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Does CSR digitalization improve the sustainable competitive performance of SMEs? Evidence from an emerging economy

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Does CSR digitalization improve the sustainable competitive performance of SMEs? Evidence from an emerging economy

Abstract

Purpose – This study aims to investigate the influence of the digitalization of corporate social responsibility (CSR) on the sustainable competitive performance (SCP) of small- and medium-sized enterprises (SMEs) in an emerging economy and to examine the moderating effect of digital organizational culture on this relationship.

Design/methodology/approach – Data collection was conducted through a survey completed by 311 owners and top managers operating in service, trading, and manufacturing sector SMEs, positioned within the twin cities of Pakistan. A convenient purposively sampling technique and snowball method were used for data collection, and structural equation modeling (SEM) was utilized for data analysis.

Findings – The results of this study suggest that CSR digitalization has a markedly positive influence on the SCP. Digital organizational culture appears to moderate these relationships.

Practical implications – This study highlights the importance of considering CSR digitalization and fostering a digital organizational culture for SMEs to achieve SCP. The findings provide valuable insights for strategic decision-makers, including owners, CEOs and senior management of SMEs, to enhance their knowledge concerning how and why a digital organizational culture makes it easier to digitalize CSR activities, with the ultimate objective of ensuring SCP and SME growth. Overall, the findings of this study have practical implications for policymakers and managers in SMEs as they can promote the adoption of digital technologies in CSR initiatives and develop a digital organizational culture within the organization. This would contribute to enhancing the SCP of SMEs. Thus, this research is beneficial for business actors, policymakers, and researchers seeking to enhance SMEs' SCP.

Social implications – This study provides valuable guidance to the senior management of SMEs regarding successfully adopting and integrating digital technologies into their CSR practices. This integration can lead to increased social and environmental benefits, which positively impact both business and society. Policymakers can use these findings to develop policies and initiatives to encourage CSR digitalization among SMEs. By providing support and incentives for digital transformation, policymakers can help SMEs adopt digital tools to improve their CSR performance, contributing to economic growth and sustainability.

Originality/value – This study pioneers research on the links between CSR digitalization, digital organizational culture, and the SCP of SMEs. This study contributes to the literature by defining CSR digitalization as an antecedent to the SCP of SMEs. In addition, this study underlines the significance of CSR digitalization for the achievement of SMEs' SCP of SMEs with the moderating role of digital organizational culture. Overall, this study enriches the resource base view literature through empirical evidence.

Keywords CSR digitalization, digital organizational culture, and Sustainable competitive performance of SMEs

Introduction

SCP refers to a company's ability to achieve and sustain a long-term competitive advantage over its rivals. It requires consistently outperforming competitors in terms of profitability, market share, customer satisfaction, and other key performance indicators while managing and adapting to changes in the business environment. Globally, SMEs have been striving to improve their SCP and achieve sustainable growth for several decades (Xu & Wang, 2018). Businesses worldwide find it challenging to enhance their sustainable competitive positions in highly dynamic environments (Ahmad et al., 2022). To achieve SCP, some firms invest in tangible resources, such as land, equipment (Mitra et al., 2016), and machinery (Shirodkar & Mohr, 2015). On the other hand, several firms invest money in intangible resources, such as entrepreneurial activities (Kiyabo & Isaga, 2020), information and communication technologies (Martínez-Caro et al., 2020), intellectual capital, and CSR (Sampong et al., 2018). The resource-based view (RBV) theory reveals that a firm's intangible and tangible resources determine its survival and superior performance (Barney, 1991). However, the theory holds that intangible resources are more important than tangible resources (Salvi et al., 2020). Several contemporary studies substantiate this assertion (Ahmad et al., 2022; Haji & Mohd Ghazali, 2018). In line with the assumptions of RBV theory, this study aimed to highlight that business organizations invest in intangible resources like CSR digitalization and promote a digital culture within organizations, which, in turn, enhances their SCP.

Many SMEs are increasingly leveraging intangible resources such as digital platforms to improve their business strategies and deal with competitive pressures (Kohli et al., 2020). Digital platforms enable businesses to share, update, and standardize data on an unprecedented scale (Yoo et al., 2010), transforming the way in which SMEs can gain a competitive advantage (Parker et al., 2016). Digital platforms have become an essential part of the value propositions of many enterprises, allowing them to leverage information management and improve their connections with stakeholders (Cenamor et al., 2017; Scuotto et al., 2017). However, the implementation of digital technologies may require significant changes in how organizations work and interact with their environment, potentially leading to the development of new business models, the transformation of conventional commercial strategies, and stakeholder relationships (Scuotto et al., 2017).

Digitalization is expanding rapidly, and due to this rapid expansion, humanity and social responsibilities have demanded that all types of organizations adopt digital CSR (Bouwman et al., 2019). The "digitalization" of CSR is defined as the process of moving CSR implementation from offline to online using digital technology, such as a company website and social media accounts (Parente, 2020). Digital CSR is integrated into multidirectional social media programs like Facebook, Instagram, and Twitter. These social media platforms enable organizations to inform stakeholders about their digital CSR initiatives (Benitez et al., 2020).

The digitalization of CSR has become increasingly important in the current business landscape. The integration of CSR with digital platforms allows for direct communication between stakeholders and enterprises, facilitating the exchange of information and valuable feedback. It not only enhances stakeholder relationships but also requires enterprises to be vigilant about their digital reputation (Martínez-Caro et al., 2020). Digital CSR adoption can expand an organization's value proposition and improve stakeholder relationships, leading to better financial performance by reducing the time and costs associated with manual work (Ainin et al., 2015). It enables

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3 organizations to respond to the needs and concerns of their stakeholders more quickly and
4 effectively than their competitors. Moreover, organizations that adopt digital CSR actively involve
5 stakeholders and value their suggestions and feedback in strategic decision-making, which in turn
6 enhances their competitive position in the market. By leveraging the power of digital platforms,
7 organizations can effectively engage with stakeholders, address their concerns, and align their CSR
8 efforts with stakeholder expectations, ultimately contributing to achieve sustainable growth.

