Reputation Management of Organisations in the Public Sector: Social Listening as a Method for Analysing Big Data

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Abstract: Reputation management in the public sector has scientifically been rather neglected in the past. Nevertheless, the literature suggests that the strategic management of reputation has become more important for public organisations in recent years. Therefore, big data analysis with the help of social listening, i.e. retrieving relevant communication from online sources via web-crawling and analysing the results using artificial intelligence, is applied here to three public sector organisations. The results show that social listening is at least in principle suitable for measuring reputation in the public sector. Also, the reputation of public companies and private companies is different. As a consequence, public companies should aim to improve their reputation and at least an awareness of the weaknesses of public company reputation should be built.

INTRODUCTION

In the age of digitalisation, reputation management is a topic that is becoming more and more important. In the course of globalisation, internationalisation and increasing competition, the rules of the game for companies have changed. In addition to financial performance, environmental behaviour and social commitment are now crucial to the success of a company (Kaul & Desai, 2014). With the help of an appropriate communication strategy, the improvement of a company's reputation represents a decisive competitive advantage (Dowling, 2016). As a result, the reputation as a 'perceptual representation of a company's past actions and future prospects that describes the firm's overall appeal to all of its key constituents when compared with other leading rivals' (Fombrun, 1996, p.72) has emerged as a valuable key asset in order to position a firm in the market (Sanchez-Torné et al., 2020). Reputation is becoming essential not only for profit maximising companies, but also for organisations in the public sector due to the growing competition for well-educated employees and residents (Christensen & Gornitzka, 2019). It is doing so both in terms of crisis avoidance and actively building a positive image. Especially the complexity resulting from the existence of various stakeholders in the public sector is crucial in this development. The public sector is a large and important employer in Germany and thus a significant object of study in scientific research on crisis and reputation management.

The first step in mapping the initial situation is to measure the current reputation, which forms the basis for all further strategic considerations. Scientific discourse has shown that reputation is largely outside the sphere of influence of a company (Griffin 2014), which is why it is imperative to consider the communication of external third parties (Aula & Mantere, 2008). In the course of digitalisation and constant use of smartphones, social media platforms have been omnipresent for a decade (Jones et al.,

2009). Today, they are considered a central part of everyday life and play an immense role for companies of all kinds from multinational enterprises to small-sized companies. They are also considered essential with regard to non-profit organisations or governmental agencies, as they make a great contribution to shaping the perception of other stakeholders (Kaplan & Haenlein, 2010; Kim & Liu, 2012). Against this background, the inclusion of communication from the Internet is absolutely necessary for an all-encompassing reputation analysis (Maniora & Pott, 2020) irrespective of the type of organisation. In a previous study, the reputation of the 50 largest German companies could be measured using social listening (Westermann & Forthmann, 2021). This methodological procedure is a still very young, innovative procedure that uses artificial intelligence (AI) to enable the analysis of huge amounts of data resulting from the mass of online communication. To the best of our knowledge, there has been very limited research on how organisational reputation is visible through social listening and how this can help in understanding the overall reputation of organisations. Due to the fundamental structural differences between the public and private sectors, this context raises the main question of which differences can be identified concerning the online reputation of the two sectors. Our research so far has not found any studies that have addressed this question using this new methodological approach.

Looking at the current state of research, the integration of social media in the public sector still offers much room for further research (Sharif et al., 2015). In order to fill the existing gap, this study aims to identify structural differences in reputation between public and private companies. This is essential for developing and applying the right strategy when it comes to managing the reputation of a public sector company especially when it comes to times of crisis. Thus, the underlying research questions are the following: Are there differences between the reputation of private and public sector companies? If yes, what are these differences and which implications do they have concerning an appropriate reputation management for a company in the public sector? The article starts with a theoretical section describing

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the state of research regarding the reputation of private and public companies and their differences. After that, the chapter on methods comprises a section on social listening as a tool for collecting and evaluating data in this context as well as the description of the methodological approach used in this study. Following this, an empirical section first indicates that social listening works as a tool for measuring corporate reputation. To do this, three well known crises at three different companies are analysed using social listening. As the existence of these crises has been made public in relevant publications, this article serves as an indication of the effectiveness of social listening as a tool for reputation measurement. Secondly, the differences in reputation between private and public companies are investigated empirically to answer the above mentioned research questions. In specific, the differences between the reputations of public and private enterprises are demonstrated by using classical statistical methods. Following this, the differences themselves are analysed in more detail. In particular, the individual dimensions of digital reputation management are examined more closely regarding the expectations described in the theoretical section. The final chapters conclude the article by discussing and summarising the results and giving recommendations for action.

Organisational crises can be seen through social listening. This indicates that using AI to crawl websites and analyse the results is at least in principle suitable for depicting the reputation of companies. Public companies and private companies do differ in the way their reputations are represented digitally, particularly in terms of profitability and sustainability. As a recommendation for action, public companies should aim to improve the reach and the tonality of their reputation. At least an awareness of the weaknesses of public company reputation should be established.

STATE OF RESEARCH IN REPUTATION MANAGEMENT

The Current State of Corporate Reputation Management and the Influence of Online Communication

The importance of reputation and appropriate reputation management has been recognised in the corporate context, in theory and practice, for some years now and is considered an integral part of communication management (Doorley & Garcia, 2020; Marsen, 2020). However, a recent survey conducted by news aktuell (2015), a subsidiary of Germany's largest press agency, dpa, and the communications consultancy Faktenkontor revealed that there is still a discrepancy between strategic aspirations and operational implementation and management regarding reputation management. The high investment of time and the expenditure required can be considered as possible causes for the lack of regular measurement, as the results of reputation measurement are in many cases based on very complex market research (Westermann & Forthmann, 2021).

From a theoretical point of view, reputation is made up of many different factors. Depending on the industry, interests and social norms as well as other criteria are considered to be the essential reputation drivers. After a detailed literature search, it quickly becomes apparent that the existing studies vary greatly in terms of their findings. They identify different influencing factors as reputation drivers and attach different degrees of significance to them (Carroll, 2013; Einwiller, 2013; Veh et al., 2019). The studies have shown that the focus of the individual image and reputation dimensions varies depending on the industry as well as interest and demands of the respective shareholders (Walker, 2010). Following Aula and Mantere (2008) reputation is a triad of good deeds, good communication and good relations. The various studies show that the overall estimation of a company is a compound of many individual components, some of which are interrelated and some of which are independent of each other (Veh et al., 2019). In addition, individual assessments, perceptions and societal norms also influence opinions about an organisation (Einwiller, 2013). As a result, reputation represents a less stable, rather fragile and less constant construct (Kaul et al., 2015, p. 459) which is made up of the attitudes and perceptions of all relevant stakeholders, as well as the current values and norms to which society is subjected (Einwiller, 2013). Following Fombrun's original approach (1996), there is general agreement that the reputation of a company is an interplay of different characteristics (Einwiller, 2013; Walker, 2010). This is a catalogue of criteria of concrete, objectively verifiable and physical factors that relate to corporate strategy, management style and products as well as services: financial performance, company capability, products and services, social and environmental responsibility, management and leadership, and the treatment of employees are the dimensions that have been shown to be largely relevant in the course of reputation research. In line with Carroll (2013), communication also makes a decisive contribution to building a reputation. According to his definition, reputation is 'a widely circulated, often repeated message of minimal variation about an organisation revealing something about the organisation's nature' (Carroll, 2013, p. 4), for which communication plays a key role. Against this background, it quickly becomes clear that reputation cannot be attributed solely to internal factors but is rather determined by a variety of external sources outside the company. In this sense, the company's sphere of influence on its own reputation is limited and reputation is more likely to be determined due to the prevailing opinions of external third parties who share their thoughts in public networks (Aula & Mantere, 2008).

