

COMMUNICATING CORPORATE SOCIAL RESPONSIBILITY (CSR)
How Can Blockchain Help CSR Communication

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Abstract

During the past few decades, corporate social responsibility (CSR) has become an essential part of enterprises' marketing strategy not only through the rise of public awareness on social and environmental matters, but also the resulting demand for correct CSR communication. However, there are common difficulties companies face in communicating their CSR actions, and there is a need for a solution. Therefore, this thesis identifies these common difficulties of CSR communication based on existing peer-reviewed literature and proposes implementing blockchain as a solution for these difficulties. Blockchain is a technology system of recording information in a way that makes it practically impossible to change or cheat the system. Blockchain provides the needed transparency, traceability, accountability and decentralization that CSR communication lacks currently. Thus, the objective of this thesis is to investigate what are common difficulties in CSR communication and furthermore, what are the benefits of blockchain and could these benefits overcome the identified difficulties. The findings are based on the existing and suggest that there is a significant business potential in utilizing blockchain in companies CSR actions and therefore communications.

Keywords

Corporate social responsibility; CSR; communications; blockchain technology; blockchain; transparency; traceability; accountability

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1. Introduction

There has been a need for re-evaluating marketing operations purposes as a concept of providing and satisfying the needs and wants of consumers in the marketplace for many decades. Individual satisfaction should be focused on through societal and environmental considerations and therefore the long-run consequences of marketing actions have become increasingly important. Social responsibility has been an interesting topic amongst the general management research area since the late 1940's. Nevertheless, marketing actions have not gone through a definite reformation within the reasoning behind the purpose of marketing, especially after the rise of capitalism (Pravat K, 1974).

During more recent years, corporate social responsibility (CSR) initiatives have more and more become an essential part of business and especially marketing strategies for all types of companies and organizations (Lee et al., 2020). In the present world, social awareness and responsibility is expected from every operator in the field of business since consumers are progressively more interested in the social and environmental impact of their purchases. In the 21st century, over 85% of customers expect companies to report their CSR activities publicly (Fatemi & Dube, 2021). This generates the need for companies to set forth CSR actions in their marketing operations effectively. However, the way that companies and organizations manage and communicate their CSR actions has an important impact on consumers' perception of the motives behind these actions and therefore of the whole company (Lee et al., 2020).

Marketing communications and especially CSR communications that are directed to consumers often contain a persuasive intent of the marketers. Furthermore, persuasiveness can straightforwardly be perceived as manipulation which subsequently leads to skepticism toward CSR messages (Lee et al., 2020). Consequently, transparency is exceedingly important in running an effective CSR program that affects consumer behavior desirably. Especially in the field of social responsibility, transparency in supply chain management and corporate decision-making is the factor that enhances credibility and brand trustworthiness of companies and organizations. Nonetheless, transparency in companies CSR actions is rather difficult to achieve holistically without the implementation of new technology (Ezzi et al., 2022).

Blockchain technology is one of these new technologies that could be utilized in CSR communication in order to overcome common difficulties in CSR communication. Blockchain is a distributed database system that is built on the mechanism of cryptography. Blockchains have the ability to publicly validate, record and distribute transactions in unchangeable encrypted ledgers (Wang et al., 2019). During recent years, research on the application of blockchain technology has been focusing on primarily finance, legal areas, energy sector and other areas exterior to marketing and corporate social responsibility communications. However, blockchain technology has the potential to significantly and positively affect the performance and marketing of corporate social responsibility in enterprises (Ezzi et al., 2022).

The business potential of blockchain has been recognized by many large world-wide operating corporations, such as IBM and Microsoft (Sanka et al., 2021). However, the existing research has remained relatively under researched considering the potential that blockchain has in enhancing CSR communication through increasing credibility which on the other hand improves customer loyalty, customer acceptance, benefits sales and therefore increases profit margins (Boukis, 2020). One of the leading professional services organizations PwC states in their press room online that it is possible to imagine that 10 % to 20 % of global economic infrastructure will be running on blockchain-based systems by the year 2030 (Sengooba, 2018).

There is significant potential in applying blockchain technology in corporate social responsibility activity and communication and the purpose of this thesis is to elaborate on this potential. In this literature review I will go through the existing academic peer-evaluated literature in the field of corporate social responsibility and blockchain technology and try find an answer for my following research questions:

1. What are common difficulties in CSR communication?
2. What are the benefits of blockchain and can these benefits overcome the difficulties in CSR communication?

The first part of this thesis focuses on defining and understanding the concept of corporate social responsibility and acknowledging its importance for marketing operations and their outcome. It identifies common difficulties in CSR communication and therefore displays the potential of applying blockchain technology on these difficulties as a solution. The second part focuses on blockchain technology by displaying its characteristics and benefits regarding the potential value for CSR communication. It discusses blockchain technology on a more general level and does not go into detail on the technological side of it. The last part of this thesis finally connects the difficulties identified for CSR communication with the benefits of blockchain technology in order to find a solution. The discussion part of this literature review is rather important, since there is a lack of evidence in existing literature combining CSR communication and blockchain technology. However, the purpose of this literature review is to elaborate the potential blockchain technology has in CSR communication and provide motivation for future research of the topic.