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10 SMEs operating in emerging economies face significant obstacles, such as the need for
11 technological innovation (Donbesuur et al., 2020), digitalization, and sustainability (Kilintzis et
12 al., 2020), as well as coping with globalization (Singh & Kumar, 2020), market competitiveness,
13 and a turbulent business environment (Acikdilli et al., 2020). Globalization and market volatility
14 have intensified the race to achieve SCP among businesses and non-profit organizations (Ahmad
15 et al., 2022). The literature highlights that SMEs in emerging economies face a high failure rate.
16 For instance, Wang and Chen (2010) found that over 75% of SMEs failed in their first year of
17 operation. Anware et al. (2021) reported that in not-so-developed countries such as China, 67% of
18 SMEs fail within their first year of operation, and 85% go out of business within their first ten
19 years (Parnell et al., 2015). Similarly, in emerging economies like Pakistan, Khattak and Shah
20 (2020) found that only 19% of newly established ventures survive up to 5 years, and only 4% of
21 SMEs survive 25 years after starting their business. SMEs in emerging markets like Pakistan often
22 struggle with sustained growth due to high failure rates. This can be attributed to various factors,
23 including a lack of innovation and small size, which limit their ability to adapt quickly to changing
24 business processes and environments (Ullah et al., 2021). Additionally, a shortage of managerial
25 skills and resources further increases these challenges (Alkahtani et al., 2020), impeding the
26 growth and performance of SMEs and making it crucial for them to adopt strategies that enable
27 them to overcome these obstacles. Thus, SMEs operating in emerging markets like Pakistan need
28 intangible skills and capabilities to overcome these obstacles and improve their SCP (Ali et al.,
29 2020).
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33 CSR is a perennial topic of interest for business scholars, as it has been widely recognized
34 that businesses that prioritize social responsibility can gain a competitive advantage in the long
35 term (Ahmad et al., 2022; Hernández et al., 2020). However, achieving strong CSR performance
36 in the emerging digital business environment has become an even greater challenge for
37 organizations (Benitez et al., 2020). This is particularly true for SMEs facing resource constraints
38 such as limited physical, financial, and human capital (Bouwman et al., 2019). Although, SMEs
39 are the backbone of all types of economies (Isensee et al., 2020). These enterprises have gained
40 strategic importance in developing and emerging economies in recent years as they contribute
41 significantly to sustainable development. While SMEs use various digital platforms like company
42 websites, Facebook, Instagram, and Twitter for their advertising campaigns, limited attention has
43 been paid to the role of these platforms in facilitating their CSR activities (Bouwman et al., 2019;
44 Preble, 2005). However, in the digital age, social media platforms offer various mechanisms for
45 stakeholders to collaborate and engage in an organization's efforts related to societal activities (Hur
46 et al., 2018). Consequently, the digitalization of CSR has become a significant strategic move for
47 businesses, garnering increased attention (Stankov & Gretzel, 2021). Therefore, this study aims to
48 investigate the impact of CSR digitalization on the SCP of SMEs, with a particular focus on the
49 moderating influence of digital organizational culture.
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53 Moderation analysis is considered to better understand the complex relationship between
54 CSR digitalization and the SCP of SMEs. Despite the potential benefits of digital transformation,
55 such as increased efficiency and improved customer satisfaction, there have been cases in which
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3 these initiatives failed due to cultural clashes within the organization (Wokurka et al., 2017). Thus,
4 digitalization requires the inculcation of a digital culture that promotes this transformation, i.e., an
5 organizational culture that is suitable for digitally transforming firms. Several enterprises know
6 that they need to change their culture in order to attain digital goals (Haffke et al., 2017). While
7 transitioning to a digital culture may be imperative, there is no guarantee that such a transition
8 would generate value for the organization. Therefore, understanding the role of digital culture is
9 crucial for effective management of CSR digitalization. However, there is currently a lack of
10 research on how organizational culture affects the development of enterprises' digital
11 transformation (Duerr et al., 2018). Although digital organizational culture is a significant driver
12 of transformation, it has yet to receive sufficient attention, with most studies focusing on the
13 technological and economic aspects of digital transformation (Wokurka et al., 2017). Thus, it is
14 essential to investigate how digital organizational culture may facilitate the digitalization of CSR,
15 with the ultimate goal of achieving the SCP of SMEs. Furthermore, Ahmad et al. (2022) suggest
16 that future studies explore the relationship between the digitalization of CSR and the SCP of SMEs
17 and the moderating role of digital organizational culture in this relationship, particularly in an
18 emerging economy.
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22 The primary objective of this study is to bridge the gap in the current body of literature by
23 investigating how the digitalization of CSR practices affects the SCP of SMEs in Pakistan, an
24 emerging economy. Pakistan has experienced significant growth in the digital sector, with a
25 growing emphasis on digital transformation in various industries. The country has made
26 advancements in digital infrastructure and technology adoption, contributing to the development
27 of a digital ecosystem within the business sector. Focusing on Pakistan as a specific context, this
28 study takes advantage of its diverse business landscape, including the manufacturing, services, and
29 trading sectors. This diversity allows the exploration of digitization efforts and sustainable
30 practices across different sectors, providing a comprehensive understanding of the topic.
31 Furthermore, by understanding the experiences and outcomes of digital CSR adoption in this
32 setting, the findings and conclusions drawn from this study can have broader implications for other
33 emerging countries undergoing similar digital transformations. Currently, there is a lack of
34 understanding of how Pakistani SMEs use the digitalization of CSR activities to achieve SCP.
35 Therefore, this study aims to address this gap in the literature. Specifically, this study examines
36 the moderating role of digital organizational culture in the relationship between digital CSR and
37 SCP. The novelty of this study is twofold: First, this study extends the knowledge of the
38 digitalization of CSR, digital organizational culture, and SCP relationships by elaborating on how
39 the digitalization of CSR and digital organizational culture influence the SCP of SMEs. To the
40 best of the author's knowledge, the digitalization of CSR has never been systematically tested with
41 the SCP of SMEs, nor has its predictive power been examined in the emerging economy. It is
42 probably one of the pioneering efforts in Pakistan with reference to an emerging economy. As
43 such, it is a theoretical contribution to the existing body of literature for this part of the globe.
44 Second, this study suggests that the digitalization of CSR, both directly and indirectly, through
45 digital organizational culture, affects the SCP of SMEs. The current research provides an
46 explanation of how and why a digital organizational culture facilitates the digitalization of CSR
47 activities, with the ultimate goal of achieving the SCP of SMEs.
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51 The findings of this study provide valuable insights into how the digitalization of CSR
52 initiatives can enhance the sustainable competitive performance of SMEs. This finding has
53 important implications for addressing social and environmental challenges by promoting
54 sustainable development through the integration of digital technologies and CSR practices.
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Specifically, this study shows that the digitalization of CSR initiatives has a positive influence on the sustainable competitive performance of SMEs. This suggests that digital technologies can be leveraged to enhance the sustainability practices of SMEs, which can lead to positive social and environmental impacts. Additionally, this study highlights the positive influence of digital organizational culture on this relationship and provides insights into how organizations can further improve their SCP by integrating digital culture within their digital CSR initiatives. This research provides a solution for organizations to enhance their impact on sustainable development by using digital tools to promote responsible and sustainable business practices. Overall, this study provides valuable insights into how SMEs can enhance their sustainable performance and contribute to sustainable development through the digitalization of CSR and digital culture.

