

## ***FROM SWOT TO SWOTS ANALYSIS WITHIN ORGANIZATIONS***

**Aurel Mircea Niță**

**National School of Political and Administrative Studies, Bucharest**

*Abstract: The article proposes a new approach to classic analysis system, from a public or private organization, based on strengths, opportunities, weaknesses, risks or threats - SWOT. The passing to a new model of SWOT is made in a managerial manner to the Strategic analysis - SWOTS. The article presents examples in order to compare the two approaches, focusing on the analysis SWOTS and differentiated benefits which this new type of analysis holds. The strategic SWOT analysis helps us to have a proactive approach regarding risk management in an institution. By SWOTS it will be explained and exemplified some results, structured in time, for a period of nine years, from 2001 till 2009. The exemplification was done on a top company, but the results of SWOT analysis application, can be generalized and applied to any organization, profit, non-profit, including public administration.*

*Keywords: organization; management approach; SWOT analysis; SWOTS analysis; strategy;*

*JEL CODE: M19*

### **1. Introduction**

Any company operating in the market is an open system (according to automatic systems theory, self-regulating system is closed loop), sufficiently sensitive to changes in the market due to management's own attitude. The signals are transmitted in both ways from the market to the firm, and from the firm to the market, the communication system within the company / organization - market, achieving both ways. A self-regulating system has feed-back reactions, known as the *feedback*, needed to adjust output variables or outputs which do not correspond to the objectives of the prospective, that refers to input variables or inputs, namely, the desire of the management team – for instance, specific goals such as increasing sales by 5% in the current

month, on the market in Bucharest. In this case, the comparison between what has been achieved and what must be achieved is made at the entrance, where it compares the variable input with what has been obtained at the output. It is given a command to change / improve the intensity and direction of application of variable input. However, the same self-regulating system has feed-before or direct reaction, which is the reverse of the operation of feed-back reaction. A method of analysis of the organization, seen as a self-regulating system, which is characterized by simplicity, ease of use, universally applicable, but with restrictions to deployment -see the SWOT method of SWOT analysis, which refers to analyzing internal and external competition environment, that the relationship organization / company - market and is known as the SWOT analysis method.

SWOT analysis came from the research conducted at Stanford Research Institute from 1960-1970. The background to SWOT stemmed from the need to find out why corporate planning failed. The research was funded by the fortune 500 companies to find out what could be done about this failure. The Research Team were Marion Doshier, Dr Otis Benepe, Albert Humphrey, Robert Stewart, Birger Lie (Fine, 2009).

It all began with the corporate planning trend, which seemed to appear first at Du Pont in 1949. By 1960 every Fortune 500 company had a 'corporate planning manager' (or equivalent) and 'associations of long range corporate planners' had sprung up in both the USA and the UK. (Hounshell & Smith,1988).

This paper follows three main directions. First, it proposes a review of the literature on the SWOT matrix- a short history. Secondly, we propose a model improved with the aim of helping SWOT analysis and formulation of strategies, switching to Strategic SWOT. The third part of the paper provides a concrete example of using the improved method of analysis, with the objective to validate the new improved model - SWOTS.

## **2. Brief history and the evolution of the method in time**

Strategic planning is the process to which public and private organizations appeals, in order to establish long-term courses of action and formulate strategies for achieving these objectives, taking into account relevant environmental variables, internal and external.

When performing a SWOT analysis we identifies both internal factors (strengths, weaknesses) and external factors (opportunities and threats) of a company.

The next stage, which precedes the identification of these factors is to find and formulate effective strategies based on eliminating weaknesses, exploit opportunities and / or countering threats.

According to Wehrich (1993) SWOT analysis is used to develop strategies:

- 1 - SO, using strengths to take advantage of opportunities where the strengths and opportunities shake hands,
- 2 – ST, improving strengths to reduce the likelihood and impact of threats, the risk to the company,
- 3 – WO, using the opportunities to overcome weaknesses and
- 4 – WT, limiting weaknesses and reducing threats.

Strategies are presented in a matrix that allows a view of the interactions between internal and external factors.

External factors define the external environment and therefore cannot be controlled by the organization (Karppi et al 2001). However, there are known cases where, by agreement between different competitors, the market was divided and as if by chance, were influenced some opportunities, even given rise to new opportunities, such as the fall of a government, or merger of companies and so on.

