ONLINE REPUTATION ASSESSMENT OF ENTITIES IN AUTOMOTIVE INDUSTRY IN THE SLOVAK REPUBLIC[1]

MÁRIA KOZÁKOVÁ[2] – VLADIMÍR HOJDÍK[3]

Online povesť subjektov pôsobiacich v automobilovom priemysle v Slovenskej republike

Abstract: The present-day business world is no longer the matter of doing business; there is a rising importance of intagible resources. It is the very reputation of an enterprise that is considered one of valuable intangible resources. Reputation is defined as an expected behaviour of the entity based on information about its behaviour in the past. This concept is however changing as a result of the rising influence of the Internet and social media. The rising popularity of digital and social media has brought about an increased interest in this communication channel in business environment. It means that the reputation management depends also on the online environment created in an enterprise. Many companies have started using the Internet and social media to gain advantages and attract more customers; however, the content shared via social media may become a threat and the threat may develop into a fast communication crisis, on the other hand. This type of media may represent both an opportunity and threat for building the reputation and its protection. The aim of the paper is to highlight the importance of managing the online reputation and current methods which enable us to measure the reputation level online, in particular the sentiment analysis, as well as the analysis of multifactor sentiment. The paper also presents results of the research into the online reputation on the example of the automotive industry.

[2]   Ing. Mária Kozáková, University of Economics in Bratislava, Faculty of Business Management, Dolnozemská cesta 1, 825 35 Bratislava, Slovak Republic, e-mail: maria.kozakova@euba.sk

[3]   Ing. Vladimír Hojdík, University of Economics in Bratislava, Faculty of Business Management, Dolnozemská cesta 1, 825 35 Bratislava, Slovak Republic, e-mail: vladimir.hojdik@euba.sk

---

1 Introduction

With development of the Internet and the increasing use of social media (blogs, social networks, or various online communities), the credibility and corporate reputation is becoming an increasingly important and rare strategic asset. Reputation is capable of influencing business performance at various levels (especially financial performance), but building, shaping and strengthening is no longer under the control of the company, and there is increasing evidence that traditional consumer control in the markets characterized by consumers using the Internet and social media questioned by new patterns of consumption and culture.

Internet and social media can be considered modern tools of interpersonal communication, and because of their specific features, it becomes a challenge for managers and the corporate reputation management. Social media is becoming a good tool for creating an image and a positive reputation. The reason is that companies are able to build interactive relationships with an unlimited number of recipients. Through social media, consumers can exchange information, share ideas; moreover, they can continually define and evaluate products and brands themselves. Consumers are no longer considered to be exogenous for companies because they are involved in production processes in this way, and together they create economic value.

On the other hand, the functioning of social media is beyond the control and influence of the company. Customers are actively involved in the formation of business by sharing content in the online environment, which can lead to a threat to the corporate reputation and the emergence of a reputation risk. One negative comment or post about a company or its products on social networks can trigger an unstoppable avalanche that can damage a carefully crafted image of the company or destroy the corporate reputation. In this paper, we would like to outline the problem of online reputation and also underline the importance of active online reputation management of the company.

2 Online Reputation

Walter (2013) argues that reputation in life and business is everything. It means that reputation is very fragile, and one mistake may sometimes cause irreversible damage. From a traditional point of view, the corporate reputation has been described as the result of a public judgement that increases (or decreases) over the time, and it is socially shared by different stakeholders. Consumers tend to use the internet to read, track, listen and buy products or services, and often look for recommendations and referrals from consumers who have tried the product and have a personal experience with it before purchasing a particular product or service.