This study has practical implications for strategic decision-makers who must consider the digitalization of CSR activities and digital organizational culture when making decisions about the SCP of SMEs. It provides awareness and understanding of the digitalization of CSR activities and the role of digital organizational culture in the SCP of SMEs, which could be beneficial for business actors such as CEOs, top managers, and corporations. This research helps CEOs and other senior managers of SMEs enhance their knowledge of how and why having a digital organizational culture makes it easier to digitalize CSR activities, with the ultimate objective of ensuring the SCP and growth of SMEs. This research also encourages responsible managers to allocate funds to intangible elements like the digitalization of CSR and to promote a digital organizational culture rather than relying solely on tangible resources. Lu et al. (2021) convincingly argue that intangible resources are less risky and require less money than tangible resources such as machinery. Therefore, it is a good opportunity for investment managers to maximize their returns by investing in intangible resources, such as the digitalization of CSR and promoting a digital culture within the organization. Moreover, the top management of Pakistani SMEs would benefit from this study by gaining assistance in developing effective strategies for maintaining SCP. Overall, the results of this study can help academics, researchers, and policymakers in emerging economies.

2. Literature Review

2.1 The definition of SMEs in Pakistan

Chittithaworn et al. (2011) conducted a study on the definition of SMEs and highlighted variations in their definitions across different regions. Variations arise due to differences in economic sectors (such as agriculture, mining, etc.), disparities in the levels of development among countries, and the existence of diverse criteria used to define SMEs. As identified in previous studies, the criteria used to define SMEs include the number of employees, annual production, annual sales, type of clients, asset value, capital, and the level of technical and authoritative organizations (Shah & Ahmad 2019; Alhajeri, 2012). However, the most commonly used criteria for defining SMEs are the number of employees, capital size, or both. According to Chittithaworn et al. (2011), an enterprise is typically defined as an SME based on the number of full-time employees or the value of assets.

According to the SME Policy 2007 in Pakistan, all business enterprises are considered SMEs that meet the following criteria: employment size of up to 250 employees, annual sales of up to Rs 250 million, and paid-up capital of up to Rs 25 million. However, the State Bank of Pakistan (SBP) has proposed a separate definition for SMEs, distinguishing small and medium enterprises based on different criteria. According to SBP, an enterprise is defined as a small enterprise if it has up to 20 employees and an annual sales turnover of Rs 100 million. On the other hand, a medium enterprise is defined as one that has an employment size of up to 250 employees

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3 and an annual sales turnover ranging between Rs 100 million and Rs 800 million (Shah & Ahmad
4 2019). According to the Small and Medium Enterprises Development Authority (SMEDA)
5 criterion, businesses with an employment size ranging from 10 to 40 employees and productive
6 assets (excluding buildings and land) valued between Rs 2 million and Rs 20 million are
7 considered small enterprises. On the other hand, enterprises with an employee count between 40
8 and 99 and productive assets costing over Rs 40 million are classified as medium-sized enterprises
9 (Ahmad, Shah & Abbass, 2021).

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11 The concept of SMEs was introduced in Pakistan during the tenure of Mr. Zulfiqar Ali
12 Bhutto's administration. In 1972, the government established the Small Business Finance
13 Corporation (SBFC) under an Act of Parliament. The primary objective of the SBFC was to assist
14 small entrepreneurs in achieving self-employment and setting up cottage industries. The SBFC
15 played a crucial role in assisting a large number of small entrepreneurs by providing funds on
16 favorable terms and with reasonable interest rates (Tanveer, 2001). In late 1998, the government
17 of Pakistan established the SMEDA, with the primary objective of addressing the challenges faced
18 by SMEs in the country. It has emerged as a prominent institution in Pakistan, providing essential
19 platforms to support SMEs in overcoming their inherent limitations. It is an autonomous body
20 working under the umbrella of the Ministry of Industries and Production, and contributes to the
21 development and advancement of SMEs in Pakistan. It serves as a vital advisory body for SME-
22 related policies for the government and also functions as a comprehensive one-stop resource for
23 SME clients, offering a range of services and support (Shah & Ahmad 2019).

26 27 **2.2 Sustainable competitive performance**

28 SCP refers to a company's ability to achieve and sustain a long-term competitive advantage over
29 its rivals. It requires consistently outperforming competitors in terms of profitability, market share,
30 customer satisfaction, and other key performance indicators while managing and adapting to
31 changes in the business environment (Ahmad et al., 2022). According to Barney and Hesterly
32 (2015), SCP is defined as a company's capacity to achieve and maintain a competitive advantage
33 over time by effectively managing its resources, capabilities, and core competencies while also
34 integrating sustainable practices that consider environmental, social, and governance (ESG)
35 factors. SCP contains consistently outperforming competitors and delivering long-term value to
36 all stakeholders. Thus, SCP is a company's ability to maintain a long-term competitive advantage
37 over its rivals while simultaneously addressing ESG factors. It stipulates creating and maintaining
38 a strong competitive edge based on sustainable practices and creating value for all stakeholders.
39 SCP is driven by a combination of factors, including strategic decision-making, operational
40 efficiency, innovation, and effective utilization of resources (Porter, 1985), as well as
41 incorporating sustainable practices into business operations and demonstrating social and
42 environmental responsibility. This can enhance a company's reputation, attract environmentally
43 conscious customers, and mitigate the risks of changing regulatory frameworks (Grant, 2021).