2. Communicating Corporate Social Responsibility

2.1 Characteristics of CSR and their basis

Corporate social responsibility, also known as corporate responsibility (CR), can be understood to have its beginning traced to the foundations of capitalism back in the late 19th century. That is when big business grew into corporations because of the newfound sources of power. With the rise of corporations eventuated also a new business-government relationship which on the other hand enforced businesses in the societal and therefore social scheme of the world. After the second world war began the phenomenon of social movements which mainly focused on four areas: civil rights, environment, consumers and women. Through these accelerating occurrences, the importance and popularity of CSR became undeniable amongst different stakeholder groups, such as consumers and employees, and therefore demand for companies to communicate their CSR actions evoked. (Carroll & Brown, 2018)

Corporate social responsibility is an ability of a company to extend its focus from profitability to touch also ethical, legal and philanthropic matters (Bedin et al., 2020). It is a

subjective concept without an instinctive definition (Grigoris, 2016). One can begin to understand the meaning and purpose of corporate social responsibility by defining the individual words of the term first. “Corporate” is not only to be understood as corporate forms of businesses, but also to include other forms such as large, medium or small businesses. Although society nowadays focuses generally on larger organizations, because of their prominent visibility, smaller organizations are not to be forgotten. In other words, one could articulate the word corporate as business in CSR. On the other hand, “social” refers to human society, which intrinsically includes communities, states, nations and the world, as pertinent. Therefore, the word social also touches on the life or welfare of a community and embraces other living organisms and the natural environment too. Finally, the word “responsibility” implies an “obligated” state of being held accountable by society (Carroll & Brown, 2018).

There are numerous existing definitions of CSR as a concept. Even though confusion still occurs to a great extent when trying to define CSR, the existing definitions are to a large degree congruent. The confusion is commonly related to the social construct of CSR in a specific context and it is important for businesses to understand the impact of a social context on CSR when developing business strategies. The definitions are frequently biased toward distinct interests without any supporting empirical evidence and thus prevent the development and implementations of the concept (Dahlsrud, 2008).

The Commission of the European Communities defined Corporate Social Responsibility as following in 2001:

“A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis”

As said, CSR can be seen as a social construction which makes it not possible to find or develop an unbiased definition. However, it is possible to study the similarities and differences in existing definitions for the purpose of creating understanding on the concept of corporate social responsibility. Existing definitions consistently refer to five dimensions of CSR, which are the following: environmental, social, economic, stakeholder and voluntariness (Dahlsrud, 2008). These five dimensions can also be seen in the definition

made by The Commission of the European Communities, which according to the study made by Dahlsrud in 2008 has the largest frequency count of 286 in Google. Next, I will minutely go through the five dimensions of CSR.

The environmental dimension of CSR is not included in the early definitions, but it is nowadays an important part of CSR. The environmental dimension refers to the natural environment and businesses and organizations hold a responsibility of taking into consideration the outcoming impacts of their business activities on the natural environment. The lack of the environmental dimension in definitions in the earlier years could be because of the newly accelerated rise of climate change just during the recent decades. In addition, the World Business Council for Sustainable Development differentiates corporate environmental responsibility from corporate social responsibility although when explaining CSR in more depth, the emphasis of environmental and social dimension are equal (Dahlsrud, 2008).

The social dimension of CSR refers to the relationship between business and society and states the importance of the impact businesses have on society. In contrast, the economic dimension includes the socio-economic or financial aspects including the description of CSR in terms of a business operation. On the other hand, the voluntariness dimension refers to the actions that are not prescribed by law and implies that regulatory requirements are just conceptual frameworks, and the minimum performance level of businesses should exceed that. To end, the stakeholder dimension can be understood as implementing different actions according to the concerns of different stakeholder groups with a focus on achieving optimal performance (Dahlsrud, 2008).

Breaking corporate social responsibility down to different dimensions helps us understand the complexity and ambiguousness of the phenomenon and identify its possible pain points where one could utilize blockchain technology. CSR has also been divided by its different purposes in earlier literature: CSR as social obligation, stakeholder obligation, ethics driven and managerial processes (Maignan & Ferrell, 2004). There are numerous other divisions present in existing literature, and going through them all would make a thesis by itself which is an additional point to CSR's complexity. In this thesis, we will focus on understanding the five dimensions when covering CSR.

Now that I have successfully stated the importance of corporate social responsibility and explained the origin of this concept, we can move on to how CSR and marketing relates to one another.

2.2 CSR as a marketing tool

Corporate social responsibility and an enthusiastic approach to it has been an often-occurring topic in marketing literature for decades already. The focus has been especially on consumer responses to CSR initiatives in addition to the benefits in marketing results as a result of corporate actions with a social dimension. In order to contribute to the management of CSR, marketers can expand the focus from only consumers to all stakeholders (Maignan & Ferrell, 2004). As I stated earlier in this thesis, corporate social responsibility takes into consideration the wealth of all stakeholder groups. Nowadays, it is not enough to only consider the wellbeing of consumers, but also the employees, investors and other stakeholders. Switching this focus from consumers to additionally also other stakeholder groups emphasizes the importance of corporate social responsibility for marketers. Communicating CSR actions and initiatives with different stakeholders establishes a crucial element in not only implementation but also success of CSR (Crane & Glozer, 2016).

How a company or an organization manages and communicates their CSR initiatives through marketing channels has a definite impact on how different stakeholder groups operate with them. Irresponsible companies that do not display any CSR actions are at a prominent disadvantage compared to companies that display effective CSR in their marketing actions. These noteworthy disadvantages are illustrated in the results of a study done by Aflac (Carroll & Brown, 2018). Next, I will go through the important components of the results, which are relevant to this thesis by bringing forth successfully the importance of CSR in marketing.

