

ORIGINAL SCIENTIFIC PAPER

SWOT - AHP MODEL PRIORITIZATION OF STRATEGY OF DEVELOPMENT CASE STUDY OF THE COMPANY „MINEL TRANSFORMERS“, SERBIA

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ABSTRACT

The subject of research of work is establishing and measuring the exterior factors from surroundings, demonstrated through SWOT analysis and AHP method on the very company „Minel Transformers“, Serbia. Theoretic frameworks of the subject research are given first, by explanation of the notions related to the SWOT analysis, as well as the defining the notions „advantages, disadvantages, opportunities and threats“ directly aimed at the company being observed. Challenges of turbulent surroundings, competitiveness of the market and constant changes require from the company constant adjustment to changes, new conditions and market opportunities. Company „Minel Transformers“, Serbia, produces and sells a product which is very specific and used for the longer period of time, therefore, the most important indicators of performances of business are quality, reliability and longevity of use of those goods, while a legal person should work on speed, costs and flexibility in the future.

Keywords: SWOT, AHP, prioritization of strategies, more criterion-based decision making, „Minel Transformers“

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INTRODUCTION

SWOT analysis is an analytical management framework for obtaining relevant information of the organization on itself and the surroundings where it acts now and in the future with the purpose of establishing strategic opportunities and threats in surroundings and its own strategic strengths and weaknesses [1]. It is used as tools for generating and ranking strategies and in time it is being upgraded by numerous methods when it comes to several criteria decision making when it comes to the issue of decision making in uncertain conditions [2]. This method found use in modeling of non-structural problems from various domains such as: economy, industry, army and projects. Due to its effectiveness and popularity, softwares have been developed which adjusted their systems on the basis of Analytic Hierarchy Process (Analytic Hierarchy Process AHP) framework: Criterion Decision Plus [3], Web-HIPRE [4], Criterion Decision Plus [5] and ERGO [6]. In Serbia this method is described with the aim of selection of the optimum strategy in Vrnjacka spa, whereas recently in the work of Nikolic and a group of authors it has been implemented with the aim of development of the strategy of the Tourism of the Old Mountain [7] and [8] and Timok region [9]. Also, the method is described by Knezevic and a group of authors as a choice of scenarios and development of postal services [10]. Many authors think SWOT analysis should be combined with the method of several criteria decision-making. The above mentioned method is combined with Fuzzy AHP, Fuzzy Topsis, MCDM (Multi Criteria Decisions Making), Vikor and Topsis method [11] and [12]. In many researches where SWOT analysis has been used it is proved this hybrid method is mainly used for improvement of SWOT analysis, because the AHP determines the importance of the factors of the SWOT analysis [13]. Saaty (2008) [14] in its work at the assessment of uncertainty and risks implemented the AHP method. Mustafa and Al-Bahar (1991) [15] also use the AHP method, both in procedure of identification as well as classification and assessment of the risks in the execution of the project in the field of construction industry. SWOT and AHP analyses are implemented outside tourism so Görener Ali (2012) with the aim of drafting a strategy in production companies presented the combination of SWOT and AHP in order to rank elements of SWOT analysis [16]. In addition, the studies conducted show that SWOT analysis is usually used along with other complementary approaches, such as the analytical hierarchy process (AHP), analytic network process (ANP), and simple additive weighting (SAW), etc., to offer scientific plans and quantify their importance and prioritization [48,49] This method is also applicable with the aim of delegating of marketing jobs [17]. And that the combined methods SWOT and AHP is not used just in our country is also demonstrated by authors from Sri Lanka who implemented it in formation of strategy of revival of tourism, while with the aim of comparative analysis of health tourism in India and Iran the combination of SWOT and AHP can also be used [18]. Also it can be implemented on the example of health tourism and Iran and India with the aim of comparative analysis [19]. The above mentioned method is used with the aim of strengthening tourism in Gornje Medjmurje [20]. The aim of this study is to determine the basic elements for internal and external scanning of the company „Minel Transformers“, i.e. to define strategic directions, program priorities, measures and performance goals and objectives. For identification of the SWOT factors that should be considered within the process of strategic planning, materials from business analysis were used. Within every subgroup SWOT factors, additional structuring can be done and formation of the list of elements which define and in more detail represent the subgroups which can contribute to results being more convincing.

