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**Article**

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Article

# Challenges for Corporate Reputation—Online Reputation Management in Times of Global Pandemic

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**Abstract:** The issue of corporate reputation management in the time of accelerated digitization has been a subject of research by academics and practitioners for more than a decade. The aim of this study was to provide an insight into the issue of reputation management in the Internet environment in the time of global pandemic. As for the structure of the research, the study mapped two horizons of events, the first one being the onset of the pandemic in the first half of 2020, and the second one the period of cancellation of antipandemic measures after 24 months. The research was localized in the market of Central Europe, specifically in the online market of the Slovak Republic. This market synthesized two important factors, namely the highly developmental nature and at the same time the increased degree of restraint it experienced during the two years of the pandemic. A sophisticated online reputation analysis (sentiment analysis, analysis of reputation determinants, and data synthesis through the TOR indicator) was performed on a significant sample of e-commerce representatives, the results of which provided relevant findings on reputational challenges and reputational threats. Based on the findings, it can be stated that the market has adapted relatively quickly to the changed conditions. The pandemic represented a market opportunity rather than an existential threat for the subjects examined. It also played the role of an imaginary accelerator in the evolutionary transition from offline to online.

**Keywords:** reputation; pandemic; COVID-19; business performance; reputational risk; market opportunities; e-commerce



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## 1. Introduction

In terms of corporate reputation, the literature offers a wide range of views, from interpretational formalized views to views of an almost informal nature. In general, all of these views agree that reputation as a business asset is an extremely fragile element (Pollák et al. 2019), even if the issue of development and management of a company's intangible assets is relatively well researched. We often encounter a relative content vacuum in the professional literature in terms of corporate reputation management and development, especially when it comes to its development in the virtual environment of the Internet (Ureña et al. 2019). Back to the very essence of the concept of corporate reputation from the perspective of the Internet (often referred to as online reputation or virtual reputation), it is nothing other than reputational issues in the Internet environment; at the same time, we could also call this statement the simplest definition of the term. We assume that the advent of accelerated digitization in the late 1990s has largely redefined the approaches used to manage this extremely fragile business asset. Traditional communication channels have allowed relatively considerable control over the flow of information content through a series of obstacles and restrictions, thus creating a highly closed ecosystem of form: content-media-target audiences (Heath et al. 2018a). With the integration of the Internet into the

daily lives of individuals, the market began to change gradually (Chae and Ko 2016), and the regulated form of the media market began to be deregulated. Although the Internet version 1.0 offered only static pages, in any case, their content no longer required lengthy approval by the editorial boards of media houses or the boards of companies. The power of the individual and the form of one-to-many communication (Heath et al. 2018b) have become a phenomenon of the onset of the new millennium.

The evolution of the Internet into its current form has created a wide range of both opportunities and threats for businesses (Štefko et al. 2011; Sheldon et al. 2019). From the point of view of opportunities, it is mainly a significant reduction in both distribution and communication channels (Klewitz and Hansen 2014); while in terms of threats, these are basically the same factors. By shortening the distribution channels, it is possible to optimize costs largely (Paetsch et al. 2017) and, of course, create a relatively interesting situation with falling prices on the one hand and rising profits on the other hand. As for threats, from the point of view of manufacturing companies, the pressure on the quality of services within the entire supply-and-demand chain has increased rapidly. Although manufacturers acquire better control by eliminating often highly specialized intermediaries, they also lose the opportunity to share reputational risk. The shortening of communication channels was literally revolutionary in terms of opportunities for companies. Social networks have reduced the producer–consumer communication channel to a physical minimum (Etter et al. 2019). Groups, but in many cases individuals themselves, are given an opportunity to communicate directly with companies. In their virtual social networking environment, businesses are represented by their profiles (Dahnil et al. 2014). Unique feedback and synergistic customer–producer interactions have helped accelerate growth of those companies that had understood the nature of the new rules of the game in time (Wibowo et al. 2021). The risks stemmed mainly from the asymmetric nature of the communication. One-to-many communication is natural from a business perspective as a source of communication messages. However, from the customer’s point of view, one-to-many communication is a relatively new and not yet fully explored phenomenon (Sturienė 2019). Although communities are managed and content controlled largely, the unregulated nature of the Internet creates the perfect environment for reputational risk. Under certain circumstances, the voice of an individual may be equal to the voice of a corporation, since the virtual environment erases the typical advantages of brick-and-mortar businesses (Luther et al. 2017). Business practice remembers the example of Jeff Jarvis and his dissatisfied customer blog, which created one of the most significant examples of the reputational risk in the Internet age (Pollák et al. 2019). Almost a decade ago, this fact led us to the initial research question, which significantly determined our next research: “To what extent have the new marketing communication rules changed the traditional rules in the media market?”. The context of the question has been examined in more than a dozen published studies. Despite considerable research efforts, the question cannot be answered unequivocally. We believe that even today, it is not possible to answer it clearly. Figure 1 below shows the reasons for this:

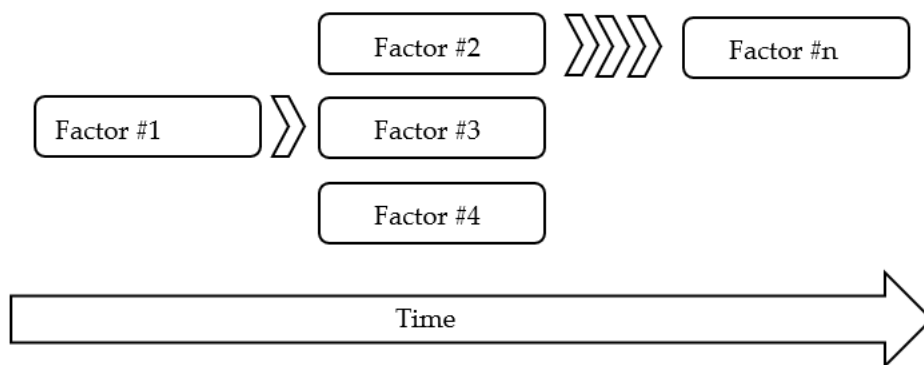


Figure 1. Multiplication of variables.

The digital market is constantly evolving (Felix et al. 2017; Gao et al. 2021; Yim et al. 2017). While the traditional media market of the late 20th century used relatively stable patterns of marketing communication, valid for almost a quarter of a century, the digital market is undergoing continuous evolution. The variables that need to be considered when creating a media strategy are multiplied by the arrival of new communication platforms to an almost unquantifiable extent. Awareness of this fact was a key point for further direction of our research. The issue of managing corporate reputation in such a highly turbulent environment is a relatively large challenge for marketing managers, but what happens if the market is suddenly exposed to a phenomenon known as black swan? This question arose at the beginning of our research, the results of which are described in this study.