A considerable result of the study was that “75 % of consumers are likely to take some negative action toward irresponsible companies, such as social media postings to boycotts of the companies” (Carroll & Brown, 2018). The impact of social media marketing and the resulting word-of-mouth phenomenon has been stated extensively in marketing literature. These occurring negative actions affect brand image poorly which results in a decline in

brand equity. A poor brand image and equity on the other hand complicates companies' operations compendiously and hinders them from growing and converting new customers.

The importance of word-of-mouth can be seen also in another result about losing customers: "Irresponsible companies stand to lose as much as 39% of its potential customer base, one in four customers will tell their friends and family to avoid these companies" (Carroll & Brown, 2018). The power of word-of-mouth is increasingly remarkable nowadays, since consumers do not always trust companies' marketing actions to be honest. This can be seen as a result of capitalism as an environment where companies can act dishonestly in order to achieve as much of a profit as possible.

The final considerable result of the study considers the stakeholder group of investors: "83 % of professional investors are more inclined to invest in the stock of companies that are known for its CSR, they view these initiatives as an indicator of greater transparency and honesty which results in lower risk" (Carroll & Brown, 2018). There is a perspicuous causal connection between finding investors and displaying successful CSR actions in a company. With that said, focusing on CSR initiatives has a monetarily advantage for companies and organizations as well.

Stakeholder groups hold authority over different organizational resources and have the ability to withdraw these resources if needed or desired (Maignan & Ferrell, 2004). In other words, stakeholder groups have remarkable influence on corporate activities. Keeping them content through including compendious CSR initiatives in their business strategies is vital for them to survive. In order to achieve paramount stakeholder contentment, these CSR initiatives need to be visible in companies' marketing activities. In addition, corporate activism on social issues is increasing in frequency which for its part increments the importance of CSR in marketing (Carroll & Brown, 2018).

2.3 Difficulties in CSR communication

During recent years, debates about CSR have evoked many difficulties related to the concept. One of the foremost debates is considering the fact that there are mixed signals about whether current business is actually committing to acting sustainably and responsibly in order to contribute to making the world a better place to live in (Elving et al., 2015).

A survey done by KPMG in 2013 reveals that reporting CSR is a mainstream part of companies practice worldwide. Over 70% of the survey participants stated that they communicate CSR actions publicly. The increased importance of CSR communications has 'also increased the organizations' efforts to practice CSR. However, this results also in rising demand for transparent and accountable CSR communication, since the public has generated skepticism towards corporate messages. This is a result of CSR's possible decoupling from actual corporate practices and therefore corporations hide their actions behind marketing campaigns. Nowadays there is an insistence on the consistency between corporate actions and communications and terms describing this phenomenon, e.g. "green-washing", have been generalized (Elving et al., 2015).

Corporate social responsibility communication has been continuously criticized to be "a tool to serve business interests" (Elving et al., 2015). However, prior research of the topic has paid relatively little attention to how the communication of CSR initiatives should be done towards consumers and other stakeholders. The cause of CSR communication outcomes can be somewhat complicated to identify, and all CSR initiatives are not received positively by different stakeholders (Lee et al., 2020). Previous studies have shown that successful CSR communication increases stakeholder awareness, involvement and trust in addition to improving the stakeholder-organization relationship as a whole (Kim, 2022). All of these requisitions for successful CSR communication could be achieved through transparency, which blockchain technology provides.

There has been research done on how the public is aware of its consumption power. Results show that consumers are keen to use this power to support 'good' companies and punish 'bad' ones. This shows the importance for companies to show publicly their CSR initiatives and actions. However, the public awareness of CSR behavior has not increased with the increasing speed of company involvement in CSR (Dawkins, 2004). There is clearly room for improvement in the effectiveness of CSR communication and furthermore even a need for it because of the public's increasing power.

Hbaermas developed a CSR communication theory in 1984 stating the idea of instrumental or strategic and communicative or deliberative action. The instrumental action is not oriented towards understanding but tries to influence the other party and their decisions. In CSR communication it refers to persuasion of others and using language as self-presentation of

being responsible (Elving et al., 2015). For instance, the CSR website of car manufacturer BMW (2013) emphasizes their responsibilities in a one-way communication manner and stakeholders can not engage in a dialogue with the company (Seele & Lock, 2015). The persuasiveness in CSR communication can be perceived as manipulation as a consumer, and therefore decreases the credibility of the message.

In contrast, communicative action promotes cooperation and seeks understanding. In CSR, communication is used aiming to achieve understanding on social and environmental issues and in addition to finding ways to address them (Elving et al., 2015). A contrary example, Volvic (2013), a bottled water company, interacted with its stakeholders in a dialogue through a corporate blog about its engagement in a cause-related marketing project with UNESCO (Seele & Lock, 2015). On the contrary, the communicative action enhances the credibility of a CSR message because of the increased trust resulting from two-way communication. Dividing CSR communication into two types of action helps us understand and identify the different motives behind CSR campaigns. By understanding this division we can move forward to discuss credibility gaps as a result of CSR communication.

