

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

Husnija Bibuljica

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### Abstract

*In this work, I tried to give a detail answer in concerning the relationship between technology and business strategy in the Management of SMEs. Entrepreneurship and innovation is now all over the world are centered because of further economic growth and reduction of unemployment can only be based on the entrepreneurial society. Entrepreneurial Society entrepreneurial economy is characterized with entrepreneurs where there are a large number of new businesses. An entrepreneur is a person who is willing to take the risk of starting business ventures and the establishment of new businesses. Entrepreneurship is defined as the totality of entrepreneurial knowledge, skills and abilities to successfully conduct business. The basic characteristics entrepreneurial companies are constantly establishing a variety of small businesses entrepreneurs / trades that do not employ any workers to entrepreneurship employing up to hundreds of employees. The success entrepreneurship is based on the constant changes and responding to changes. Essentially all of the changes is innovation of products and services and high quality new products that can only confirm the market.*

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

### 1. Introduction

Small and medium enterprises (SMEs) operate with very limited business resources. So, as the main characteristic that can manage to make specific SMEs is the lack of resources. This is mainly the financial resources, but also all other resources - knowledge, manpower, machinery. Thus speaking, the management of small and medium-sized enterprises takes the form of company management in terms of limited resources.

The entrepreneur is not a multinational corporation, but an individual who is looking for profit. To survive, he has to have a different view and, in its efforts to implement the principles different from those applied by the President of large and even medium corporations. In this sense, as the main obstacles for the development of the group of small and medium enterprises in the domestic market occur: lack of financial resources; lack of knowledge; lack of markets and lack of adequate institutional infrastructure.

The management of the company in terms of lack of resources affects the definition of the organizational small and medium sized enterprises - a small number of employees (especially in micro firms) employees perform multiple functions at the company (not uncommon for the owner himself performed by several functions), and some activities 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 increase, a good part of the activities related to the business of the company locate outside the company. Here it should be noted that SMEs can most functions relocated to outside of the company.

The only business function that cannot be left to others, and that has to remain within the company, is a research and development, because it is a function which together with good of marketing the backbone of growth and development of companies. Achieving competitive advantage in the global economy requires an innovative approach to business primarily when it comes to knowledge. In this regard, management in SMEs has to be oriented in the direction of investment in knowledge and improvements in labor productivity and knowledge.

### 2. Access to Managers and Management Technology and Innovations

For the management of small and medium-sized enterprises and innovation of new technologies and 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, that is enough to know what works and does not and how it works. The second approach assumes that it is necessary to know

what she does and how the technology black box. We start from the premise that the manager is not necessarily a thorough basic knowledge of science and technology.

For managers is essential 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 and to upgrade, maintain and develop the competitive advantages of economic agents. (Dragan N. Đuričin, Stevo V. Janošević i Đorđe M. Kaličanin (2009): Menadžment i strategija (četvrto, prerađeno i dopunjeno izdanje), Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu, Beograd, str.64.)

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 - the company taking into account the technology and displayed by product / technology matrix.

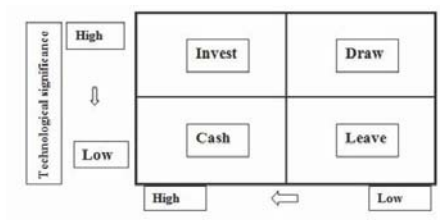
Harris, Shaw, and Somers (1981) indicate that the technology can be classified according to their relevance for the competitive advantage and on the basis of the relative position of the company to its competitors.

**Table 1:** Product / Technology Matrix

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

**Source:** Fusteld, 1978. Quoted from Burgelman, Maidique, Wheelwright, 2001.

Each entry (\*) shows the relative strength of the company in relation to the condition of appropriate technology



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

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" a field in which the combined high technological quality and high relative technological position which ensures full involvement of the company, which 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, but changes in the competitive-based activities can reduce their relative importance. Understanding these changes and the direction in which the place is important for the strategic situation of the company, although it may happen that due to inadequate assessment of the changes are premature or in the wrong direction. In technology of the field of "draw" is due to changes in the relative technological position, it is necessary to make appropriate choice, in accordance with the estimated technological tendencies, between technologies that will invest more intensively in order to counter its competitors, and technology segments and business activities to be abandoned. (Dragan N. Đuričin, Stevo V. Janošević i Đorđe M. Kaličanin (2009): Menadžment i strategija (četvrto,

prerađeno i dopunjeno izdanje), Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu, Beograd, str.64.).

In the technology in the field of "leave" the combined low relative technological position and high technological quality, which makes it necessary to abandon this segment of the business activities and reallocate resources and engage in profitable business parts. A lots of companies in its portfolio have more business segments (multibusiness) , each of which corresponding to them, their technology.

It is therefore necessary to establish a proper relationship of the technological and business portfolio. This connection helps to increase the reliability of decision making in terms of investment and technological priorities.

One such tool is the model of McKinsey, based on two dimensions: the attractiveness of the activity competitive position.

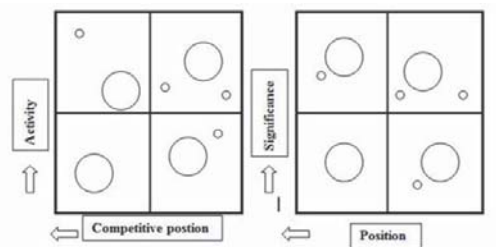
Failure to establish appropriate links technology and business can result in errors in investment and other business decisions.

The standard strategic analysis can show that in a particular business segment strong competitive position in an attractive industry.

But 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 activities with low competitive position in which technology, which 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, in 1981.

### 3. 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 in a timely and satisfactory manner. (Vives (editor): Corporate Governance, Theoretical & Empirical Perspectives, Cambridge University Press, Boston, 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.

**Table 2:** The life cycle of technology and competitive advantage

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 Embodied in products / processes.
Key technology	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.

**Source:** Little, in 1981.

#### 4. Strategic Approaches

The positive approach to strategy is the current strategy of the company and how she 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.

This approach applies to the following factors (Burgelman, 1994): (Burgelman, 1994, str.45.)

- core competence;
- product / market agents;
- Key values;
- employees.

To understand the strategy of the company is not enough to know, and certainly not only, attitudes and beliefs of top management on business activities, but also analyze what the company really is and to what extent there is an agreement or the 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 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) approach to the five powers: (Porter, 1989. str. 49.)

- new entrants,
- customers,
- suppliers,
- rivals,
- substitutes.

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.

#### 5. Conclusion

Improving the quality of operations is an imperative of the modern market and global flows. The implementation of quality systems according to the requirements of ISO 9000 and the establishment of a process of continuous improvement of quality, together with the implementation of reengineering techniques, the basis for improving business productivity of SMEs and create a competitive advantage in the international market, mainly because of market and technological flexibility of companies in this group. For 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. The largest number of first generation entrepreneurs today educates their children in many schools of management, economics, finance, marketing, business information technology, and others. It's a good sign that the approach to management changes. Investing in knowledge is an investment that pays dividends.

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