METHODS

In order to minimize negative impacts, a company must in all ways envisage all the threats from surroundings and in this way realize its advantages and chances in relation to competition. To do it properly, it is necessary to observe all the factors from surroundings through a detailed analysis. The process of strategic management is a method by which managers can envisage and implement a strategy which can lead to sustainable competitive advantage [21]. Strategic planning is predicting problems and finding a solution if that is possible. That is a systematic process of re-newal of strategic planning and organization through detailed analyses, formulation of strategy as well as its implementation [22]. In this strategic process SWOT has a special role, because a big number of tools is used and techniques that encompass the analyses of advantages, shortcomings, chances and threats [23]. Strategic management is the process of

directing activities when it comes to creation and realization of strategy whether it is a or some other institution. It uses methods that achieve efficiency and effectiveness in the realization of goals [24]. Methods and techniques which are most often used in strategic management are: SWOT analysis – determining chances and threats from surroundings and own weaknesses, Scenario method – assessment of the future is done, Portfolio matrix – technique for establishing positions of services and activities for strategic business and Benchmarking – method by which position in the field is established.

SWOT ANALYSIS

One of the most frequently used techniques for analysis in the process of strategic management is the SWOT analysis comprising the analysis of external chances and threats [25]. Interior and exterior factors analyzed by SWOT analysis can influence the future of the company. Relevant meanings cannot be measured just on the basis of the SWOT analysis, i.e., there is no ability of assessment for the adequate implementations of certain factors. Quite frequently it happens that the SWOT is just the list of the mentioned subfactors, so proper strategy assessment cannot be done on the basis of that. By upgrade of SWOT analysis by a method of group and several criteria decision making, its implementation has considerably expanded and numerous possibilities for making objective managerial decisions in various social fields [26]. SWOT analysis is tools for support in decision-making and it is used as tools for internal analysis, and obtained information can be systematically presented in a matrix that can help in defining the strategy of long-term progress [27]. It is upon the very organization whether it has the power to eliminate or diminish the influence of threats. All opportunities can be lost if the competition is used, therefore organization must use the given opportunities well, if it has resources and strengths [28]. It is logical that organizations with bigger strengths have lesser weaknesses, so they easier cope with the situations that logically stem from defined weaknesses. Strategic management encompasses, a set of decisions and procedures that determine management with the aim of achieving future activities [29]. In this method not interior factors consisting of strength (S), weaknesses (W), but exterior factors opportunities (O) and dangers (T) are observed [30]. Erhard (2005) [31] thinks this analysis also lacks the criterion by which the importance of some conclusions would be determined. The lack of quantitative description is also noticed by Valkov (2010) [32]. Another shortcoming of SWOT analysis reflects that it covers the factors that can't be classified into strength or weakness, opportunity or danger, not having dual or uncertain factors. [33]. The abovementioned method found implementation in Thailand within the Wellness analysis [34]. Dilek (2016) [35] implemented the SWOT analysis within the touristic potentials of the city of Safranbolu.

When it comes to advantages, some of the most important are:

- Key element of formulation of strategic options are harmonizing organizational powers and weaknesses with opportunities and threats which exist on the market.
- SWOT analysis with the correct use can provide a good basis for formulation of the strategy.

The main shortcoming of SWOT analysis in the process of strategic decision making is that the method does not give analytical possibility for qualification of identified factors [36]. To decrease noticed weaknesses, organizations can make strategies through recognizing advantages and weaknesses and define the plan of activities to decrease or remove the influence of threats [37]. According to Mintzberg (1994) [38] SWOT is not always an effective method because it is rooted into the current perceptions of organization. SWOT is still advocated as strong tools for planning in all kinds of business activities. In practice it is often an activity which is not carried out well. After analyzing all important points, it is not known what should be done with the generated data. SWOT analysis is not perfect as regards the use of information to carry out strategies [38]. AHP i.e. analytical hierarchical process is a method for analyzing and formulation of decisions which can also be used for measuring relative influence of numerous factors to possible outcomes. It can be said that this is one of the most applicable and most known methods when it comes to decision-making, including subjective decision-making when it comes to the importance of criteria. This method was developed by Thomas Saaty in 1980 [39]. The choice of the most acceptable solution is done on the basis of a defined set of values with the aid of tools for formation and decision-making. Synthesis of all values, by strictly determined mathematical rules and models, is done in the very end. Decision-making can rank all the elements in horizontal and vertical sense, because the sum of weight coefficient of elements on every level of hierarchy is one. During evaluation of elements, till the very end of the procedure, it is necessary to check the consistency of reasoning of decision-making. AHP method in this case helps the decision

