intended results” (Thomson & Strickland, 1996).

Access to Managers and Management Technology and Innovations

For the management of small and medium-sized enterprises and innovation of new technologies, management is essentially a question of what the manager needs to know about the role of technology and innovation in the strategy of the company. One approach assumes that technology is a black box and that is enough to know how it works, what works, and what does not work. The second approach assumes

that it is necessary to know what she does and how the technology black box works. However, we started from the premise that the manager does not necessarily have a thorough basic knowledge of science and technology. The technological impact based on the company's strategy should be directed through the production process and product innovation capability, not leaving aside the expertise in a given technology (Thomson & Strickland, 1996).

For managers, it is essential for them to master the skills necessary to understand the importance of new technologies and innovations in modern business activities and the ways that technology and innovation potential leverage to improve the functioning and development of the company so as to upgrade, maintain, and develop the competitive advantages of economic agents (Đuričin, Janošević, & Kaličanin, 2009). Furthermore, competitor analysis should be an essential part of strategic analysis. It was well described; "Unless a company pays attention to what competitors are doing, it ends up flying blind into the competitive battle" (Thomson & Strickland, 1996, 2). Therefore, what the competition is doing have a direct impact on a company's own strategy.

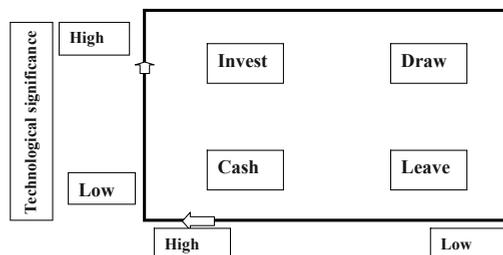
The way to express the integration of technological and product-market strategy of the company is to carry out the decomposition of every product and service in the constituent technology and assess the relative strength - the degree of distinctive competence - of the company by taking into account the technology and displayed product/technology matrix. Harris, Shaw, and Somers (1981) indicate that the technology can be classified according to their relevance based on the competitive advantage and on the basis of the relative position of the company to its competitors.

	Product A	Product B	***	Product N
Tehnology 1	(*)			
Tehnology 2				
*				
*				
Tehnology N				

Table 1. Product / Technology Matrix

Source: Fusteld, 1978. Quoted from Burgelman, Maidique, and Wheelwright, 2001. Each entry (*) shows the relative strength of the company in relation to the condition of the appropriate technology.

Figure 1. Technology Portfolio
 Source: Harris, Shaw, & Somers, 1981



Consequently, the importance of technology can be expressed by means of added value for consumers, certain product groups, and by the potential value that could be added to other product groups. The significance of each specific technology depends on the stage of the technological cycle in which it is located. The relative technological position can be expressed by comparison with its competitors through some measurable indicators: patents, know-how, trade secret, learning curve effects, and key skills.

Field "invest" is a field that combines high technological quality and high relative technological position to ensure full involvement of the company. It, however, must be ready to invest in border R & D, overcoming limitations in the process of product development, and investing in new equipment. Field "monetize" must be interpreted cautiously. These technologies can be very significant at one time and, as such, changes in the competitive-based activities can reduce their relative importance. Understanding these changes and the direction is important for the strategic location of the company. Nevertheless, it may show that the inadequate assessment of the changes are premature or are moving in the wrong direction. Based on the technology of the field of "draw", changes that occurs is due to the relative technological position. As a result, it is necessary to make appropriate choices in accordance with the estimated technological tendencies between technologies that will invest more intensively in order to counter its competitors, technology segments, and business activities to be abandoned (Đuričin, Janošević, & Kaličanin, 2009). The technology in the field of "leave" combined low relative technological position and high technological quality, which makes it necessary to abandon this segment of the business activities and reallocate resources so as to engage in profitable business areas. A lot of companies in its portfolio have more business segments (multibusiness), each of which corresponds to their technology. It is therefore necessary to establish a proper relationship between technological and business portfolio. This connection would help to increase the reliability of decision making in terms of investment and technological priorities. One of such tools is the model of McKinsey based on two dimensions: the attractiveness of the activity competitive position. Failure to establish appropriate links technology and business can result in errors in investment and other business decisions. The standard strategic analysis can show a strong competitive position in an attractive industry of a particular business segment. However, technological analysis may indicate that the technological support and business activities has a relatively weak position. If it is intended to maintain and improve the existing favorable competitive position, it is necessary to further invest in technology in order to eliminate the weaknesses of the current technological state (A). In the case of B, it is an attractive business activity with low competitive position whereby its technology has a relatively high importance and position, not the cause of the weak competitiveness.