Over time, the SWOT method has been used as a tool for strategic planning in different types of organizations, this analysis represents an exercise of adjusting the internal behavior of an organization with the environment (Kangas et al, 2003). It begins by identifying the leadership of the organization and grouping them into internal and external factors.

Internal factors refer to characteristics that can be exploited (strengths) or minimized (weaknesses) to improve operation.

SWOT is one of the most popular tools for strategic analysis, which aims to identify strengths and weaknesses of an organization and the opportunities and threats in the environment. (Yichuan and Lei, 2004.)

SWOT analysis power comes from ease of use and adaptability to a wide range of situations (Martin-Collado et al 2013).

SWOT limits:

It identified two major weaknesses of the analysis:

- Identify factors driving subjective and
- Measuring their relative importance (Osuna and Aranda, 2007).

Using the SWOT matrix, after analyzing the results of the management company, we can move on to:

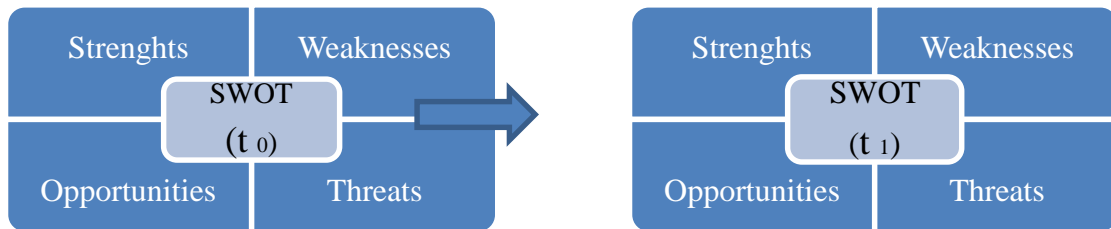
- a) redefine the mission, strategic direction and development goals;
- b) prioritization of development;

c) establishment of measures to develop and establish indicators and to ensure measurability to achieve/reach these goals.

This method has some limitations, since it does not explain the way how it is apply. It does not say if you apply the matrix for the product, the service and competitors or on the relationship between an organization and another organization.

### 3. Defining objectives based on SWOT analysis. From SWOT to SWOTS

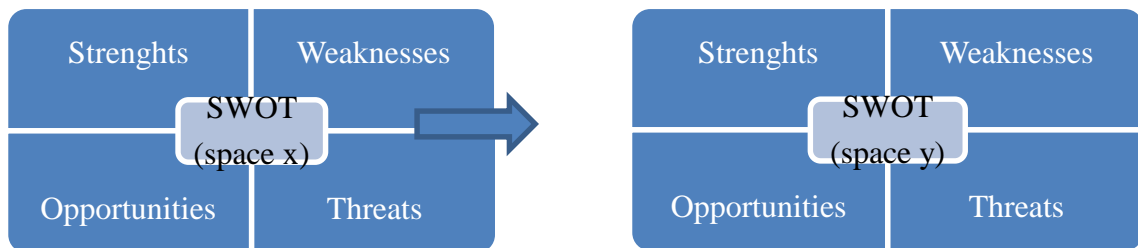
When we speak of SWOTS or Strategic SWOT, it can improve the formulation of strategies for an organization, linking them to the new variable time-T, space -S and context- C, as in the figure below.