- maker to set priorities at decision- making and enable flexibility at decision-making. Also, AHP is proposed when it comes to big and complex problems as well as it comes to strategic planning of organizational resources. When it comes to such problems, numerous qualitative and quantitative factors are included. In the process of solving problems, assessment of managerial preferences plays the main role [40]. AHP in literature is proposed as a solution for complex problems: possibility of introduction of new technologies, evaluation of strategic alternatives, as well as strategic planning of organizational resources. Numerous factors, both qualitative and quantitative are included in this problems and one of the approaches that creates a flexible model of harmonizing preferences is the Analytical Hierarchical Process (AHP) [41]. Evaluating the strategies identified for energy action plans, this study uses an integrated methodological approach consisting of SWOT analysis, TOWS matrix, AHP method and ANP method to determine the best energy strategy. In this study, which evaluates the strategies determined for energy action plans, SWOT analysis is applied by taking internal and external stakeholders opinions first to determine the best energy strategy [50]. According to Bruzzese et al.

(2020), studies use SWOT analysis and TOWS methodology [51]. But, the results obtained from AHP can be further analyzed, interpreted, and verified using additional methodologies if needed [52].

MEASUREMENT METHODS

AHP - SWOT analysis is a combined method that occurred by joining SWOT analysis and AHP method. SWOT analysis, although envisaged as tools for planning, has its weaknesses, which can be avoided by merging with AHP method. So called hybrid method occurred as a result, and as advantages obtained by this merging in literature stand out: simplicity, efficiency and ability of combining [42]. A problem of SWOT analysis lies in obvious future development and results of many factors. On the basis of Jeon and Kim (2011), steps are following:

- implementation of SWOT analysis
- comparison in pairs between SWOT factors in every SWOT group,
- comparison in pairs between four SWOT groups and
- formulation of strategies based on results.

Choice of strategy by implementing SWOT – AHP analysis can be precisely explained by the following steps [42]. In SWOT analysis what should be determined are: Strengths (S), Weaknesses (W), Opportunities (O) and Dangers (T). AHP (Analytic Hierarchy Process) is a method proposed by Saaty (1977) [44] and based on comparison of pairs of criteria and giving importance and advantages to certain. During the process of decision-making, chosen factors follow one another in a hierarchical order. The very process of AHP starts by formation of matrix of comparison of various elements, at which fundamental scale is used. AHP is given in table 1. Use of this scale enables comparison in pairs.

Table 1. Fundamental scale AHP

Evaluation scale	Definition	Explanation
1	Equal importance	2 activities have equal contribution
3	Modest more important	Experience and assessment favorize 1 criterion a bit more
5	Much more important	Experience and assessment strongly favorize one criterion
7	Extremely more important	One criterion extremely more favorized than the other
9	The most important	Proofs strongly favorizing one criterion in relation to the other
2,4,6,8	Intervals	
Reciprocal values	If in comparison with j it has one of the abovementioned assessments, j compared with i has a reciprocal value.	
1.1 – 1.9	If activities are very equal.	Exact value is hard to determine, so relative value of a criteria can be determined in comparison with the other

Source: Saaty, 2008

By mutual comparison and their ranking a matrix is formed of comparison in pairs presented in table 2. Element a_{ij} presents a comparative advantage C_i compared with C_j , obtained using a fundamental scale. The rule valid in filling the matrix is that the element a_{ij} has value 1 for $i=j$, as well as that $a_{ij} = 1/a_{ji}$.

Table 2. Matrix of comparison in pairs

	C_1	C_2	C_3	...	C_j
C_1	a_{11}	a_{12}	a_{13}	...	a_{1j}
C_2	a_{21}	a_{22}	a_{23}	...	a_{2j}
...	...	...	...	...	...
C_j	a_{j1}	a_{j2}	a_{j3}	...	a_{jj}

Source: Saaty, 2008.

After that calculation of normalized weight is done w_j . One of the possible ways of determining the weight by implementing the method of geometric mediana is shown by following formulas: To be acceptable the value Cr must be smaller than 0.1. This procedure should be done for every group of SWOT analysys at which the best is to use expert analysys 54. In this way local weights of elements within SWOT groups will be determined (w_{si} , w_{wi} , w_{oi} and w_{ti}).