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45 According to Barney (1991), companies gain a competitive advantage by possessing
46 unique and valuable resources that are not easily replicated. In his RBV theory, Barney (2001)
47 argues that organizations need an adequate combination of intangible resources (such as
48 entrepreneurial ability, intellectual capital, reputation, and knowledge) and tangible resources (like
49 infrastructure, technology, finance, and so on) to achieve sustainable competitive performance.
50 These resources collectively contribute to a company's ability to outperform its rivals and maintain
51 a strong market position. However, the theory holds that intangible resources are more important
52 than tangible ones (Ahmad et al., 2022). This study aims to investigate the influence of the
53 digitalization of CSR activities on the SCP of SMEs. Furthermore, this study examines how digital
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organizational culture influences the effectiveness of CSR digitalization in enhancing the SCP. A limited review of prior studies of how the digitalization of CSR activities affects the SCP of SMEs and the moderating effect of digital organizational culture on this relationship is discussed below.

2.3 CSR digitalization

CSR activities involve an organization's efforts to act ethically, protect the natural environment, provide social assistance to its employees, and support underprivileged communities (Ahmad et al., 2022). Digitalization refers to restructuring various aspects of social life around digital communication and media infrastructure (Brennen & Kreiss, 2015). CSR digitalization is the process of moving CSR implementation from offline to online through digital technology (Irawan et al., 2022). This involves equipping CSR initiatives with digital technology to create digital CSR, which can be integrated into social media platforms such as Facebook, Instagram, and Twitter (Benitez et al., 2020). By using digital tools like company websites and social media accounts, organizations can carry out CSR activities and inform stakeholders about their digital CSR initiatives (Parente, 2020).

There is a prevalent belief that digitalization can undermine a company's competitive advantage by dissolving industry boundaries, damaging traditional entry barriers, and redefining sources of competitive advantage (McGrath, 2013). However, several studies (Zhao et al., 2019; Schilling, 2002) suggest that digital technology can lead to more sustainable competitive advantages, particularly through the self-reinforcing "winner takes all" dynamics observed in tech giants such as Amazon and Alphabet. To meet the obligations of all stakeholders, organizations must strategically consider the constant changes brought about by digitalization and leverage social media to address these changes (Konovalova et al., 2018). By incorporating digital CSR initiatives into strategic planning and using social media to communicate with stakeholders, companies can improve their competitive performance and meet their CSR obligations (Mulkhan, 2021). Few studies have investigated how the digitalization of CSR is influenced by digital organizational culture regarding digital CSR initiatives (Puriwat & Tripopsakul, 2021), for example, when communicating corporate social obligations (Preble, 2005). Some researchers have highlighted the need for empirical research in this area (Ahmad et al., 2022; Schultz & Seele, 2020). However, no such empirical analysis has been conducted to determine whether the digitalization of CSR is helpful in achieving the SCP of SMEs and how digital organizational culture facilitates the digitalization of CSR activities with the ultimate goal of achieving the SCP of SMEs. There is an acute need for further research in this area. In response to that, the current study attempts to determine how and why the digitalization of CSR increases the SCP of SMEs and how digital organizational culture facilitates the digitalization of CSR activities. A limited review of the relationship between CSR digitization and SCP is discussed below.

2.3.1 CSR digitization and its effect on SCP

The ultimate focus of businesses, particularly those operating in emerging economies, is to achieve optimal and sustainable competitive positions that enable them to endure and thrive in the market for an extended period of time. According to Ahmad et al. (2022), winning this race is crucial to the success of any venture. This involves acquiring unique resources, capabilities, or strategies that provide a competitive edge over others in the market. CSR digitization is becoming increasingly important for companies seeking to improve their sustainability performance and maintain a competitive advantage in today's fast-paced business environments. CSR digitization can help SMEs improve their SCP in several ways, including resource efficiency, customer engagement, access to funding, and risk management (Babiak, Copeland, & Yang, 2022). Sustainability is

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3 becoming more critical to businesses, so SMEs that adopt CSR digitization are likely to gain a
4 competitive advantage in the marketplace. Bocken et al. (2014) assert that digitization enables
5 companies to streamline their CSR efforts, gather and analyze data, and communicate with
6 stakeholders more effectively. These benefits can help companies drive innovation, reduce costs,
7 and improve their reputation, all of which contribute to SCP. According to Benitez et al. (2020),
8 digitization can improve communication and engagement with stakeholders such as customers,
9 employees, and investors, allowing companies to better understand and respond to their needs. For
10 example, social media and digital marketing tools can help companies engage with customers and
11 promote their CSR initiatives, which in turn enhances their competitive position in the market.
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13 According to a study by Accenture (2020), digital technology can help companies reduce
14 their carbon emissions by up to 20% and cut costs by up to 16%. Companies can achieve both
15 environmental and economic benefits by implementing digital solutions to CSR initiatives. Irawan
16 et al. (2022) suggest that CSR digitalization practices aim to equip micro, small, and medium-
17 sized businesses with the necessary digital competencies to succeed in today's market. Companies
18 are now giving more importance to investing in digitalizing their CSR activities, as they believe
19 that it will lead to significant long-term benefits and improved performance. Vallaster (2017) also
20 states that firms invest in CSR activities to enhance their financial and social performance. Lee et
21 al. (2016) contend that companies develop unique CSR frameworks that are difficult for
22 competitors to replicate, enabling them to capitalize on potential opportunities. Although it may
23 be argued that engagement in CSR initiatives does not lead to immediate profit gains, it can
24 enhance a firm's competitiveness and reputation within the communities they serve, resulting in
25 positive financial outcomes. Therefore, companies that effectively incorporate digitization into
26 their CSR strategies can gain a competitive edge and ultimately boost their financial performance.
27 Zahid et al. (2021) argue that there is a positive association between a company's digitalization of
28 CSR initiatives and its ability to gain a competitive advantage over other market competitors. This
29 is because companies that engage in CSR are more likely to prioritize the preferences and interests
30 of their stakeholders. By implementing digital tools in their CSR activities, companies can address
31 stakeholder needs and concerns more efficiently and effectively than their competitors. This, in
32 turn, helps them gain a competitive advantage in the market. Based on prior literature, the
33 following relationship is expected:
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38 *H₁. Digitization of CSR has a significant positive influence on the SCP of SMEs.*
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40 **2.4 Digital organizational culture**

41 According to Deshpande and Webster (1989), the term organizational culture refers to a “set of
42 shared assumptions and understanding about organizational functioning”. Similarly, Barney
43 (1986) defines organizational culture as a “complex set of values, beliefs, assumptions, and
44 symbols that define the way in which a firm conducts its business”. Schein (1985) proposed a
45 definition of organizational culture as a “pattern of basic assumptions that a given group has
46 invented, discovered, or developed in learning to cope with its problem of external adaptation and
47 internal integration, and that has worked well enough to be considered valid, and therefore to be
48 taught to new members as the correct way to perceive, think, and feel in relation to these
49 problems”.