With the changing media landscape, the rise of the Internet and the increase in communication via social media (Humphreys & Jen-Hui Wang, 2018), which blurs the boundaries between the real and virtual worlds, the important role of communication for companies and their reputation is becoming even more obvious (Szwajca, 2017). Many managers often see it as a double-edged sword, which on the one hand opens new doors, but on the other hand poses new challenges and dangers (Kaul et al., 2015). It is

crucial to understand social networks and to extract important information for one's own communication strategy in order to reduce potential dangers. The huge mass of information and opinions on the Internet and the almost unlimited possibilities of obtaining information without time or space restrictions provide significantly better conditions for quickly building up a high level of awareness and spreading communication messages at low cost (Kaplan, 2010). At the same time, however, it carries the risk that a single negative post can damage the reputation of the entire brand (Szwajca, 2017; Bernoff & Schadler, 2010). The public sector is also not unaffected by this danger. Ordinary citizens in particular are using such platforms with ever-increasing popularity to voice their concerns and exert pressure on governmental activities (Khan & Krishnan, 2020). For this reason, it is nowadays imperative in every sector to consider all online communication in order to obtain a comprehensive overarching picture of how a company is viewed, as this is what makes up its reputation (Fertik & Thomson, 2010).

Therefore, Kaul et al. (2015) recommend drawing data from all possible sources for a comprehensive analysis of online communication. Indeed, it has been shown that the ability of corporate decision makers and strategists to collect, filter and interpret data from social media is crucial for the success of a company's strategic orientation, especially with regards to reputation (Venkateranam & Das, 2014). With today's development of using the internet increasingly as a medium of information and communication, the survey instrument also needs to be adapted. In view of the rising availability of data, the advantages of social media analyses in terms of efficiency, precision and costs clearly outweigh traditional survey methods, e.g. interviewing by telephone (O'Connell, 2010). Therefore, a reputation management that meets contemporary standards should leave old paths and embark on the virtual path of 'positioning, monitoring, measuring, talking and listening as the organization engages in a transparent and ethical dialogue with its various online stakeholders' (Jones et al., 2009, p. 934). Focusing attention on all the diverse dialogues around the company and using the insights gained from them represents a new approach to reputation management for a company (Carroll, 2013; Kaul et al., 2015) and can be seen as an important future success factor.

Reputation Management in the Public Sector in Contrast to the Corporate Sector

Following Carpenter and Krause (2012), it is necessary to adapt the basic principles of reputation management from the corporate context in order to make the challenges of public administration more transparent in a democratic setting. The public sector embedded in a political environment consisting of various interest groups such as the media, experts, citizens, customers and many others must manage the balancing act of maintaining its flexibility as well as its consistency at the same time. This is even more challenging because public organisations are in need of support from various sides, although many stakeholders are critical in principle (Carpenter & Krause, 2012). The necessary support can only be gained through professional reputation management.

Until now, the focus of scientific research on reputation management has been on the corporate side. In the public sector, little importance was attached to the construct, and the establishment of reputation management in the public sector was neglected for a long time (Luomaaho, 2007). Due to increasing competition and a growing convergence between public and private companies, the topic is also gaining importance and interest in the public sector (Wæraas & Maor, 2014). Arguments for the rather subordinate role of appropriate reputation management in the public sector are based on the monopoly position of the public sector and its aim of equal treatment of all stakeholders, which, in contrast to private companies, led to a lack of competition and market segmentation (Nuno da Camara, 2007). However, structural change, through which many public sector tasks are suddenly being taken over by private companies (Luomaaho & Canel, 2016), and the increase in media presence, through which mistakes by decision-makers become observable and accessible (Maor, 2011), have led to a reassessment: organisations financed from public funds are increasingly coming under criticism. Their continued existence is often called into question. Predominant opinions about 'ill spirited bureaucrats, constantly trying to figure out how to increase regulation of citizens while extending their own "malign influence"' (du Gay 2000, p. 2) or 'the lazy, procrastinating, and indifferent bureaucrats with no customer or service orientation, busy reading magazines, planning sailing trips or buying and selling stocks' (Wæraas & Brykjeflot, 2012; Osborne & Gaebler, 1992, p. 127) play a central role in this development. A lack of transparency and existing inefficiencies, as well as a strong rule-orientation, reinforce this negative image, which leads to a loss of confidence in the public sector (Luoma-aho & Canel, 2016; Wæraas & Byrkjeflot, 2012).

Particularly in democracies, 'public sector organisations [...] need some form of public consent, authority, or legitimated power to operate' (Luoma-aho & Canel, 2016, p. 597). As a result, a change has taken place in the attribution of the importance of reputation to the public sector, making it a 'key intangible good' (Sanders & Canel, 2015, p.777) in order to maintain or regain trust and legitimacy. Due to economic pressures and rising stakeholder expectations (Luomaaho, 2008), image-building concepts such as brand and reputation management for the public sector are no longer just in their infancy but have become very fashionable (Lee & van Ryzin, 2019). Various studies show the relevance of the topic for different areas of the public sector, such as ministries and central government agencies (Luoma-aho, 2007; Maor, 2007), local government units (Ryan, 2007), education institutions (Kuoppakangas et al., 2020; Christensen, 2019; Ressler & Abratt, 2009) and local councils (Luke et al., 2020). It is often shown that better reputed public organisations are beneficial to society in terms of maintaining and attracting business, increasing legitimacy and

engagement, empowering citizens, enhancing public participation, and guaranteeing more fluent fulfilment, autonomy and power (Bankins & Waterhouse, 2019; Luoma-aho & Canel, 2016). Furthermore, a good reputation is considered a 'strong political asset [that can] protect the agency from political attack, and […] recruit and retain valued employees' (Carpenter, 2012, p. 491).

Although awareness of the importance of reputation has now reached the public sector (Lee & van Ryzin, 2019; Ressler & Abratt, 2009), the structural differences require differentiated treatment. In this context, Wæraas and Byrkjeflot (2012) name five problems (politics problem, consistency problem, charisma problem, uniqueness problem, excellence problem) which the public sector, unlike private companies, must cope with which challenge the establishment of a reputation management. Firstly, the so-called politics problem is due to the fact that poli-tics sets the direction, while the decision making scope of the individual administrative institutions is determined by a previously established framework and, as a consequence, is very limited. In contrast to private companies, identity, mission and strategy cannot be quickly adapted to changing market conditions or stakeholder needs but are to a certain extent pre-determined by the large overarching political framework construct (Frederiksson & Pallas, 2018). Secondly, Wæraas and Byrkjeflot (2012) cite the consistency problem, the cause of which is to be found in the multitude of different, sometimes divergent tasks, areas of responsibility and values. Since a consistent value system and appearance have a positive effect on the reputation of a company (Fombrun & van Riel, 2004), it quickly becomes clear that this point also poses a challenge for the public sector. Furthermore, companies must build up emotional appeal in order to maintain a strong reputation (Fombrun & von Riel, 2004). This gives them a form of charisma. However, public sector companies quickly reach their limits in this respect as well, which leads to the third problem, they have to face. Unlike private companies, they are not able to segment their own market and select specific target groups on which they can have a charismatic impact. Rather, they have to serve every stakeholder, be it the taxpayer, voters or users of certain services (Luoma-aho, 2007), which makes a uniform charismatic appearance difficult. In addition, there is the discrediting of bureaucracy in general, the image problem already mentioned, and the chronic depression resulting from daily work with un-solvable problems such as crime and unemployment (Luoma-aho & Makikangas, 2014; Vigo-da, 2000). The fourth problem facing the public sector in achieving a good reputation, the so-called uniqueness problem, is attributed by Wæraas and Byrkjeflot (2012) to the lack of identity, which can in turn be attributed, among other things, to the various demands of a rather complex stakeholder environment. In addition, there is the diversity of task areas, which makes uniform positioning and differentiation from the competition difficult (Wæraas & Byrkjeflot, 2012). As a final problem, Wæraas and Byrkjeflot (2012) name the excellence problem, which arises against the background of the different and conflicting interests of the multitude of stakeholders. Thus, the reputation of the public sector can never reach an excellent level, since a decision in the interest of one group always implies dissatisfaction of another group. In this way, the public sector's hands are tied, and consequently it is unable to maintain 100 percent satisfaction among all stakeholders.