Best ranked elements from every SWOT group are mutually compared by AHP method (described in step 2) and in that way get weight factors of the whole group (S , W , O and T). Resulting weight (W_{rsi} , W_{rwi} , W_{roi} i W_{rti}), is obtained by multiplying the weight of the group (S , W , O and T) with the weight of elements within group (w_{si} , w_{wi} , w_{oi} and w_{ti}), demonstrated by formulas 5, 6, 7 and 8.

$$W_{rsi} = S \times w_{si} \quad (5)$$

$$W_{rwi} = W \times w_{wi} \quad (6)$$

$$W_{roi} = O \times w_{oi} \quad (7)$$

$$W_{rti} = T \times w_{ti} \quad (8)$$

$$GM_i = \left(\prod_{i=1}^n a_{ij} \right)^{1/n} \quad (1)$$

$$w_j = GM_i / \sum_{i=1}^n GM_i \quad (2)$$

where GM_i is geometric means, a w_j weight of the j -th criterion 44. Then the degree of consistency Cr is calculated. First maximum own value of matrix should be established λ_{max} i index of consistency is determined Ci , by and on the basis of that the:

$$Ci = (\lambda_{max} - n) / (n - 1) \quad (3)$$

where n number is number of criteria that are compared a λ_{max} ak maximum characteristic value of matrix of comparison, Ci can be compared with the index for accidental matrix, Ri .

The index of consistency is then tested by use of deviation λ_{max} from n , u in comparison with adequate average values for accidental inputs, by which consistency index is obtained Cr . We calculate it by the following formula.

$$Cr = Ci / Ri \quad (4)$$

where Ri is an accidental indeks whose values are given in table 3

Table 3. Values of accidental index of consistency Ri by the number of criteria n

Number of criteria n	1	2	3	4	5	6	7	8	9
Ri	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45

Source: Saaty, 1977.

The last step is the choice of strategies which seems best and the most accessible to a certain strategy. On occasion of formulation of strategy care should be taken of the factors that should be formulated so as to:

1. be arranged in a hierarchical way,
2. when it is possible, they should be expressed in a quantitative way,
3. be real and and
4. consistent 45.

With that aim TOWS (Threats, Opportunities, Weaknesses, Strengths), the matrix is used which presents a changed order of the SWOT matrix. In that matrix, one starts from defined elements of SWOT analysis, and then on the basis of that strategies are formulated, based on interior factors and their response to exterior factors. Strategies that can be formulated that way are given in table 4 [46].

Table 4. TOWS matrix and strategies

	Exterior opportunities $O_1, O_2, O_3 \dots$	Exterior dangers $T_1, T_2, T_3 \dots$
Internal strenghts $S_1, S_2, S_3 \dots$	Maxi-maxi strategies SO Use internal powers (S) to use external opportunities (O)	Maxi-mini strategies ST Rely on internal opportunities (S) to decrease dangers (T)
Internal weaknesses $W_1, W_2, W_3 \dots$	Mini-maxi WO Strategies minimizing weaknesses (W) to use the opportunities (O)	Mini-mini WT Strategies minimizing weaknesses (W) to minimize dangers (Ts)

Source: <http://www.quickmba.com/strategy/swot>

After setting some possible strategies, it is necessary to observe factors that appeared in SWOT analysis again. It is necessary to calculate how efficient are they in a given element, in expert analysis efficiency of the strategy is determined according to elements from SWOT group. Then indices of efficiency are obtained:

U_{Sij} – efficiency of strategy j to use the advantages and strenghts of S_i

U_{Wij} – efficiency of strategy j to decrease weaknesses W_i .

U_{Oij} – efficiency of strategy j to use opportunities O_i .

U_{Tij} – efficiency j in facing threats T_i .

Global value of j strategy V_j can be defined by a formula:

$$V_j = \sum_{i=1}^K U_{Sij} W_{rsi} + \sum_{i=1}^L U_{Wij} W_{rwi} + \sum_{i=1}^M U_{Oij} W_{roi} + \sum_{i=1}^N U_{Tij} W_{rti} \quad (9)$$

where K, L, M i N are numbers of items within the SWOT analysis. The best ranked strategy is the one with the biggest value V_j [43].

