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CORPORATE DIGITAL RESPONSIBILITY AND ACCESSIBILITY IN DIGITAL SERVICES

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ABSTRACT

Digitalisation and new digital services have brought new challenges for entrepreneurs. On the one hand, digital services must be accessible to all users, and on the other hand, in the near future, new legislation will bring new requirements to this field. The purpose of this paper was to understand the current state of knowledge on both accessibility requirements and legislation, and its position in the corporate digital responsibility (CDR) framework. This paper's topic is the multi-step approach. First, this paper reviews CDR from an accessibility perspective, gaining information on the previous CDR framework definitions. Second, it reports the results of an interview with Finnish micro-entrepreneurs on web accessibility in digital services' requirements. Finally, the results were discussed and an understanding was obtained regarding the role of accessibility in digital services in the CDR framework, and topics for further research were identified.

KEYWORDS

Accessibility, Digital Services, Accessibility Directives, CDR

1. INTRODUCTION

Digitalisation rapidly changes the services in a digital environment. At the same time importance of accessible digital services arise. Accessible digital services means that all people can use digital services properly and can understand them. In providing technology that supports accessibility elements, people can choose how to interact with the content and the process or they can choose how to access information (e.g. how to navigate through content with different strategies, access information in many ways and how to personalise the content properly) (Ali, AlBalushi & AlBadi 2017). On the other hand, corporate digital responsibility (CDR) plays a significant role in digital services. Recently there has been discussion related to corporate digital trust and CDR, but there are very few definitions of the term (Herden et al. 2021; Albinson et al. 2019). CDR is defined as the set of shared values and norms that guides an organisation's operations with respect to the creation and operation of digital technology and data (Herden et al. 2021).

However, accessible digital services and their role in the CDR framework have not been investigated enough from the perspective of entrepreneurs. The research gap results from an insufficient understanding about entrepreneurs' knowledge about accessibility, its current and future legislation requirements and how entrepreneurs consider CDR in the decision-making process. New technologies and digital services offer many opportunities to utilise services 24/7. Digital solutions and services should be designed to work for all people whatever their hardware, software, language, location or ability (they should be accessible to people with a diverse range of hearing, movement, sight and cognitive ability). Digital service developers can avoid barriers by taking into account accessibility requirements, thus optimising the user experience (Ali et al. 2017). Accessibility can be viewed as the 'ability to access' and benefit from some system or entity. It supports social inclusion for people with disabilities as well as others, such as older people, people in rural areas and people in developing countries.

Recent studies have investigated CDR's role in artificial intelligence (AI) and data privacy fields (Ashok et al. 2021; Ayling & Chapman 2021; Liyanaarachchi et al. 2021; Elliott et al. 2021) but not its role regarding the requirements for accessible digital services. Only one survey, the Global Digital Inclusion survey (2017), explored by Christopher Joynson revealed important CDR factors regarding digital inclusion. One result pointed out the importance of digital accessibility, and the importance of designing digital services and goods

accessible to all people. Different qualitative research studies have been conducted based on the accessibility of websites – in particular the challenges faced by senior users of websites (Burmeister 2010) web practitioners' thoughts about web accessibility (Farrelly 2011) and the web accessibility of CSR communications (Adelopo et al. 2012) – but more up-to-date research in terms of combining and understanding accessible digital services, CDR and decision-making challenges from the perspective of entrepreneurs. CDR has been investigated from the perspective of large companies (Jones & Comfort 2021). CDR research from the perspective of SMEs' and micro-entrepreneurs' perspectives is missing. It should consider that SMEs and micro-entrepreneurs have digital services that are available for customers, and it would be interesting to understand how SME's and micro-entrepreneurs consider digital responsibility in digital service decision-making process.

The purpose of this paper was to understand the current state of knowledge on accessibility requirements, legislation and accessibility's position in the CDR framework. To increase understanding of this context, in-depth interviews were conducted with micro-entrepreneurs. Microenterprises are companies with fewer than ten employees and an annual turnover of not more than two million euros (European Commission 2021). Micro-entrepreneurs have many different roles in their business, and thus, they are usually holistically responsible for the decision-making process.

This paper's topic is the multi-step approach. First, I present the results from the existing framework of CDR, accessibility in digital services and legislation. Second, I present the results of qualitative research, based on in-depth interviews. Third, I discuss the results related to the theoretical contribution and provide future research suggestions.