2.3.1 Perceived manipulateness of CSR messages resulting in skepticism

CSR has been stated by marketing scholars to be discretionary activity of firms with the purpose of improving societal well-being (Mishra & Modi, 2016). Societal well-being can be considered to be improved in this context by companies through doing activities that help the society somehow and then communicating them correctly to different stakeholder groups. However, the way that stakeholders perceive these CSR communication messages can be problematic, since often they come out as manipulative in the eyes of a consumer. This could be a result of the current state of business having a goal of accumulating as much profit as possible. As a result, consumers raise skepticism towards companies' CSR messages by acknowledging the financial gain companies get through communicating their CSR actions.

Consumers are generally more intrigued in engaging with companies that they believe are involved in CSR for moral reasons and not only financial reasons. The results of a study done by Schmeltz in 2014 show that the majority of consumers believe companies engage in CSR just for financial gain instead of moral reasoning. Another study done of consumer

attributions for CSR programs by Ellen et al. in 2006 shows that consumers who believe the company is motivated by the desire to help the community in its business affairs, instead of selfishly using CSR as a cause, are more often likely to pursue their purchase intent. This consumer distrust or disbelief of marketing actions can be conceptualized as skepticism. (Forehand & Grier, 2003)

Skepticism is defined as a tendency towards disbelief and questioning things, in other words a lack of trust in communication and in this case in CSR communication. Studies done on the impact of skepticism towards CSR communication on e.g., consumers purchase intentions are surprisingly suggesting not being that significant as often assumed. However, skepticism leads to the decrease of credibility which on the other hand is one of the most significant difficulties in CSR communication. (Schmeltz, 2014)

2.3.2 Credibility gaps in CSR communication

Especially instrumental CSR communication campaigns evoke mistrust and criticism based skepticism in stakeholder groups towards companies. Over the past few years there have been many examples of corporate action proving that business is not committing to delivering their promises of CSR and in contrast engage in greenwashing practices (Moratis, 2017). As a result, corporations become challenged of their moral legitimacy which furthermore leads to so called “credibility gaps” (Seele & Lock, 2015).

Credibility is defined as “the capacity to be believed or believed in” (Oxford English Dictionary, 2016) and it is a central part of CSR reports being a remarkably effective communication tool. The credibility of an organizational communication message is jeopardized by the inconsistency between words and actions. This results in credibility gaps that are a common challenge of CSR communication (Lock & Seele, 2017).

Credibility gaps occur between the increased levels of corporate social responsibility communication disclosure and public trust that has not increased simultaneously. In more detail, corporate social responsibility performances are being undermined by public trust because of the lack of confidence in not only their data but also in the sincerity of reporting. Although over the past few decades demand and implementation of CSR reporting has

increased, it has not resulted in making more sustainable actions in business or increasing confidence in intentions to take sustainability more seriously (Dando & Swift, 2003). As I have stated earlier, CSR is taking into consideration the wealth of all stakeholder groups and increased demand for corporate CSR reporting not being accompanied with increased intention to act sustainably further deepens credibility gaps.

What is more, stakeholders have different expectations of what companies should do in terms of corporate social responsibility initiatives and the perception of what the companies actually do results in a credibility gap because of the lack of it. Credibility is also considered to be a central part of trust and furthermore a trustful relationship between stakeholder groups and companies is crucial in terms of CSR communication. Therefore, credibility can also be seen as a basis of legitimacy and an outcome of high-quality CSR reporting. (Lock & Seele, 2017)

The ISO 26000, a global guidance standard for CSR, identifies explicitly credibility as a key area for corporate management to focus on in their CSR claims. The standard presents various strategies in order to enhance that credibility, a few of them being related to transparency and second- or third-party judgment (Moratis, 2017). This leads us again to the potential of blockchain technology in adding transparency and optimizing third-party judgment, which I will elaborate in section three of this thesis.

3. Blockchain Technology helping CSR communication

3.1 Characteristics of blockchain (BC) technology

Blockchain is an emerging technology that has the characteristics of decentralization, transparency and openness, encryption protection and information tampering-proofing (Fan et al., 2022). Blockchain is basically a system of recording information in a way that makes it practically impossible to change or cheat the system. Although the concept has been profoundly associated with cryptocurrencies such as Bitcoin and Ethereum, it has also received attention in academic literature and research because of its significant business potential (Hughes et al., 2019). Blockchain solutions have the potential to influence business

models, stakeholder relationships, methods of contracting and power strategic competitive advantage (Saurabh et al., 2022).