In summary, the diversity of internal and external stakeholders with much higher, sometimes diverging interests is reflected in much more complex structures, decision-making processes, and often much more unspecific target definitions than in commercial companies. While the latter can focus on specific target groups, the public sector serves almost everyone. A small connection, be it through tax payments, participation in elections or the use of services, is sufficient for the public sector to see itself as a stakeholder (Luoma-aho, 2007). The decision to satisfy the demands of one stakeholder group almost always provokes the dissatisfaction of another stakeholder group. Furthermore, public sector organisations often lack a clear identity from which all actions and values are derived. This again reflects the complex organizational environment with different stakeholders, which makes a clear, pointed positioning difficult against this background, only a compromise that reconciles the various interests is ever possible (Carpenter & Krause, 2012). This is also due to the fact that all investments are financed from purely public funds, which 'are more subject to public scrutiny and are required to have a high degree of accountability to their constituencies' (Luoma-aho & Canel, 2016). The fields of work and tasks are accordingly often very complex and can be explained less by strategic positioning considerations than by the satisfaction of diverging stakeholder interests. With regard to reputation management, Luoma-aho and Canel (2016) state that the findings from reputation research in the context of private companies can be better transferred to public sector institutions if they place a strong focus on customer and service orientation.

Given the theoretical and practical implications of this situation, some researchers suggest that the fundamental differences also require an adaptation of the measurement tool for reputation management. 'The aims of public services range from social benefits to individual benefits, and measuring reputation changes accordingly from expert/professional judgements to citizen judgement' (Nuno da Camara, 2017, p. 19). These different aims and the obligation to take complex stakeholder interests into account mean that the criteria that are important in terms of reputation also differ. For this reason, it is consequently difficult to measure the intangibles of the public sector with instruments specifically designed for the corporate context (Nuno da Camara, 2017). In contrast to Carpenter (2010), who measured public sector reputation deductively using content analysis, Luoma-aho (2007) aimed to develop a standardised instrument using factor analysis and semantic differentials to measure it. His results showed that the various items used to measure the reputation of the public sector can be grouped into five factors. As a consequence, a model has to consider the dimensions Authority (e.g. cooperative, flexible, engaged in

conversations), Esteem (e.g. under constant development, esteemed, proactive), Trust (e.g. neutral, responsible, ethical, trustworthy), Service (e.g. acts according to clear principles, meeting expectations, useful, finds out customer needs) and Efficiency (e.g. fast, coherent, keeps to schedule, efficient). Furthermore, he noted that the reputation scores were relatively average, so that the reputation of the public sector in general is rather 'fact based' (Luoma-aho, 2007, p.132) and neutral scores should be sought. Lee and van Ryzin (2019) chose a different approach to operationalising and measuring the construction of reputation. Following the conceptual definition of Carpenter (2010), according to which reputation extends to the four dimensions of performance, morality, procedural fairness and technical competence, Christensen and Lodge (2018) conceived the BRS (bureaucratic reputation scale) as a new instrument for measuring reputation. Contrary to the fact-based model of Luoma-aho (2007), they also implemented the emotional aspects and supplemented the four dimensions with the component of general reputation, which aims to capture overall feelings and attitudes. The performance component includes the decision-making competence and goal achievement of the public sector, taking into account its core mission. Moral reputation summarises the perceived values and ethics of the public sector. This includes, for example, equal treatment of different groups, honesty, acting in accordance with the law and integrity, and it provides information on the extent to which behaviour is perceived as compassionate, flexible and honest (Carpenter & Krause, 2012). The dimension procedural reputation has a 'formal instrumental focus' (Christensen & Lodge, 2018, p.7) and refers to 'justness to processes' (Carpenter, 2010, p. 47) of the organisation and its ability to make reasonable decisions using the given rules. Finally, they include technical reputation, which aims to reflect the skills, knowledge and experience to manage complex tasks and environmental factors. In their study, Lee and van Ryzin (2019) showed that all five factors produce a model with high internal reliability and validity. Furthermore, they concluded that the reputation of a public institution can be significantly improved if the actors are given more autonomy in decision-making, if they have more budget to achieve their goals, and if they have more power.

While research on reputation in the corporate context is relatively mature and there is general agreement that companies should strive for an excellent reputation with high reputation scores in order to stand out from the competition, the results for the public sector do not yet provide a uniform consensus. The public sector is still a long way from the optimal reputation architecture that has already been developed for private companies (Westermann & Forthmann, 2021), although some studies show that performance makes a decisive contribution to improving the general reputation value (Christensen & Lodge, 2018; Christensen & Gornitzka, 2019). Since the accountability of the public sector can best be justified by performance (Christensen & Lodge, 2016), some studies show that this dimension is relatively crucial for the reputation of the public sector (Overman

et al., 2020). Following Ifran and Hassan (2017), this can be expressed in the form of project success but can also be attributed to a high degree of customer and service orientation (Luoma-aho, 2016). Christensen and Lodge (2018) have shown that companies tend to focus on moral and technical competences on their websites. Professional performance and a focus on moral values is also the key to a positive reputation according to Christensen and Gornitzka (2019). Despite these findings, there is some uncertainty whether and to what extent high reputation values are also beneficial in the public sector. The main objective, acceptable levels of trust and satisfaction, can be better achieved and maintained in the long term with neutral reputation values. Following on from Luoma-aho (2016) and Nuno da Camara (2007), the excellent reputation of a company is thus more likely to be reflected in neutral and average values, which in return can be reliably maintained over the long term and over the years (Luoma-aho & Canel, 2016; Luoma-aho, 2007). Although a closer look at the literature to date reveals fundamental differences in reputation between private companies and public sector organisations, research in this area is still in its infancy. Despite there being agreement on the importance of the construct in both the private and public sectors, the research provides divergent results in some cases. For this reason, the present study aims to provide further insights into the similarities and differences in reputation between public and private companies.

In order to examine the stability of reputation and changes, it is imperative to implement continuous monitoring of reputation in the public sector, as in private companies. As a result of the changing media landscape and the emergence of numerous social platforms, not only private companies but also public sector organisations have been revolutionised (Todericiu et al., 2016). In the public sector, too, communication via the Internet on Twitter, Facebook, and LinkedIn is increasingly gaining significance as a new communication channel and as an option for informing citizens or promoting exchange among or with them (Sáez Martín et al., 2015).

For this reason, in order to maintain a comprehensive view of public opinion and the reputation of the public sector, it is imperative to understand the web as a 'publishing arena' (Mar chiori & Cantoni, 2011, p. 139) in which the population shares its own experiences and experiences of others. This turns the shared content into 'proxies of reputation' (Marchiori & Cantoni, 2011, p. 139), which have to be surveyed in the context of a reputation analysis. Studies on the reputation of companies have already shown that the analytical method of social listening is a relevant way of analysing big data in the form of large volumes of online conversations in order to determine subsequent reputation values for private companies (Westermann & Forthmann, 2021). For this reason, before dealing with the main empirical part of this study, it will be established that social listening is suitable as a method for measuring the reputation of the public sector by analysing three exemplary companies. Based on that, the main research question of this study is then to provide information on

the differences between private companies and the public sector using the method of social listening. We expect the reputation of public companies to be lower than that of private companies, as the strategic management of reputation is a rather new topic for these companies. If this were to happen, there would be a need for public companies to catch up. Furthermore, we expect the reputation of public companies to be much more balanced than that of private companies, as public organisations have to deal with highly complex, politically influenced stakeholder relations, which does not allow an imbalanced positioning and urges them to smooth the various interests. This distinguishes them from private companies, which pursue a clear line and clearly defined goals in order to stand out from the competition.

METHODOLOGY

The Principles of Social Listening

Against the background of these developments and the changing media and communication landscape, social listening is now considered a common procedure for obtaining an up to date opinion of and thus access to the reputation of one's own company, reacting accordingly and actively managing its reputation (Efraim, 2018; Turban et al., 2018). In the course of time, various studies have been conducted in different thematic contexts, e.g. in the automotive industry, on consumer behaviour or in political communication, in which online communication has been analysed using partially standardised or manual content analyses (Westermann & Forthmann, 2021). These include according to the authors 'identification of trends in the U.S. automobile industry (Du et al., 2015, pp. 29 ff.), the influence of user and marketer-generated content on consumer behaviour (Goh et al., 2013, pp. 88 ff.), the development of a competitive market strategy (Harrysson et al., 2012, pp. 1 ff.), and social media analyses for political communication (Grubmüller et al., 2013, pp. 1 ff.) ' (Westermann & Forthmann, 2021).