The second decade of the 21st century could be called a decade of accelerated digitization (Stam and van de Ven 2021; Hanna et al. 2011). Businesses of all sizes have moved much of their identities to the online environment (Sageder et al. 2018). Social networks, in our case mainly the social network Facebook, represent the places where companies moved their presence after the end of the age of websites (Bayer and Servan-Schreiber 2011; Valos et al. 2019). Communities participated in the development of brands or products. Both sides of the market maximized their benefits resulting from intensive and targeted business-to-consumer communication, with appropriate frequency and nature of the interactions. The ecosystem showed signs of continuous development. At the end of the second decade of the new century, a black swan phenomenon appeared on the market. In its initial phase, it had the form of an unknown respiratory disease, first reported in the Chinese city of Wuhan (World Health Organization 2020). The disease caused by the coronavirus SARS-CoV-2 was named COVID-19, and at the beginning of 2020, it resulted in a global pandemic of unprecedented dimensions (Wu and McGoogan 2020).

The onset of the pandemic was drastic (Luo and Tsang 2020; Donthu and Gustafsson 2020; Dvorak et al. 2021). The governments of the affected countries responded to this previously unknown disease with the closure of their economies. Many efforts to slow down the spread of the pandemic were radical in many cases (Garel and Petit-Romec 2020; Ibn-Mohammed et al. 2021). Millions of people found themselves in forced isolation, with the exceptions often being the physical commuting of people belonging to a country's critical infrastructure (Islam 2021). The COVID-19 pandemic was a significant global determinant of change, with a pattern of behavior across the global market showing a high degree of similarity (Bratianu and Bejinaru 2020). If the second decade of the new century was in the spirit of accelerated digitization, the beginning of the third decade was characterized by almost complete digitization of most human interactions with the outside world (Ahmed et al. 2020; Awada et al.). From the physical perspective, social distancing meant full socialization for social media, which thus fulfilled their main essence, although as researchers, we do not think that their creators envisaged such a scenario. The digital infrastructure has undergone a major stress test (Islam et al. 2021). The opportunities and threats mentioned in the introduction of our study have taken on a whole new dimension in this highly nonstandard environment (Tisdell 2020; Kirk and Rifkin 2020). At this point, as researchers, we followed up on the topic of the new rules of marketing communication in the context of digitization and the Internet, which we supplemented with the issue of corporate reputation management. The synthesis of these topics led to the initial research question of the presented study, namely: "How can a global pandemic affect the corporate reputation of companies?". By extrapolating this question, we determined two key points in the problem. We identified critical points or neuralgic points of the issue of corporate reputation management in the online environment through (i) the distribution flow and (ii) the communication flow. The aim of the pilot study in 2020 (Pollák et al. 2021a) on which our empirical investigation in the current research was based was to describe how selected companies of national importance dealt with reputational risks arising from congested logistics infrastructure. This was in the context of direct targeted communication with their target groups in the environment of the social network Facebook during the first lockdown in 2020. The aim of this study was to provide a comprehensive view of the issue

of reputation management in the Internet environment in the time of global pandemic by comparing two horizons of pandemic events. The first event horizon was an unprecedented first economic closure at the onset of the pandemic in which the first of the datasets was collected. The second horizon of events represented the pandemic, where at a time of a decreasing number of the infected almost two years later, we used the same methodology to examine the same sample in order to identify a shift in the reputation of selected companies. At the same time, we wanted to quantify the degree of reputational damage or the reputational profit of companies over time. Based on the analysis, we aimed to compile a set of examples of good practice, and thus create a basic qualitative basis for eliminating reputational risk and increase the performance of companies exposed to significant virtual market turbulence under the pressure of circumstances.

From the point of view of the structure, we begin from the classical model: in the introduction, we have presented the topic in the context of the current state of knowledge in the issue. Within this section, the initial research question was formulated and at the same time, the motivation for conducting this empirical study was described. The next chapter then describes the objectives of the study, as well as the basic methodology. The description of the results of the empirical analysis is supplemented by an extensive discussion. The conclusion offers a summary of the results, describes the limitations, and sets out the perspectives for further research.

## 2. Materials and Methods

The aim of this study was to provide an insight into the issue of reputation management in the Internet environment in the time of global pandemic by comparing two event horizons of the pandemic. The first event horizon was represented by the previously unprecedented first closure of the economy at onset of the pandemic, when the first of the datasets was collected. The second event horizon was the pandemic, where at a time of a decreasing number of the infected almost two years later, we used the same methodology to examine the same sample in order to identify a shift in the reputation of selected companies. At the same time, we wanted to quantify the degree of reputational damage or the reputational profit of companies over time.

The subjects of the research were entities whose main business was the operation of online stores. In terms of sampling, we selected the six most significant entities that operated predominantly in the Central European market and were also directly located in one of the markets that was most regulated in Central Europe during the pandemic, specifically the market of the Slovak Republic and the six best e-shops awarded in the (e)Shop of the year 2019 competition in the category of the quality award (Heureka Group 2020). This competition is regularly organized by the Heureka Group. Heureka is one of the opinion formers in the e-commerce segment in the Central European Internet market. Specifically, the following companies were selected:

- DATART.sk (a store selling mainly electronics, operated by ELEKTROSPED, which is a part of the HP Tronic group);
- Astratex.sk (a store selling underwear, operated by the Czech company of the same name);
- Footshop.sk (a shop selling mainly shoes and clothes, operated by the company of the same name);
- MojaLekaren.sk (a shop selling over-the-counter drugs and nutritional supplements, operated by the Czech company Pears Health Cyber);
- svetnapojov.sk (a shop selling mainly alcoholic beverages, operated by the company of the same name);
- HEJ.sk (a store selling a wide range of products, but mainly electronics, operated in the same way as DATART.sk by ELEKTROSPED).

As for the selection, the entities represented mainly the supply side of the market, which was the most subdued one during the repeated lockdowns.

From the point of view of the analyzed data, both the reputation parameters of the entities in the online environment and the selected financial indicators, specifically sales and profit, were monitored. These were obtained from the Finstat database (Finstat 2022). In the analysis, they were examined in the horizon of 4 years preceding the outbreak of the pandemic and the first year of the pandemic. Reputation parameters, specifically the individual partial determinants of online reputation, were monitored in two identical time frames, with the first time frame representing the peak of the first wave of the pandemic in April 2020, and the second one being the end of the pandemic after two years, when in April 2022, the government also released the latest regulations related to the COVID-19 pandemic. The data collection thus took place over a 24-month period and, in terms of restrictive measures, represented the entire imaginary period of the pandemic in the monitored market.