50 Since time immemorial, an organization's culture has been regarded as both a potential
51 source of sustainable competitive advantage (Chan et al., 2004) and an essential component of its
52 overall effectiveness (Zheng et al., 2010). Moreover, it is well known that projects involving
53 organizational changes, such as those entailed by the introduction of new digital technologies in a
54 firm (Martínez-Caro et al., 2020), depend heavily on organizational culture (Ke and Wei, 2008).
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3 A substantial amount of research has been conducted in the past to investigate the function of
4 organizational culture from various perspectives. Previous studies have discovered a relationship
5 between an organization's culture and its employees' levels of performance (O'Really et al., 2014),
6 job satisfaction (Belias & Koustelios, 2014), leadership (Sarros et al., 2008), knowledge
7 management (Rai, 2011; Zheng et al., 2010), innovation (Hogan & Coote, 2014), and information
8 technology (Leidner & Kayworth, 2006).
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10 Let us extrapolate the concept of organizational culture to the digital realm. In this case,
11 one could argue that, in the age of the digital workforce, a company's culture needs to grow to
12 incorporate its digital workplace practices to remain competitive (Duerr et al., 2018). Based on
13 these considerations, the term 'digital organizational culture' refers to a concept that explains how
14 technology and the Internet are reshaping the way in which organizations communicate with their
15 internal and external stakeholders. According to Senbursa (2021), digital culture is defined as a
16 new type of culture in which the culture of humanity digitizes and changes into a new form. Digital
17 culture includes the lifestyle and habits formed by the innovations of the modern age and
18 technology that are taking place in daily life. Dzingirai (2021) convincingly argues that it is a term
19 that refers to shared values and norms that have emerged due to the utilization of disruptive digital
20 technologies and tools. Thus, digital culture shapes how an organization interacts with
21 stakeholders. Digital organizational culture has evolved into an essential component of the new
22 business model, which has set its imprint on organizational adaptability and digital innovation
23 (Dery et al., 2017). This study explores the moderating role of digital organizational culture in the
24 relationship between CSR digitization and the SCP of SMEs. A limited review of prior studies on
25 how digital organizational culture moderates the bivariate relationship is discussed below.
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29 **2.4.1 Moderating role of digital organizational culture**

30 Despite its unprecedented prospects, the digital economy raises questions regarding how
31 individuals and businesses will adapt and thrive in this new century (Kane et al., 2015).
32 Organizational culture has been mentioned as a factor that may ultimately affect how well an
33 enterprise implements digital technologies. For instance, an enterprise with a more flexible culture
34 is more likely to succeed with new technologies than one that is not (McDermott & Stock, 1999).
35 Several previous studies have demonstrated that companies undergoing digital transformations
36 with significant benefits for their internal and external stakeholders and organizations have failed
37 because of a collision between company culture and digital changes (Wokurka et al., 2017). Del
38 Giudice (2019) asserts that transformations can create tension between old values, systems, or
39 procedures and new ones, which can hinder the implantation and use of new technologies. Past
40 literature reveals that many business organizations have digitalized their business models but are
41 unable to successfully implement these changes within their organizations. What could be the
42 reason why an organization might be unable to implement a new system successfully? One
43 possible explanation is that the new system does not mesh well enough with the culture of the
44 organization, which makes it difficult to implement and use new technologies (Preston & Allmand,
45 2001). Hence, digitization requires the installation of a digital culture that supports this
46 transformation, more specifically, an organizational culture that is suitable for digitally
47 transforming organizations (Martínez-Caro et al., 2020). Many organizations are conscious of the
48 fact that they need to undergo some sort of cultural transformation to accomplish their digital goals
49 (Haffke et al., 2017). Although the need to adapt to a digital environment may be essential, there
50 is no guarantee that such a transition will yield value for the organization (Weber & Pliskin, 1996).
51 Therefore, research on the important role that digital culture plays can help figure out what
52 practical things are needed to properly manage a digitization process. According to Martnez-Caro
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et al. (2020), digital organizational culture has the potential to act as a facilitator for firms as they undergo digital transformation. Thus, organizations start the process of digitalizing CSR in conjunction with integrating digital culture, which will ultimately assist the organization in enhancing its SCP. Organizations that have a digital culture can successfully implement the digitization of CSR initiatives as compared to organizations that do not have a digital culture. The successful implementation of CSR digitization plays a significant role in improving SCP. After examining the relevant literature, we hypothesized that digital organizational culture moderates the association between CSR digitization and the SCP of SMEs.

H₂. Digital organizational culture moderates the relationship between CSR digitization and SCP of SMEs; with a high level of digital organizational culture, the positive effect of CSR digitization on SCP is strengthened.

3. Research methodology

3.1 Sampling and data collection

According to Anwar et al. (2018), strategic planning is primarily the responsibility of company owners and top managers. Thus, to achieve the research objective, the sample of this study consists of owners and top managers of SMEs from the twin cities of Pakistan (Rawalpindi and Islamabad). The selection of twin cities for data collection is inspired by residents' unique social, cultural, and demographic traits, and most SMEs have their head offices in these cities. The authors obtained a list of SMEs and contact information from the Islamabad Chamber of Commerce and Industry (ICCI) and the Rawalpindi Chamber of Commerce and Industry (RCCI). In this study, data were collected using a convenient purposive sampling technique and the snowball method.

According to Osborne et al. (2008), an acceptable criterion for selecting a sample size to obtain unbiased estimates is a ratio of 10–15 responders to one item. Following this criterion (20 items \times 15 = 300 responses), a total of 700 questionnaires were distributed to the owners and top managers of SMEs in the services, trading, and manufacturing sectors to obtain at least 300 responses. Out of these, 407 questionnaires were returned; 96 questionnaires were found to be erroneously filled and have missing values, so they were dropped. Thus, 311 questionnaires were completely and accurately filled out by the respondents and used for analysis, with an effective response rate of 44.43%.