Figure 1

Internet users in the world by regions by June 30, 2017
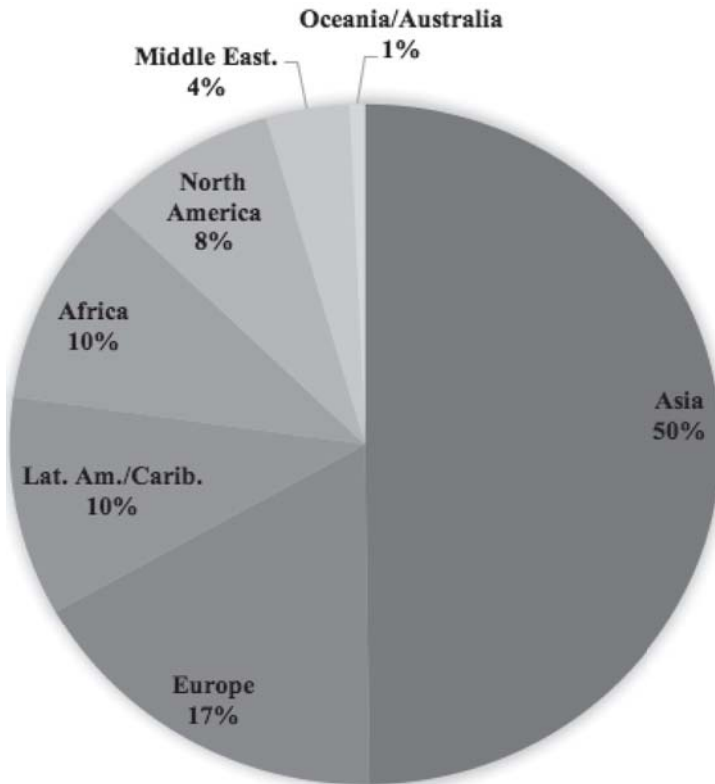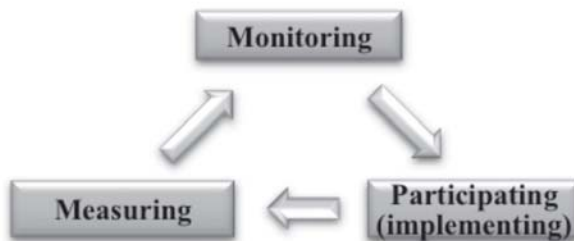

Source: [6].

A concept simultaneously appearing with social media is "online reputation". An increasing number of consumers depend on online opinions when

making purchasing decisions and a good online reputation is one of the most important components of effective marketing [5]. Online reputation represents the reputation of companies established in the Internet, and it is predominantly built by community participation and through the 'reputation aggregators', such as search engines like Google, which enable people to find content online.

According to Jones et al [7] online reputation is a reputation, which involves a corporate reputation created on the online environment. In a social network, members influence each other by sharing their experiences and opinions, constantly modifying the overall network's judgement on the discussed entities. Bunting and Lipski [1] point out that corporate reputation management is more than just proactive communication with stakeholders. But it is based on communicating people who collaborate online through search engines such as Google, Ask or Yahoo. Author Weber [15] calls these search engines "reputational aggregators" because they list search results in order of their reputation.

Figure 2

On-line reputation management process

Source: [7].

Many companies are aware of the need to track messages and what is happening in the online world, especially after the introduction of new Web 2.0 technology. The online environment enables online communities to participate, collaborate, play their role in shaping the business process and influence the corporate reputation, sales turnaround, profit margin and even its existence. This "virtual consumer community", which exchanges ideas and cooperates, as well as sharing knowledge about a particular situation, influences the business process [13, p. 354]. One of the challenges faced by managers of online environments is that of fostering positive interactions between members. The role of online reputation management is to interact with people online, create shared content, track what stakeholders say, address negative content, and en-

able ideas that are shared through social media. Dijkmans et al. [2] argue that the role of online reputation management is to interact with people online, create shared content, track what stakeholders say, address negative content, and enable ideas to be shared through social media.

It is important for companies to know about such online conversations and respond quickly to any negative debate, neutralize it and bring a better product or service to customers and consumers. This aspect reflects the phenomenon of social media. Gurau [3] summarizes this impact of social media on the behaviour of online audiences as follows:
- Social media constitute a network which allows a bidirectional communication between companies and their audiences;
- Users are connected to one another, enabling discussions and debates about companies and their product;
- Users are now able to filter the information that they receive
- Users can easily access to various sources of information through the spread of the Web and discussions with other stakeholders of the companies.