SWOT in Time

$t_0$

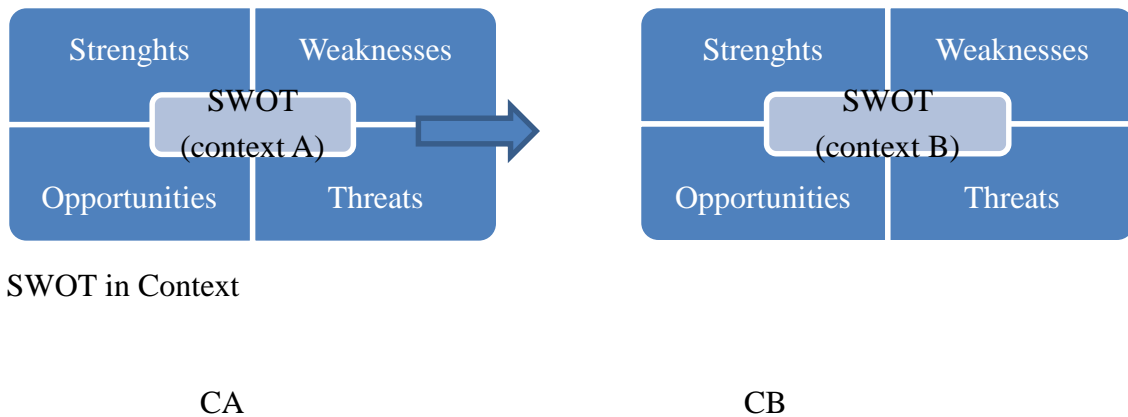
$t_1=t_0+\Delta t$



SWOT in Space

$S_x$

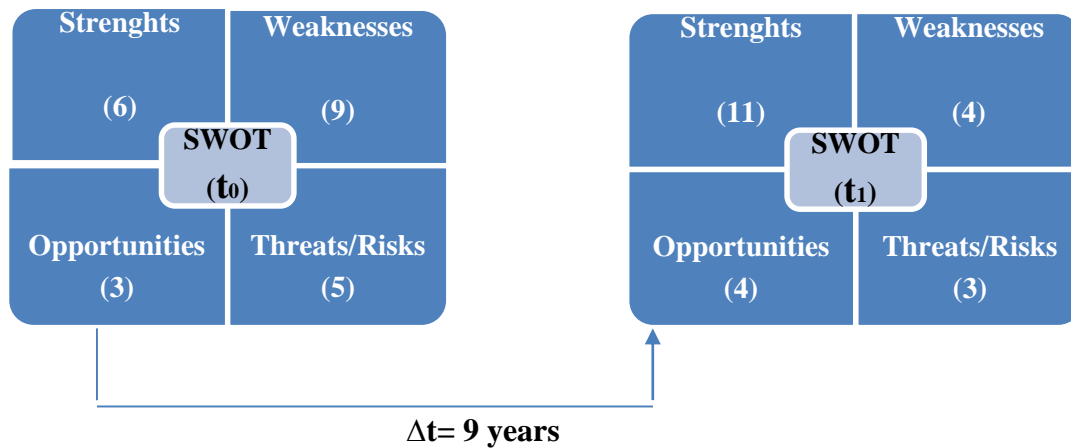
$S_y=S_x+\Delta S$



SWOT in Context

**Figure 1** SWOT analysis applied in time, space and context

Next, we present an SWOTS analysis model for a furniture company, where we have designed a Strategic SWOT, to predict the company's objectives for a period of 15 years, taking into account the management functions and functions of the organization.



Where,

$$\Delta t = t_1 - t_0$$

$$\Delta s = s_1 - s_0$$

$$\Delta ctx = ctx_1 - ctx_0$$

**Figure 2** SWOTS application, taking into account the company's functions and management functions

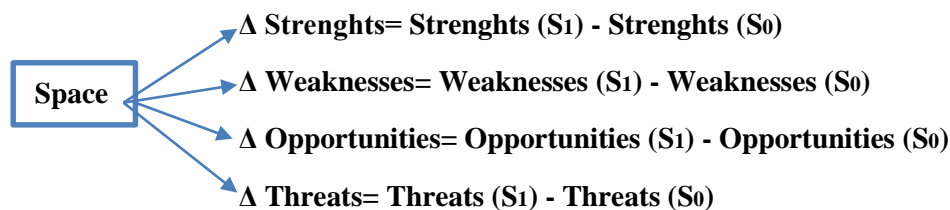
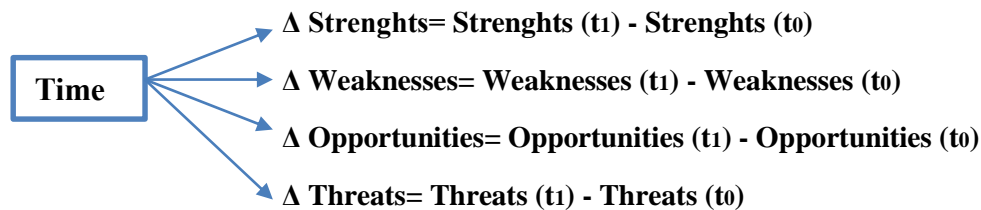
Why time, space and context are important in such an analysis?