There are several data collection methods, including unstructured interviews, semi-structured interviews, structured interviews, observations, and group discussions. In this study, the self-reported questionnaire was chosen as the data collection method because it is more cost-effective and time-efficient than other methods, such as interviews, videoconferencing, and brainstorming sessions (Bryman & Bell, 2007). Another reason was the natural tendency among company owners and top managers to avoid personal interviews or to have limited time to spare for researchers. Questionnaires were considered the best method for data collection in this situation as it allowed respondents to complete them at their convenience without the possibility of direct influence from the researchers (Ahmad & Shah, 2022; Ahmad & Wu, 2022).

3.2 Operationalization of variables

The primary purpose of this study is to investigate how CSR digitalization influences SMEs' SCP, with the moderating role of digital organizational culture. A survey method was employed to attain this research aim, and, where possible, a questionnaire was developed based on previously published measurement instruments. If necessary, the authors modified the scales to make them more applicable to the context of the digitization of CSR - SCP relationship. **Some relevant studies consulted at this stage are Ying et al. (2019), Zhen, et al., (2021) Khattak, and Yousaf, (2021),**

Puriwat, and Tripopsakul, (2021), Ahmad, Wu, and Khattak, (2022). The authors used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) for all multi-item construct measures. Models of reflective measurements were used to operationalize all constructs. Five experts with strong knowledge of digitalization and strategic management were simultaneously engaged in assessing the developed questionnaire. This was performed to confirm the validity and reliability of the instrument used in this investigation. Furthermore, pilot studies were conducted to ensure that the questionnaire was appropriate for data collection. For pilot testing, 150 questionnaires were distributed to respondents and collected immediately after they completed them. Only 93 questionnaires were received, of which 74 were usable, resulting in an effective response rate of 49.33 percent. The Cronbach's alpha coefficient was used to determine the degree of consistency of the variables. The initial Cronbach's alpha for CSR digitalization was 0.596, indicating that this variable's questionnaire could not be used for the data collection. To improve the quality of the questionnaire, the authors eliminated two CSR digitalization items. After deleting two items from the CSR digitalization questionnaire, the overall values of the variables ranged between 0.851 and 0.964, and the F-test was significant for each factor (See Table I); therefore, they were classified as satisfactory. Thus, Cronbach's alpha coefficient of all components incorporated into the variables provided a good representation of each variable under consideration, enabling further analysis (correlation analysis and structural equation modeling). More details related to the operationalization of the variables are discussed below.

Insert Here: Table I. Analysis of variables reliability using Cronbach's Alpha

3.2.1 Dependent variable. The authors use sustainable competitive performance as an endogenous variable: *Eight items were* adapted from Ying et al. (2019) to quantify *SCP*.

3.2.2 Independent variables. The authors use CSR digitalization as predictor variables: Eleven items were used to measure CSR digitalization. Most of the previous research has focused on discussing three essential components of CSR: CSR concerning employees, CSR about the environment, and CSR in relation to the community (Khan et al., 2019). In terms of gaining comprehensive insights, the researchers mainly focused on three elements of CSR digitalization frequently cited in the literature on SMEs (Bai and Chang, 2015).

3.2.3 Moderating variable. The authors use digital organizational culture as a moderating variable. Three items were used to measure digital organizational culture, adopted from (Zhen, et al., 2021).

3.3 Data analysis method

The data collected through the survey were analyzed using SPSS and Amos graphics software. First, a pilot test was conducted to determine the instrument's validity and reliability. Then, confirmatory factor analysis (CFA) was performed to confirm the factor structure, assess the convergent validity of the study constructs, and eliminate items with low standardized factor loadings. Statistical techniques such as correlation analysis and structural equation modeling (SEM) were employed to achieve the research objectives. The data analysis process adopted for this study is consistent with Ahmad et al., (2023); Ahmad & Wu (2022); Ahmad, Wu, & Abbass (2022); Khattak & Ullah (2021); and several others.

4. Empirical findings

4.1 Statistics for demographic variables

Table II presents statistics regarding the demographic characteristics of the sample used for the analysis. The sample consisted of top-level managers from various sectors in Pakistan, with 84.6% of managers being male and 15.4% female. The composition of this sample reflects Pakistan's social and cultural norms. The distribution of the sample across different sectors was 40.2% service, 38.9% trading, and 20.9% manufacturing. Regarding qualifications, 57.6% of the managers held a master's degree, 16.1% held a bachelor's degree, 20.9% held an M.S/M.Phil. degree, and 5.5% held a PhD. In terms of age distribution, the majority of the sample (47.3%) were between the ages of 41 and 50 years; 29.6% were between 31 and 40 years; 10.6% were between 20 and 30 years; and 12.5% were above 50 years of age. The sample included SMEs, with 10% of them having an employment size of 20–50 employees, 14.8% with 51–100 employees, 18.3% with 101–150 employees, 48.6% with 15–200 employees, and 7.4% with 20–250 employees.

Insert Here: Table II. Statistics for Demographic Variables

4.2 Confirmatory factor analysis (CFA)

CFA was performed in AMOS 24 to validate the factor structure and assess the convergent validity, discriminant validity, internal consistency, and reliability of the study constructs. As illustrated in Figure A₁, the measurement model was used to test the validity and reliability of the constructs. A satisfactory model fit was achieved by implementing the model modification strategies recommended by Hair et al. (2014). This involved adjusting the model based on identified issues such as weak factor loadings or high-error term cross-loading. Moreover, a few items were excluded from the analysis to improve the overall model fit.

The values of the model fit indices (see Table III) were determined to be within acceptable parameters, including CMIN/DF = 1.221, GFI = 0.955, NFI = 0.973, and AGFI = 0.941, indicating satisfactory model fit values. Similarly, the values of PCLOSE = 1.000, SRMR = 0.036, and RMSEA = 0.010 suggest good model fitness according to the criteria recommended in prior studies (Tanaka, 1993; Hair et al., 2014). The study results reveal that the factor loadings for each latent construct range from 0.832 to 0.877, demonstrating that all observable factors strongly illustrate the latent variables (see Table IV).