Regarding the methods used to collect empirical material to determine the level of online reputation, we used a standardized methodology for measuring the overall level of online reputation, TOR (Pollák et al. 2021b; Soviar et al. 2019), which was developed as an extension of sentiment analysis (SA) (Liu 2012). The first step in a comprehensive analysis of TOR online reputation level is to identify a relevant and homogeneous research population, consisting of relevant entities with at least a basic presence in the online environment. Subsequently, the selected entities are clearly identified based on their own name or designation used. The compiled names matrix is then subjected to a multistage analysis. The process of multistage analysis can be seen in Figure 2 below:

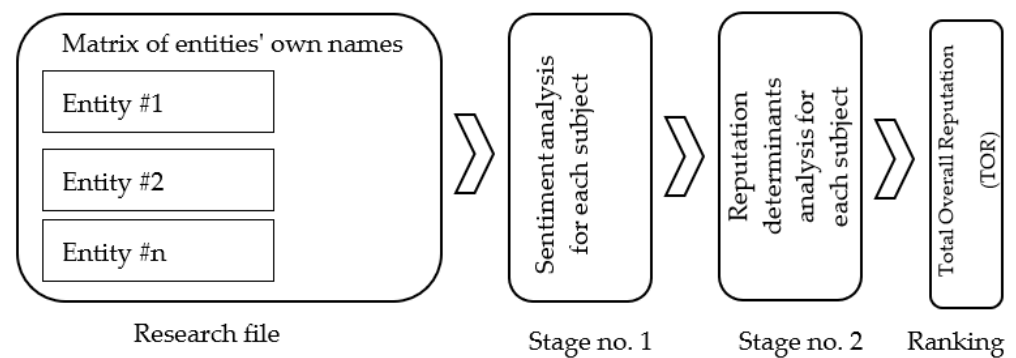


Figure 2. Comprehensive analysis of the level of online reputation.

The product of the analysis is the TOR coefficient for each of the analyzed entities. Based on this coefficient, it is possible to rank the research file, thus creating a ranking of entities for subsequent benchmarking according to the level of the overall online reputation of individual entities. Before proceeding to the presentation of the analysis results, the methodology that was used in the analysis to quantify the partial reputation indicators of phases 1 to 2, as well as the formula for calculating the TOR parameters, shall be presented in more detail.

At this point, we can proceed to the description of the sentiment analysis (SA), which represents the starting point for comprehensive examination of the issue. We assume that the main reputation determinant is the own virtual presence of the entities in the search results in the Google search engine environment. At the same time, the sentiment; i.e., the polarity of the result of searching for the subject’s own name in the first 10 places in the search engine, was considered.

The following diagram presents the sequence of steps in the sentiment analysis (see Figure 3):

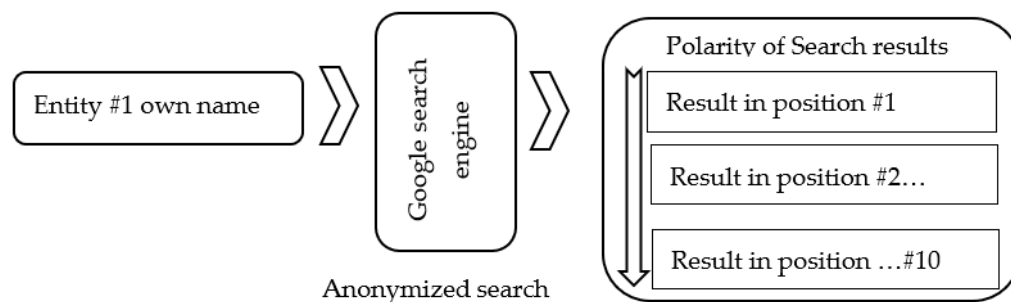


Figure 3. The process of sentiment analysis—one entity.

From the point of view of the polarity of the search results, there are four states, namely: (i) positive sentiment, (ii) the entity’s own website, (iii) neutral sentiment, and (iv) negative sentiment. In terms of ranking, the first 10 positions in the Google search result were considered. Table 1 presents the key for quantification of the measured variables:

Table 1. Sentiment analysis quantification table (Pollák et al. 2021b).

Sentiment/ Position of the Result	1	2	3	4	5	6	7	8	9	10
Positive sentiment (+)	20	19	18	17	16	15	14	13	12	11
Custom web site of the organization (x)	10	9	8	7	6	5	4	3	2	1
Neutral sentiment (±)	2	2	2	2	2	2	2	2	2	2
Negative sentiment (–)	–20	–19	–18	–17	–16	–15	–14	–13	–12	–11

Based on the chosen methodology, the first 10 search results of the given entity were gradually quantified in points. For the purposes of compiling the order of the analyzed subjects, the same procedure was used for the entire examined sample.

In any case, it should be noted at this point that the basic form of sentiment analysis is insufficient for more sophisticated measurements. As in the case of highly significant entities, approximately the same results in terms of the positions were recorded. In terms of point-quantifiable values, we approached the possible maximum. Ranking and subsequent benchmarking is difficult in such cases; it was thus necessary to repeat the measurements using more sophisticated reputation parameters. In such cases, the resulting order was compiled by the sum of the values of partial measurements in percentage. For measurements using one parameter (basic analysis of SA sentiment), we assumed that each entity could obtain a maximum of 155 points, which in percentage terms represented the following ratio: 1 point = 0.645%. In our analysis, we used an extended two-level sentiment analysis, in which the basic polarity of search results was considered, which was then supplemented by the polarity of search results in the Google tab for news. When using two parameters, one point had a value of 0.322%. We used a sentiment analysis in this extended form (ASA) as the first input parameter when calculating the TOR score.

At this point, we can proceed to the second stage of measuring the level of reputation, namely the measurement based on the reputation scores of entities through reputation determinants. In our measurement, the reputator, or in other words, the reputation determinant, was a significant media player in the online environment able to independently influence the reputation of the measured entity. Traditionally, these are large media players, such as Facebook and its ratings, or Google and its reviews. It was necessary to define a reputator for each sample, as the methodology represented a relatively stable and universal static key, while the environment as such developed dynamically. For each survey, the set of reputators was specified by expert estimation. In our analysis, the set of reputators consisted of: (i) a score from Facebook ratings converted to percentages, (ii) a customer rating from Heureka (a recommendation for further purchases made by customers in the

last 90 days), and (iii) a score from Google reviews converted to percentages. Each of these parameters entered the calculation separately. The calculation of the TOR parameter itself was based on the following formula:

$$TOR = \frac{R_{ASA} + \sum_{i=1}^n R_i}{n + 1} \tag{1}$$

where:

- TOR—total online reputation in %;
- $R_{ASA}$ —reputator ASA (% score based on the advanced sentiment analysis);
- $R_i$ —reputator (% score based on a given  $i$ -th determinant of online reputation);
- $n$ —number of indicators.

