

Assessment of Strategies Using Analytic Network process: Case of Media Company in Latvia

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ABSTRACT— *Republic of Latvia as a single state is divided into four regions, where there are socio-economical differences, depending on their location and geographical features. As one of the options contributing to the region's economic climate and development is the use of regional media, which can be used to motivate the citizens to start they own business. This paper includes the assessment of the regional media strategies that will contribute to the growth of the business sector. Latgale region, which is less socio-economically developed, is taken as an example. To determine the best strategy, the authors use A'WOT hybrid method, that is a tool for company environment research and estimation. This method is a combination of two methods – SWOT and Analytic Hierarchy Process that has been used since 2000. The combination of the methods allows identifying the best strategy from the offered in TOWS matrix, taking into account SWOT factors and sub-factors values and their importance in implementing the strategies. As a result, each strategy was assigned a weight that helps to create the hierarchical structure of the strategies and identify the most important strategy to promote economic status of the region with no loss of money and time.*

Keywords — SWOT analysis, Analytic Hierarchy Process, Analytic Network Process, strategy, Media Company, Latvia

1. INTRODUCTION

Over last 500 years, the influence of mass media has grown exponentially with the advance of technology. First there were books, then newspapers, magazines, photography, sound recordings, films, radio, television, the so-called New Media of Internet, and now social media (Anthony, 2007).

Press, radio, television and online public message portals are primarily providing secondary socialization. Nurseries, schools, churches, interest clubs, colleges, and other institutions are also engaged in the same secondary socialization. Nurseries, schools, churches, interest clubs, colleagues and other institutions are also engaged in the same secondary socialization (Veinberga, 2010). We do not think that the media has enormous power in our daily lives – media is like a mirror, where we see ourselves and our society, as well as public interest and thoughts. So the mission of the media should dispassionately, comprehensively and professionally inform, persuade, educate and what is the most important – to motivate people to act, participate and create, which will affect the development positively.

The subject of the paper is Latgales Laiks – a newspaper of the Latgale, which is one of the largest press representatives in the region. The object of the paper is to present an application of Analytic Network Process for strategic decisions making.

The objective of the publication is to identify the region's strengths, and to develop strategies to contribute to the improvement of the region's economic climate and potential development, on the basis of comprehensive socio-economic research of the Latgale region.

On the basis of the objective, the hypothesis has been put forward – it is possible to identify the best strategy, using A'WOT hybrid method, that represents the combination of Analytic Network Process and SWOT analysis has been used to define the principal operation strategy.

The article consists of three main sections. In the first part the development and implementation process of the SWOT and ANP methods are viewed. In the second part the chosen region and problem is described. On the basis of SWOT matrix, four strategies of Latgales Laiks Ltd. were proposed, and the significance of each strategy has been estimated by the means of A'WOT hybrid method, thus creating the hierarchy of the strategies that will facilitate the implementation of the principal strategy of the company.

In the conclusion, the proposals for the improvement of the content of Latgale Laiks have been made for the purpose of motivating people to engage in entrepreneurship, which will positively influence economic situation of the region.

2. SWOT AND ANALYTIC PROCESS APPLICATION OVERVIEW

There are many methods of analysing the external environment of organization. Such methods as Pest, Pestplus, Grid, Scan, EFAS, ETOM, Quest, SNW, GETs, etc. can be used. However, according to Wheelen and Hunger the easiest way to scan the environmental dynamics of the company is using Strengths, Weaknesses, Opportunities, and Threats analysis (SWOT) which is one of the most commonly used tool for decision-making thanks to its convenience and simplicity (Hunger and Wheelen, 1998).

Using this analysis, it is possible to combine a variety of the company's external (micro and macro environment) and internal environmental factors, which contributes to the optimal development strategy (Wehrich, 1998). SWOT gives the possibility to identify internal and external factors, which are able to influence the productivity and profitability of the company (Wales and Reaich, 2004).

SWOT method is created on the bases of “dichotomy method”, which is used in such spheres as philosophy, math, botany, informatics, literature and others sciences. Dichotomy, *from greek – Dickotomia*, is division into two different groups. The elements of the SWOT matrix are mutually exclusive pairs of factors, due to which the uncertainty of internal and external environmental interaction is reduced to a minimum.