Furthermore, the convergent validity, discriminant validity, and internal reliability of the study constructs were also confirmed, providing more support for the measurement model. To test convergent validity, we calculated the average variances extracted (AVE) for each set of measures. The results in Table IV demonstrate that AVE values range from 0.709 to 0.748 for constructs above the minimum threshold of 0.50, implying that loaded items show a higher variation in the relevant construct than the error term (Hair et al., 2010). Similarly, the square root of the AVE values for each set of measures is above the threshold of 0.70 (See Table IV), demonstrating that every construct differs from the others (Hu & Bentler, 1999). Thus, the results suggest that convergent validity was achieved. Furthermore, AVE's square root value is higher than any latent construct's highest square correlation, which reveals that acceptable discriminant validity was accomplished. Moreover, composite reliability (CR) scores were used to evaluate the internal consistency reliability of the study constructs. As seen in Table 4, all CR values are above the benchmark of 0.70 (Bagozzi & Yi, 2012), indicating that the scales had high internal consistency. Hence, the achievement of all the criteria for fitness of measurement allowed us to proceed with SEM testing.

Insert Here: Table III. The goodness of fit statistics

Insert Here: Table IV. Factor Loadings, Validity, and Reliability

4.3 Correlation analysis

Table V illustrates the Pearson correlations that were found among the variables. It provides preliminary support for the anticipated hypothesis of the research. The results revealed that CSR digitalization ($r = 0.346$, $p < 0.05$) has a significant positive correlation with the *SCP* of SMEs. Moreover, digital organizational culture is also positively correlated with the *SCP* of SMEs ($r = 0.305$, $p < 0.05$). All constructs have correlation coefficients less than 0.80, demonstrating that there is no problem concerning multicollinearity.

Insert Here: Table V. Descriptive statistics and correlation analysis

4.4 Structural equation modeling

SEM 1 was performed to examine the influence of CSR digitalization on the *SCP*, as shown in Figure A₂. The SEM 1 model demonstrated acceptable fit values (see Table III). The fit indices include $CMIN/DF = 1.104$, $GFI = 0.968$, $AGFI = 0.956$, $NFI = 0.928$, $RMSEA = 0.024$, $SRMR = 0.028$, and $PCLOSE = 1.000$. These values meet the thresholds recommended by Hair et al. (2014), Hu & Bentler (1999), and Tanaka (1993). The results of SEM 1 are reported in Table VI.

The hypothesis predicts that the digitalization of CSR is positively associated with the *SCP* of SMEs. We regressed *SCP* on the digitalization of CSR to test these predictions. The results reported in Table VI reveal that CSR digitalization ($\beta = 0.361$, $p < 0.05$) has a significant positive effect on the *SCP* of SMEs, providing support for H1. This significant positive effect suggests that the integration of digital tools and practices in CSR positively influences SMEs' ability to outperform their competitors and achieve sustainable competitive advantages. These findings suggests that when SMEs adopt digital technologies to enhance their CSR activities, it positively impacts their overall competitive performance in the long run. The digitalization of CSR enables SMEs to leverage technological advancements and digital platforms to effectively address social and environmental responsibilities while also improving their competitiveness in the marketplace.

Insert Here: Table VI. Results of Structural Model 1

4.5 Moderation analysis

Moderated analysis was used to examine the interactive effects of digital organizational culture on the *SCP* of SMEs. SEM 2 (see Figure A₃) was performed to examine the moderating effect of digital organizational culture on the relationship between CSR digitalization and *SCP*. The SEM 2 results are presented in Table VII.

The hypothesis predicts that the relationship between CSR digitization and *SCP* in SMEs is stronger when there is a higher level of digital organizational culture. The results presented in Table VII show that CSR digitalization ($\beta = 0.666$, $p < 0.001$) and digital organizational culture ($\beta = 0.618$, $p < 0.05$) were significant predictors of *SCP* of SMEs. The interaction term of these variables has a significant positive effect on the *SCP* of SMEs ($\beta = 0.110$, $p < 0.001$). These findings support H2, which predicts that digital organizational culture would moderate the relationship between CSR digitalization and SMEs' *SCP*. This moderation suggests that the effectiveness of CSR digitization in driving *SCP* outcomes is strengthened when SMEs have a culture that supports and embraces digital transformation. A digital organizational culture encourages the adoption and utilization of digital tools, processes, and mindsets throughout the organization, which strengthens the positive effects of CSR digitization on *SCP*.

Insert Here: Table VII. Results of moderator analysis

5. Discussion

In recent years, advancements in digital technology have resulted in significant changes for people at the individual level as well as for companies and society in general. People have become accustomed to using mobile devices and are continuously connected through the internet. According to Blazquez and Domenech (2018), people use smartphones, tablets, and computers to make online purchases, communicate their thoughts and opinions, talk with friends, check the way how to travel to a certain spot, and share their current location. However, the mechanisms through which organizations can take advantage of digital technologies to increase their SCP are not sufficiently clear for academics and industry practitioners (Martinez-Caro et al., 2020). Organizations have often been advised to invest in digital technologies to transform their existing business models into e-business models and increase their competitiveness. However, little research has been conducted on how to utilize these newly obtained technologies to enhance SCP.

This research has expanded the RBV theory concerning SCP by evaluating the perceptions of top-level managers on the digitalization of CSR, digital organizational culture, and SCP of SMEs. The idea of this study was developed from the existing literature and tested with the SEM technique utilizing the Amos graphics software. The results of this study illustrate that intangible resources, namely the digitalization of CSR, strengthen the SCP. A significant and positive relationship was found between digitalization of CSR and the SCP of SMEs. These results demonstrate that when a business organization responds to stakeholders' needs and concerns by interacting with them through the adoption of digital CSR initiatives (e.g., a company website and social media applications), it would be able to satisfy their needs and wants more efficiently and effectively than its competitors. It would involve them and value their suggestions and feedback in strategic decisions, which, in turn, enhances the sustainable competitive position of the business organization in the market. The findings of this study are consistent with Irawan et al. (2022) who reported that the successful implementation of CSR digitalization practices helps SMEs to improve their SCP.

Digital organizational culture plays an essential role in the successful implementation of CSR digitalization. It is also clear that companies with a robust digital culture can implement CSR digitalization better than companies that do not have a vibrant digital culture. The results show that digital organizational culture changes or moderates the relationship between the digitalization of CSR and the SCP of SMEs positively. This means that the SCP of SMEs is further enhanced when digitalizing CSR in conjunction with the integration of digital culture. This finding is consistent with the mainstream contention that digital organizational culture has the potential to act as a facilitator for firms as they undergo digital transformation (Martnez-Caro et al. 2020). When organizations start the process of digitalizing CSR in conjunction with the integration of digital culture within the organization, the positive influence of the digitalization of CSR on SMEs' SCP is further improved. Overall, the results of the study are consistent with RBV theory, which states that a company's tangible and intangible resources and capabilities configure its survival and superior performance (Barney, 1991). In this context, intangible resources are given higher importance than tangible resources in theory (Salvi et al., 2020).