Figure 3

Aspects of social media influencing online shopping behaviour
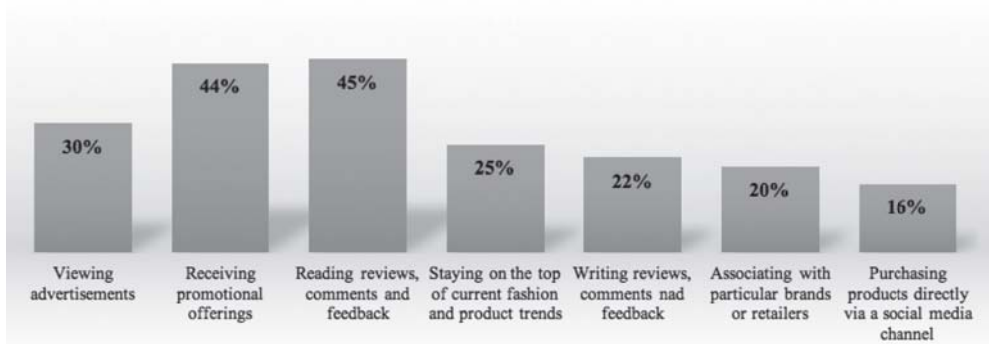
Source: [12].

Based on the Total Retail Survey 2016, up to 45% of respondents on the social media aspect related to their online shopping behaviour said that reading reviews, comments, and feedback through social media and the Internet had an impact on their shopping. And 43% say that mutual interaction through social media increases their respect and perception of brand value. Therefore, it is important for companies to know about such online interviews and to be able to react quickly to any negative discussion, neutralize it and bring a better product or service to customers and consumers. From the online environ-

ment and the discussion through social media and the web, the need for online business reputation has also emerged.

2.1 Social media engagement in automotive industry

The first online era was the first ten years of the World Wide Web, when automakers relied on websites as digital showrooms. Push-marketing programs, search engines or integrated campaigns helped drive site visits. One-way, push-based communication was the dominant online marketing framework. Then blogs arrived. Now automakers could connect directly with customers and prospects and their conversations in a scalable way. Those networks made it easy for other networks to cross- share updates, and the digital ecosystem began to take shape. Engagement became part of the lexicon. Expectations for brands to participate in social channels grew and continue to grow. Always-on communication is the reality.

In 2013, we began to enter the third online era, the "Internet of things," whereby Internet-connected devices post updates to users' news feeds about destinations, performance metrics, goal attainment and myriad metadata for social sharing. In the third online era, potential buyers are exposed to numerous influencers and disruptors via social media during every stage of their path to purchase.