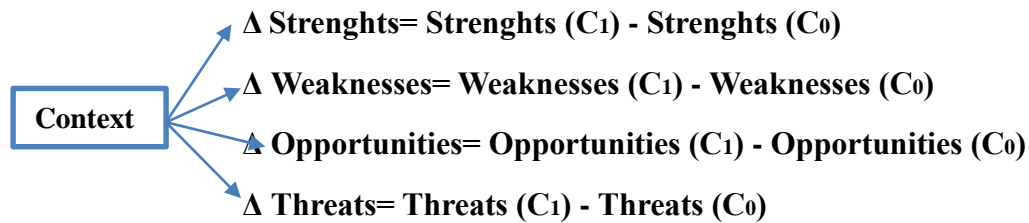
The importance of *time variable* is resulting from Ansoff's matrix, known as matrix product - markets. Thus, due to the changes on any type of market, what was analyzed today may not be valid in the next hour, day or year.

*Space variable* is as important in applying SWOT analysis, because some actors / producers withdraw from the market and move to another market. For example Nokia company, after it received financial incentives when it entered the market in Romania in 2007, only a few years left this market in 2011.

Regarding the importance of *context*, it is sufficient to observe the current situation of refugees coming from Syria and other less developed countries into EU, and found that few weeks before, this problem does not existed. Note that in a consumer society where the birth rate falls, consuming population of products and services growth, such as furniture, medical services, social assistance, etc. can become a factor of progress. There is nothing else but a demographic factor that influences the economic, social development, including the furniture market.

The projected objectives are related to strategies as follows:





**Figure 3** Formulating strategies in time, space and context

The context is defined as internal and external environmental condition, at a certain time – t<sub>1</sub>, in a certain space- S<sub>1</sub>. Environmental state is determined by the degree of saturation of the market with products and services, the number of the actors directly involved, the status of the relationship between them, etc.

For example we speak about changes in context, when we refer to strikes, bankruptcy of an national or international actors, merger, critic events on different markets, such as government changes, floods, natural disasters.

#### **4. SWOT analysis in management**

As a result of the literature review, this matrix allows thinking a strategy in a consistent manner, so that risks, internal and external threats and internal weaknesses of a company are anticipated and eliminated. At the same time, market opportunities and company strengths must be anticipated, influenced or even determined and also preserved and developed.

Basically, SWOT analysis is a management strategy in interaction with the environment.

For example, during 1990-2001, the management of furniture factories in Romania would have to anticipate the risk of wood substitutes because of all catalogs and magazines specialized in furniture, it outcomes this market trends, including raw materials and technology - see Table 1.

**Table 1 - SWOT Analysis conducted for a company producing furniture in 2001**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Quality of raw material from rich forests of Romania, with healthy wood;</li> <li>• Cheap labor;</li> <li>• Good quality of products made for export;</li> <li>• Good specialists in woodworking, recognized internally and externally;</li> <li>• Own network of retail stores;</li> <li>• Own means of transport;</li> <li>• Own warehouses etc.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Poor quality of products for the domestic market;</li> <li>• High resistance to changing the organization;</li> <li>• Inadequacy to the new technological requirements;</li> <li>• Poor management;</li> <li>• Promoting poor, even nonexistent, image product and company;</li> <li>• Technological indiscipline that supplies the domestic market, due to a mentality, anything goes;</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Increased demand (due to "increasing purchasing power "of the population by distributing shares in 1990);</li> <li>• Low inflation;</li> <li>• Lack of competition, other domestic furniture manufacturers;</li> <li>• Lack of vision, undefined mision,values, specific objectives explained in the job description ;</li> <li>• Good image of the furniture manufacturer, trusted brand and notority on the domestic market;</li> <li>• Cheap raw material- healthy Romanian wood: beech, oak, fir, poplar, acacia, etc. wood essences required nationally,</li> </ul>	<p><b>Risk / threat</b></p> <ul style="list-style-type: none"> <li>• The high price of raw materials worldwide, long-term forecast;</li> <li>• Low price of raw material, artificially maintained through policies to protect the internal market;</li> <li>• Outdated technologies on the internal market;</li> <li>• New technologies on foreign markets;</li> <li>• The appearance of wood substitutes, so it was used new raw materials related to modern technology;</li> <li>• drawdown of traditional markets in Eastern Europe, Russia, Ukraine,</li> </ul>