Through the use of this methodological approach in numerous pilot schemes, the various technical and content-related possibilities have been largely professionalised, so that this form of analysis is considered an established procedure (Lee et al., 2020). Internet-based communication analysis is widely used in market research in particular to gain valuable customer insights and generate important competitive advantages (Chui et al., 2012). With the help of social media analytics, for which the examination of online communication is a prerequisite, reputation management is taken to a new level (Aula, 2010). Listening to the customer thus replaces the traditional form of survey (Poynter, 2010). Although many different terms are now firmly established in language use, such as social listening, social media analytics, social analytics and social media intelligence, they all ultimately describe very similar approaches (Holsapple et al., 2014). What is important for reputation management is that, despite the different terminology implying a different focus, all online sources, both social media and classic media,

are considered and included equally in the analysis. This makes the two-stage process of the method clear: the first step consists of conducting the actual listening, which collects all statements that can be found on the Internet about the respective company, and then the second step consists of performing the analytics, the analytical consolidation.

With the increasing use of the Internet and the associated growth in the amount of data, also known as big data, it is obvious that conventional analysis methods quickly reach their limits here. In order to sufficiently filter out all the available information about customer decisions, behaviour or the cause of shitstorms, it is also necessary to adapt the method to the current conditions (Humphreys & Jen-Hui-Wang, 2018). Unfortunately, it has been shown that content analysis done by hand, for which a good feeling of text and human apprehension are a prerequisite, is no longer up to the increasing demands, so that much information remains unnoticed or is misinterpreted (Kietzmann & Pitt, 2020). If the results of the analysis are based purely on the work of computers, it is a mere reproduction of the text, which often lacks interpretation, mood and an overall understanding of the text. In contrast, AI-based procedures have meanwhile proven their worth in filtering out the elementary components from the mass of online messages (Humphreys & Jen-Hui-Wang, 2018) from which neither clients nor researchers can draw meaningful insights (Lee et al., 2020). Following Zerfass et al. (2020, p. 3), AI is 'based on technologies like natural language processing, data retrieval and knowledge representation, semantic reasoning and machine learning'. The resulting reliability, validity and efficiency reveal the advantages of AI-based procedures and explain the high thematic relevance, especially with a view to future research (Lee et al., 2020) and with regard to the newly emerging forms of unstructured data and media types (video, text, speech) (Kietzmann & Pitt, 2020). Despite the high level of attention in academic research and the numerous opportunities and possibilities that can take marketing and communication management to a new level, AI has so far been used very little in practice (Zerfass et al., 2020). Taking that into account, there is widespread confirmation of the requirement to insert AI for content analysis (Zerfass et al., 2020; Lee et al., 2020; Humphreys & Jen-Hui Wang, 2018) in order to crystallise the various details and facets out of the immense amounts of data (Kietz-mann & Pitt, 2020).

So how does artificial intelligence work to produce the correct data? To get fragments for the correct company, different notations and spellings of the company name are used. Exclusionary terms and sorting out prohibited URLs help avoid false positives. For example, 'Google' might be misspelled as 'Gogle' or 'Googel'. A fragment containing 'Apple pie' is not likely to be about the company that produces the iPhone. To assign the fragments to the correct event types, event types are also defined by positive and negative keywords. The event type 'sustainability', for example, is associated with the positive keywords 'future oriented', 'recycling', 'fairness' and 'responsible' and the negative keywords 'wasteful', 'immoral' and ' environmentally harmful'. For

example, the sentence 'Less environmentally harmful commercial aircraft are an important goal for Lufthansa' can be clearly assigned to the company 'Lufthansa' and the event type 'sustainability'. To make the assignment of text to event types more reliable, comprehensive text corpora were created for the different types of events. Typical patterns for each event type were stored in a special kind of artificial intelligence, a so-called 'neural network', which then learnt by processing examples, a task which consists of assigning texts to events by using specific probability algorithms. To make sure that the analysis was done correctly, the error rate was controlled manually. An examination of 1,500 fragments revealed an error rate between 8 and 18 percent. The artificial intelligence used to process the fragments is based on methods of natural language processing (NLP). NLP processing uses the following methods:

1.   keywords-based search
2.   search based on regular expression
3.   rule-based analysis
4.   deep learning.

Like two sides of the same coin, this method also has its advantages and disadvantages. While it convinces through its rapidity and simplicity, it can unfortunately only be used effectively in a few situations. In particular, these are searches for very specific topics (e.g. 'piezoelectric motor') or searches for entities whose names are not easily confused (e.g. 'Lufthansa').

In those situations, keywords-based searches can detect potentially relevant text fragments for further processing. A 'regular expression' is somewhat similar to a keywords-based search, but allows a search for several word forms using only one pattern (e.g. only one pattern is needed to search for run, runner, running, etc.). This method includes normal keyword searches, but also includes extensions like keyword concatenation. Allowing tokens is the key feature of a 'rule-based analysis'. Tokens are placeholders for several terms usually defined through regular expressions. A token could be, for example, a verb describing sustainability or a list of terms describing a particular part of the environment. A typical rule-based search would then be: *<sustainabilityVerb>*<partoftheenvironment>*. The advantages of rule-based analyses are their flexibility and precision. But these advantages have their price: rule based analyses need more computational power and therefore are more expensive. It therefore makes sense to apply this form of analysis to fragments that have already been processed by other methods. Using sets of pre-labelled sentences to train a neural network which then is used to find similar sentences is the approach that deep learning algorithms use. This strategy can be applied to both event types and sentiments. It is inherent in the procedure that it depends on the size and quality of the training. Its advantage lies in its cost effectiveness: its economical use of computing resources allows the analysis of large numbers of sentences at a reasonable cost. In contrast to rule-based patterns, which refer to the semantic meaning of the words, deep learning algorithms do not use specific language knowledge. The assumption here is that similar sentences have similar meanings. For this article, the data set was generated by a combination of rule based analysis and deep learning. The sets of rules for the neural network are generated through consistent training using sample data sets. This training allows the generation of probabilities that are required for the multi layered nodes of a highly complex neural network. To evaluate a statement, decisions are made along a path of a multi layered node system. As mentioned above, the probabilities of the path were generated before using extensive test data. But since the test data was coded manually and the quality of the artificial intelligence was checked manually, the error tolerances are comparable to those of directly coding text manually.

Empirical Approach

To determine if social listening is also able to display reality specifically when it comes to the public sector or companies with attributes similar to public ones, we took a closer look at the situation of different companies of the public sphere as they went through recent crises. To avoid making general claims about reputation and social listening based on cases specific to only one branch of business, we chose to take a look at companies from different parts of the (public) economy. Those companies were the charitable hospital operator 'Malteser', the public savings bank 'Sparkasse München' and the publically owned and at the time of the social listening Berlin's still unfinished airport 'BER'.

Due to high costs and difficulties in making the necessary infrastructure investments, the hospital operator group 'Malteser' planned to sell six of their eight hospitals. The crisis was critical to the company because it threatened their reputation as a company which engaged in helping those in need. The plans to sell the hospitals were made public by the German newspaper 'Handelsblatt' on the 31st of October 2019. The savings bank 'Sparkasse München' cancelled 28,000 premium savings contracts at a stroke. In addition, the bank reserved the right to demand penalty interest from new customers with balances of more than EUR 100,000 in current accounts. This was made public by the German newspaper 'Die Zeit' on the 26th of September 2019. At the time of the conducted social listening audit, the government terminal at Berlin's still unfinished BER airport was completed on time and within budget but remained unused, as it was not scheduled to be used until the airport opened in October 2020. This was made public by several newspapers on the 6th of September 2018. For each of the companies experiencing these crises, we calculated daily time series for the following variables: total number of fragments, absolute number of positive fragments, absolute number of neutral fragments, absolute number of negative fragments, absolute balance, relative proportion of positive fragments, relative proportion of neutral fragments, relative proportion of negative fragments and relative balance. For each of those time series, we selected a period of 121 days (the day of the crisis plus 60 days before and 60 days after the crisis) for further inspection. The results will be presented in chapter 4.1.