2. ACCESSIBILITY'S ROLE IN THE CDR FRAMEWORK

Accessibility, part of digital services, and especially cognitive accessibility in this context means that digital services are simple, consistent and clear to use, providing understandable content, taking into account all users – not only people who have some disabilities or problems in using digital services (Ali et al. 2017). Nowadays, digital service creation includes many accessibility requirements that need to be considered in digital service design and creation. Some of the accessibility requirements are defined by country legislation. The UN Convention on the Rights of Persons with Disabilities (CRPD) recognises access to information and communication technologies, including the web, as a basic human right. The CRPD is a comprehensive human rights document that includes a direct reference to the rights of all people to have equal access to communications technology (CRPD 2016; W3C 2018). Currently, the Web Accessibility Directive of 2016 requires all public sector websites and applications in EU member states to implement, enforce and maintain a uniform set of accessibility standards. The rules laid down in the directive reflect the commission's ongoing work towards building a social and inclusive European 'Union of equality', wherein all Europeans can take a full and active part in the digital economy and society. The directive obliges websites and applications of public sector bodies (with a limited number of exceptions) to meet specific technical accessibility standards (WCAG 2.1.) (EU 2020). Each European country has formed its own legislation based on the directive.

In addition to this directive, there is a newer directive, the European Accessibility Act 2019 (EAA), which aims to improve the functioning of the internal market for accessible products and services by removing accessibility barriers from digital services. The EAA covers a wide range of products, services and functionalities which need to meet the specific technical and non-technical accessibility standards (Ministry of Social Affairs and Health 2021). The EAA requires that both the public and private sector actors guarantee the accessibility of certain products and services. In particular, this new legislation affects the digital services of SMEs. In Finland, the accessibility requirements will enter into legislation on 28 June 2022 (Ministry of Social Affairs and Health 2021). Thus, it is not yet explicit whether or not the coming national regulation will only cover SMEs or also micro-entrepreneurs' digital services in Finland. On the other hand, when legislation requirements are not definite for entrepreneurs, the question of social responsibility arises. How entrepreneurs – especially SMEs and micro-entrepreneurs – involve social and digital responsibility in decision-making and are aware of future legislation and accessibility requirements.

Corporate social responsibility (CSR) and digital transformation are the most important factors of global competitiveness in the modern world (Orbik & Zozul'aková 2019). Definitions of CSR cover various dimensions including economic development, ethical practices, environmental protection, stakeholder involvement, transparency, accountability, responsible behaviour, moral obligation, corporate responsiveness and CSR. CSR encompasses the economic, legal and ethical expectations that society has of organisations at a given point in time. In the digital environment, there is a growing demand to understand corporate responsibility towards digital services (Rahman 2011; Schwartz & Carroll 2003; Hayat & Orsagh 2015). CSR is a broad concept. It can be seen and formulated in different ways depending on the size of the company and industry.

According to Lobschat et al. (2021) CDR is a subset of CSR, that relates to 'companies' responsibilities in the digital environment. CDR provides organizations with a set of shared values and norms to guide their operations with respect to the creation and use of technology and data. In the digital environment, there can be different processes which need companies' digital responsibility (e.g. the creation of technology and data capture, operation and decision-making, inspection and impact assessment, and the refinement of technology and data) (Lobschat et al. 2021). One definition of CDR is that is an extension of a firm's responsibilities that considers the ethical opportunities and challenges of digitalisation (Herdet et al. 2021). CDR becomes a new way for companies to achieve global competitiveness (Schwartz & Carroll 2003). Based on the study by Lobschat et al. 2021, CDR should be seen as a separate field from CSR, also by stakeholders (i.e. organisations, individual actors and different actors from the government, legal or institutional sides and technological actors) and four life cycles linked to data, technology and digital services. CDR culture exists in three different layers: shared values, specific norms, artefacts and behaviours. Many factors can influence CDR culture, such as public opinions, legal requirements and customer factors (Lobschat et al. 2021). Herden et al. 2021, stated different criteria and they use the ESG model as framework for CDR topics. The ESG model is divided into three categories or domains: the environmental, social and governance domains. The CDR topics have been categorised according to the ESG framework, for example, the environmental domain includes digital waste, the social domain includes digital cohesion and the governance domain includes data privacy related topics (Herden et al. 2021). Digital inclusion involves aspects as digital literacy, access to public and privacy services, participation, involves public policies and other social aspects, beyond accessibility to resources and services, is part of ESG's social category. Other topics in this category are, for example, digital cohesion, digital influence and digital freedom. The provision of digital services should not discriminate in regard to the users and should offer accessible services for all users. The governance domain also includes topics which can be seen as enhancing accessibility in digital services, such as data responsibility and data usage (Herden et al. 2021).