because of fashion; <ul style="list-style-type: none"> <li>• The lack of competition for raw materials in the medium and long term, due to low prices of raw materials</li> <li>• Cheap and well trained labor force.</li> </ul>	Turkey, etc., due to political changes in Europe -wave of democracy; <ul style="list-style-type: none"> <li>• Reduced competitiveness due to an inability of the quality assurance.</li> </ul>
---	---

The attitude of the company management in relation to supply and demand will be studied on the basis of three possible scenarios, below:

**Table 2 - The attitude of company management, Niță (2003)**

<b>0.crt.</b>	<b>Ratio Demand -Supply</b>	<b>ATTITUDE</b>
1	$D > S$	Indifference. The product quality is not a priority
2	$D = S$	Primary involvement, Competitors; more <i>reactive feed-back</i> than <i>proactive</i> type of <i>feed-before</i> (but the storm can come)
3	$D < S$	Strong involvement, fierce competition; proactive and reactive management, marketing studies, if it's not too late

In case 1, the company's products are sold even in the factory, because the supply is less than demand. In this case, the attitude and behavior of employees from sales service of top management, towards customers / consumers are accompanied by disrespect towards them as products being insufficient to meet entire request will sell anyway. Many times a company hasn't developed a sales force. This attitude has been found not only to furniture manufacturers, but also manufacturers of color TVs, Dacia and ARO cars, etc., the market is unsaturated and with great purchasing power.

In case 2, it occurs a primary interest, for the first time, since products start to be stored either in company`s warehouses or retailer`s warehouses and, will not be sold as soon as they are produced.

Case 3 is characterized by a particular interest from management or employees, as commodity "lies" in the stock, is no longer seeked, the market is saturated, even over-saturated or characterized by the disappearance of demand for the benefit of new applications for other

products, to meet another need, another necessity induced by advertising companies, even other expectations or aspirations. The first measure consists in dismissal of employees, leading to social conflicts that may and in this case, the company will be strongly involved.

Conclusion: Time variable, in 1990, should be completed by the space variable, in our case is the entire Romanian territory and not a region or county, or variable *context* - the degree of saturation of the market, for instance, the ratio above or below unitary, of the demand for supply on the Romanian market, and monitoring of this report on the external market of Romania. Fold, in Europe since then, the furniture market, the color television market, cars market, had a net gain on the quality of these products, even if they were more expensive compared to similar products manufactured in Romania. Famous brands outside Romania were Land Rover, Volvo, Mercedes, Opel, Fiat, Volkswagen etc., With a very good segmentation models according to NADA customer needs, desires, expectations, hopes, and power of buying.

Conclusion: Another variable is the SWOT analysis that can improve purchasing power, which belongs to the external environment variable.

As a result of of the SWOT analysis for the furniture company, at the moment 1990, there are proposed a number of prospective targets, as follow:

- conservation and ensuring market of selling both locally and in Western Europe;
- higher production volume, to meet the demand of luxury furniture in Romania and abroad, but also the consumer products, simultaneously with
- increasing market share for various products and product lines ;
- increasing the number of employees (specialists in woodworking);
- improved company image and less the image of the product - marketing strategies;
- introducing quality in production through management quality assurance;
- investment in technology and performance equipment for processing furniture;
- increase in turnover.

After about 9 years, due to the report diagnostic review carried in 2001, the new SWOT analysis applied consisted of the following:

**Table 3. SWOT analysis of the same company producing furniture, 2009**

<b>Strenghts</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Management Concept: long term business</li> <li>• Quality of raw material from rich</li> </ul>	<ul style="list-style-type: none"> <li>• Only 5% of the production for domestic market</li> </ul>