RESULTS AND DISCUSSION

The most important exterior and interior factors for the future of the company are called strategic. They are summed in SWOT analysis. In the end SWOT analysis is supposed to identify the opportunities which currently cannot be used due to lack of necessary resources and uniform competency a company has and a superior way it uses it in. SWOT analysis has a time dimension, i.e. whenever it is possible, it is useful to compare them and follow SWOT analysis made for companies in different points of time and observe those conditions, that is trends of company through this analysis [47]. SWOT analysis gives basic elements for internal and external scanning of company „Minel Transformers“, i.e. for defining strategic directions and program priorities, measures and goals for identifications of SWOT factors. Directions and program priorities measures and aims for improvement of its business. SWOT which should be considered in process of strategic planning materials have been used from business analysis. Within every subgroup of SWOT factors additional structuring also has to be done and formation of the list of elements which define and represent in more detail subgroups, which can contribute to results being more convincing.

Table 5. SWOT analysys for development strategy of company „Minel Transformers“, Serbia

STRENGTHS	WEAKNESSES
S ₁ Bigger production capacities compared with used ones	W ₁ Obsolete equipment - test and production
S ₂ Flexibility of capacities for expanding production	W ₂ Inability of independent participation in tenders due to negative business due to earlier problems of providing bank guarantees
S ₃ Annual references (long perid of presence in domestic and foreign market around 50 years)	W ₃ Lack of working assets
S ₄ Ability of production and overhaul of transformers of other producers of all powers and voltage levels	W ₄ Problem of obtaining loan support from banks
S ₅ Lifecycle longer in relation to competition	W ₅ Lost foreign markets
OPPORTUNITIES	THREATS
O ₁ Signing a contract with known manufacturers	T ₁ Growth of share of foreign manufacturers
O ₂ Entry to the market of Zimbabwe	T ₂ Financial dependency from od velikih kupaca (TE „Nikola Tesla“, HE „Đerdap“, TE „Kostolac“, ED „Beograd“ and EMS „Beograd“)
O ₃ Possibilities of export to Russia	T ₃ Dumping prices of the competition
O ₄ Reliability of existing transformers	T ₄ Competition (“Rade Končar” and “Etra”)
	T ₅ High proces of material (copper)

Source: The authors

By observing the factors of exterior surroundings of the abovementioned company, we can see that currently the main driving forces primarily are much bigger capacities in relation to currently used, then big flexibility of capacities for expanding program with investments. Yearlong list of references and presence on domestic and foreign market can certainly be the advantage of this company in the market in relation to the competition. This company is unique because it has ability of overhaul of transformers of other manufacturers of all powers and voltage levels. As regards weaknesses of this company that restrict the company from achieving better results in the market, we can primarily mention obsolence of equipment, inability of participation in tenders due to negative business of earlier years, as well as the problem of bank guarantees, afterwards the lack of working assets. As one of the most important ones, the problem of obtaining loan support of banks for production is highlighted, due to not obtaining a loan, a company will fall behind the competition, by which it will lose some markets. As the main chances for improvement of performance of the observed company on the market, we can mention insufficiently use of production capacities, as an important potential for further expanding of production and foreign sales. Development of sectors for providing services is also one of the most important opportunities that can be used for increasing competitiveness. However, what really makes a difference in relation to competition is the quality of making products and long life of exploitation of transformers. What is actually a threat for achieving competitive advantage and winning the market game is the growth of market share of foreign manufacturers, financial dependency from big buyers, as well as dumping prices of competition. First weights of elements within groups have been determined by AHP method (wsi, wwi, woi and wti), afterwards weight of groups has been detrmind by the same method (S, W, O and T) AHP procedure has been used. When all the factors of SWOT analysis of the observed company are observed, a clear strategy can be made for performance on the market. First by AHP method weights of elements have been established. Elements within every SWOT group have been chosen and then compared. The value of comparison together with calculated values of groups are given in table 6. Consistency rank of this matrix amounts to $Cr = 0,096$ which is an acceptable value. SWOT analysys of company „Minel Transformers” made for the needs of its own development has been used in this work, presented in table 5. Then, in order to be ranked based on the results of the SWOT analysis, it is necessary to fill in a questionnaire. The questionnaire was filled in by the members of the board of directors and ten more experts from other companies on the Serbian market. The AHP method was applied to the integrated results of the survey.

Table 6. Calculating weights of groups within SWOT analysys

	S ₃	W ₃	O ₃	T ₅	Weight groupsrupe (S, W, O and T)
S ₃	1	1/5	1/5	1	0.092
W ₃	5	1	3	2	0.482
O ₃	5	1/3	1	2	0.278
T ₅	1	1/2	1/2	1	0.145
Consistency ratio relative to the goal: CR=0.096					

Source: The authors

The final results are shown in Table 7.

