



DETERMINATION OF THE TECHNOLOGICAL POSITION OF THE COURIER SERVICES COMPANY

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Abstract: To choose good strategy it is important to check first the strategic position of the company. The SWOT analysis is very useful tool to do so. To show a direction of the further actions of the company, a 3x3 matrix, which shows the relation between technological possibilities and position of the company in the market, can be used. Both methods used together will allow to determine the company's technological strategy. The article shows how, in one test, to use both a SWOT analysis as well as a 3x3 matrix to determine the technological strategy on the example of the courier services company.

Key words: SWOT analysis, 3x3 matrix, technological position, strategy

1 INTRODUCTION

A courier market is currently one of the fastest growing services markets in Poland. Between 150 registered courier-post companies only 15 companies that generate more than 96% of the turnover of the Polish market have an important role [1]. Therefore, due to the big competition each of these companies must fight for its proper position in the market.

Despite the fact that courier service companies provide services, they must use the proper equipment, they must have sufficient knowledge, skills, must have properly organized process of items delivering to the customer. This means also that this type of companies must have the appropriate technology.

Each company, also courier service company, must plan its actions in a short and long term. An appropriate strategy is a part of the long term plan. The strategy is a set of criteria and decision rules that shape the functioning and development of the organization in a changing environment [2]. As a result, the company management knows in what business to get involved, how to use the possibilities of creative cooperation (synergy) between different units and how to distribute resources among them [3].

The technological strategy is one type of the strategy. It describes how to select and use own technology to achieve technological advantage. Within its framework there are isolated [4]:

- 1) strategic analysis, which allows to answer the question what the company can do and why,
- 2) strategic choice to decide what to do and why,
- 3) strategic planning, which shows how the chosen strategy will be implemented.

The purpose of the article is to determine the strategic position of the company from the point of view of used technology. The strategic analysis in terms of technology will be carried out and with use of the SWOT method and 3x3 matrix the adequate strategy will be chosen. Obtained results can be used by the research company to strategic planning.

2 CHARACTERISTIC OF THE RESEARCH COMPANY

The research was conducted in the branch office of the courier service company in the south of Poland. This branch office is a part of the international courier consortium X.

Courier services company X is present in over 220 countries and territories across the globe, making it the most international company in the world. With a workforce exceeding 285,000 employees, it provides solutions for an almost infinite number of logistics needs. The main activity of the company concerns [5]:

- express delivery services for parcels and envelopes by the specialists in international shipping,
- freight transportation, warehousing and distribution, supply chain solutions.

The research branch office offers its services from Monday to Saturday. A customer can deliver the parcel to the office, but also can ask to take the consignment from him office, home, e.g. transmits called "door to door". The procedure of the parcel transmission is short and simple to implement.

3 RESEARCH METHODOLOGY

SWOT analysis (alternatively SWOT Matrix) is one of the most popular analytical techniques. This method, through the analysis of internal and external business environment, allows to identify its strengths and weaknesses, opportunities and threats. This analysis is a tool to optimise the business management strategy or build a new strategic plan. The main objective of this study is to determine the current position of the test object and its prospects, and with the best strategies [6-8].

SWOT analysis can be carried out for a product, place, industry or person. It involves specifying the objective of the business venture or project and identifying the internal and external factors that are favourable and unfavourable to achieving that objective. The technique is credited to Albert Humphrey, who led a convention at the Stanford Research Institute (now SRI International) in the 1960s and 1970s using data from Fortune 500 companies. The degree to which the internal environment of the firm matches with the external environment is expressed by the concept of strategic fit [9].

Setting the objective should be done after the SWOT analysis has been performed. This would allow achievable goals or objectives to be set for the organization [10].

The results of the SWOT analysis contains for groups of statements:

- Strengths: characteristics of the business or project that give it an advantage over others.
 - Weaknesses: are characteristics that place the team at a disadvantage relative to others.
 - Opportunities: elements that the project could exploit to its advantage.
 - Threats: elements in the environment that could cause trouble for the business or Project.
- The SWOT method allows the separation of the four potential strategic situation [11-12]:
- SO – maxi-maxi strategy – Strategies that use strengths to maximize opportunities.
 - WO – mini-maxi strategy – Strategies that use strengths to minimize threats.
 - ST – maxi-mini strategy – Strategies that use strengths to minimize threats.
 - WT – mini-mini strategy – Strategies that minimize weaknesses and avoid threats.

To determine the strategic position of the research company the internal analysis, in which have been pointed out strengths and weaknesses and the external analysis, which allowed to determine the opportunities and threats in the environment of the research company, were done. Steps to assess the strategic position of the company were carried out in stages. The first step was to diagnose strengths and weaknesses and emerging opportunities and threats in case of the research company. The next action was to assign a weight in each group, when added, must score 1. The next step was to attribute the assessment of severity in 9-point Parker scale to each factor where 1-3 means weak, 4-6 average, 7-9 strong influence. Then, the average values were calculated in each group because of the possibility of different amounts of the factors in the individual groups. Based on calculations the strategic position of the research company was determined [13].