Figure 4

How the automotive industry compares in using social media platforms on a regular basis vs. all other industries
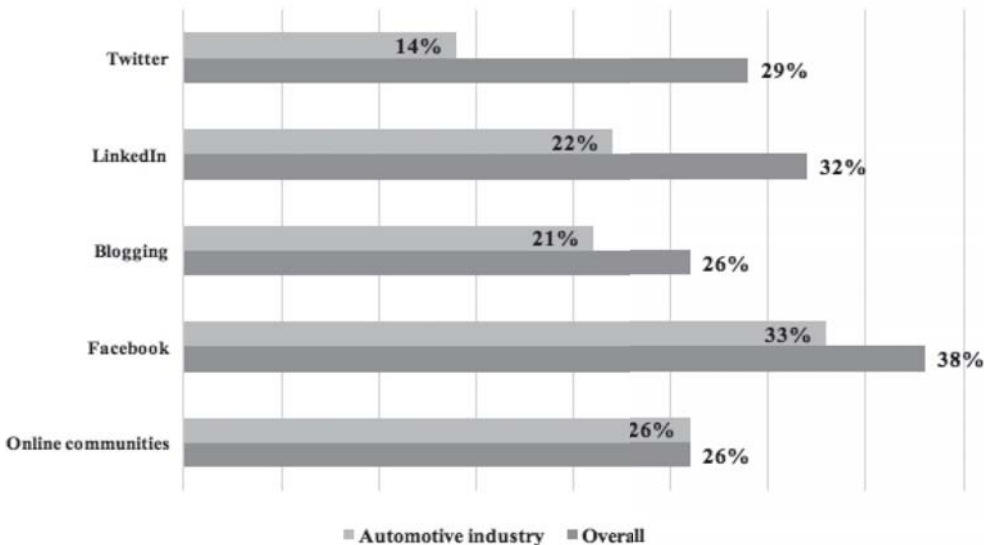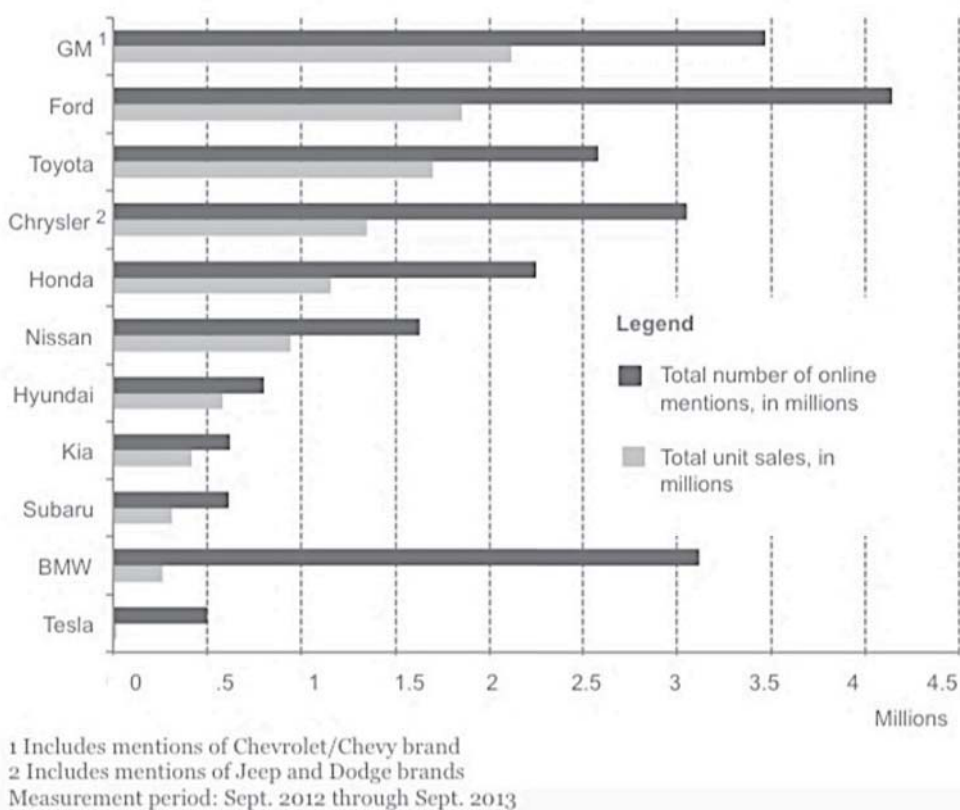

Source: [12].

In the social selling framework, the higher the number of online mentions compared to the number of cars sold indicates strong buzz and online engagement, well-connected digital systems that feed online news feeds, and a healthy loyalty loop to drives sales. Social media asks a fundamental question: What's new? Online mentions are often fuelled by new products, new data and new experiences, and the car-buying experience, from research to driving home from the lot, can be a rich source of mentions.

Figure 5

Total unit sales to the total number of online mentions for 12 months

1 Includes mentions of Chevrolet/Chevy brand
2 Includes mentions of Jeep and Dodge brands
Measurement period: Sept. 2012 through Sept. 2013

Source: [12].

2.2 The research of Online reputation in Slovak automotive industry

Sentiment analysis was mostly used tool in order to analyze online reputation of selected subjects. Sentiment analysis is one of the most used rating systems for online reputation in Europe. This method is based on assessment of top (usually top ten) organic results of a search engine. Each partial result and

sentiment is analysed and followed by the final assessment of the company. That serves as criterion for evaluation of success or failure of the entity in selected segments. In order to eliminate the probability of customized search results, it is recommended to use a proxy server, which secures anonymity and finds only the most relevant results. The final score is calculated according to scoring system listed in below table.

Table 1

Sentiment analysis and system of evaluation

Sentiment/Position	1	2	3	4	5	6	7	8	9	10
Positive sentiment	20	19	18	17	16	15	14	13	12	11
Website of company	10	9	8	7	6	5	4	3	2	1
Neutralsentiment	2	2	2	2	2	2	2	2	2	2
Negative sentiment	-20	-19	-18	-17	-16	-15	-14	-13	-12	-11

Source: [11].