Strategic planning consultants recommend analysing the environment of the company using SWOT at least one time per year. For example, American Management Association (AMA) has developed checklist for SWOT analysis, which when completed by a variety of competing companies, provides a possibility to assess the strengths and weaknesses of the companies (Хруцкий and Корнеев, 1999).

While the SWOT matrix provides a range of alternatives, one of its major limitations is the inability to propose the final decision. Although, there are some variations in evaluating the factors, the importance of the factors is not evaluated. As a result, it is impossible to create a hierarchy of factors and determine the most important strategy, taking into account the internal and external factors interdependencies.

Analytic Network Process was firstly introduced by Thomas Saaty in 1996, in his work regarding the decision-making based on multicriteria assessment that applies network structures with dependences and feedbacks among specific elements of decision-making process by arranging them in a hierarchical structure with the aim to evaluate the relative importance of pairs of elements and synthesize the results (Wales and Reaich, 2004).

In addition with SWOT analysis for the better accuracy and objectivity, it is recommended to use other techniques that can help managers accept the most optimal strategy. M.Pesonen, M.Kurtilla J. Kangas, M.Kajanus and P.Heinonen were the first, who first time in 2001 offered the solution to this problem. They used SWOT and ANP methods combination in their paper, which was illustrated by the real example on the basis of environmental problems. This hybrid method is called A^WOT, *from English – ANP in SWOT analysis*. (Pesonen et al., 2001). Integrating ANP method into SWOT creates priorities of the selected factors and makes them mutually measurable (Annika, 2008).

Analytic Network Process (ANP) was developed to optimise the decision-making process, when there is a need of mutual estimation of qualitative, quantitative and sometimes even contradictory factors. Comparison using the ANP model is carried out by pair wise comparison of criteria and after that by pair wise comparison of the alternatives (Saaty, 2001, 2009). ANP is capable of handling feedbacks and interdependencies, which exist, in complex systems like a manufacturing or environmental system (Hui-Lin Hai, 2011).

The results of ANP were very effective at complicated, often irreversible decision making in such spheres as government administration (Kahraman et al., 2007), entrepreneurship, production (Görener, 2012), health care, tourism (Kajanus et al., 2004; Wickramasinghe, 2009), environment (Kurtilla et al., 2000), information technology (Michnik and Kania, 2012), logistic (Meade and Sarkis, 1999), and education spheres.

Latvian researchers used SWOT and Analytical Network Process for the cognition of different purposes. It is mentioned in the following papers: “Use of Analytic Network Process for risk Assessment in Production of Renewable Energy from Agriculture Biomass in Latvia” (Rivza et al., 2013), “The choice of the most profitable pension fund in Latvia” (Voronova, 2011), “Latvian insurance companies culture risk management evaluation” (Stepchenko et al., 2014) and “Assessment of Risk Function Using Analytic Network Process” (Stepchenko et al., 2015).

There is only one research that evaluates and analyses the development trends, intensity, functionalism and significance of Latgale press issues in the region: “The Role of the Newspaper in the Regional Community” (Murinska, 2013). The research enquires how regional newspapers represent local communities and the way how the communicative integration has been facilitated. In the research journalists and editors were interviewed, the results show the high importance of the press issues in the region as daily life organizers. Local press informs what is happening around and control decision-making process in the region (Murinska, 2015).

3. CASE STUDY OF A LATVIAN MEDIA COMPANY

3.1 Improvement of the Mass Media Strategies Activity in Latgale Region

Latvia as a single state is divided into four regions - Vidzeme, Kurzeme, Zemgale and Latgale, where there are socio-economic differences. They existed during the first inter-war period and continue to exist today (Veinberga, 2010). It is

not possible to achieve a completely equal development level in all areas. It is clear that they will be different due to their geographic location, natural resources and the mentality of the population. Therefore, both for the regional administration and the state government the region development as an attractive living and working place is more significant rather than correcting the differences between the regions, while emphasizing the advantages of each region, and taking into account the factors that put the brakes on the particular sphere in certain regions. Equally important is the provision of sustainable development, which includes also significant environmental conservation and protection issues.

Latgale region is located in the southeast of the country bordering with Russia, Belarus and Lithuania. Accordingly the EU, the Russian - Latvian border is 275 km long, Latvian - Belarus is 87 km long and the Latvian - Lithuanian border is the longest - 588 km. [23] The region is located furthest from the Latvian capital - Riga, due to what it is slower in development than other regions (see Figure 1).