<p>forests of Romania, with healthy wood;</p> <ul style="list-style-type: none"> <li>• Quality Policy</li> <li>• Business based on export sales</li> <li>• The external market provided</li> <li>• 4000 employees</li> <li>• Performance equipment for processing furniture</li> <li>• Customers: Germany, Italy, USA, UK, Japan, Austria, Greece</li> <li>• Huge demand for furniture, there were waiting lists for clients</li> <li>• Turnover of 43 million euros annually</li> <li>• Listed on the Bucharest Stock Exchange</li> </ul>	<ul style="list-style-type: none"> <li>• Strong dependence of the external market</li> <li>• Lack of implementation of ISO system 9001</li> <li>• Luxury furniture made for export, PAL furniture for domestic consumer</li> <li>• Fierce competition on Western foreign market</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• 4000 employees, the company is growing</li> <li>• 95% of production destined for export, external market recognition</li> <li>• The local workforce, highly skilled</li> <li>• Local natural resources</li> </ul>	<p><b>Threats/risks</b></p> <ul style="list-style-type: none"> <li>• Strong dependence of the external market</li> <li>• Increased number of furniture companies in the local market</li> <li>• Large factory, very high production</li> <li>• The need to shift to other markets, including internal one</li> <li>• Inadaptability to market requirements: luxury furniture in small quantities or cheap furniture</li> </ul>

From the SWOT analyzes it appears that for furniture company, the variable space remains constant but the context changes. First analysis was conducted before Romania's accession to the European Union (2007), while the second analysis was conducted after 2 years of membership. Also on the context, we see changes in the external market orientation: moving from the market of Eastern Europe's to Western market, although demand on the Russian market

today is very high. Thus, in the external environment, the only variable that may not change is the space – if the company choose to remains on the same market.

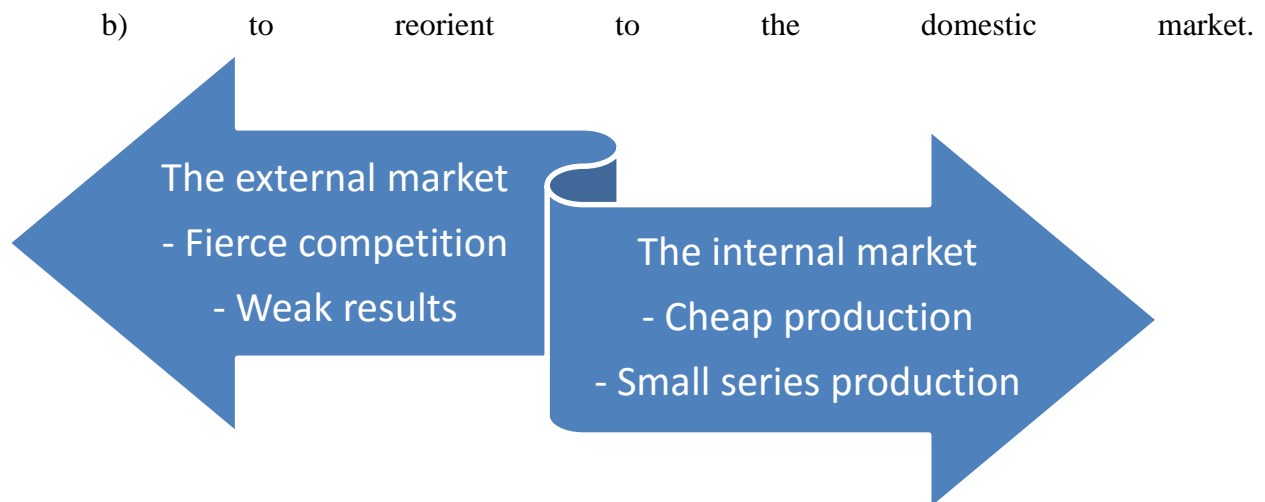
In the table below it can be observed the evolution during nine years, of strengths in time, space and context for the Romanian furniture company.