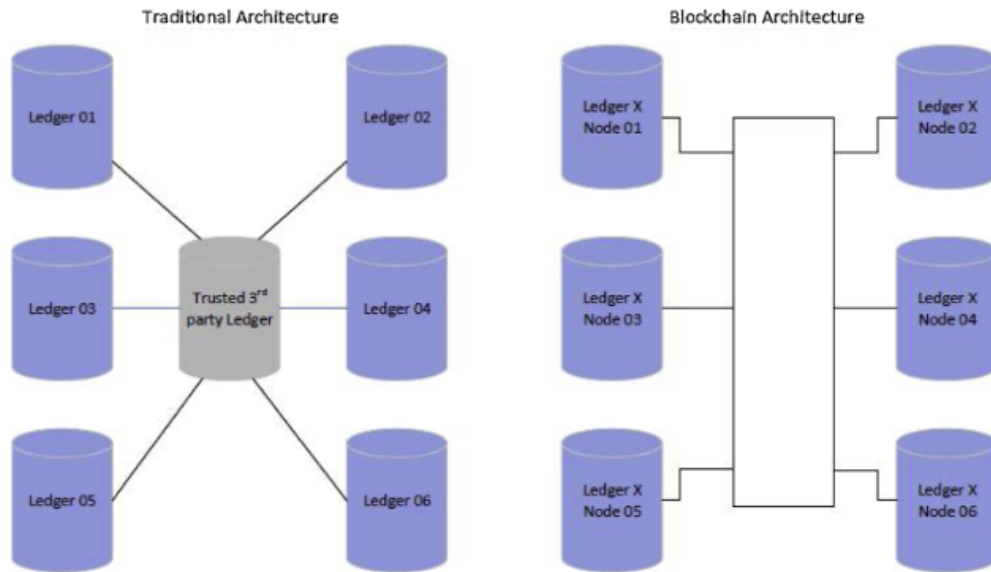
Fundamentally blockchain technology stores data in a new way. The traditional way of tracing information systematically stores data in a centralized storage pattern and whoever holds the pattern has the capability to change the data. In other words, whenever the data is unfavorable for the stakeholder of the traceability system, there is a possibility for them to modify stored information. Blockchain technology provides better visibility and transparency in decentralized databases and therefore promotes information to be almost immune against tampering. This characteristic holds substantial value considering corporate social responsibility information tracing and the credibility that transparency conducts. (Fan et al., 2022)

Blockchain was first proposed by Nakamoto in 2008 as an electronic peer to peer cash system named Bitcoin (Hughes et al., 2019). Furthermore it has developed to be described as a distributed database, or so called peer to peer ledger, that consists of interconnected blocks of data which are protected by cryptographic concepts against tampering (Sanka et al., 2021). These interconnected blocks of data are managed by using the consensus of its network participants, in other words the stakeholders of the data, and therefore works without central authority. In more detail, the data in a blockchain perpetually grows when new blocks are added to the network - hence the name Blockchain (Ly, 2019). Each node in a blockchain network possesses a copy of the blockchain, in other words the whole node, and the existing nodes cannot be altered without the agreement of the whole network (Sanka et al., 2021). Any data modification is detected since the hash of the block changes through any alteration.

The configuration of a blockchain is structured around the distributed database, in other words decentralized immutable mechanism secured with cryptography. From a structural point of view, the trusted third party validator in a traditional model is replaced with the distributed database (Hughes et al., 2019). This difference of traditional and blockchain model, and the interconnectedness of data that comes with blockchain is visualized in **Figure 1** (see figure 1). As we can see, in the blockchain model each ledger has a node, in other words a copy of the blockchain, and therefore all of the ledgers are interconnected. Ledgers can also be seen as companies or organizations.

Figure 1.

Blockchain technology based architecture compared to traditional architecture.



Note. Adapted from Hughes et al. (2019, page 115)

Although blockchain technology has not yet reached the majority of the world's business operations and is not utilized in companies CSR actions and communication extensively, the potential of this new innovation of the internet has been recognized. Blockchain has various adaptations in multiple countries and in larger companies such as IBM and Microsoft (Sanka et al., 2021). Gartner, a large-scale technological research and consulting firm, forecasts the business value of blockchain to be 176 billion USD by 2025 and 3,1 trillion USD by 2030 (Sengooba, 2018). Additionally, the multinational technology conglomerate corporation Cisco predicted that 10% of the global GDP will be on blockchain by 2027 (Sanka et al., 2021). These sanguine predictions of blockchains' future from notable corporations speak for the potential of blockchain technology in many areas of business and especially corporate social responsibility.

To sum up, blockchain is an information technology at its core but it also displays an idea of promoting the development of ecosystems that holds both old ways and new innovation in the sense of centralized and decentralized models. Blockchain technology offers a tool for humankind that proves the existence and exact content of any documents or digital assets at a specific time point. This characteristic of transparency through definite proof of different documents could be utilized in companies CSR actions and communications. Transparency

helps companies achieve the needed accountability and credibility that are continually lacking in current CSR actions. (Swan, 2015)

3.2 Benefits of BC for CSR communication and prior use cases

The innovation of blockchain technology consists of multiple beneficial functionalities and features that have been identified in academic literature in the past few years. However, many of these recognized benefits are often affiliated with the technological side of blockchain technology and are not focusing on the business application side of it. Based on the research done on the benefits of blockchain by Hughes et al. in 2019, Sanka et al. in 2021 and Wang et al. in 2019, I have gathered six benefits relevant for promoting CSR actions and communication, which are listed below:

1. **Transparency and traceability:** Records in the nodes on a blockchain are always time stamped and stored which results in absolute visibility of all activity and transactions for everyone on the blockchain network. Transparent visibility leads to easy traceability in the case of a fraud or otherwise in auditing purposes.
2. **Verifiability and trust:** Cryptographic mechanisms verifies the authenticity of a record in a blockchain such as another database system cannot do. Cryptography efficiently increases human trust in technology and associated protocols because of the integrity and security of action records.
3. **Data integrity and security through non-repudiation:** The data in blockchains is secured against tampering and for an adversary to be successful a lot of practically infeasible work needs to be done. Therefore parties cannot dispute or deny their additions to the data in the blockchain because of its integrity.
4. **Decentralized nature through disintermediation:** Blockchain process allows information systems to be free from 3rd parties, in other words centralized authorities. The systems are therefore autonomous and do not have to take the risk of centralized human actions.