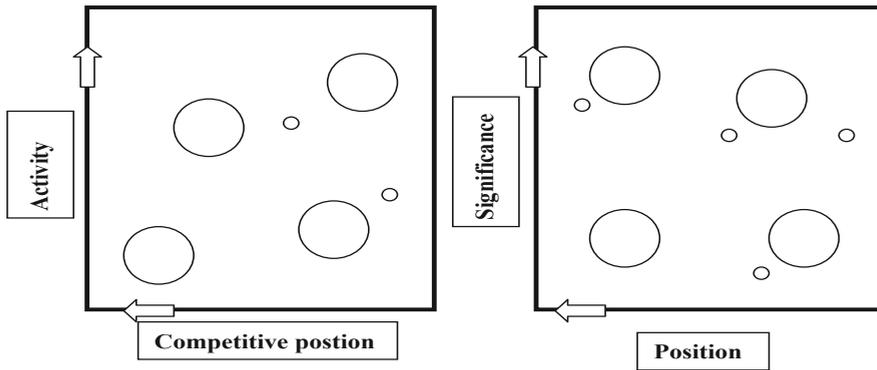


Figure 2. Approval of business and technology portfolio
 Source: Harris, Shaw & Somers, 1981.

Technological Evolution and Forecasts

Technological changes are one of the key forces that affect the competitive advantage of the company and that is very difficult to respond to in a timely and satisfactory manner (Vives, 2000). Integrating technology and strategy is a dynamic process that requires an understanding of the dynamics of the life cycle of different technologies that are engaged in the business activities of the company. Table 2 shows the relationship between the stages of the life cycle and the potential for competitive advantage. An important element of the integration of technology and strategy is the existence of facilities for continuous technological prediction. Different authors have presented a useful technique for technological forecasting as a function of technological progress (S curve), extrapolation of trends, the Delphi method, and the development scenario.

Technological stages	Importance of technology for competitive advantage.
Life cycle	
Technologies in development	Still have not shown their potential for changing the basis of competition.
Mature technologies	Exhibit the potential to change the base of competitiveness.
Key technology	Embodied in products / processes. They have the biggest influence on the added value (cost, features, price). Allow ownership position.
The base technology	Insignificant influence on the added value; are common for all competitors; goods.

Table 2. The life cycle of technology and competitive advantage
 Source: Little, 1981.

Strategic Approaches

The positive approach to strategy is the current strategy of the company and how it is realized. The normative view refers to what the strategy of the company could be. The positive approach to the strategy of the company reflects the attitude of top management on the basis of past and current business success.

However, this approach applies to the following factors (Burgelman, 1994):

- Core competence;
- Product / market agents;
- Key values;
- Employees.

In understanding the strategy of the company, it is not enough to know the attitudes and beliefs of top management in regards to business activities, but also to analyze what the company is really all about. It also aims to ascertain to what extent there is an agreement or difference between positive and normative, which in reality is expressed as the difference between the proclaimed strategy and strategic action. Product-market access strategy refers to how a company is competing with their products and services. Access strategy based on resources is based on how the company provides factors necessary to create a core competency and skills as the basis for the development and maintenance of competitive advantages. During the 1980s, the normative approach to strategy based on resources was very prevalent.

Porter (1979, 1985) approaches to the five powers are (McGuigan,J, Moyer.R, Harris.F, 2008):

- New entrants;
- Customers;
- Suppliers;
- Rivals;
- Substitutes.

Furthermore, the normative approach on the core competencies and skills in the 1990s has evolved in the direction of integration of product-market approach and strategy-based approach to resource management.

At the same time, understanding the technology has evolved in the direction of one of the most important elements of the definition of business and competitive advantage.

Conclusions

In conclusion, improving the quality of operations is imperative for the modern market and global flows. The implementation of quality systems, however, is performed according to the requirements of ISO 9000 and the establishment of a process of continuous improvement of quality. Stressing quality has been shown to be successful regardless of industry, company size, or the environment. Together with the implementation of reengineering techniques, the basis for improving business productivity of SMEs and creating a competitive advantage in the international market is carried out mainly because of the market and technological flexibility of companies in this group. Especial attention should be oriented to the education of management

and other staff, implementation of quality management and marketing concept as fundamental in the SMEs business, and identification and selection of strategic partners in their specific activities. The more the application of modern management methods and techniques, as a means of efficient management of the company and its activities, the more they need the appropriate knowledge and skills that can be delivered in specialized schools. Moreover, the largest number of first generation entrepreneurs today educates their children (next generation of managers) through many schools of management, economics, finance, marketing, business information technology, and others. It is a good sign that the approach to management changes. Investing in knowledge is an investment that pays dividends. Delegations of decision-making authority by the CEO- Owners, and the use of trained professional managers and experts, are also associated with better relative and absolute performance.

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