Figure 1: The location of Latgale region

The biggest region's problem is reduction of population. Over last 11 years, since the first census the population has decreased by 80 877 citizens or about 21%. [24] As a result, the region has the smallest market sector economically active statistical units per 1000 population and the highest unemployment rate.

Despite the weaknesses, the region has a lot of strengths - biologically and clean environment, empty premises and land, the rich cultural heritage, major transport corridors etc., as a result there are the potential for developing - the potential to improve the relationships between educational institutions and employers, commercial and non-commercial fishing development, manufacturing of biological products, etc. Latgale is like a bridge between East and West with well-developed infrastructure and services, which can combine these two opposite cultures. This region can become an important tourism region as Land of lakes with natural and cultural heritage, and multicultural environment.

All these activities have to be carried out by the government, and citizens are not able to implement them without the support of the government, however, in accordance to existing situation, the state is not able to use socio-economic benefits and develop its potential. In Latgale, in comparison with other regions, there is the smallest number of the company establishment relating to the total population. Although, the location of the region, the current condition of agriculture and natural resources prove the opposite. [23]

So, the contribution of every citizen and company is very important to the development of the region. As one of the option, that can contribute to the regional development is the attracting those, who society trusts and listens to – media. Public opinion responds not to the environment, but to the pseudo-environment, argued Walter Lippmann, the creator of the new idea, called agenda-settings (Lippmann, 2007). There is frequent information about the current society and what it has become – violent, focused on material values, too sexually oriented, but on the other hand, looking at the content of media, they themselves give rise to these thoughts, litter even independently minded readers with annual increasing of advertising, negative and violent messages, nationalistic beliefs and subjective opinions.

Paradoxically, the region that is less developed and retarded in comparison with other regions has a dense number of regional newspapers – 19 press representatives, but unfortunately they are generally presenting the facts about the events or activities. After reading those facts, people do not have considerations, motivation and ideas in order to improve the existing situation and to change their life. However, most of the information, which is received by people, is entering the social arena by the means of media. For the developing current situation of the chosen region, the authors choose the most read newspaper in the region, “Latgales Laiks”, which is one of the largest newspapers in the region, with a circulation of 15 000 issues and printed editions in two languages - Latvian and Russian.

Applicating ANP method the authors want to determine the most important strategy for the region developing, using regional media as an intermediary. In this publication the authors want to show an A'WOT method application, on the basis of the one of Latvia regions, which is the depressed region with the signs of slow development.

3.2 Strategies for growth and development

Practical application of ANP is implemented in accordance with existed evaluation process of strategy choice. Authors will not go into this description of the methods application, but rather show a methodology of algorithms and key results (see Figure 2).