5. **Interoperability:** Blockchain offers a secure data sharing platform where separate parties can share the same data and furthermore synchronize their services. This also leads to the standardization of business operations which adds more transparency compared to utilizing traditional technology.

6. **Efficiency leading to cost savings:** Blockchain systems have the ability to work autonomously while increasing efficiency because of the disintermediation and automation possibilities. This results in a net effect of reduction in costs.

Additionally the application of blockchain into business operations and therefore CSR activities increases technology awareness and overall use of technology. Furthermore, this awareness develops new applications and new understanding of innovative technology use.

The hype of blockchain is still largely riding on the cryptocurrency fever since the way that money can be traded, earned and even created was revolutionized by it. Blockchain is considered to be a finance-oriented technology through its traits of handling data in a secure and honest way (Bedin et al., 2020). In addition to the potential business value of blockchain in the field of finance, studies have also highlighted significant potential in the field of marketing and law (Hughes et al., 2019). However, past and current applications of blockchain are still mainly related to finance somehow. Examples of these finance related applications are foremost cryptocurrencies, but also stock exchange, banking and finance, insurances and trading overall (Sanka et al., 2021).

There are applications of blockchain in supply chain management whereas blockchain provides security, transparency, speed and reduced cost. The records of different supply chains and trades can be stored on a blockchain in order to achieve enhanced tracking and verification (Bedin et al., 2020). Another application is smart contracts, a solution first introduced by Nick Szabo in 1994, that utilizes Blockchain technology to create contracts between two or more participants without needing a third party verifier such as a lawyer. The terms of a smart contract are executed in a decentralized environment by the blockchain system when the terms are fulfilled. Furthermore, these contracts have potential for widespread usage in various purposes and industries (Yli-Huumo et al., 2016).

Moreover, blockchain is applied for registration purposes for instance in education certification and document stamping in order to prevent document forging. In addition, registry of assets can conveniently be kept on a blockchain preventing asset theft and fraud (Bedin et al., 2020). Additionally, health related data can be recorded on blockchain allowing seamless and secure transfer of health records between different organizations such as educational institutes and government (Hughes et al., 2019). Blockchain can be used also in governmental matters such as voting. Many countries suffer from not being capable of carrying out free and fair elections and blockchain makes voting transparent. This blockchain based e-voting can also be implemented in organizations and companies administrative voting (Bedin et al., 2020).

However, existing research and studies on blockchain technology are focusing approximately 80% on the technological aspect with less than 20% focusing on the business application of the concept. This could be because of the problematic nature of converting ideas of blockchain usage from feasibility to widespread commercial reality which requires significant investment allocation in blockchain projects. However, the extraordinary business potential has been recognized in prior studies and many benefits of blockchain could be utilized in corporate social responsibility communication and help companies overcome their difficulties with it. (Hughes et al., 2019)

3.3 The impact of BC on consumer trust

Consumer trust is built on loyalty, product acceptance, commitment and good long-term relationship overall between a consumer and firms (Bozic, 2017). In more detail, transparency reinforces consumer trust through protecting explicitly consumers' data, production transparency and social responsibility. Having a centralized data system harms the trust and also confidence of users because of the risk in the central entity being a single point of failure, which can have disastrous consequences (Ferreira da Silva & Moro, 2021).

During the past few decades there have been many scandals that have undermined consumers' trust in different organizations (Yacoub & Castillo, 2022). For instance, the Volkswagen emission scandal is a great example of how CSR communication affects consumer trust and speaks for how it could have been avoided by applying blockchain. Before the scandal,

Volkswagen was considered to be one of the most trusted corporate brands and socially responsible companies in the world. In 2009 Volkswagen intentionally altered result data on its engines to meet US clean air standards (Valentini & Kruckeberg, 2018). As a result of these alterations unfolding, the brand lost its consumers and investors trust, since an important consumer right of receiving truthful information on products and services was violated.

Being a trust-free technology, blockchain contributes to consumer trust by having tamper resistance characteristics. Applying blockchain technology shifts trust from third parties to a blockchain system and therefore raises the matter of trust in algorithms, which can be problematic for a large group of people (Ferreira da Silva & Moro, 2021). However, the risk of error and data alteration is significant in third party involvement and becomes almost zero in applying blockchain technology instead. Furthermore, this enhances consumer trust significantly and therefore also enhances the credibility of a company.

4. Combining CSR communication and blockchain technology

4.1 General notes on combining CSR and BC

Blockchain technology has the fundamental concepts of being decentralized, immutable and transparent. All of these are also key concepts for CSR actions and therefore enhance CSR communication (Ly, 2019). Earlier in this thesis, I identified two common difficulties in CSR communication based on current existing literature. One of them being stakeholders' skepticism towards companies CSR messages because of the lack of transparency and accountability in their actions and the other being credibility gaps as a result of inconsistency between companies words and actual actions. In addition, I acknowledged the risk of having a central authority and centralized database in terms of outside and internal sabotage.

Later, I also identified a few benefits of blockchain, relevant to CSR communication. These were transparency and traceability, verifiability and trust, data integrity and security through non-repudiation, decentralized nature through disintermediation, interoperability and efficiency leading to cost savings. A solution for common CSR communication difficulties can be therefore found in the benefits of blockchain. It contributes to achieving an adequate

degree of transparency, accountability and consistency in CSR actions and communication (Ly, 2019).