During the second and main part of our empirical analysis we focus our attention on investigating whether public and private companies differ in the way they are perceived by the broader public. To do this, a social listening audit of 3,107 German companies was conducted. The listening contained text fragments of five reputation dimensions following the so-called Reputation Quotient by Fombrun (Fombrun, 2000) that is probably the best-known approach to measuring reputation (Fombrun & van Riel, 2004). With this approach, Fombrun became a pioneer in reputation measurement and practice in the late 1990s which is why it is nowadays a well-proven tool. The Reputation Quotient consists of six dimensions, which are in turn subdivided into 20 key performance indicators (see Figure 1). The main criticism of the reputation quotient lies in the strongly distorting effect which is rooted in the survey of only the most important stakeholders. This measurement error is reflected, for example, in the Fortune ranking (Fombrun et al., 2004). Furthermore, according to Schwaiger et al. (2011), reputation drivers outside the company's sphere of influence can no longer be clearly differentiated from the direct consequences of good or bad communication practices and initiatives.

Critics also doubt the approach of adding emotional components to a model based on fundamentally functional dimensions. In this way, the inherent functional approach of the Reputation Quotient is contradicted (Schwaiger et al., 2011). Thus, more complex and refined models have been developed over the past years. Still, the concept is the most well-established one and it provides a solid base for our analysis that is in need of a general categorisation of the fragments to further analyse them. We also did not include the emotional dimension to avoid possible bias following from it.

The collected fragments were divided up into their tonalities and the data set was then divided into two groups. The first group contained all the companies belonging to sectors of industry which are primarily dominated by public companies (for example: airports, supply and disposal companies, and savings banks). The second group contained all the companies belonging to sectors of industry which are primarily dominated by private companies (for example automobile manufacturers, tour operators and perfumeries).
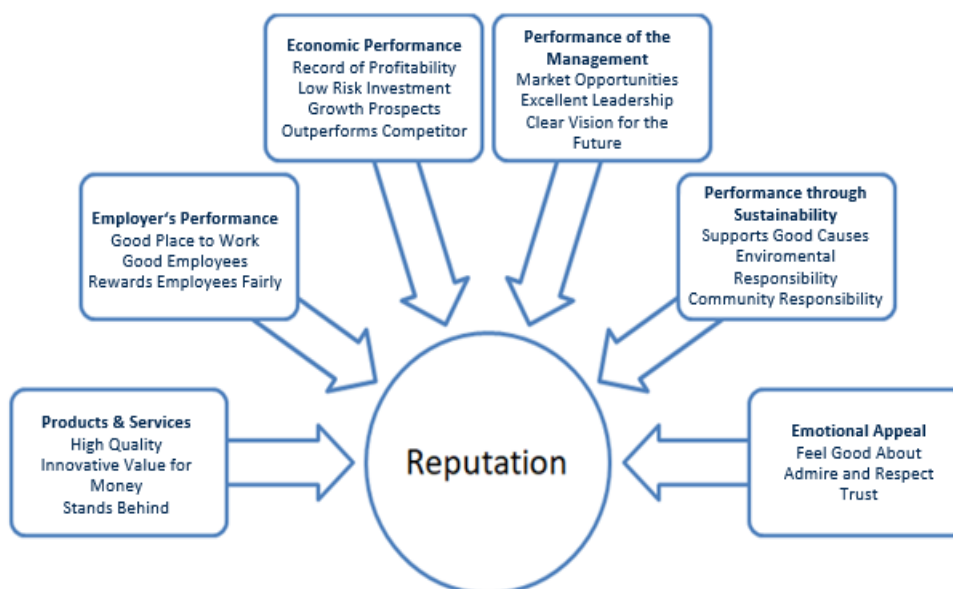
Figure 1: The six Dimensions of the Corporate Reputation Quotient.

RESULTS

Social Listening as a Suitable Method

Our analysis conducted on three companies from or close to the public sector aims at showing that social listening is a valuable tool in examining reputation not only in the corporate but also in the public sector. As follows, our results do suggest this.

Figure 2 illustrates an exemplary time series of the hospital operator 'Malteser'. The graph shows the daily values for the total number of fragments starting on the 1st of September 2019 and ending on the 30th of December 2019. To make the graph easier to understand from a visual point of view, the simple 7-day moving average (dark line) was added to the daily

values (light line). The outlier on the day of the crisis is clearly visible.

The interesting question is whether the crises whose existence is shown by the newspaper publications mentioned above are indeed verifiable in all of the time series. In some of them, it is quite obvious (for example in figure 2). In others, the situation is less clear. To make a clear-cut distinction between a crisis being detected correctly by social listening and a crisis not being detected correctly, we decided on the following rule: A crisis is detected by a social listening time series if the graph has an outlier on the day before the publication of the crises, the day of the publication of the crises or the day after the publication of the crisis. Values higher than the 3rd quartile plus 1.5 times the interquartile range or lower than the 1st quartile minus 1.5 times the interquartile range were considered outliers. The first time frame

was set to a period of 30 days before to 30 days after the publication of the crisis, and the second time frame included the period from 60 days before to 60 days after the crisis. All in all, we had 54 tests (3 crises with 9 time series each and two tests for each time series). The following table (Table 1) shows which of these tests did detect the crises correctly (1) or did not (0).

As is quite obvious, the crises do reflect themselves clearly in the time series of the absolute values. In the relative values, there is almost no incidence of a crisis being detected. Also, there is no visible substantial difference between the three investigated crises, giving strength to the idea that crises reflect themselves in the absolute values of a social listening audit regardless of the company in question. All in all, at least when using absolute values, social listening does provide an at least plausible method of analysis in the context of public companies, too.
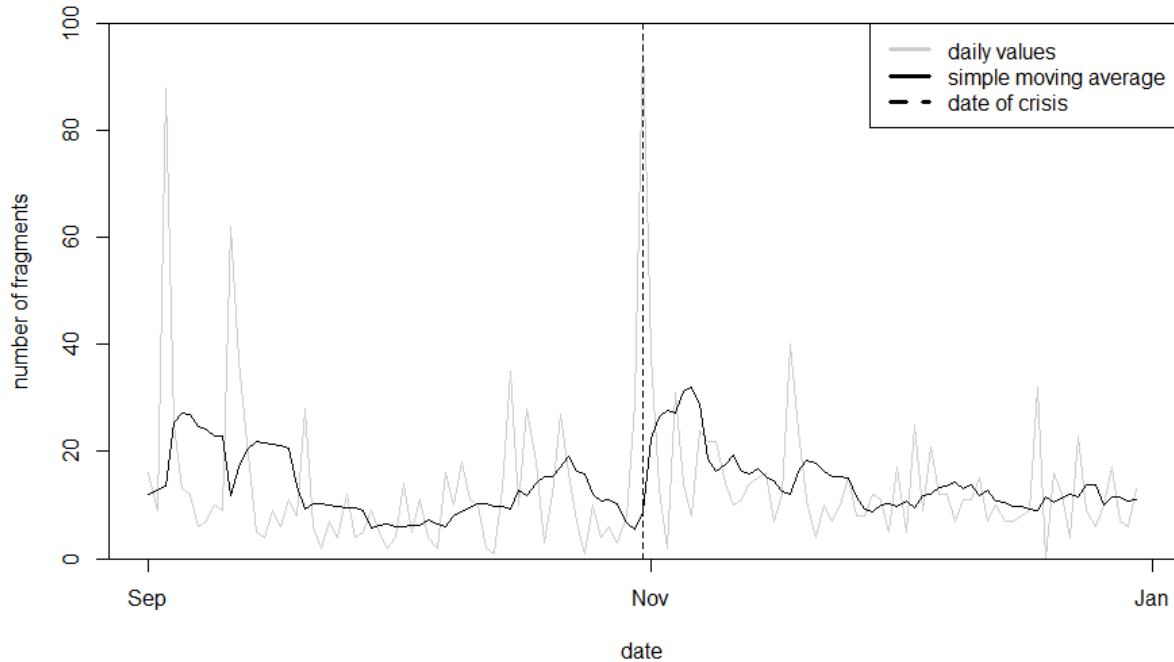

Figure 2: Daily values for the total number of fragments for Malteser.