Hojdík and Kozáková [9] evaluated the level of online reputation of three largest companies in the automotive industry in Slovakia (Kia, Volkswagen and Peugeot Citroen) with the use of sentiment analysis methodology. Data was processed based on the search results for the keywords "Volkswagen reputation", "Kia reputation" and "Peugeot Citroen reputation". The results showed that KIA Motors had the most favourable results among the selected subjects. The remaining two companies achieved a negative score and should take steps to improve their reputation. Following table summarizes the results of the research.

Table 2

Sentiment analysis results of three largest Slovak automotive companies

	1	2	3	4	5	6	7	8	9	10	Total points
KIA	2	-19	18	17	16	2	14	13	12	11	**86**
VW	-20	-19	18	-17	-16	15	-14	13	2	-11	**-49**
PSA	20	-19	2	2	-16	15	-14	2	12	-11	**-7**

Source: [9].

An example of a business that should pay close attention to monitoring online reputation is Volkswagen. The reputation of the company suffered due to an emission scandal in 2015 and at the same time in 2017 due to the strike of employees in Slovakia. Every negative mention, and especially on the Internet, leaves a trace and is difficult to eliminate, as it can resonate in consumers' minds for very long time. Both events have damaged the company's reputa-

tion, which was also reflected in search results on the website Google.com. After entering the keyword "Volkswagen Slovakia", the first 10 results of searching were analyzed and broken down – we considered top ten results for two-time periods, period before the start of the strike and after the strike of the employees [8]. The results showed that the strike of Volkswagen Slovakia's employees negatively influenced the overall sentiment of the results of the "Volkswagen Slovakia" keyword.

Table 3

Sentiment analysis results before and after strike of Volkswagen Slovakia employees

Position of result	Sentiment analysis before 1.6.2017		Sentiment analysis after 1.6.2017	
	Sentiment	**Points**	**Sentiment**	**points**
1	Neutral	2	Negative	-20
2	Positive	19	Negative	-19
3	Negative	-18	Positive	18
4	Negative	-17	Negative	-17
5	Positive	16	Negative	-16
6	Positive	15	Negative	-15
7	Positive	14	Negative	-14
8	Negative	-13	Neutral	2
9	Positive	12	Negative	-12
10	Positive	11	Negative	-11
Total points	**---**	**41**	**---**	**-104**

Source: [8].

The Volkswagen emission scandal that burst out during the September 2015 had the same negative impact on the company's reputation. But not only reputation and online reputation were damaged, due to this scandal, the company suffered losses in sales and recorded a drop-in profit. With Google.com, the first twenty results were analyzed after entering the keyword "Volkswagen". The results showed that the overall sentiment score is much higher before the emission scandal than after, what also proves the number of results with positive sentiment from both time periods. The total score of sentiment analysis before the scandal was 42, after the scandal broke out, the number of points from the search results was negative - 111. [10].

Table 4

Sentiment analysis results before and after the emission scandal of Volkswagen

Position of result	Sentiment analysis before September 2015		Sentiment analysis after September 2015	
	Sentiment	Points	Sentiment	Points
1	Neutral	2	Neutral	2
2	Neutral	2	Neutral	2
3	Neutral	2	Negative	-18
4	Neutral	2	Neutral	2
5	Positive	16	Negative	-16
6	Positive	15	Negative	-15
7	Negative	-14	Negative	-14
8	Positive	13	Neutral	2
9	Neutral	2	Negative	-12
10	Neutral	2	Negative	-11
11	Neutral	2	Negative	-10
12	Negative	-9	Negative	-9
13	Negative	-8	Positive	8
14	Neutral	2	Negative	-7
15	Positive	6	Negative	-6
16	Neutral	2	Negative	-5
17	Positive	4	Negative	-4
18	Negative	-3	Positive	3
19	Positive	2	Negative	-2
20	Neutral	2	Negative	-1
Total points	---	42	---	-111

Source: [10].

Based on the research results achieved by using sentiment analysis, Hojdik (2017) used also multifactor sentiment analysis to quantify the score of online reputation of Slovak automotive companies – ten strongest companies (according to Total Revenues of year 2016) operating in subsector of suppliers.