The development of comprehensive transparency is limited by the need of third party intermediary certification within a company's operations. Applying blockchain technology obliterates this need and offers the guarantee of adequate transparency and impossibility of altering information in the blockchain and therefore is considered to be a strategic asset for especially internationally competitive companies (Pizzi et al., 2022). Transparency and tamper resistance is crucial in terms of implementing a successful CSR campaign and communicating its phases to different stakeholders.

Applying blockchain in companies CSR activities and communication has a comprehensive positive impact on their reputation. Additionally, it prevents different scandals from occurring. For instance, Volkswagen's emission data alteration scandal in 2009 could have been avoided by applying blockchain technology in their CSR activities and therefore CSR communications. Blockchain offers a decentralized environment for recorded data, publicly available for the whole network, and through encryption data alteration is almost impossible to happen and because of the following transparency and traceability it is not even favorable for companies to do so. Furthermore, central authorities are relatively easy targets for outside offense as well as internal sabotage. In the distributed system of blockchain, third party authority is replaced with collaboration of users and fully transparent records and therefore no central authority is needed and the risk of sabotage is practically non-existent. (Funk et al., 2018)

4.2 Closing credibility gaps

As I stated in an earlier part of this thesis, companies' actions are not always congruent with their CSR claims and communication. This phenomenon can be described as a credibility gap and occurs when there is a lack of credibility in companies CSR claims and the public trust is

weakened. Credibility gaps encompass a large variety of different situations, but the lack of credibility is common to all of them. In this part of the thesis, I will go through ways companies can close credibility gaps based on the literature I reviewed for this purpose. Unfortunately, there is not yet existing literature of how to utilize blockchain in closing credibility gaps. However, I will propose blockchain as a solution for these situations based on the earlier stated benefits of blockchain technology.

Transparency is one of the most effective ways of enhancing credibility in CSR communication. Companies can achieve transparency through communicating different dilemmas, choices and performance of their CSR actions. This can happen through e.g., sustainability reporting by opening to stakeholders' organizations periodical vision and ambition on their CSR initiatives in addition to areas in which they have an impact on. In order to enhance the effectiveness of CSR communication through transparency, companies can additionally take a more vulnerable position by having a dialog with both supporting and skeptic stakeholders with the purpose of contributing to the formulation, realization and also evaluation of their CSR strategies. (Moratis, 2017)

Sustainability reporting promotes the idea of communicative action in Habermas CSR communication division, and in order to achieve adequate credibility should include integrated reporting demonstrating the ecological, social and economic performance of a company in addition to true cost accounting practices (Moratis, 2017). As an example, the Sportlifestyle brand PUMA initiated publishing an annual environmental profit-and-loss statement in 2011, which contains economic valuation of environmental profits and losses (PUMA, 2011). The report contains a comprehensive explanation of different emission sources, such as land use, air pollution, waste and water use and greenhouse gas emissions, in addition to how the brand is contributing to raising awareness of environmental profit and loss amongst business, governments and science. The credibility of sustainability reporting is based on the trust stakeholders have on companies' transparency. However, this trust could be achieved comprehensively through applying blockchain technology in sustainability reporting. Blockchain contributes to absolute transparency, since the characteristic of being tamper resistant guarantees transparency and traceability. This kind of transparency in CSR actions and communication contributes to enhancing credibility with a significant potential.

According to a study done by Ferreira da Silva and Moro in 2021 there are some links in existing research papers of blockchain technology and consumer trust. Consumer trust is highly dependent on transparency and words relating to it, such as “privacy”, “traceability” and “other security vulnerabilities” are linked to increasing trust in existing research papers of blockchain technology. Blockchain-enabled transparency propagates trust in consumers because of more excellent visibility and verifiability on the compliance requirements of the company’s claims (Rejeb et al., 2020). Therefore, we can acknowledge the connection in applying blockchain technology and increasing consumer trust and therefore enhancing companies CSR communication credibility and slowly closing the credibility gap.

Another way of closing the credibility gap is consistency over a long period of time. Studies show that the longer companies engage in CSR and communicate it the more credibility they obtain. In other words, longevity and explicit reporting is valued in terms of CSR communication (Schmeltz, 2014). However, this is rather difficult to achieve for newly found companies, such as startups, and applying blockchain technology would disregard the problem of longevity. Blockchain provides the transparency and assurance of CSR actions which is difficult to achieve with regular CSR communication as a newly found company. In other words, utilizing blockchain allows bypassing the longevity part of achieving credibility in CSR communication, since the transparency, accountability and disintermediation is guaranteed right from the start.

Conceivably the most effective way of enhancing the credibility of CSR communication is adding second- or third-party judgment to companies’ operations (Dawkins, 2004). Different forms of external auditing, such as third-party involvement, can play a significant role in forming and enhancing the credibility of a company’s CSR communication through displaying their commitment to specific standards and criteria and acknowledging their operation according to them (Moratis, 2017). Adding external auditing offers transparency acknowledged by an independent knowledgeable source. Furthermore, by applying blockchain technology, the need for external auditing dissipates. All transaction history and other CSR related financial activities would become visible for the whole network and in a decentralized manner without the possibility of tampering. In the long run, this efficiency leads to cost savings, since blockchain systems work autonomously. Additionally, the risk of human error is minimized which intrinsically enhances credibility in CSR communication and contributes to closing credibility gaps.