Table 1: Detection of crisis using different tonalities.

Variable	Malteser (30 / 60 days)	Sparkasse München (30 / 60 days)	BER (30 / 60 days)	Sum
Total	1 / 1	1 / 1	1 / 1	3 / 3
Positive Abs.	0 / 0	1 / 1	1 / 1	2 / 2
Neutral Abs.	1 / 1	1 / 1	1 / 1	3 / 3
Negative Abs.	1 / 1	1 / 1	1 / 1	3 / 3
Balance Abs.	1 / 1	1 / 1	1 / 1	3 / 3
Positive Rel.	0 / 0	0 / 0	0 / 0	0 / 0
Neutral Rel.	0 / 0	0 / 0	0 / 0	0 / 0
Negative Rel.	0 / 0	1 / 1	0 / 0	1 / 1
Balance Rel.	0 / 0	0 / 0	0 / 0	0 / 0
Sum	4 / 4	6 / 6	5 / 5	15 / 15

Reputation of Public vs. Private Companies

After gaining quite a strong indication that social listening works at least to some degree as a tool for measuring the reputation in a general perspective in both the private and the public sector, we focused our attention on investigating whether and how public and private companies differ in the way they are perceived by the broader public.

The following graphs illustrate exemplary comparisons between these groups for the management dimension of reputation. The upper graph contains comparisons for the total number of fragments, the number of positive fragments, the number of neutral fragments, the number of negative fragments and the balance. The lower graph contains comparisons for the relative proportion of positive fragments, the relative proportion of neutral fragments, the relative proportion of negative fragments and the relative balance.

As is quite obvious at first glance, the absolute values for private companies are higher than for public companies. As for the relative values, the picture is less clear. The differences between the two groups seem to be smaller on average, with one of the values being virtually equal. Regarding the values that are not equal, in one case private companies have higher values, while in two other cases public companies have higher values. To investigate this phenomenon a little more closely, t-tests were conducted for each of the 45 variables from the five dimensions of reputation (25 variables of absolute values (written in capital letters) and 20 variables of relative values). Figure 5 shows the p-values shows the p-values of those 45 tests. The upper horizontal line represents 5 percent significance while the lower line represents 1 percent significance.

Out of the 45 tests conducted, four were significant at the 5 percent level, while 25 others were significant at the 1 percent level. This result indicates significant differences between the groups, but with this number of tests, it is likely that some of them show significant differences by pure chance. To counter this, the p-values were corrected. Unfortunately, there is no universally accepted method of correction, so we used a variety of correction methods to make sure our results were not based on some arbitrary choice of correction. In specific, the methods used were: Holm (1979), Hochberg (1988), Hommel (1988), Benjamini and Hochberg (1995), Benjamini and Yekutieli (2001) and Bonferroni (2007). Taking this into account, every t-test has 7 p-values (one uncorrected and one resulting from each method of correction). Figure 6 shows how many how many of those 7 values are significant at the 5 percent level.

Almost half the tests (to be exact: 20) are significant at each of the seven p-values. Another nine are significant for at least one p-value. Only 16 of the 45 tests show no significance at all. Taking all this into account, it does not seem far-fetched to claim that public and private companies differ at least to some degree in the way their reputation is perceived online. This opens up the question of how the two types of companies differ in their reputation. To explore this question in more detail, we examined each dimension of the reputation separately. Tables 2 and 3 show the results for the means of the absolute and relative values:

In the employer dimension, the number of fragments in each of the tonalities is higher in the private sphere than in the public sphere. Also, quite striking is the fact that the balance is close to zero in both cases (with the public balance being negative and the private balance being positive). On the other hand, private and public companies are virtually the same in terms of the negative and neutral proportions, while displaying only minor differences in the other two tonalities. The situation is similar in the management dimension (also see figures 3 and 4). Here, too, the private companies have higher absolute values than the public ones. The most striking difference to the previously discussed dimension is that in the case of management both absolute balances are positive. A look at the relative values shows that the differences are not large in this case either. The situation for products and services is not much different. Again, a

strong predominance of the private companies in the absolute values even though in this case the balance of the public companies is somewhat higher than that of the private companies and there are relatively small differences in the relative values. The dominance of the private companies is even more obvious in the profitability dimension. The absolute number of fragments of private companies in every tonality is a multiple of the absolute number of the public companies. Even for the relative values, there is quite a substantial difference in the positive values and the balances. The dominance of the private companies in the profitability dimension is only surpassed by their dominance in the sustainability dimension. Not only are the numbers of fragments much larger for every tonality, but the relative values of the private companies also surpass the values of the public companies except in the case of negative values (where they are almost the same). Concerning the expectation that the reputation of public companies is 'lower' than that of private ones, the above tables paint quite a clear picture: for the absolute values, the balance of the private companies is larger in every dimension except products and services. For the relative values, the balance for private companies is larger in every dimension except management and products and services. All in all, this is at least an indication that the reputation of private companies is 'higher' than that of public ones.

Turning to the second expectation, the comparison of the balances over the different reputation dimensions also makes apparent that in many cases the public companies have values closer to zero than the private companies. This applies to both absolute and relative values. As mentioned above, for the absolute values, the balance for public companies is smaller (and closer to zero) than that of the private companies in the dimensions of management, profitability and sustainability, while in products and services, the opposite holds true. For the employer dimension, the balance of the private companies is also larger than that of the public ones, but both can be regarded as 'virtually zero'. For the relative values, the balances of the public companies are smaller (and closer to zero) in three of the dimensions (employer, profitability and sustainability), while they are larger in the other two dimensions. This lends credibility to the idea that the reputation of public companies is more balanced than that of private ones. On the opposite side, it also needs to be mentioned that the absolute number of neutral fragments is larger for private companies than for public ones in every dimension, while the neutral proportions are more or less the same in almost all of the dimensions (products and services being the only exception here, with a neutral proportion of 0.31 for public and 0.37 for private companies).

A greater equilibrium of the reputation of public companies compared to private ones becomes somewhat more apparent if a comparison across dimensions is made for the absolute values. The coefficient of variation for the different tonalities across dimensions is smaller for private companies for almost every tonality. For the total number of fragments, public companies have a coefficient of variation of 0.74, while private ones have a coefficient of variation of 0.83. The situation is similar for the negative