New technologies bring a new set of responsibilities for companies. At the same time, new regulations and legislations will be legislated for digital services. Many regulations have an impact on entrepreneurs' decision-making in the digital service environment. For example, the European Union's General Data Protection Regulation (GDPR) is an important legal framework for designing corporation-specific norms for CDR (Lobschat et al. 2021). Accessibility directives and regulations also bring requirements for digital service design. Organisations should include ethical considerations as criteria for their software selection when taking new digital services into use. Legal frameworks provide important guidelines (e.g. the GDPR), but a corporation needs specific engagement with CDR to develop a culture and norms that guide corporate behaviour across levels (Lobschat et al. 2021). Although legislation would define the digital service usage and design, and set the requirements, how much effort entrepreneurs will put into following the legislation has not been investigated enough and it is not known how they get the knowledge of how to implement the legislation requirements. The WCAG 2.1 requirements (W3C 2018) improve not only web accessibility but also other important functionalities of digital services, such as search engine optimisation, which is a competitive advantage for entrepreneurs.

3. METHODS

It is important to tailor knowledge about how entrepreneurs are designing digital services and how they consider accessibility in their decision-making. This qualitative research was designed to explore micro-entrepreneurs' perceptions and understanding of issues related to accessibility in digital services.

The qualitative research focused on the field of accessible digital services and the decision-making process from micro-entrepreneurs' perspective in Finland. The qualitative study aimed to

- describe the current state of knowledge and practices regarding the accessible digital services,
- examine the challenges they face when applying accessible digital services
- identify their understanding about current accessibility legislation

I conducted eight in-depth interviews with micro-entrepreneurs in order to solicit their experience and opinions regarding aspects of accessibility in digital services. I assured the participants of the confidentiality of the interviews to enable them to discuss sensitive or private information. All the interviewed entrepreneurs were locating in Finland.

The criteria for participating was that an interviewee needed to have digital services in use in his or her company and that the entrepreneurs should be responsible for digital service decision-making. The participants represented a variety of business types and they had different level of experiences with digital services. The interviews were semi-structured to allow for capturing comparison data. Demographic data were not collected from the participants. Instead of demographic data, data on experience as an entrepreneur in years, a description of the business area, business size and the current set of digital services were collected. The interviews were conducted between September and December 2021. The participants reported a range of types of digital services that they had in use (see Table 1).

Table 1. The participants' digital services

Participant	Business size (number of people)	Digital services in use
1	9	Website, Instagram
2	1	Website, webstore, Facebook, LinkedIn, YouTube, Instagram
3	1	Website, LinkedIn, Twitter, Facebook,
4	1	Instagram
5	1	Website, Facebook, Instagram
6	1	Webstore, Facebook
7	2	Website, Facebook, LinkedIn
8	1	Website, Facebook
		Website, LinkedIn

After the interview sessions, all the interviews were transcribed and analysed by using common themes. Each transcript was coded for different themes based upon the questions asked in the semi-structured interviews.

Two themes of interest found from interviews were:

1. the current state of knowledge and practices regarding accessible digital services and challenges
2. understanding current accessibility legislation

4. RESULTS

These sections present the results by themes and the characteristics of the research.

4.1 Knowledge about Accessibility in Digital Services and Challenges

Most of the interviewees understood that accessibility relates to finding information from digital services. Two interviewees (P2, P5) associated the term *accessibility* with clear and understandable digital services. Two interviewees (P5, P8) had the knowledge that accessibility in digital services is related to offering better services for people who has limitations in regard to using digital services (e.g. people with visual impairments). One interviewee (P1) stated that accessibility means having contact information available on a website. After the interviewee responses, I explained the meaning of web accessibility in the context of digital services in order for them to be able to understand the concepts.

When the interviewees gained an understanding of the accessibility concepts, they had to think how they considered accessibility elements in their digital services. All the interviewees mentioned that they have tried to build clear and simple websites, e-commerce stores and other digital services without knowing that these functions (being clear, understandable and easy to use) are part of accessible digital services. Five interviewees (P3, P5, P6, P7, P8) mentioned that they have focused on using more understandable language in the digital content. None of interviewees thought that people with visual limitations or other limitations would use their services by themselves or that they should consider these people when designing digital services.

The challenges in creating accessible digital services were diverse, but the main challenges were the lack of knowledge and resources, proper testing with users and the feeling that they do not need to have accessible digital services. One interviewee (P2) mentioned that he wanted to create simple digital services, but he was not sure if he has managed to do it so he was looking for help in evaluating the current digital services. Five of the interviewees (P1, P2, P5, P6, P7) mentioned that their digital services have been tested by family member, colleague or friend. Four of the interviewees (P4, P6, P7, P8) also tested the digital services themselves.

4.2 Understanding the Legislation

The knowledge about the legislations and directives in the digital environment was partial. During the interview, I asked about the interviewees' knowledge about the current legislation related to digital services, as well the factors that they need to consider when taking new digital services into use or updating the content to digital services. All the participants were familiar with the GDPR and what requirements it brings to entrepreneurs' digital services. Four interviewees (P2, P3, P6, P7) were complying with the requirements of the GDPR in their digital services, in terms of respecting the rights of consumers and informing customers about data usage in their digital services. Two interviewees (P2, P8) mentioned that they do not consider or apply any legal requirements in their digital services.