5. Discussion

The purpose and main goal of this literature review was to identify common difficulties in corporate social responsibility communication and through examining benefits of blockchain technology find solutions for these problems. Even though blockchain technology is capable of disrupting numerous industries by offering transparency, auditability, efficiency, revenue and security, it still remains under researched in terms of applying it to business operations (Sanka et al., 2021). Furthermore, blockchain technology has notable marketing application potential and can change the way consumers interact with brands and build their trust in companies CSR communication (Boukis, 2020).

Corporate social responsibility is defined through recognizing five dimensions to it, which are environmental, social, economic, stakeholder and voluntariness (Dahlsrud, 2008). These dimensions elaborate the purpose and motivation behind CSR communication and therefore provides understanding of CSR overall. Although the name corporate social responsibility refers only to social responsibility, it is important to understand the other four dimensions to it in order to operate accordingly to CSR. The environmental part of corporate social responsibility is often emphasized in current research of the topic, but also stakeholder management is recognized as an important area to focus on in CSR. Stakeholder satisfaction, such as the satisfaction of investors, customers and employers, is crucial in order to operate a business enterprise. Therefore, one could argue stakeholder satisfaction to be a constitutional area of corporate social responsibility.

Corporate social responsibility is thus recognized to have a positive effect for business overall when communicated correctly. This thesis identifies common difficulties in CSR communication to be skepticism towards companies CSR messages as a result of perceived manipulateness (Ellen et al., 2006; Forehand & Grier, 2003; Schmeltz, 2014) and resulting credibility gaps (Dando & Swift, 2003; Lock & Seele, 2017; Moratis, 2017; Seele & Lock, 2015). These difficulties in CSR communication are resulting from the lack of stakeholder's trust in companies. Furthermore, the lack of trust is a result of poor transparency, accountability and efficiency in CSR communication (Pomeroy & Dolnicar, 2009). CSR

communication is important in terms of building a relationship between different stakeholders and companies in addition to raising awareness of common issues within companies. Hitherto, CSR has not experienced radical renewal in its implementation practices and as a result CSR communication has not evolved either. Therefore, in his thesis I identify the potential of blockchain technology in disrupting the field of CSR and consequently helping CSR communication.

Blockchain technology is defined in this thesis based on reviewed literature on the field of technology and business to be a distributed database consisting of cryptographed interconnected blocks of data (Fan et al., 2022; Hughes et al., 2019; Ly, 2019; Sanka et al., 2021). The topic of blockchain in business operation applications has received some attention in academic literature but regarding its significant potential in changing the way people do business it remains under researched, especially in the field of corporate social responsibility. Deloitte did a global blockchain survey in 2019 resulting in 86 % of the 1386 high revenue company participants believing that blockchain will finally get mainstream adoption in the business world (Sanka et al., 2021). However, it is a slow process to apply new forms of technology in long rooted ways of operating business.

The relevant characteristics and benefits of blockchain technology is defined accordingly to be 1) transparency and traceability, 2) verifiability and trust, 3) data integrity and security through non-repudiation, 4) decentralized nature through disintermediation, 5) interoperability and 6) efficiency leading to cost savings (Hughes et al., 2019; Sanka et al., 2021; Wang et al., 2019). By identifying relevant benefits of blockchain technology considering the difficulties in CSR communication, solutions are easier to be found and further examined. Companies are in a favorable position of implementing this new potential form of technology in their CSR actions and communication since the defined common difficulties in CSR communications are directly a consequence of lacking the characteristics blockchain technology possesses. Lack of trust in CSR messages could be solved with the trust blockchain brings through transparency, data integrity, decentralization and traceability. This would prevent skepticism from constructing and CSR messages would not be perceived as manipulative. Similarly, credibility gaps would not form if blockchain enabled trust in CSR communication is valid through verifiability, security and again transparency.

The technological side of applying blockchain is CSR activities and therefore CSR communication is a rather difficult task to achieve because of the unfamiliarity of it. Companies would need to allocate a significant amount of funds on the development of the blockchain system which would require a vast amount of researching, technological development, education for different stakeholder groups and implementation and maintenance expenditures. Furthermore, implementing blockchain systems in e.g., accounting and auditing with the purpose of enhancing CSR communication credibility, remains a difficult task because of organizational barriers caused by the lack of knowledge in its potential. To conclude, there is an overall lack of evidence-based research regarding blockchains adoption possibilities. (Pizzi et al., 2022)

The lack of evidence in existing literature on implementing blockchain in CSR communication created a significant limitation for writing this thesis. However, the potential is acknowledged in this thesis by discussing the merging points of CSR communication difficulties and blockchain benefits on a more general level. Through this discussion I have identified and do propose potential future research to be done on the practical level of implementing blockchain in CSR actions and communication. In addition, the cost structure of implementing blockchain is still an under researched area, and researching it would benefit many professionals to actually implement this new technology in their businesses.

The purpose of this thesis was to identify a potential area for blockchain research in CSR communications and give motivation for future research. Blockchain has a remarkable potential of being the future of technology and the internet. Existing research of blockchain technology is almost completely focusing on the technological innovation of it, rather than on the application of the technology in business operations (Ferreira da Silva & Moro, 2021). This resulting gap really highlights the potential marketing, social and economic sciences' researchers have in researching the impact of BC in consumer trust and therefore credibility of CSR communication. Blockchain technology has the potential to automate trust in addition to streamlining processes across various industries and not only marketing, and therefore is noteworthy for researching the application of this technology in CSR communication further.

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