Based on the quantification of the overall level of online reputation, it was possible to create a ranking of analyzed entities for further processing, visualization, or simple benchmarking. If it was possible to repeat the measurements over time, there was room for trend identification. In combination with the parameters that are characteristic of traditional brick-and-mortar stores, there was room for comparing the effectiveness of spending resources on e-marketing communication and comprehensive branding of the entity in the online environment. Both approaches were considered in the measurements and analysis presented in the following part of the study. The results of the analysis were interpreted through overview tables and histograms.

### 3. Results and Discussion

The results of the analyses are presented in this section in three levels. The first level describes the basic measurement from April 2020. The contexts identified on the basis of this measurement were subjected to thorough feedback from the international scientific community. As for the presentation of the dataset, it remained in the same form as in autumn 2020 (Pollák et al. 2021a). The second level describes a reference measurement after 24 months. In the third level, the dataset was supplemented with the presentation of selected economic indicators, as well as visualizations of key findings, which are discussed in the context of the topic, like the previous two levels, to generate knowledge for broader interpretations or areas for further research.

#### 3.1. First Measurement—Spring 2020

The first months of the pandemic created unprecedented market conditions. During the peak of the first wave of the pandemic, we carried out complex measurements in order to identify possible directions for subsequent continuous research. The measurement results are presented in Table 2 below:

**Table 2.** Overall (total) online reputation—spring 2020 (Pollák et al. 2021a).

No.	Subject/Result Sentiment	ASA Score (%)	FB Score (%)	Heureka Score (%)	Google Score (%)	TOR Score (%)
1	HEJ.sk	63.11	99.00	92.00	84.00	84.53
2	Footshop.sk	66.33	90.00	93.00	88.00	84.33
3	DARTART.sk	43.79	99.00	93.00	84.00	79.95
4	MojaLekaren.sk	45.08	88.00	90.00	72.00	73.77
5	Astratex.sk	70.52	92.00	98.00	0.00	65.13
6	svetnapojov.sk	37.67	98.00	99.00	0.00	58.67

In the first step, we carried out an extended sentiment analysis, the results of which could be summarized as follows: the first entity in our ranking, the shopping portal Hej.sk, showed relatively solid media work both in terms of overall presence and in the case of PR and marketing communication, which we would recommend intensifying due to the size



of the entity. Second in line, the Footshop.sk shoe store also showed perfect PR mastery through media by clearly targeting their customers. In the case of the third entity, the giant of the brick-and-mortar world, DATART.sk, almost standard values for the model entity were recorded. In the first place were the entity’s own websites, followed by sites of positive and neutral natures. Landing sites and affiliate-based sites generated a significant share of positive sentiment in the search results. The near-ideal state within this parameter did not appear in the “news” category of the search results. All search results were neutral and, in our opinion, were created by poor optimization of content providers’ sites, which added text from the contextual advertising window to messages of a different nonsubject nature. The fourth entity, the online pharmacy, gained almost 50% of possible points in the category of main search results with its organic products, which was supplemented by positive customer ratings. The better results reduced the gain in negative sentiments in the 9th and 10th place. Those results had the nature of customer ratings. These could be eliminated through better work with the content. The category of “news” points to the need for a certain nature of PR, as a significant portion of the results had a neutral polarity, which greatly reduced the online communication potential of the entity. As for the fifth entity, the Astratex.sk underwear store, the category “news” was an exemplary example of marketing communication through related media and PR news. The entity achieved the maximum number of points in this category. On the other hand, the remaining entity included in our measurement, the online liquor store svetnapojov.sk, achieved the lowest score in our comparison. This was mainly due to the total neglect of PR and marketing communication policy aimed at the media. The name of the entity generated only three mentions in the category of “news”, two of which were of a neutral sentiment.

An important finding was the fact that at the time of the research, the difficult pandemic situation was not reflected in the presence of the entities in terms of their search results at all. This may have been due to the longer response time of the Internet to shocks; in any case, this phenomenon was one of the stimuli for continuing the research.

In the second step, we continued the analysis of entities in terms of their image created by the reputators. We only negatively evaluated the absence of Google reviews of two entities, which deprived them of their authenticity. However, this was probably due to the relatively short presence of the entities on the market. Again, we were surprised that the difficult market situation did not affect the reputation management during the period under review. In the analysis of hundreds of Facebook interactions in the research time period, only a few cases of negative interaction were recorded. Considering the nature of the market and the situation that generated stress and emotions in general, this was a very surprising and highly positive finding.

### 3.2. Second Measurement—Spring 2022

The receding pandemic created the conditions for the implementation of the reference measurement. The measurement results are presented in Table 3 below:

Table 3. Overall (total) online reputation—spring 2022.

No.	Entity/Result Sentiment	ASA Score (%)	FB Score (%)	Heureka Score (%)	Google Score (%)	TOR Score (%)
1.	svetnapojov.sk	45.08	96.00	98.00	98.00	84.27
2.	Astratex.sk	83.72	92.00	98.00	00.00	68.43
3.	Footshop.sk	67.62	90.00	96.00	00.00	63.41
4.	DATART.sk	78.25	60.00	96.00	00.00	58.56
5.	MojaLekaren.sk	44.11	80.00	98.00	00.00	55.53
6.	HEJ.sk	52.81	00.00	94.00	00.00	36.70