Achieved through a SWOT analysis data can also be used to link the company position in the market with its technological possibilities. To do this, a 3x3 matrix, described in papers [7, 14-16], in which each of the nine fields determines the other's position, can be created. In the article also 9-point Parker scale was used. Its interpretation is following: 1-3 weak (W), 4-6 average (A), 7-9 strong (S) with regard to the technological possibilities and position in the market. The 3x3 matrix diagram is shown in Figure 1

POSITION IN THE MARKET	S	Buy the ready technology	Develop your technological potential	Focus on the revealed chance
	A	Keep in the background	Search for occasions	Improve the marketing
	W	Keep in the background	Discover the incidental market	Search for partners
		W	A	S
		TECHNOLOGICAL POSSIBILITIES		

Fig.1 Scheme of the 3x3 matrix [7, 14-17]

To create the 3x3 matrix the data from the SWOT analysis can be used. The first step was to extract from the data these factors that determine the position of the company in the market and its technological capabilities. Due to the various impacts of the strengths and weaknesses of the company and the opportunities and threats. Some changes to previously designated evaluation had to be made. In the case of weaknesses and threats because of their negative impact on the level of technological possibilities and position of the company in the market, the conversion of the evaluation 1-9, 2-8, 3-7, 4-6 was made, while the evaluation 5 remained unchanged. As a result the point corresponding to the relevant field in the 3x3 matrix can be determined, and thus the direction of the company's improvement can be indicated.

4 RESEARCH RESULTS

In **Tables 1** the extracted strengths and weaknesses and identified the opportunities and threats of the research company were presented. This table contains the results of the evaluation in 9-point Parker scale and the average values in each group.

Tab. 1. SWOT analysis in the research company [own study]

Strengths		
1.	Long tradition.	8
2.	The positive image of the company.	7
3.	The ability to reach out to the majority of customers and markets.	9
4.	Good organization of the service provision.	5
5.	Modern means of transport.	6
6.	Qualified staff.	7
7.	The ability of transport of the bulky items.	6
8.	Availability of services on the Internet.	8
9.	Stable and preferably related channels of distribution.	8
10.	Precision and accuracy of provided services.	8
Average		7,20
Weaknesses		
1.	High prices.	8
2.	High labour costs.	7
3.	Bad motivation system.	3
4.	Small possibility of new product.	2
5.	Insufficient level of marketing.	4
6.	No comprehensive offer to a specific market segment.	4
7.	Distribution of items requires particular punctuality of the provider.	9
Average		5,71
Opportunities		
1.	The continuous demand for courier services.	9
2.	Availability of information about best practices in human resources.	4
3.	Possibility to consolidate position in the local market.	6
4.	Large number of young skilled people in the labour market.	7
Average		6,50
Threats		
1.	Strong competition.	8
2.	The fall of the zloty.	3
3.	The increase in fuel prices.	6
4.	Highway tolls.	5
5.	Unemployment.	3
6.	Restricted lows.	3
Average		4,67

The SWOT analysis allows to determine the strategic position of the research company. The strategy, that should be taken by this company, is shown as the point in the coordinate system shown in **Figure 2**. To determine the coordinates of the point the following calculation was made:

$$X = | \text{strengths} | - | \text{weaknesses} | = 7,20 - 5,29 = 1,91$$

$$Y = | \text{opportunities} | - | \text{threats} | = 6,50 - 4,67 = 1,83$$



Fig.2 Strategic position of the research company [own study]

From the **Figure 2** and determined point A it results that the company was ranked in the sector maxi-maxi strategy, it means aggressive strategies. In the research company, strengths predominate over the weaknesses and the opportunities over the threats. The strategy of the company should aim to maintain this position and to make market expansion.

By determining the strategic position it was possible to identify directions of future activities of the company. Analysis of the various groups of factors relating to the company's strategic position allowed for their determination. It should be noted that the maxi-maxi strategy is a strategy that uses the synergy effect the organization's strengths and opportunities emerging in the environment.

The strongest side of the company was the ability to reach out to the majority of customers and markets. The research company is a company with long tradition, known in Polish and international market, has stable and preferably related channels of distribution, what has also been highly evaluated. The company offers its services on the Internet, the services are accurately and precisely provided.

Unfortunately, its main disadvantage is a fact, that distribution of items requires particular punctuality of the provider, and this is, often for reasons beyond the control of the company, difficult. Therefore, in this area the company should be more careful. Its services also are expensive, which is associated with high labour costs connected with the wide standards introduced in company.

The continuous demand for courier services is a very strong opportunity that comes out of the market. In the Internet age, the demand for traditional post items decreased. But delivery of signed documents or packages must be carried out in the traditional way.