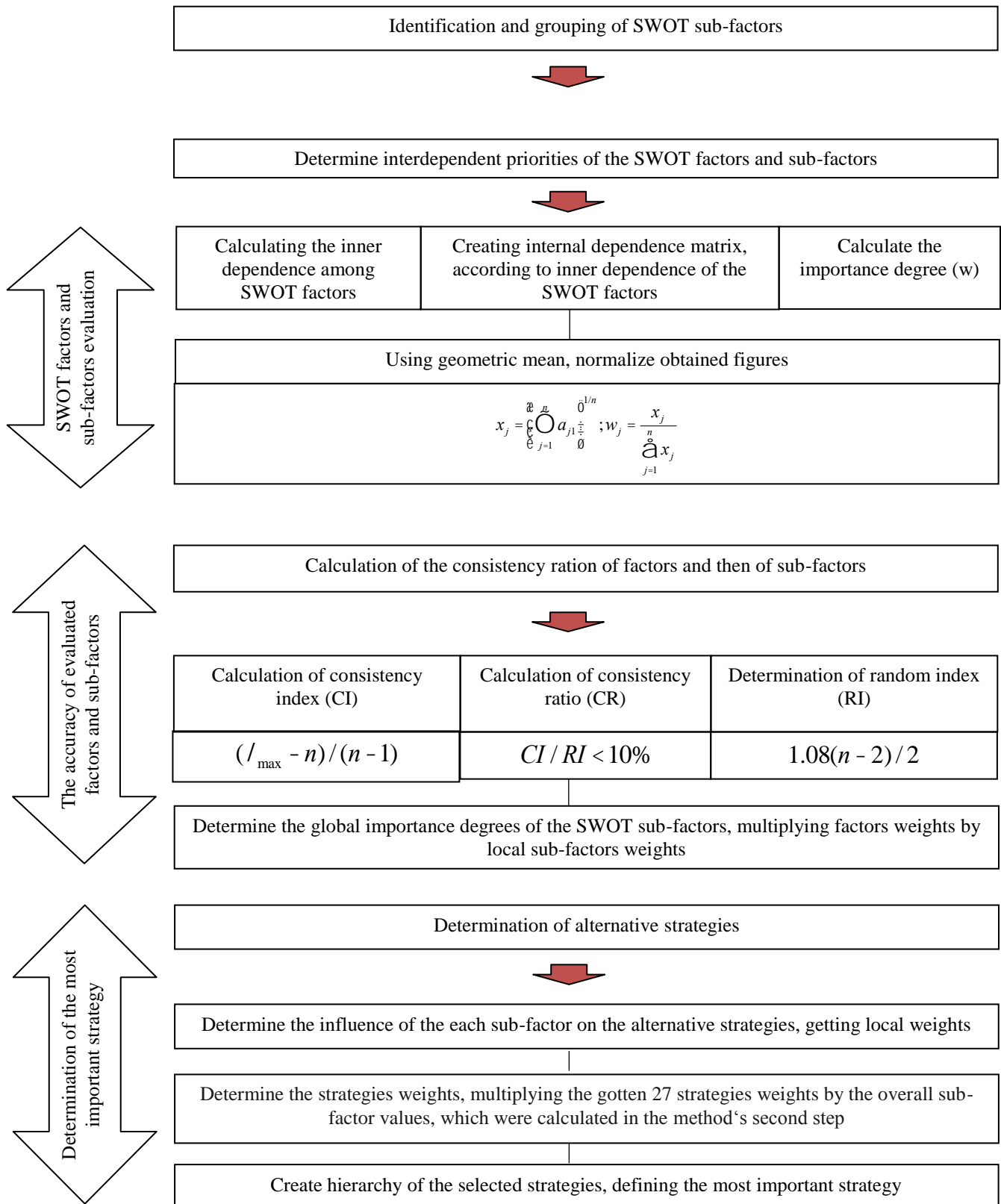


Figure 2: Alternative strategies evaluation using ANP method (created by the authors, based on T.Saaty ANP method)

After using the method, the hierarchical structure of SWOT factors in each group was obtained. Accordingly to the hierarchy, the most and less significant factors and their value difference were shown (see Figure 3).