None of interviewees were familiar with the current Web Accessibility Directive or Finland's national legislation based on this directive. Some of the interviewees (P2, P4) had noticed that, in particular, the parties of public sector have done website renewal projects recently, but they did not understand why the renewals had been done. None of the interviewees were familiar with future preparation for legislation based on the EAA, and its requirements for SMEs.

5. DISCUSSIONS

The purpose of this paper was to understand the current state of knowledge of the accessibility requirements and legislation, and its position in the CDR framework. The other part of this paper revealed the results of qualitative research which aims to understand micro-entrepreneurs' knowledge about accessible digital services and the legislation based on digital services.

Based on the existing definitions and frameworks of CDR, accessibility in digital services can be seen as part of this framework. Using the ESG framework, accessibility's position falls under the 'social' category and under the 'governance' domain. Accessibility in digital services can be seen part of digital inclusion, which includes the availability and accessibility of digital technologies. It can be seen as part of fairness as all humans should be treated equally; it can also be seen as part of human-computer interaction in which people use digital services and interact with them. Companies should understand their responsibility to produce understandable digital services. If log-in or registration processes are not understandable, people do not know how companies are going to use their information.

The group of entrepreneurs who participated to interview were not aware of the accessibility requirements of digital services, the legislation or directives which are valid for the public sector and a specific group of private companies nor the EAA, which is based on the coming legislation for SMEs in the near future. However, the interviewees had sought to make their digital services simple and easy to use, and to use understandable language in their digital services without knowing that the above features are the features of accessible digital services. The most common reason for implementing and maintaining digital services is a lack of knowledge of how to make services accessible. In previous studies this lack of knowledge has been reported as one reason to not implement accessible services (Kärpänen 2021).

All of the interviewees were familiar with the GDPR, but some of them not followed the legislation requirements or thought them mandatory in their digital services. When legislation does not exist, its importance is not seen relevant in digital services' daily activities. The new European GDPR strengthens the rights of data subjects and enhances the obligations and responsibilities of those who collect, process and store personal data (Parlov et al. 2018). Based on ESG classification, the GDPR can be seen to belong to the 'governance' category in which there are most of the data privacy issues. To be able to understand GDPR requirements, the digital services should provide understandable instructions or clarifications for people. This is part of being accessible and especially part of cognitive accessibility features.

Future research should examine SMEs' awareness and corporate awareness of accessibility features and decision-making features. There is a need for a deeper understanding of accessibility in the planning of digital services and accessibility relation to CDR. Some country-specific research has conducted related to the GDPR (Parlov et al. 2018). Accessibility in digital services is not understood as well as the GDPR. It is recommended that more research by country level is conducted, especially now when the legislation based on the EAA is coming into effect for entrepreneurs. Another future research topic would be managerial decision-making features related to CDR. Digital services are changing rapidly, new technologies and services are popping up for customers and customer behaviour is changing constantly in the digital environment. CDR is wide framework and new CDR topics arise when new digital solutions come to the market.

6. CONCLUSIONS

As a conclusion, it should be emphasised that entrepreneurs should consider accessibility directives and legislation when designing digital services. Based on the results of the interviews, an understanding of the existing research was obtained, as well as an understanding of topics for further research on accessibility in digital services. The findings of this study lead to the following conclusions:

- 1) Accessibility in digital services should be seen as a part of the CDR framework. Legal requirements (e.g. the GDPR) influence CDR culture (e.g. the GDPR) (Lobschat et al. 2021). Accessibility directives and country-specific legislation are already valid in the public sector's digital services, and in the near future, the legislation will affect entrepreneurs.
- 2) There should be more information available for micro-entrepreneurs about how *accessibility in digital services* means can enhance their digital services. When they understand the benefits, more support is needed in order to be able to implement the requirements for a digital service's content and platform. This viewpoint must be taken into consideration when planning more research in this context.
- 3) There is a need for further research in this field among SMEs because the SMEs are part of the national legislation in EU countries. Digitalisation is shaping our digital services and providing more digital platforms, application and services. At the same time, we need to understand how to support companies of all sizes in understanding how to create accessible digital services and how digital responsibility in their decision-making can be a competitive advantage in their business. When they understand the benefits, more support is needed in order for them to be able to implement the requirements for digital services.

The roles of CDR and accessibility should be seen as the factors of corporate reputation, customer satisfaction and trust. Some studies related to this field have been conducted, and the results have revealed that customer satisfaction, trust and corporate reputation mediated the relationship between CSR and customer loyalty (Pitafi et al. 2020). Digital trust, digital responsibility and accessibility in digital services should be seen as companies' competitive advantage and just factors that need to be implemented based on legislation requirements.

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