Unfortunately, in addition to the continuous demand, the market is very competitive. There are many companies with long traditions, with a strong market position. Therefore, advertising campaigns and competitive prices are very important. Unfortunately, the prices of courier services is greatly affected by increases in fuel prices and highway tolls

In **Table 2** the factors deciding about the technological possibilities of the company and its position in the market were presented. The average values for the two groups of factors were also included. Based on two averages, the relation between the position of the company in the market and its technological capabilities was determined. This relation is presented in **Figure 3**.

Tab. 2. Classification of the elements for 3x3 matrix [own study]

Technological possibilities		
1.	The ability to reach out to the majority of customers and markets.	9
2.	Good organization of the service provision.	5
3.	Modern means of transport.	6
4.	Qualified staff.	7
5.	The ability of transport of the bulky items.	6
6.	Availability of services on the Internet.	8
7.	Stable and preferably related channels of distribution.	8
8.	Precision and accuracy of provided services.	8
9.	Bad motivation system.	7
10.	Small possibility of new product.	8
11.	Distribution of items requires particular punctuality of the provider.	1
12.	Availability of information about best practices in human resources.	4
13.	Large number of young skilled people in the labour market.	7
Average		6,46
Position in market		
1.	Long tradition.	8
2.	The positive image of the company.	7
3.	Insufficient level of marketing.	6
4.	No comprehensive offer to a specific market segment.	6
5.	The continuous demand for courier services.	9
6.	Possibility to consolidate position in the local market.	6
7.	Strong competition.	2
8.	The fall of the zloty.	7
9.	High prices.	2
10.	High labour costs.	3
11.	The increase in fuel prices.	4
12.	Highway tolls.	5
13.	Unemployment.	7
14.	Restricted laws.	7
Average		5,64

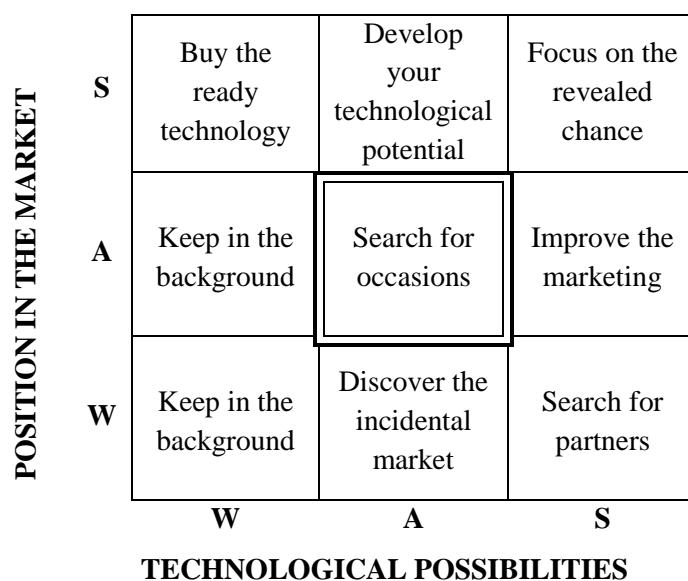


Fig.3 The 3x3 matrix for the chosen metal company [own study]

From the relation between technological possibilities and position of the company in the market (**Figure 3**) it results that the company is located in the middle field of the 3x3 matrix, which means “Search for occasions”. This means that the company both in terms of its technological possibilities and its position in the market is located as “ordinary, average”.

From the 3x3 matrix it results that the company should try to improve their technological capabilities through improved timeliness of deliveries and improvement of the service delivery organizations. It is important to search for information about best practices in human resources, which will influence the better management of human resources, and hence, better organization of work.

From the point of view of the position in the market the company should look for ways to reduce the price of their services, and reduce labour costs. It is important to look carefully at the competitors in order to see if they do not threaten the company.

It should be noted, however, that in case of the technological opportunities the obtained value was close the boarder line with the field “Improve the marketing”. It means that the technological possibilities of the research company are quite good.

5 CONCLUSIONS

In the article the research results connected with technological position of the courier services company including its strategic position were presented. For this purpose, two research methods were used: SWOT analysis and technological 3x3 matrix.

First, the strengths and weaknesses of the company and the opportunities and threats coming from the surroundings were indicated. The individual elements from each group in 9-point Parker scale were evaluated. Thanks to this research, it was found that the best strategy for the company is the maxi-maxi strategy, e.g. aggressive strategy.

The same factors were used to determine the technological position of the company in the 3x3 matrix. The same 9-point Parker scale with inversion was used. The results showed that the company should search for occasions in the market to take advantage of its present technological possibilities and position in the market.

A very important part of the work was to rotate the scale, which allow to use a single evaluation for both SWOT analysis and technological 3x3 matrix. In case of the weaknesses and threats an inversion of the scale was made. It can be very convenient in the case where such research will include views of employees of the company, for example in form of survey.

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