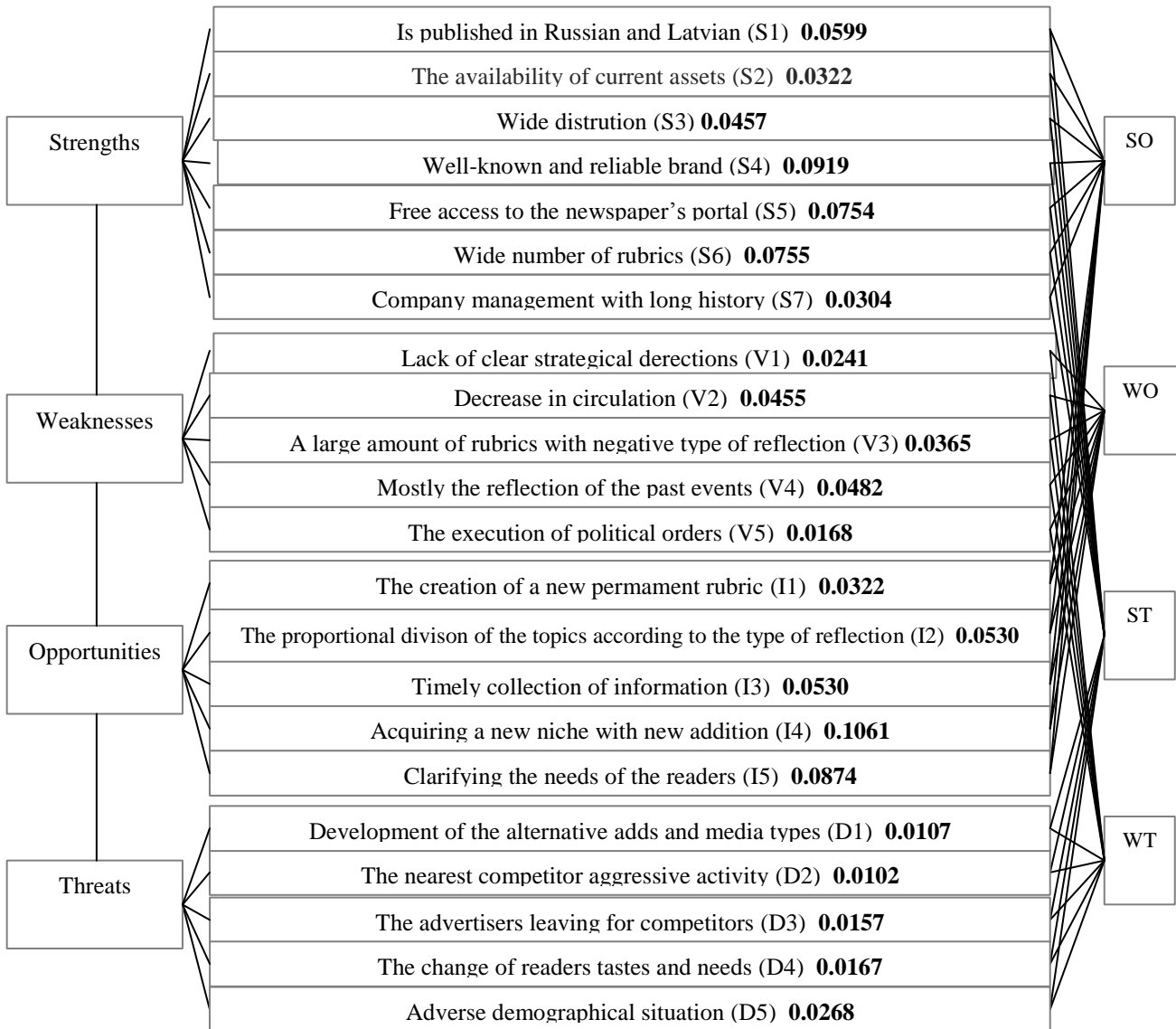


Figure 3: The SWOT sub-factors evaluation of Latgales Laiks ltd.

As the next step after determination of overall priorities of the sub-factors, strategies are divided accordingly to TOWS matrix areas. TOWS matrix was developed in 1982 as the next step of SWOT for the developing alternative strategies (Weihrich, 1982). It provides means to develop strategies based on logical combinations of factors related to internal strengths or weaknesses with factors related to external opportunities or threats (Wickramasinghe and Takano, 2009). TOWS matrix identifies four conceptually distinct strategic groups that in our case are four strategies for the improving the Latgale Laiks ltd. Management, which will indirectly influence the condition of the region. Also, the implementation of strategies will contribute to the welfare of the region's citizens and socio-economical conditions (see Table 1).

Table 1: TOWS matrix of Latvian Media Company

| | Strengths | Weaknesses |
|---------------|-----------------------------------|-----------------------------------|
| Opportunities | Creating new rubrics | Clarifying readers desires |
| Threats | Developing the newspaper's portal | Improving the newspaper's content |

After formulating the strategies using A'WOT method, the authors determine the weight of each strategy, assessing how each sub-factor of the group is affecting the achievement of chosen strategies. At the end it is obtained as much

values as the sub-factors – 27 weights, estimating how each of the 7 strengths, 5 weaknesses, opportunities and threats sub-factor affects each strategy (see Table 2).

Table 2: The importance of strategies in relation to the strengths of Latgales Laiks Ltd. (fragment)

| Is published in Russian and Latvian (S1) | | | | | | Lack of clear strategic directions (W1) | | | | | |
|---|------|-----|-----|-----|--------|--|-----|----|-----|------|--------|
| | S1 | V1 | SD | CD | w | | S1 | V1 | SD | VD | w |
| SI | 1 | 2 | 1 | 2 | 0.3317 | SI | 1 | 2 | 0.5 | 1 | 0.2382 |
| VI | 0.5 | 1 | 0.5 | 2 | 0.1972 | VI | 0.5 | 1 | 0.5 | 0.5 | 0.1416 |
| SD | 1 | 2 | 1 | 2 | 0.3317 | SD | 2 | 2 | 1 | 1 | 0.3369 |
| VD | 0.5 | 0.5 | 0.5 | 1 | 0.1394 | CD | 1 | 2 | 1 | 1 | 0.2833 |
| CR = 0.017 | | | | | | CR = 0.022 | | | | | |
| The creation of new permanent rubric (O1) | | | | | | Development of the alternative adds and media types (T1) | | | | | |
| SI | 1 | 3 | 1 | 2 | 0.3592 | SI | 1 | 2 | 2 | 0.5 | 0.2703 |
| VI | 0.33 | 1 | 0.5 | 0.5 | 0.1233 | VI | 0.5 | 1 | 1 | 0.5 | 0.1607 |
| SD | 1 | 2 | 1 | 2 | 0.3245 | SD | 0.5 | 1 | 1 | 0.33 | 0.1449 |
| VD | 0.5 | 2 | 0.5 | 1 | 0.1930 | VD | 2 | 2 | 3 | 1 | 0.4241 |
| CR = 0.013 | | | | | | CR = 0.017 | | | | | |