In the first step, we carried out an extended sentiment analysis, the results of which are presented below. The first entity, svetnapojov.sk, can be described as follows: the entity’s

own website was followed by three links to affiliate sites, some of which offered ratings directly. We rated all these links as positive. The fourth to sixth in order were links of a similar nature, for which the optimal choice of words ensured a positive nature. The seventh to ninth places had a similar character to the entire previous presentation; in the case of the absence of evaluation, positive sentiment was ensured by the optimal choice of words referring to the offered goods. The search result for the last of the monitored positions was of a neutral sentiment. This concluded the measurement of the e-shop, which was an example of a relatively simple but in principle effective optimization. Compared to the first measurement, we also noted a relatively significant increase in the level of reputation based on simple sentiment. This increase was reflected in the displacement of neutral sentiments from the 10 ten search results, which is a kind of universal recommendation for entities that do not have direct experience with optimizing their reputation in the online environment. As far as the measurement based on the second parameter was concerned, similarly to the first measurement, the e-shop did not have any relevant publicity in the news category. Compared to the first measurement, there was even a decrease, losing the media mention in the third position of the search results. This fact largely pointed to the evolving shape of the market, while the measured situation was relatively unusual even for such a defined market. The second entity in the ranking, Astratex.sk, showed the following parameters: their own site was followed by a high customer ranking reference page. The following were two neutral links and a profile link on the social network Facebook. This link contained highly positive ratings. The sixth and seventh positions in the search results also had a positive sentiment; these were affiliate links, with one of them containing a positive evaluation. The order was concluded with a link to the Instagram social network, a rating on the relevant site, and a link to another online store operating on an affiliate basis. From the point of view of a simple analysis of the entity's sentiment, we saw a significant increase in its activity in terms of improving its online reputation. Compared to the first measurement, the entity almost doubled its reputation level, while its e-marketing activity managed to displace mainly neutral links. Regarding the media activity of the entity, in the analysis of sentiment with the extended parameter of news, we found that the company did a considerable amount of quality work in the pandemic period. Cooperation with media celebrities, affiliate programs, events, and a wide range of products provided the company with sufficient media content to take advantage of the opportunities associated with dampening the traditional market. Even in this case, however, we found a relatively older date in the search result, which did not reduce the sentiment, but it certainly did not help in the global competition. The third entity was Footshop.sk. In the case of this e-shop, the site itself was followed by the Czech variation of the e-shop site; this is a phenomenon especially for local entities. Global players use standard global domains, with geographic localization being addressed within the website. The third and fourth results linked to an affiliate site with a high e-shop rating. The following two references were of the same nature, but without the mentioned evaluation. In these cases, we assigned the nature of neutral sentiment to the references. The four reference pages following the seventh to tenth positions were again predominantly positive in nature, and only one of them, namely the penultimate message, was rather of a neutral sentiment. Even in the case of this entity, we recorded an almost twofold increase in the level of online reputation based on a simple sentiment analysis. Although the values did not exceed 2/3 of the possible potential, the increase was significant compared to the first measurement. As for the second measurement with the extended parameter, we recorded an almost identical situation as in the case of the first measurement. The results in the News category were the dominant products of marketing cooperation with one entity, a local platform for young people. In the case of the first measurement, this cooperation was rather an advantage, but in the context of an evolving market, this situation was not considered optimal. Such communication is highly inauthentic in a more developed market, although from the point of view of the methodology used, it did not directly reduce the value of the reputation level as such. In the case of the fourth entity, Datart.sk, its own e-shop site was in the first place in the search

results. This was followed by a link to Facebook, which was by its nature predominantly a neutral score. The third position was followed by a link to the evaluation of the e-shop by customers through the Heureka platform. This was considered highly positive. In the other two places, there were again links to customer ratings through different platforms, both of which showed a positive sentiment. The following link was a link to the Instagram social network, where the rest of the results were complemented by affiliate programs and cross-promotion with a wide range of actors. Apart from one predominantly neutral web link, affiliate activities had the character of positive publicity. Overall, well-done media work could be seen. Compared to the period of the first wave of the pandemic, we found only minimal differences in the level of reputation determined by a simple sentiment analysis. When it came to measuring based on another parameter, in our case the News tab, the situation was quite different; we saw significantly increased media activity in the search results, with only 2 out of 10 results being neutral. During the pandemic, the company made considerable efforts to fill the gaps in the e-marketing portfolio. Compared to the first measurement, the results were predominantly neutral, which was a relatively expected behavior. However, it should be noted that a relatively insignificant part of the positive results from the second measurement were rather of a historical nature, as they referred to the events of the preceding year. Media communication should be regular, as outdated media mentions can be disruptive, even if it is a state that is better than none or organic uncontrolled communication. The fifth entity in the order was MojaLekaren.sk. In this case as well, the site for the company was followed by affiliate sites containing a high e-shop rating. The fifth link was a link to a profile on the social network Facebook that also contained a positive rating. An interesting link was in the sixth position: a link to the najnakup.sk platform, which allows online evaluation of online stores by their customers based on their shopping experiences. Less than 40% of customers recommended shopping in the e-shop. Such a parameter appeared for the first time in our sample. A neutral and positive link to affiliate sites followed. The order was closed by two references of a neutral sentiment. In this case, we also saw an increase in the overall level of reputation measured using the basic methodology, but this increase was not so sharp. However, the first half of the measured spectrum; i.e., the search results at positions 1–5, was optimized for each of the positions relatively well, especially with regard to the comparison within the sample under review. When measuring with an extended parameter, we found that one of the least optimal models of e-marketing communication was a combination of insufficient media presence and excessive, often ambiguous or misunderstood creativity. The combination of the mentioned factors achieved a value of just over 1/3 of the possible level of reputation in terms of media image in the Internet environment. Compared to the first measurement, we noted a decrease of 16 points within the second tested parameter. In a comprehensive comparison of the two parameters converted to percentages, this meant a 1% decrease in terms of the ASA parameter compared to the level achieved during the first wave of the pandemic. The last in the order according to the overall level of online reputation was the e-shop HEJ.sk. Even in this case, the custom page was followed by a wide variety of links of a positive nature, with most of them having the nature of an affiliate cooperation. The evaluation sites showed a significantly positive sentiment. It was evident that great emphasis was placed on optimizing the presence of the e-shop in the online environment. Compared to the first measurement, this e-shop also recorded a growth to the limit of the possibilities given by the methodology of calculating a simple sentiment analysis. As for the media image of the e-shop, the second of the measured parameters resulted in quite interesting findings. The not-so-well-chosen name of the e-shop, which can be translated as a greeting in many languages, was followed by many irrelevant links. The paradox was that the first link in the search was the relevant media report, but its nature showed only a neutral sentiment. We again attributed this situation to the developing nature of the market. However, it should be mentioned that we recorded a similar specificity in terms of the name of the entity in developed markets. In both cases, however, this meant rather a slight disadvantage for the entity.

In general, it can be stated that the market as such underwent significant development during the pandemic, with four out of six entities being able to increase their level of reputation according to the extended ASA parameter. Regarding a simple sentiment analysis, all entities in the sample showed signs of optimization or a shift toward the desired state. We considered this fact as significantly positive. With a certain degree of abstraction, it can be stated that the pandemic acted as an accelerating factor in the e-market development process.