Table 7. Global weight of criteria of SWOT analysis

SWOT group	Weight of the group	SWOT factors	Local importance of SWOT subcriteria	Global importance of SWOT subcriteria
Značen crveno STRENGTHS	0.092	S ₁ Bigger capacity	0.094	0.008
		S ₂ Capacity flexibility for expanding production program with investments	0.155	0.014
		S ₃ Long- term references	0.256	0.023
		S ₄ Ability of production and overhaul of transformers of other producers of all powers and voltage levels	0.135	0.012
		S ₅ Long lifecycle in relation to competition	0.357	0.033
WEAKNESSES	0.482	W ₁ Obsolescence of equipment	0.19	0.090
		W ₂ Inability of independent participation in tenders due to negative business	0.23	0.113
		W ₃ Lack of working assets	0.27	0.130
		W ₄ Problem of obtaining credit support of banks for production	0.22	0.104
		W ₅ Lost foreign markets	0.09	0.044
OPPORTUNITIES	0.278	O ₁ Making contracts with known manufacturers	0.187	0.052
		O ₂ Export to the market of Zimbabwe	0.058	0.016
		O ₃ Opportunities for export to Russia	0.459	0.128
		O ₄ Overhaul of existing transformers	0.293	0.081
THREATS	0.145	T ₁ Growth of market share of foreign producers	0.105	0.015
		T ₂ Financial dependency from big buyers	0.116	0.017
		T ₃ Dumping prices of competition	0.040	0.005
		T ₄ Competition	0.299	0.043
		T ₅ High price of material	0.438	0.063

Source: The authors

By implementation of TOWS matrix, several strategies have been determined shown in table 8.

Table 8. Proposal of strategies based of TOWS matrix

	Exterior opportunities	Exterior weaknesses
	SO ₁	ST ₁
Inner Strengths	Strategy of winning new markets by implementation of yearlong experience of company.	Strategy using longer lifecycle of transformers with the aim of stopping competition on the market.
Outer strengths	WO ₁	WT ₁
	Strategy of signing contracts with known manufactures with the aim of modernizing equipment.	Strategy of providing favorable loans and partnership with banks for obtaining working assets.

Source: The authors

Table 9. Coefficients of efficiency of certain strategies

	SO	ST	WO	WT
U _{s1}	0.136	0.122	0.487	0.254
U _{s2}	0.138	0.124	0.448	0.287
U _{s3}	0.160	0.102	0.484	0.252
U _{s4}	0.135	0.122	0.487	0.253
U _{s5}	0.142	0.224	0.462	0.170
U _{w1}	0.160	0.102	0.484	0.252
U _{w2}	0.155	0.126	0.454	0.262
U _{w3}	0.138	0.124	0.449	0.286
U _{w4}	0.192	0.135	0.245	0.426
U _{w5}	0.350	0.108	0.188	0.351
U _{o1}	0.230	0.115	0.491	0.163
U _{o2}	0.162	0.146	0.303	0.387
U _{o3}	0.447	0.116	0.148	0.286
U _{o4}	0.308	0.125	0.234	0.331
U _{t1}	0.171	0.171	0.189	0.467
U _{t2}	0.117	0.166	0.261	0.454
U _{t3}	0.113	0.145	0.487	0.253
U _{t4}	0.135	0.122	0.487	0.253
U _{t5}	0.135	0.122	0.487	0.253

Source: The authors

Before ranking of strategies efficiency indices have been established (U_{Sij} , U_{Wij} , U_{Oij} and U_{Tij}) by use of AHP method, shown in table 9. In the last step, the overall priority of examined strategies has been calculated, like: The prioritization of the defined alternative strategies has been set according to the size of normalization factors w_i for: $SO_1=0.136$; $SO_2=0.138$; $WO_1=0.487$; $ST_1=0.122$; $WO_2=0.448$; $WT_1=0.254$; $ST_2=0.124$; $WT_2=0.287$. The dynamic role of a strategy implies that after achieving a certain result with the application of the chosen strategy the organization enters a new phase of growth and development which demands a new strategy [59]. According to the model for determining the priorities of suggested alternative strategies, WO_1 and ST_1 strategies have priority of application. The significance has been determined of each alternative strategy (SO_1 , SO_2 , WO_1 , WO_2 , ST_1 , ST_2 , WT_1 , WT_2) based on the defined SWOT sub-criteria, and the resulting matrix W_3 was obtained, like:

$$W_3 = \begin{bmatrix} 0.1360.1380.1600.1350.1420.1600.1550.1380.1920.350 \\ 0.1220.1240.1020.1220.2240.1020.1260.1240.1350.108 \\ 0.4870.4480.4840.4870.4620.4840.4540.4490.2450.188 \\ 0.2540.2870.2520.2530.1700.2520.2620.2860.4260.351 \\ 0.2300.1620.4470.3080.1680.1170.1130.1130.1350.135 \\ 0.1150.1460.1160.1250.2380.1660.1450.1450.1220.122 \\ 0.4910.3030.1480.2340.1320.2610.4870.4870.4870.487 \\ 0.1630.3870.2860.3310.4600.4540.2530.2530.2530.253 \end{bmatrix}$$

The obtained results define prioritization of the suggested alternative strategies in the following descending order: $WO_1 \rightarrow WO_2 \rightarrow WT_2 \rightarrow WT_1 \rightarrow SO_2 \rightarrow SO_1 \rightarrow ST_2 \rightarrow ST_1$. In the last step, the overall priority of examined strategies has been calculated, like:

$$W_2 = \text{SWOT - factors (global)} = \begin{bmatrix} WO_1 \\ WO_2 \\ WT_2 \\ WT_1 \\ SO_2 \\ SO_1 \\ ST_2 \\ ST_1 \end{bmatrix} = W_3 \times W_{\text{SWOTsub - factor (global)}} = \begin{bmatrix} 0.487 \\ 0.448 \\ 0.287 \\ 0.254 \\ 0.138 \\ 0.136 \\ 0.124 \\ 0.122 \end{bmatrix}$$

Ranking strategies has been done and results are given in table 10.

Table 10. Ranking strategies of company „Minel Transformers“

Strategy	Value V_i	Rank
SO ₁	0.216555726	3
ST ₁	0.126286241	4
WO ₁	0.363374431	1
WT ₁	0.293783602	2

Source: The authors

It is necessary to make several strategies, and then, according to the elements of the SWOT analysis, determine their effectiveness, and rank and select the best ideas. The SWOT analysis is a useful tool because it helps to understand the market conditions, as well as the market position of the company. In this case the analysis helps to make a decision whether it is good to start a business or not, and if it comes to business, in which direction should the company further develop. If the planned business starts, the analysis also helps in choosing the appropriate strategies and ways to implement them.

CONCLUSION

The key issue at which is determining relative importance of every SWOT factor, due to which it is difficult to estimate which factor is the most influential in strategic decision-making. Besides that, numerous criteria and their interdependences often complicate the process of decision-making, so independent use of SWOT analysis in the process of decision-making is generally useful, but insufficient. In this work, together with SWOT analysis, Analytical Hierarchical process (AHP) is combined, the idea which is in literature a well-known way, i.e. with modifications that SWOT factors do not correspond completely with elements of AHP model, but used for their structuring as an instrument for identification and closer determination of all the elements of decision-making. SWOT analysis of „Minel Transformers“ shows that despite many problems and difficulties it daily faces with, there are insufficiently used human and material resources and potentials for improvement of work in conditions of growing complexity and uncertainty. So, the output result of carried out SWOT analysis, by definition subjective and of qualitative character, with careful use, can provide a good basis for formulation of successful strategy. The main task of every company is to, within strategic management, turn weaknesses and threats from surroundings into its forces and advantages. This method is often combined with AHP method, which give together SWOT and AHP subject quantitative model. By precise carrying out of procedures with implementation of the SWOT-AHP method, it is determined that weaknesses dominate (weight of the group 0.482), but also opportunities don't have negligible weight (the weight of the group is 0.278). Strengths of the company „Minel transformers“ can be said to be always weak and in the upcoming period they should be developed, so that their influence would increase. The best ranked WO strategy is mini-maxi, to use making a contract with known manufacturers to modernize equipment. As the second potential strategy WT strategy is separated which would use the yearlong experience of a company with the aim of getting jobs and export to Russia. If in the future SWOT – AHP analysis would be used at creation of new strategies it is necessary to do the new SWOT analysis, discovering new opportunities and dangers, but in this way identifying strengths and weaknesses.

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