w – importance degree; CR – consistency ratio.

The point is that the consistency ratio is less than 10%, therefore, expert evaluations are conformed and can be used for strategy evaluation. In the last step in defining the overall priorities of each strategy and the creation of a hierarchical structure, it is necessary to multiply 27 obtained weights by the overall priorities of the sub-factors. At the end we get only 4 weights, where each weight shows the importance of the appropriate strategy (see Table 3).

Table 3: The overall priorities of the Latgales Laiks Ltd. strategies

| Strategies | Overall priorities |
|--|--------------------|
| 1. Developing the newspaper's portal | 0.265 |
| 2. Improving the newspaper's content | 0.254 |
| 3. Clarifying readers desires | 0.234 |
| 4. Creating new rubrics inside newspaper | 0.23 |

As it is seen from the table above, the most significant strategy with weight 0.265 is developing the newspaper's portal. The authors offer to perform the following actions to improving the portal of the Latgales Laiks Ltd, which will accelerate the socio-economic development of the region:

- creating a rubric "IdejaIR", which will include necessary and important information about entrepreneurship and enterprising people in the region;
- creating a rubric "Jaunatnei". It will provide Youth with the most current information about different opportunities and educational institutions in the region;
- cooperating with other regions publishing specific information, that can be useful for the citizens of Latgale region;
- clarifying the readers needs and options about the newspaper topic themes compliance;
- gathering information timely, inserting the information not only about the result of the event, but also about the planning of the event;
- publishing more articles with positive reflections.

Of course, even if the company implements all the proposals of the authors, this will not improve the current condition of the region significantly. As contribution of one newspaper, is not enough to change the content and approach of media. If, however, these rubrics help people to achieve their goals or create new businesses and jobs, it will be a big step in improving the current situation. Furthermore, getting the positive results as the increase of the circulation, site visitor, advertisers, etc., the newspaper will motivate indirectly other newspapers to make improvements not only among the newspapers in Latgale, but also in other regions.

CONCLUSION

SWOT analysis gives the possibility to identify internal and external factors, which are able to influence the productivity and profitability of the company, but do not give a possibility to evaluate them objectively. As a result, the A'WOT method was introduced, using which it is possible to determine the importance of the set factors, activities or strategies, giving them numerical values; as a result time and resources are not wasted in minor strategy implementation.

This publication will help media companies in their strategic planning process. Using A'WOT technology allows taking into account the variable components of SWOT while the medium-term strategies are setting.

Based on the set strategies formulation and their importance, it was obtained, that the most significant strategy for the improvement of the company functioning with the aim of Latgale region's socio-economic climate improvement and increasing potential, it is going to be Developing the newspaper's portal. For a particular media company it is advisable to implement the chosen strategy, however as it is seen from the rest of other strategies, differences in overall priorities are not significant. The second important strategy of weight 0.254 is *Improving the newspaper's content*, 0.02 weight less got the strategy *Clarifying readers desires* and the least important strategy is *Creating new rubrics*.

The fact that the value of no strategy stands out shows that all 4 strategies are important and necessary in development of the region, this way creating a better set of characteristics. According to the authors, the most important actions, that will combine all 4 strategies, are creating the two new rubrics – one is for the youth and the other for entrepreneurs. This will help to reach a new target audience and become more diverse, as a result, the new groups of society can be motivated and persuaded by the local press.

Proposed algorithm can be used for different mass media – radio, web pages, monthly editions, etc., as well as for different regions, cities or states. The only difference will be in the choice of Strengths, Weaknesses, Threats and Opportunities in SWOT analysis, that will cause a formulation of new, specific strategies suitable only for the selected region.

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