In the second step, we continued the analysis of entities in terms of their image created by the reputators. In general, we followed rather an interesting paradox, which was the absence of Google ratings in five out of six cases. However, in the first measurement, we recorded only two such entities. One of them, namely the online seller of alcoholic beverages *svetnapojov.sk*, already had this assessment. We cannot say whether this situation was caused by the decisions of the entities themselves or by modifications to the Google algorithm. In any case, we evaluated this as a step backwards in terms of the comprehensive management of the reputation of the evaluated entities. As for the Facebook rating, we recorded one case, namely the *HEJ.sk* e-shop, which no longer had this rating on its profile. This was even despite the fact that during the first measurement, its profile contained this information. We assumed that this was a conscious effort of the entity to have better control over its reputation parameters. If this was the case, this situation can be described as undesirable, as it significantly reduced the transparency of the entity compared to its competitors, which allowed customers to rate their services on their profiles within the social network Facebook. Taking these facts into account, we proceeded to calculate the overall level of online reputation. Given the methodology used, which assumed that the same reputators were considered for all assessed entities, we obtained relatively interesting results in the second measurement. The overall ranking had changed significantly, despite a significant shift in the optimization according to the ASA parameter, as the absence of Google and Facebook evaluations in selected entities decreased transparency. This resulted in a reduction in the level of online reputation compared to measuring the state at the time of the peak of the first wave of the pandemic. The slight decrease in the level of reputation within the Facebook score parameter for some e-shops was considered insignificant due to the circumstances (apart from the *DATART.sk* e-shop, which lost almost 40% compared to the first measurement).

In general, it can be stated that all analyzed entities significantly strengthened their reputation level in the most basic parameters. Regarding more sophisticated approaches, which required a significant allocation of resources, we observed a greater decline in the level of reputation across the measurements in large entities, such as *DATART.sk* or *HEJ.sk*. Smaller entities dealt with the situation relatively well. From the point of view of research questions, we came across both critical areas: distribution and communication. More customers tie up significant resources in the reputation management process, which might not represent a significant risk for the company. However, we believe that market leaders must see these challenges as an opportunity. Regarding the market-specific reputation in the form of Heureka's evaluations, apart from two cases, we saw a growth in the entire sample compared to the first of the measurements. In one case there was a stagnation, and a decrease of one percentage point was seen in another case. Based on the findings, we concluded that all entities in the measured sample dealt with the nonstandard market situation very well, as their customers evaluated these entities highly positively after the purchase. With a certain degree of abstraction, it can be stated that this very reputator was regionally highly specific. The entities consistently maintained its values. It should also be noted that in developed markets, we also found highly regionally specific reputation determinants. Facebook ratings, but especially Google reviews, played a more important role in the decision-making process for customers in these markets, and if local companies want to be more globally competitive, they should not neglect the management of these reputators. Following this statement, we can proceed to the presentation of the selected eco-

conomic indicators, as well as to the visualization of key findings, which will be discussed in the context of the research topic in order to generate knowledge for broader interpretations.

### 3.3. Context Analysis and Discussion of Findings

The first step in the context analysis was to examine the basic economic indicators of the selected sample of entities during and after the COVID-19 pandemic. The following Table 4 shows the sales and profits of the analyzed entities in the monitored period:

**Table 4.** Sales and profit development (Finstat 2022).

Entity/Indicator	HEJ.sk	Footshop.sk	DATART.sk	svetnapojov.sk	
2016	Sales	EUR 39,464,554	EUR 47,810	EUR 39,464,554	EUR 0
	Profit/Loss	EUR −616,926	EUR −149,151	EUR −616,926	EUR −1782
2017	Sales	EUR 39,867,774	EUR 947,100	EUR 39,867,774	EUR 0
	Profit/Loss	EUR −98,567	EUR 100,710	EUR −98,567	EUR −1052
2018	Sales	EUR 64,930,657	EUR 1,248,728	EUR 64,930,657	EUR 31,368
	Profit/Loss	EUR −1,114,347	EUR −72,214	EUR −1,114,347	EUR −6456
2019	Sales	EUR 95,663,583	EUR 1,432,867	EUR 95,663,583	EUR 4,391,931
	Profit/Loss	EUR −313,656	EUR −74,045	EUR −313,656	EUR 291,860
2020	Sales	EUR 130,288,881	EUR 915,206	EUR 130,288,881	EUR 9,515,303
	Profit/Loss	EUR 1,262,564	EUR −104,872	EUR 1,262,564	EUR 334,333

Thus, as far as the basic economic indicators of the subjects are concerned, it was obvious at first sight that our sample consisted of an economically inhomogeneous set. It should also be noted that in the comparison, two entities operated by foreign companies in the selected market were removed from the selection, as there were objective obstacles represented by a low availability of data. It was specific to the market that the two largest players in terms of revenue were operated by the same company. However, this was also typical of the nature of the market. As for the goals of the study, the years 2019 and 2020, which represented the period before and during the COVID-19 pandemic, were particularly important for us. The following Table 5 provides a simple overview.

**Table 5.** Sales and profit: 2020 vs. 2019.

Entity/Indicator	HEJ.sk/DATART.sk	Footshop.sk	svetnapojov.sk	
2020 vs. 2019	Sales (%)	+36%	EUR −36%	EUR +117%
	Profit+/Loss−	EUR +1.26 mil.	EUR −104,872 €	EUR +334,333 €

Three of the four surveyed entities showed significantly better economic indicators during the first year of the pandemic than in the precrisis period. In the case of players in the category of consumer electronics retailers and wholesalers, in terms of profit growth, this was a relatively large change compared to the precrisis period. It can thus be stated that, from the point of view of the sample analyzed, the crisis caused by the outbreak of the global pandemic was an opportunity rather than a threat, or market circumstances significantly increased the economic performance of a substantial part of the analyzed entities.

By analyzing the economic indicators over time, it was possible to describe the basic trends in the development of the parameters of the traditional brick-and-mortar stores over time. We considered it necessary to analyze these trends in the context of the development of partial reputation parameters of the virtual world of the Internet. It was also necessary to visualize the situation in the context of the overall level of online reputation in terms of its development in the period under review. Figure 4 below presents the selected contexts.