fragments (0.55 vs 0.92) and the neutral ones (0.69 vs 0.85). Only for the positive fragments (0.92 vs 0.76) and the balance (1.33 vs. 0.58) is the situation reversed. For the proportions, the situation is only slightly different. The coefficient of variation of the public companies is smaller for the negative proportions (0.13 vs 0.17) and the neutral proportions (0.29 vs. 0.32), while it is larger for the positive proportions (0.24 vs 0.11) and the balances (0.38 vs 0.20). All in all, the idea that public companies have a more balanced reputation than private ones tends rather to be confirmed than disproved by these results.
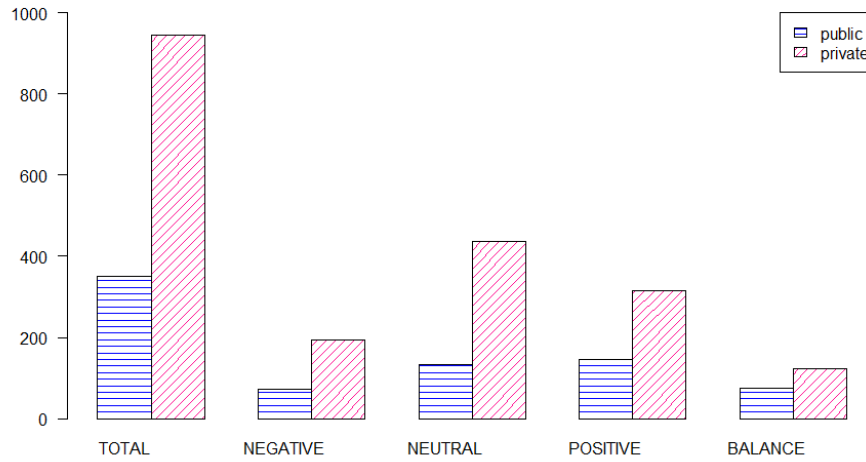
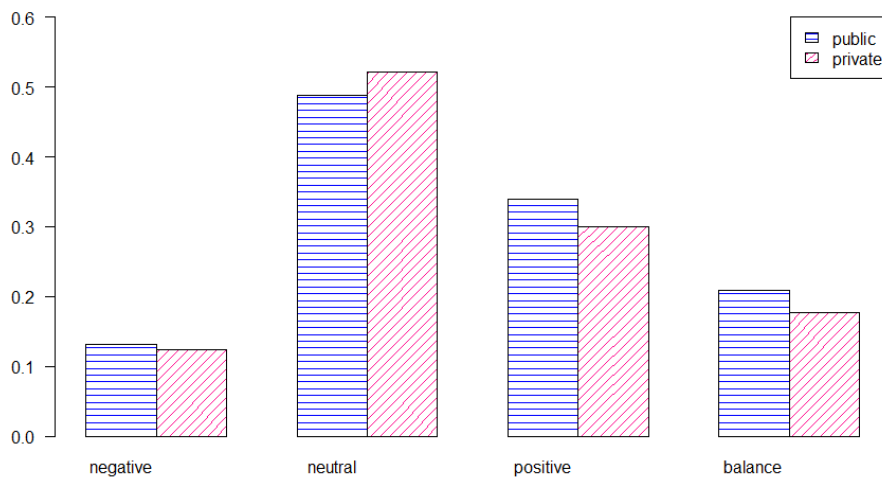**Figure 3:** Comparison of the mean values of the absolute number of fragments of different tonalities.

Figure 4: Comparison of the mean values of the proportions of fragments of different tonalities.
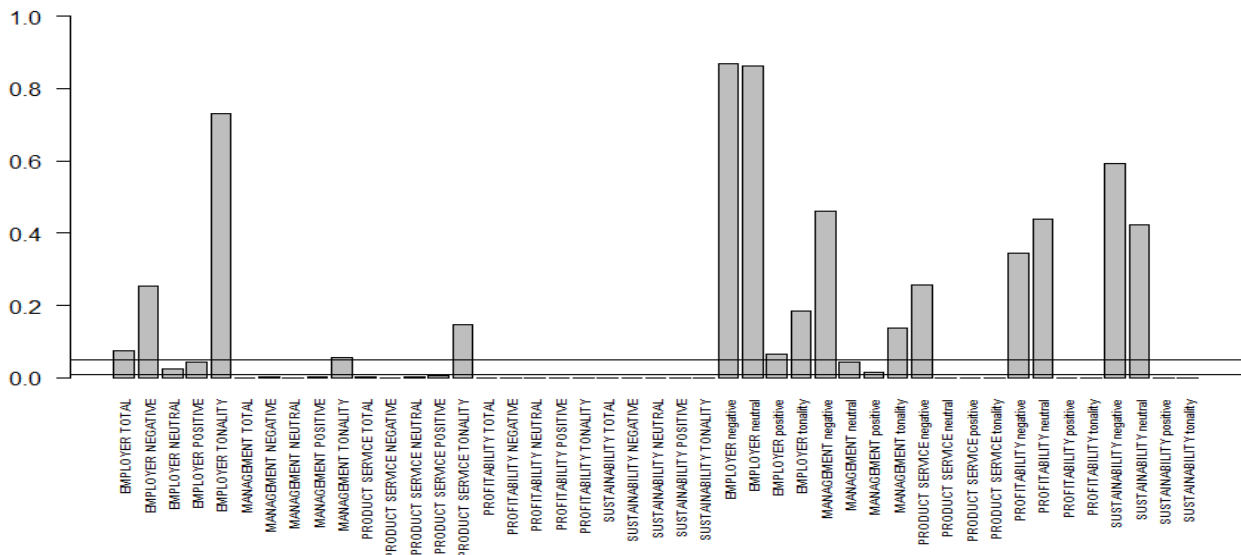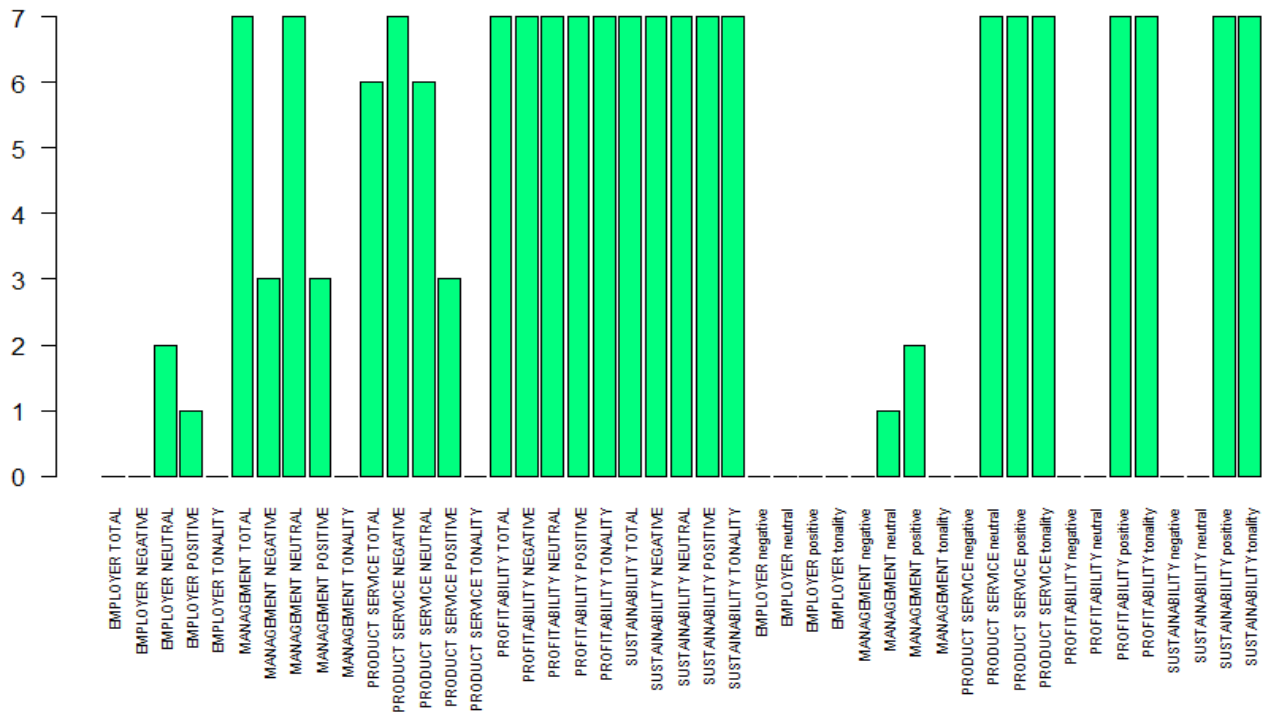
Figure 5: p-values of t-tests for each reputation dimension and tonality (uncorrected).

Figure 6: Number of significant p-values for each reputation dimension and tonality.

Table 2: Mean values of the absolute number of fragments of different reputation dimensions.

	Employer		Management		Prod. and Serv.		Profitability		Sustainability	
	Publ.	Priv.	Publ.	Priv.	Publ.	Priv.	Publ.	Priv.	Publ.	Priv.
Total	79	149	351	944	468	2051	185	822	78	420
negative	28	49	72	193	79	567	55	212	15	90
neutral	24	49	133	435	133	803	60	280	34	156
positive	26	50	146	315	256	681	70	330	29	175
balance	-3	1	74	122	178	114	15	118	14	85

Table 3: Mean values of the proportion of fragments of different reputation dimensions.