Following the identification of the ten highest performing suppliers, we subsequently came to use the methodology of multifactor sentiment analysis that allows to evaluate the online reputation from more complex view. For research purposes, this methodology was used with minor modifications, but the most important criterion was fulfilled – the use of several factors. Then,

key factors, also called reputators have been identified:

1. Advanced Sentiment Analysis (ASA) of the top ten Google search results, with the following keywords being entered in the search engine:
- "entity name",
- "entity name" + "Slovakia", where the partial result is the so-called ASA score - Advanced Sentiment Analysis Score.

2. The audience size on Facebook (F).

3. The audience on the Instagram (I) social network.

4. The audience size on the YouTube social network (Y).

5. The size of audiences on the Twitter (T) social network.

Each of these five factors had some impact on the online reputation of the subjects. The goal was to quantify Total Online Reputation scores – TOR score. The TOR Score takes into account partial scores of each reputator, resulting in a Total Online Reputation score that allows us to compare subjects with each other. The results of the research are presented in following table.

Table 5

Calculation of TOR score as a Total Online Reputation Score

P	Company	TOR SCORE %	ASA %	F %	I %	Y %	T %
1	MOBIS Slovakia	**9.67**	31.61	4.32	0.00	1.99	0.78
2	SAS Automotive	**17.10**	17.10	0.00	0.00	0.00	0.00
3	Faurecia Automotive Slovakia	**18.23**	18.06	3.52	8.00	0.00	43.32
4	ZF Slovakia	**30.33**	36.45	12.74	9.08	71.84	21.53
5	MagnettiMarelli Slovakia	**32.97**	25.81	30.13	75.28	7.74	25.88
6	YURA Corporation Slovakia	**8.39**	8.39	0.00	0.00	0.00	0.00
7	GETRAG FORD Transmissions Slovakia	**32.26**	32.26	0.00	0.00	0.00	0.00
8	Continental Automotive Systems Slovakia	**19.19**	20.97	48.97	5.56	17.42	3.05
9	Inteva Products Slovakia	**5.58**	19.03	0.32	2.09	1.01	5.44
10	U-Shin Slovakia	**13.87**	13.87	0.00	0.00	0.00	0.00

Source: [4].

The results in Table 5 show relatively large differences in the level of online reputation management of the selected sample of subjects. The best results were achieved by Magneti Marelli Slovakia, GETRAG FORD Transmissions and ZF Slovakia, which exceeded the TOR score above 30%. On the contrary, Inteva Products Slovakia, YURA Corporation Slovakia and MOBIS Slovakia were placed at the opposite end of the order. An interesting finding is that up to three companies - YURA Corporation Slovakia, GETRAG FORD Transmissions and U-Shin Slovakia do not use social media at all. Building their online reputation is done exclusively through their web site and web search engines.

In general, it can be noted that there is still considerable scope for selected entities to improve the processes leading to online reputation building and thus to optimize the entire online reputation management.

3 Conclusion

Based on research, it can be said that proactive attitude to online reputation management with the use of social media can have a significant impact on the functioning of the business. The active use of these marketing tools makes it easier to respond to the demands and feedback of customers. It also provides space for fast communication with the public or other interest groups of the company. Research shows that even today, many selected companies do not use the potential of social media to prepare for a competitive advantage.

An enterprise should pay close attention to what is written or said about it or its products or services. Using social media can provide benefits for the company, but on the other hand, one dissatisfied customer and his negative reviews can harm it and damage its reputation for a long time. Since everything written on the Internet and in the social media environment is left out of business control, the business should regularly monitor the news on the Internet and respond appropriately and responsibly. One possible way how an enterprise can quickly and relatively easily monitor online reputation is a sentiment analysis that can identify or report a negative or positive tone. An example of the use of sentiment analysis or multifactor sentiment analysis was the automotive industry, and the results indicate that negative Internet messages can negatively affect the reputation of the business with time, as negative messages, messages, or articles on blogs can hardly be erased.

References

[1] BUNTING M. – LIPSKI R. 2000. Drowned out? Rethinking corporate reputation management for the Internet. In: *Journal of Communication Management*. Vol. 5, 2000, issue 2, p. 170 –178. ISSN1363-254X.

[2] DIJKMANS, C.– KERKHOF, P. – BEUKEBOOM, C.J. 2015. A stage to engage: Social media use and corporate reputation. In: *Tourism Managemen*t. Vol. 47, 2015,p. 58 – 67.ISSN0261-5177.