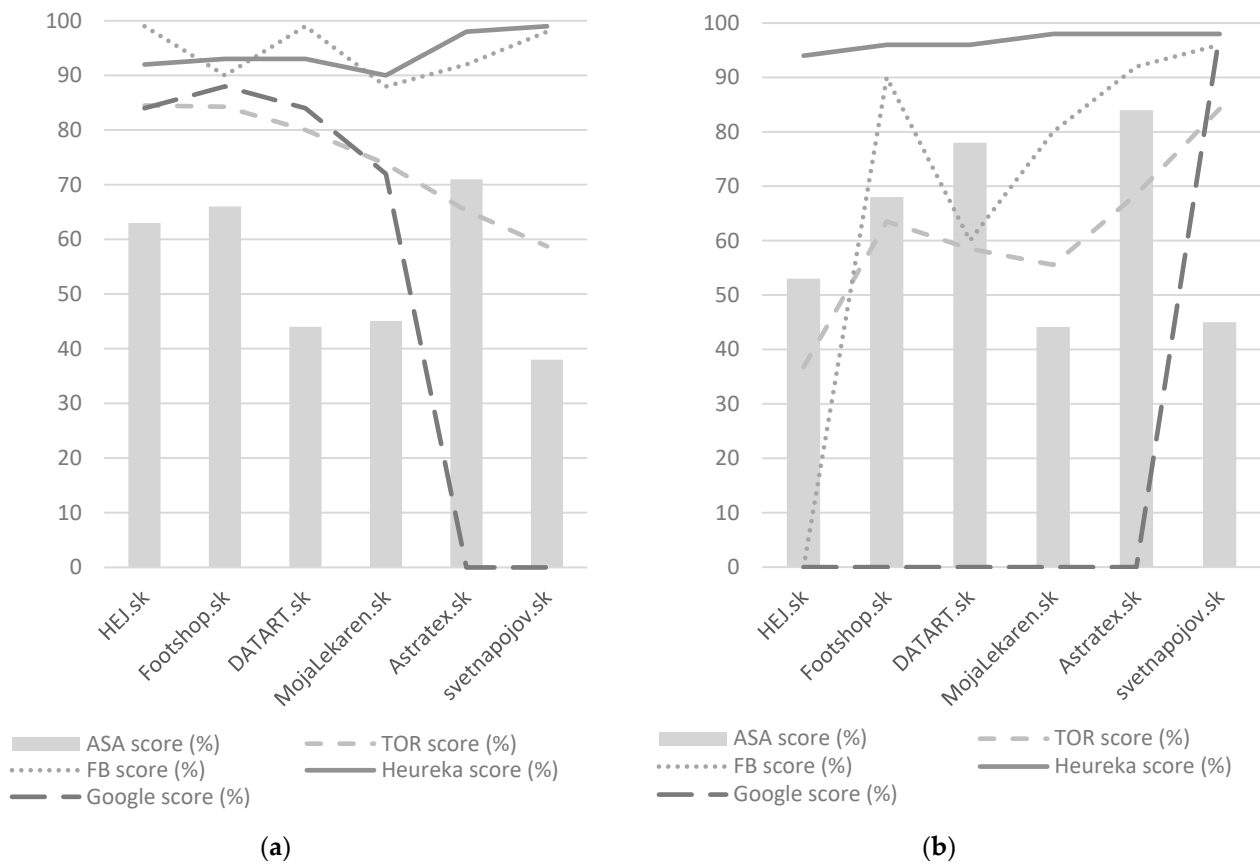


Figure 4. Interpretation of selected relationships: (a) 2020; (b) 2022.

In general, it can be stated that the pandemic, despite the very difficult market situation, did not significantly damage the reputation of the surveyed entities. Across the measurements, it was possible to see the increase in the ASA parameter represented by the results of a simple sentiment analysis, as well as the results of an advanced analysis using an extended parameter. At this point, it should be noted that, in terms of the results of the simple sentiment analysis, the second observation showed significantly higher reputation values for all entities compared to 2020. Nevertheless, an average decrease in the overall reputation level was observed. This was because in the second measurement, it was not possible to identify Google reviews for five out of the six entities under review. At the same time, there was a slight decline (except DATART) in the reputation of the Facebook rating. Finally, a significant local reputation determinant, called the Heureka rating, was the one that showed a slight increase in observations for all e-shops, except for one entity. Given the fact that it is a reputator that expresses customer satisfaction after the purchase, we considered this phenomenon; i.e., the increase in the level of observations, to be a significant success for the entities, considering the difficult market situation and considerable congestion of the entire infrastructure. Table 6 below shows a comparison of the average values of the partial reputation scores in terms of identified trends across the measurements.

Table 6. Average reputation values across measurements.

Average Value/Reputator	ASA Score (%)	FB Score (%)	Heureka Score (%)	Google Score (%)	TOR Score (%)
2020	55	94	94	82	74
2022	62↑	97↑	97↑	98↑	61↓

As can be seen in Table 6, the averages of all subreputators across the measurements increased. Nevertheless, the average value of the overall level of online reputation in 2022 fell by more than 10% compared to 2020. The decrease was mainly due to the absence of Google ratings for most entities in the measurement in 2022. It is not clear whether this was the decision of the entities themselves or due to a change in Google's algorithm. However, from the point of view of transparency, we considered this to be a significant step backwards. The entities without Google reviews thus entered the calculation of the overall reputation with a zero value for the given partial score that was subsequently reflected in their overall score. This condition can be considered as undesirable. At this point, it was possible to proceed to summarizing the results of the study in the form of formulating a conclusion.

### 3.4. Discussion of Findings in the Context of the Researched Issue

Reputation management is a complex construct, especially if there is a need to manage reputations in the Internet environment. Based on previous findings (Pollák et al. 2016; Dorčák et al. 2017), it can be stated that just targeted and continuous work of marketing managers is a determinant of market success, regardless of the industry. The pursuit of maximum transparency and availability of information should be at the top of the priorities within the value chain of corporate public relations (Dorčák et al. 2014). However, in the context of dynamic market changes accelerated by the COVID-19 pandemic, we recorded slight deviations from the defined standards in the subjects we examined. At the same time, these deviations did not significantly damage the reputation of our subjects, nor did they damage their economic results. The departure from maximum transparency of open customer ratings on global platforms combined with tighter control of local reputation platforms, such as Heureka in our case, is changing the trend of uncertainty toward better control of variables. This is a relatively interesting phenomenon, which with a certain degree of abstraction can be compared with the usual norm of times before the advent of the Internet (the norm when the media environment was largely regulated and well guarded in terms of the amount and nature of information). However, this is certainly not the desired situation, as the local market in which the analysis was carried out was predominantly open and developmental in nature. The arrival of new platforms, as well as the arrival of global market players, can significantly disrupt this fragile ecosystem. The imaginary game of security, characterized by the minimization of controlled variables, is rather short-sighted, especially in the context of a global pandemic (Bratianu and Bejinaru 2020).

