Is Data Protection a Relevant Indicator for Measuring Corporate Reputation?

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Abstract. Over the last few years the importance of reputation has grown both for individuals and organizations, especially because of the Internet and social media platforms. Considering the value of data and information, corporate reputation also passes through companies' ability to protect sensitive customers' data. When compromised, after a cyberattack or a data breach, one of the most important risks for a company is the loss of customers' trust and the negative impact for future business. Therefore, privacy and security data should be considered as a priority for organizations to safeguard trust and business. In literature, models measuring reputation consider several dimensions, such as leadership, vision, corporate social responsibility, emotional attractiveness. In this paper we analyse the relationship between cyber-threats and reputation and, on the basis of models available in literature, we discuss the possibility of including data protection among indicators for measuring corporate reputation.

Keywords: Reputation · Cybersecurity · Trust · Communication

1 Introduction

Over the last few years, because of the Internet and social media, the importance of reputation has grown. Internet represents a formidable source of information, able to affect people's impressions; moreover, social media platforms, developed to connect people, are more and more used by organizations for their online business, and increasing marketing in a different way [1].

Reputation is a multidimensional construct which includes different meanings [2], and that can be interpreted under several perspectives [3], such as economics, sociology, organizational behaviour. Besides individuals, reputation regards also organizations (corporate reputation), generated by the estimation of internal and external stakeholders.

The perceptual element plays a fundamental role, since corporate reputation derives from an amalgamation of perceptions and opinions developed by its different stakeholder [4], and reflects people's perception [5].

Considering the digital era and the value of data, and given that trust contributes to the building of corporate reputation, it is obvious the relevance for companies to handle cybersecurity effectively, in order to ensure the protection of customers' data. Indeed, a company which fails to protect them might compromise trust and generate a risk for future business. Because data breaches provide a high risk to company's reputation, data privacy and security are perceived by leaders as a priority to manage [6].

In this paper we discuss the concept of reputation and its relationship with cybersecurity, and the issue of including data protection among the indicators usually applied for measuring reputation, according to the available models in literature.

2 About the Concept of Reputation

Research about corporate reputation has been developed especially in management research [7], as shown by the amount of publications in this area [8].

It is a shared opinion that corporate reputation represents a multidimensional and dynamic construct [3, 9, 10]. The main models for the measurement of reputation have focused on the plurality of these dimensions, according to different scholars' orientations. However, reputation represents a social construction [11], where communication exchanges, whatever in physical or digital world, play an important role.

In our view [12], perceptual elements and social relationship with the various stakeholders are the prevailing elements that define reputation. In this sense, corporate reputation can be defined as [13] «*the result of the interactions between a company and its stakeholders, which include customers, users, suppliers, internal staff, consultants, etc. All these actors form impressions and develop evaluations about company activities, so directing their own behavior and affecting that of others*».

In the digital era further factors have to be considered for construction and maintaining of reputation. Given the wide opportunity for companies to conduct business on the Internet, the issues of trust and trustworthiness play a strategic role [14, 15]. When something happens in the public sphere affecting the perception of the level of trust of a company, this will immediately and directly affect the company reputation.

Two elements characterize the concept of reputation: one temporal and one contextual. The temporal element refers to the fact that reputation is built and consolidated over time; moreover, precisely because it concerns values and perceptions elaborated by stakeholders, it cannot be defined in a static way. Perceptions can change and, consequently, reputation can also take on a different connotation. In the same way, reputation changes according to the context of reference.

The same organization can have a good and bad reputation at the same time, depending on the stakeholders involved. For example, a company that works to protect the environment will elicit a positive feedback by individuals embracing this goal, but not by those who, instead, are interested in exploiting territories for economic purposes.

A good reputation is beneficial and convenient in the long term, since, for example, a company can gain a competitive advantage thanks to the better perception that its stakeholders have of it [16]. Other advantages for companies are greater visibility, protection of their values, and the improvement of their capacity to retain qualified personnel [17]. In a global and uncertain market, the challenge for organizations is to improve their ability to build and maintain customers' confidence.

3   Data Breaches and Reputation

Cybersecurity risks are considered an important operational challenge to be handled by global executives [18], and data security is one of the most relevant key macro-trends for the reputational landscape.

Since cybersecurity is a must and customer's trust is strategic for any business, the connection between cyber-threats and reputation is evident [19]. Indeed, companies which cannot protect consumers' data might compromise their trust, generating a risk for future business. Considering that data breaches are growing and that they are associated with a negative sentiment experienced by customers, companies cannot neglect the issue of data protection if they want to keep a good reputation.

It is plausible that the increasing attention to reputation is partially depending on the current regulations, in particular the EU's General Data Protection Regulation (GDPR). This law has made organizations accountable for the protection of their customers' data, requiring them to consider data protection principles "by design" (i.e., since the development earliest stages) and "by default" (i.e., always processing data with the highest privacy protection level). Any breach affecting rights and freedoms of individuals must then be reported to the relevant supervisory authority, not later than 72 hours.