**Table 4.** Variation of Strength in time, space and context

Strength	$\Delta t$	$\Delta s$	$\Delta c$
Quality of raw material from rich forests of Romania, with healthy wood;	Same quality	Same quality	Same quality in conditions of massive deforestation
Cheap labor;	the gross nominal average earning was 2412 RON	the gross nominal average earning was 2412 RON	4000 employees, the company is growing
Good quality of products made for export;	Same quality	Same quality	Same quality
Good specialists in woodworking, recognized internally and externally;	Increased	Increased	Increased
Own network of retail stores;	Both company`s warehouses and retailer`s warehouses	Both company`s warehouses and retailer`s warehouses	Both company`s warehouses and retailer`s warehouses
Own means of transport;	hiring transport companies	hiring transport companies for domestic and international delivery	hiring transport companies

In this changing context, the strategic options for the company with a large production capacity and number of employees are:

- a) to adapt to the new market or



**Figure 4.** Evolution of furniture company according to the context

It will be also shown the changes in number of strengths, weaknesses, opportunities and risks according to SWOTS, as follow:

$\Delta$  Strengths= Strengths(2009)-Strengths(2001) =11-7= 4, the company gain four more strength;

$\Delta$  Weaknesses= Weaknesses(2009) – Weaknesses(2001)= 5-6=-1, the company reduced only one weaknesses;

$\Delta$  Opportunities= Opportunities(2009)- Opportunities(2001)=4-8=-4, opportunities has decreased by four since 2001;

$\Delta$  Risks= Risks(2009) - Risks(2001)=5- 7=-2, the company reduced only two of the risks in 2009.

Strategic SWOT in this case, should have been applied to assess the objective of risk management and project management. This starts from the initial identification of risks, probability of risk assessment and risk impact assessment.

## Conclusions

The main advantage is that the new strategic SWOT analysis or SWOTS, helps us to have a proactive approach to risk management in an institution or organization, but considering the variables time, space and context.

SWOTS analysis proposed and exemplified in this article on a furniture producing company, can apply also to an organization of public administration. SWOTS can be considered a complex strategic management tool for anticipating and integrating abnormalities.

SWOTS is like an improved methodology which can be used according to General, Concrete and Particular, known as Knowledge Triangle.

Change in public administration is implemented much slower than in the private sector.

If the private sector does not apply SWOT analysis, there is risk of bankruptcy, given that competition forces you to change. We cannot speak in public administration about bankruptcy, but lack of change generates dissatisfaction on customer consuming the public service.

SWOTS application without considering the product-market matrix of Ansoff led to serious mistakes, such as withdrawal of the furniture manufacturing company from the Russian market, where demand for luxury furniture was very large and company image was positive. For this company it was enough to “attack” a new market segment, such as the production of office furniture, while the demand in Romania was still large enough for public administration.

SWOTS can prevent the lack of vision in management.

## References

- Stanford Research Institute, a 501(c)(3) nonprofit corporation, by Stanford University in 1946
- Fine, L. G. (2009). The SWOT analysis. Kick. It, LLC.
- Niță A.M. (2003) Științe economice. Marketing și management (Economical sciences. Marketing and management), NSPAS-FCRP Publishing House, București, 2003, ISBN 973-8309-15-8
- Hounshell, D. A., & Smith, J. K. (1988). Science and Corporate Strategy: Du Pont R and D, 1902-1980. Cambridge University Press. Chicago
- Weihrich, H. (1993). Daimler-Benz's move towards the next century with the TOWS Matrix. *European Business Review*, 93(1).
- Karppi, I., Kokkonen, M., & Lähteenmäki-Smith, K. (2001). SWOT-analysis as a basis for regional strategies. *Nordregio WP*, 4, 80.
- Kangas, J., Kurttila, M., Kajanus, M., & Kangas, A. (2003). Evaluating the management strategies of a forestland estate—the SOS approach. *Journal of environmental management*, 69(4), 349-358.

- Z. Yichuan and F. Lei, “Development assessment of leisure agriculture in Henan province of China based on SWOT-AHP method”, *Journal of Industrial Engineering*; R. G. Dyson, “Strategic development and SWOT analysis at the University of Warwick”, *European Journal of Operational Research*, vol. 152, no. 3, pp. 631-640, 2004
- Martin-Collado, D., Diaz, C., Mäki-Tanila, A., Colinet, F., Duclos, D., Hiemstra, S. J., & Gandini, G. (2013). The use of SWOT analysis to explore and prioritize conservation and development strategies for local cattle breeds. *animal*, 7(06), 885-894.
- Osuna, E. E., & Aranda, A. (2007). Combining SWOT and AHP techniques for strategic planning. *Economic journal*. Instituto de Estudios Superiores de Administración (IESA) Avenida IESA, San Bernardino, Caracas–Venezuela.