[3] GURAU, C. 2008. Intergrated online marketing communication: Implementation and management.In: *Journal of Communication Management*. Vol. 12, 2008, issue 2, p. 169–184. ISSN 1363-254X.

[4] HOJDÍK, V. 2017. Multifaktorová analýza online reputácie vybraných slovenských spoločností pôsobiacich v automobilovom priemysle – subsector dodávateľov**.** (A multifactor analysis of the online reputation of selected automotive companies operating in Slovakia – supplier subsector). In: *Ekonomika, financie a manažmentpodniku X.* Zborník vedeckých statí pripríležitosti Týždňa vedy a techniky [elektronický zdroj]. Bratislava: Vydavateľstvo EKONÓM, 2017, pp. 114 – 123, ISBN 978-80-225-4462-7.

[5] HUNG, Y. et al. 2012. Online reputation management for improving marketing by using a hybrid MCDM model. In: *Knowledge-Based Systems*. Vol. 35, 2012, issue 1, p. 87 – 93.ISSN 0950-7051.

[6] INTERNET USERS IN THE WORLD BY REGIONS- JUNE 30, 2017. Internet World Stats, 2017.[accessed 12.12.2017].Available at the URL:<http://www.internetworldstats.com/stats.htm.>

[7] JONES, B. – TEMPERLEY, J. – LIMA, A. 2009. Corporate reputation in the era of Web 2.0: The case of Primark. In: *Journal of Marketing Management*. Vol.25, 2009, issue 9, p. 927 – 939.

[8] KOZÁKOVÁ, M. 2017. Vplyv štrajku zamestnancov spoločnosti Volkswagen Slovakia na online reputáciu podniku. (The impact of strike of Volkswagen Slovakia employees on the company's reputation). In: Podnikové financie vo vede a praxi. 2017. Zborník vedeckých statí Katedry podnikových financií. Bratislava: Vydavateľstvo EKONÓM, 2017, pp. 93 – 102, ISBN 978-80-225-4436-8.

[9] KOZÁKOVÁ, M. – HOJDÍK,V. 2017.Sentiment analysis and the reputation of automotive companies in Slovak republic. In: Knowledge for market use 2017: people in economics–decisions, behavior and normative models. International scientific conference. Olomouc, Czech Republic, 7.-8.9.2017. Olomouc: Palacký University Olomouc, 2017, pp. 946 – 954, ISBN 978-80-244-5233-3.

[10] KOZÁKOVÁ, M. – HOJDÍK, V. – MELICH, P. 2017. The Influence of an emission scandal on online *reputation* of Volkswagen. In: Conference Proceedings Silesian University in Opava School of Business Administration in Karvina, 2017. 10th Interna-

tional Scientific Conference Karviná Ph.D. Conference on Business and Economics: Karviná, Czech Republic, 1-2.11. 2017. Karviná : Silesian University in Opava, 2017, pp. 238 – 245, ISBN 978-80-7510-265-2.

[11] ROHÁĽ, R. – SASKO. J. 2011. Analýza sentiment výsledkov slovenských firiem. (Analysis of sentiment results from Slovak firms). Visibility, s.r.o, *2011*.[accessed 12.12.2017]. Available at the URL:<http://www.reputation.sk/wp-content/up-loads/2014/02/ORMreport.pdf>.

[12] SOCIAL SELLING DIGITAL BLUEPRINT FOR THE AUTOMOTIVE INDUSTRY. PwC. [accessed 12.12.2017].Available at the URL: <https://www.pwc.com/gx/en/automotive/industry-publications-and-thought-leadership/assets/pwc-social-selling-a-digital-blueprint-for-the-automobile-industry.pdf>.

[13] SOLOMON, M. et al. 2006. *Consumer BehaviourA European Perspective*, 3[rd]edition. Harlow: Pearson. 2006.701 p. ISBN 978-0273-68752-2.

[14] TOTAL RETAIL SURVEY 2016, PwC, 2016. [accessed 12.12.2017].Available at the URL:<https://www.pwc.com/gx/en/retail-consumer/publications/assets/total-retail-global-report.pdf>.

[15] WEBER, L. 2009. *Marketing to the social web: how digital customer communities build your business*. Hoboken: John Wiley & Sons, 2009. 272 p. ISBN 978-0-470-41097-4.