When a company admits to having suffered from a data breach, this generates doubts about the attention paid to security measures and, generally, to its clients. From a reputational viewpoint, this is a twofold problem: both customers and company are victims of the attack, and both parties suffer from the consequences, even if with different responsibilities. It is therefore evident that, besides offering products and services, an organization should guarantee the best protection for its customers and their data. Moreover, each organization should consider the various types of cost derive from data breaches [20].

Popular cases of data breaches have shown their consequences on company reputation. Just think of the massive security breach that struck in 2015 Ashley Madison, a famous dating website for married people, exposing about 36 million users accounts all over the world, including sensitive information like secret sexual fantasies. Or think of Equifax, one of the most important consumer credit reporting agencies, that in 2017 announced a data breach which exposed the personal information of more than 140 million people. In both cases the problem does not regard the economic aspects only, but the urgent need of restoring consumers' confidence.

4   Data Protection and Reputation Measurement Models

Starting from the multidimensional view of reputation, it is possible to identify the different dimensions that contribute to its measurement. The complexity of this issue suggests that to exhaustively analyze a company's reputation, the best strategy is to follow a multidisciplinary approach, in order to avoid focusing only on those dimensions that do not grasp the real reputation value.

Different criteria can be used to measure reputation [21] depending, for example, on the objective and subjective elements or the nature of stakeholders involved. We consider three main approaches for measuring reputation [12], according to the type of stakeholders involved (generalist or specific) and to the type of evaluation (rational

or emotional) of the different dimensions. In this sense, we distinguish three different approaches:

1. The analytical approach addressed to a general audience
2. The analytical approach addressed to a specialist community
3. The synthetic approach.

In the "analytical approach" reputation is evaluated on the basis of the measurements of a variety of cognitive and rational indicators, belonging to many dimensions, which are then weighted and combined in an overall reputation index. The analytic models can be based on a target population of specialists (e.g., financial analysts) or on the general audience. Finally, in the synthetic ones, the basic indicators belong to the sentimental and emotional sphere and are usually less than the ones considered by the analytic approaches.

We report in Table 1 the dimensions and indicators of two well- known models in literature [22, 23] which, according to our classification, are part of the first approach. Given what we have above discussed on reputation, in fact, it is clear that this class is the most affected one by the reputational implications of data breaches.

Table 1. Dimensions and indicators for two corporate reputation measurement models.

Model	Dimensions	Indicators
Reputation quotient (Fombrun et al. 2000)	Emotional appeal	Positive feelings; Admiration and respect; Trust
	Products and services	Support; Innovativeness; Quality; Value for money
	Vision and leadership	Leadership; Vision; Takes advantage of market opportunities
	Workplace environment	Well managed; Good to work for; Have good employees
	Social and environmental responsibility	Support good causes; Environment responsible; Relations with community
	Financial performance	Profitability; Low risk for investors; Outperform competitors; Prospects for future growth
Customer Based Reputation (Walsh, Betty and Shiu 2009)	Customer orientation	Courtesy; Attention; Focus
	Good employer	Good to work for; Treats well people; Leadership

(continued)

Table 1. (*continued*)

Model	Dimensions	Indicators
	Financial reliability	Outperform competitors; Recognize market opportunities; Prospect for future growth
	Product and service quality	Reliability; Innovativeness; Support
	Social and environmental responsibility	Efforts to create jobs; Available to reduce profits for a clean environment; Support good causes

In both models, among the indicators measuring the dimensions regarding how well organization is managed, it is not explicitly considered how well the organization protects data of its own customer. However, considering the central role of customers on building and maintaining corporate reputation, we think that data protection should be included as an indicator for measuring reputation.

From our point of view, customers' data protection could be part, for example, of corporate social responsibility [24], or considered anyhow a relevant indicator of customer orientation. Moreover, this could be a sign of more attention towards customer's rights.

Finally, it is important to consider that company's performance in terms of cybersecurity will affect also the general trust of a customer in the organization itself. That is why taking care of cybersecurity has not only an immediate value for any company but also a strategic one.

5 Conclusions and Future Work

In this paper we have discussed the importance of the relationship between cyberthreats and corporate reputation, and the need for companies to handle the protection of customers' data effectively. This is especially true since data security represents one of the most relevant macro-trends for the reputational landscape.

Since reputation management requires an appropriate measurement approach, the issue is how to include data protection among indicators so as to achieve this goal. We think that data protection is an important indicator showing how companies take care of their customers' data, which can favourably affect the development or the maintenance of their reputation.

We recalled the classification of the various reputation measurement models available in literature, depending on the type of evaluation of the different dimensions and the stakeholders involved. We discussed a preliminary proposal on how to extend one class of reputation measurement models so as to include an indicator measuring data protection.

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