	Employer		Management		Prod. and Serv.		Profitability		Sustainability	
	Publ.	Priv.	Publ.	Priv.	Publ.	Priv.	Publ.	Priv.	Publ.	Priv.
negative	0.13	0.13	0.13	0.12	0.14	0.16	0.15	0.14	0.11	0.10
neutral	0.26	0.25	0.49	0.52	0.31	0.37	0.27	0.26	0.30	0.31
positive	0.25	0.28	0.34	0.30	0.43	0.36	0.28	0.36	0.26	0.36
balance	0.12	0.15	0.21	0.18	0.29	0.20	0.13	0.22	0.16	0.26

DISCUSSION

Limitations

While we did use several varying tools for our analysis, there are still some aspects that bring a limit to our results.

First of all, it is worth mentioning that our assumption that crises are detected by means of outliers is just that: an assumption. The research situation regarding crisis detection by means of social listening is still very poor. The task of subsequent research should be to remedy this.

Also, as they are based on the analysis of three German public organisations and their reputation in a crisis situation, the results concerning the test of applicability of social listening to the reputation measurement of the public sector are limited in their geographical and situational scope.

And lastly: Although the number of companies analysed in the comparison between the two sectors is quite high, they are all German companies, too. So the geographical limitation applies to the second and main part of the analysis as well.

Implications

Concerning the different dimensions, the most striking differences are particularly marked in the two dimensions of economic performance and sustainability performance. The causes are, among other things, of substantive nature. Private sector companies were founded with the intention of making a profit. This is their core purpose. This is particularly evident in the case of listed companies, whose share price and profit development are evaluated daily. In contrast, state-owned companies are not primarily geared to making the highest possible profits (Fan et al., 2017). The organisation as a company and not as an administrative unit serves primarily to perform tasks as efficiently as possible. The state often subsidises public sector companies because they cannot cover their costs from their own resources (Clyde & Karnani, 2015). In a way, the state is the customer of these companies. This is also reflected in the perception of reputation: the public tends to expect less economic performance from public sector companies than from private sector companies. As a consequence, economic performance takes a minor role in public sector reputation management, so that less emphasis needs to be placed on communication. There are also major differences in sustainability performance. Public sector companies are essentially charged with working for the common good (Goncalves et al., 2013) and 'in pursuit of the public interest' (Lewis, 2006, p. 694). These companies collect household waste, ensure clean streets, operate hospitals and care for the elderly. With this mission for the common good, public sector companies often fulfil the requirement for sustainable corporate management with social, economic and ecological responsibility already in their original business purpose. In contrast, free enterprise companies are first and foremost committed not to the common good, but to their investors. While there are different approaches to what the purpose of a company is, none of them are directly aimed at sustainability. Nevertheless, it is important for free enterprises not to represent social, ecological or economic irresponsibility in the public eye and thus damage their reputation, which could lead to economic damage in the form of penalties from customers, investors, suppliers, employees and public institutions. Instead, many companies in the free economy are building up a positive perception of their sustainability efforts in order to maintain their 'licence to operate' and secure economic prosperity in the future (Sanders & Canel, 2015). At the same time, these efforts are meeting with growing public expectations that companies add value to society and assume social, ecological and economic responsibility. This leads to the picture that the study has painted: private sector companies strive to achieve a positive reputation for sustainability, and these companies are discussed in public with a focus on their sustainability. For public sector companies, on the other hand, it tends to be conceded that they work for the common good anyway, so that this is a given and is discussed less intensively. For the reputation management of companies in public ownership, this means that they should make their sustainability communication dependent on whether they are seen as a company oriented towards the common good anyway hospitals, care facilities, city cleaning services, etc. and are thus able to give lower priority to this aspect in their communication or whether they do not have this public welfare bonus in the public eye. This can apply, for example, to publicly owned companies that operate according to economic principles in the light of public opinion, such as port and logistics companies or public utilities. These public companies are subject to the same demands in terms of sustainability as companies in the free economy and should take this into account accordingly in their reputation management.

The present study thus shows that the perception of reputation differs between free enterprise and state-owned companies. Accordingly, the reputation management of state-owned companies should also differ from that of private sector companies. In specific an improvement of the reach and the tonality seems appropriate. as well as an awareness for the differences between public and private companies seems to be useful.

CONCLUSION

The immense role of reputation and its appropriate management and the necessity of reputation measurement have been recognised in the business context for quite some time. The positive effects associated with it, the increase in competition and the growth of social media have now also led to an interest in the topic in the public sector. Although some researchers have already attempted to develop a special measurement model adapted to the public sector (Nuno da Camara, 2017; Luoma-aho, 2007; Lee & van Ryzin, 2019), it is easier to adapt the basic procedures and principles from the business context to the public sector, following Carpenter and Krause (2012). For a transparent and objective comparison and investigation of possible differences between the two sectors, it is also necessary, in the sense of the empirical quality criteria, to use the same measurement model for the reputation measurements. Against this background, our reputation analysis of private and public sector companies was based on the five functional dimensions of Fombrun's reputation model.

The basis of the study was social listening, i.e. the evaluation of communication on the internet (in forums and communities, on blogs, Twitter, Facebook, and online media, etc.). Social listening provides marketing and PR teams with a picture of how companies are perceived, talked about and discussed in society at large (PR Newswire US, 2018). This communication is partly shaped by the companies' own communication. However, there is also a huge part of communication that is not initiated and controlled by the company (Aula & Mantere, 2008). This includes, for example, statements that members of the public make independently of the company, such as customer experience reports, independent reporting by journalists or evaluations in job portals. According to the social constructivist approach, the degree of control companies have over their own reputation is very limited (Wæraas & Maor, 2014).

Social media provide an accurate understanding of customers preferences, beliefs and behaviour. They therefore serve as an important data source and success factor (Falcon, 2016). With the help of social listening, marketers are able to monitor this third-party communication and gain valuable insights into their stakeholder groups. Thus, to a certain extent this new AI-based approach reflects the attention that the public is paying to companies in the private sector or to state-owned companies and thus which reputation dimensions are of greater or lesser importance. As studies of corporate reputation in the public sector are still limited (Tuna & Kilic, 2020), the aim of this study included investigating the concept, its scores, and properties concerning its differences to the corporate context.

In order to answer the research questions from above, the results of this study, in line with those of other researchers (Luoma-aho, 2007), suggest that the reputation perception of companies in the private and public sector differs significantly. Firstly, our findings confirm that the reputation of private companies is higher than that of the public sector (Lee & van Ryzin, 2019; Ressler & Abratt, 2009). In accordance with previous research (Luoma-aho, 2007), the reputation of the private sector tends to be average and neutral. Secondly, this study sheds light on the composition of the different reputation dimensions of the public sector and reveals, in accordance with the results found by other researchers (Luoma-aho, 2007), that the different dimensions tend to be balanced, as the public sector has to meet the needs of different stakeholder groups (Wæraas & Byrkjeflot, 2012). Finally, this study reveals that the reputation of the public sector as a whole tends to be balanced.

Future scholarly research should explore whether the findings regarding the applicability of social listening also have validity in non-crisis situations with a broader range of organisations. Furthermore, the differences when comparing public sector organisations should be analysed in an international perspective, as the cultural and political situation may have an influence on the perception of the public sector.

In addition, further research projects should investigate the differences in reputation perception within the public sector and thus between the different types of state-owned companies – for example, hospitals/care facilities, infrastructure companies, banks, and business development agencies. Moreover, the results in combination with the (theoretical) literature review suggest that there might be general differences in the reputation profile, i.e. the relationship between the different reputation dimensions when comparing public organisations with private companies. This aspect should also be considered in more detail. From a strategic management perspective, the identification of an ideal reputation structure for public organisations would be of value. Finally, social listening is limited to online media and online conversations and therefore cannot deliver representative results concerning the reputation of the organisations analysed. It would therefore be valuable to combine a social listening approach with classical surveys, leading to a multi-methodological approach that delivers comprehensive results.

All in all, this article at least indicated a need for improvement of the reputation management of public companies. But even though some indications have been given in the implications, how specifically this improvement could be implemented still remains a largely unanswered question.

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Conflicts of Interest/Competing Interests

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Not available, crawling provider prohibits forwarding of data.

Code Availability

Available.

Authors' Contributions

Joint work.

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