## 4. Conclusions

The issue of managing corporate reputation in a turbulent environment is a relatively large challenge for marketing managers. The basic research question of the study regarded what happens if the market is suddenly exposed to a phenomenon known as a black swan. This question arose at the beginning of the research, the results of which were further described. The aim of the study was to provide an insight into the issue of reputation management in the Internet environment during a global pandemic by comparing two event horizons. The first event horizon had the form of the unprecedented closure of the economy at the onset of the pandemic, during which the first of the datasets was collected. The second event horizon represented the end of the pandemic, when the number of newly infected people declined. We examined the same sample two years later using the same methodology in order to identify a shift in the level of reputation of the selected companies. The goal of our research efforts was to quantify the degree of reputational damage or the improved reputation of the companies over time. The answer to the research question was relatively brief, although in its essence it synthesized an extensive knowledge base of both reference and our own empirical research. Research showed that market players on both the supply and demand sides of the market adapted to the new conditions relatively quickly. In the context of the global COVID-19 pandemic, we encountered the phenomenon of perfect digital timing. This phenomenon can be explained

by the situation when the digital infrastructure had exactly the capacity necessary to ensure market processes without irreversible damage to the economy. The beginning of the third decade of the 21st century was just this moment. Entities threatened by shortening of both the distribution and communication channels were able to optimize the flows of goods and information over time. At the same time, their reputations did not suffer significant damage. On the contrary, active companies took the opportunity to maximize the benefits of the relatively limited supply in the first months of the pandemic. As for our dataset, this condition was identified in three of the four entities examined. Based on a comparison of sales and profit with the prepandemic year of 2019, we noted a significantly positive increase in value for all monitored economic indicators. In terms of specific reputation indicators, all entities analyzed significantly improved their reputation level in its core form by improving sentiment in the top 10 Google search results. Better results for some entities were conditioned by better work with the media, while market conditions did not require any more sophisticated procedures. When it came to working with reference and affiliate sites, all the analyzed entities handle this part of the e-commerce routine extremely well. For the selected entities, we evaluated the deviation from full transparency ensured by publishing the ratings on the official fan pages of the entities in the environment of the social network Facebook as slightly negative. In addition, from the point of view of global trends, we noted the absence of Google reviews as an issue to deal with for most of the entities analyzed. We believe that entities can gain a competitive advantage only through adopting a comprehensive approach to the challenges and opportunities of the online market, especially in the case of emerging markets that are exposed to the risk of global players entering the market. Without the necessary infrastructure, local companies will then face an almost insurmountable existential threat. This statement thus concludes our study. In the following section, the theoretical and managerial implications, as well as main contributions to the science and practice, are described.

#### *4.1. Theoretical and Managerial Implications*

From the point of view of the theoretical implications, it can be stated that the trend in the approach to online reputation management oscillates around the imaginary effort for transparency (which defines the marginal position of uncertainty) and the effort for maximum control (which in turn defines the marginal threshold of certainty). With the rise in uncontrollable variables, in our case a global pandemic, subjects tended to eliminate known perceived threats. On the contrary, they tended to strengthen known certainties. However, the emerging market generates variables continuously; some of these variables create new threats, while some are transformed into opportunities and subsequently known certainties. Despite the oscillation of the realistic trend in the approach to online reputation management, the overall trend is growing over time. The topic of reputation management is thus a promising area for continuous research.

As far as managerial implications are concerned, it is possible to rely largely on the knowledge formulated within the theoretical background. Businesses, as well as individuals or various entities that have the ambition or need to manage their reputations, are confronted with an ever-increasing number of controlled and uncontrolled variables. Based on the described trends, it is possible to assume that the number of variables will reach a value that will require a certain degree of specialization. At this point, entities are confronted with the need to delegate the management of their reputation to a third party. This raises the question of trust and resource efficiency. Corporate reputation management thus creates a new segment in the media communication market. At the same time, it extends the issue beyond the scope of marketing communication to the area of asset management.

#### *4.2. Main Contributions to the Science and Practice*

The issue of corporate reputation management in the context of the virtual Internet environment is still relatively little described. Empirical research in such a case can generate



a relatively large amount of relevant data for a continuous shift in knowledge in the field. In the presented study, e-commerce entities operating in the local Central European market were subjected to research. By analyzing the level of their reputation in the period before and during the COVID-19 pandemic, it was possible to identify signs of trends in difficult market conditions. Especially in the context of the developmental nature of the market, the formulated findings have considerable potential to create a knowledge base in order to compare with developed markets or markets of a similar developmental nature, but with different levels of restrictions during the pandemic. As authors, we see the main contribution of this study to science in the creation of a reference knowledge base for the subsequent contemporary research of the impacts of global pandemic on the issue of the development of corporate reputation in the virtual Internet environment.

The effectiveness of spending resources on promotion is an important determinant of the market success of companies; in some cases, it is a determinant of their basic persistence in the market. When it comes to managing corporate reputation, we went beyond marketing communications. The sophisticated nature of the process requires knowledge of the basic procedures by which the process is defined. Applying offline practices in an online environment is usually a path in the wrong direction. The basic starting point of the process is the need for continuous real-time analysis. The detailed description of one of the possible and available analyses was given in the presented study. The methodological part of the analysis was thoroughly described, and its most important parts are visualized in Figures 2 and 3. It is in the description of the procedure of comprehensive analysis of online reputation that we as the authors see as the main contribution of the study to practice. With this statement, it is possible to conclude the topic and approach the description of limitations and the future research direction.

#### *4.3. Research Limitations*

The main limitation of the presented study was the relatively strong regional specificity of the analyzed sample. At this point, however, it should be noted that the aim of the authors of the study was to focus on emerging markets, as they by their nature allow for relatively thorough empirical research. As a rule, developed markets are strongly centralized toward market leaders, where entities with market capitalization at the level of medium-sized economies, with their unified and optimized infrastructures, distort the possibilities for revealing the nuances necessary for the development of the issue. The selected market as such represents a combination of developmental nature and relatively significant pandemic regulations. Another limitation was the combined nature of the data, as the analysis worked with qualitative data in the form of results of a sentiment analysis and quantitative data in the form of an evaluation through selected reputation determinants. We believe that the interpretations of the findings are reasonably applicable, considering the limitations, and can thus be generalized to reference markets of a similar nature.

#### *4.4. Future Research Direction*

The issue of the impacts of the pandemic on almost all aspects of business is extremely topical, even more than two years after the beginning of the pandemic. With the end of the global pandemic, the knowledge gathered during the pandemic is being increasingly more synthesized. Both basic research studies and empirical analyses contribute to the shift in knowledge and to the gradual recovery of the global market. The issue of reputation management in such a turbulent and hectic time is more relevant than ever.

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