6. Conclusion and implications

This study aimed to explore and clarify the mechanism by which CSR digitalization influences the SCP of SMEs in an emerging economy like Pakistan, with the moderating role of digital organizational culture. To achieve this research objective, a questionnaire was used to collect data, in which closed questions were asked of the target population. The collected data were analyzed using SPSS and AMOS graphics software. The sample consists of 311 owners and top managers

operating in service, trading, and manufacturing sector SMEs, positioned within the twin cities of Pakistan. The hypotheses were tested using SEM technique.

The results confirm that the digitalization of CSR enhances the SCP of SMEs in an emerging economy. The study's results also indicate that digital organizational culture appears to moderate these relationships. When digital organizational culture interacts with the digitalization of CSR initiatives, it substantially influences the SCP of SMEs. More explicitly, the digitalization of CSR has a significant positive influence on the sustainable competitive performance of SMEs. When organizations start the process of digitalizing CSR in conjunction with the integration of digital culture within the organization, the positive influence of CSR digitalization on SMEs' SCP is further enhanced. These findings demonstrate that, while making decisions on how to achieve SCP, strategic decision-makers consider the digitalization of CSR initiatives in conjunction with the integration of digital culture within the organization, which helps SMEs achieve SCP. This research reveals that firms in Pakistan have shown their concerns about CSR digitalization. Although this is a novel phenomenon for emerging markets such as Pakistan, firms are increasingly focusing their attention on the digitalization of CSR initiatives to achieve sustainable competitive outcomes. They realize that they cannot compete in the coming competitive era without proper digital technology involvement, which is why they promote a digital culture in the organization.

6.1 Theoretical implications

This study utilizes RBV theory to explain the significance of using intangible resources, like the digitalization of CSR, to attain sustained competitive performance. It enriches not only the connotation of the RBV theory and the specific element of intangible resources but also strengthens the research on digital organizational culture and SCP from the perspective of SMEs. This study is unique because it addresses a gap in the existing literature by investigating the connection between the digitalization of CSR activities and the SCP of SMEs' bond moderating variable. The current research fills the theoretical vacuum in prior research by empirically examining the moderating roles that digital organizational culture plays in the relationship between the digitalization of CSR and the SCP of SMEs. This study contributes to a better understanding of the role played by the digitalization of CSR in the SCP of SMEs. More importantly, this study's findings contribute to a better understanding of the digitalization of CSR and its impact on the SCP of SMEs in emerging economies, particularly in Pakistan.

Moreover, this study reveals that the digitalization of CSR influences SMEs' SCP directly and indirectly through the moderating role of digital organizational culture. The current study provides an explanation of how and why the digitalization of CSR increases the SCP of SMEs through the moderating role of digital organizational culture. The current research contributes to the literature by defining the digitalization of CSR as an antecedent and digital organizational culture as a moderating variable for the SCP of SMEs. These results add to the existing body of knowledge by inferring that the digitalization of CSR initiatives in conjunction with integrating digital culture within the organization helps SMEs gain SCP. This study is the first to focus on the linkages between the digitalization of CSR, digital organizational culture, and SCP of SMEs within the specific context of an emerging economy. It is probably one of the pioneering efforts in Pakistan regarding the SCP of SMEs—the digitalization of CSR. As such, this study contributes to the body of literature on this part of the world.

The findings of this research provide crucial insights into the role of digitalization of CSR initiatives in enhancing the sustainable competitive performance of SMEs, which has important implications for addressing social and environmental challenges and promoting sustainable development. The results of this study highlight that digital technologies can be effectively used

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3 to enhance the sustainability practices of SMEs, leading to positive social and environmental
4 impacts. Moreover, this study emphasizes the importance of digital organizational culture as a
5 moderator of this relationship, indicating that integrating digital culture within digital CSR
6 initiatives can further enhance the positive influence of CSR digitalization on the SCP of SMEs.
7 This research offers a practical solution for organizations to improve their impact on sustainable
8 development by utilizing digital tools to promote responsible and sustainable business practices.
9 Overall, this study's insights provide valuable guidance for SMEs seeking to enhance their
10 sustainability performance and contribute to sustainable development through the digitalization of
11 CSR and the integration of digital culture.
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14 **6.2 Practical Implications**

15 In addition to the theoretical contributions discussed above, the findings of this research have also
16 generated important policy implications for business actors such as CEOs, executives, managers,
17 policymakers, and entire corporations. The findings of this study provide evidence that the
18 digitalization of CSR is paramount for SMEs operating in developing economies such as Pakistan
19 to gain SCP by moderating the role of digital organizational culture. Therefore, CEOs and other
20 top managers working in SMEs should increase their involvement in activities contributing to the
21 digitalization of CSR and promote a digital culture within organizations to achieve SCP. This study
22 recommends that the owners and managers of SMEs concentrate on digital CSR and carefully
23 develop digitalized CSR strategies that provide consistent information, build public interest, and
24 satisfy stakeholders' expectations. Enterprises that actively engage in CSR activities are more
25 concerned about the preferences and interests of their stakeholders. When CSR activities are done
26 digitally, the company may be able to respond to the needs and concerns of its stakeholders more
27 effectively than competitors and may be able to incorporate the suitable suggestions of its
28 stakeholders into strategic decisions. In this way, digitizing a company's CSR helps it gain a
29 competitive advantage over its competitors in the market. Furthermore, this study also
30 recommends that owners and managers of SMEs promote a digital culture within the organization
31 because digital organizational culture plays an essential role in the successful implementation of
32 digital CSR initiatives.
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35 Therefore, SMEs need to shift their focus toward the digitalization of CSR and promote a
36 digital culture within the organization to maintain their competitive performance in turbulent
37 markets. According to Ying et al. (2019), intangible resources are more important than tangible
38 resources in maintaining the SCP of SMEs in emerging economies like Pakistan. The authors also
39 recommend a similar suggestion for Pakistani SMEs to focus on digitalizing CSR and promoting
40 a digital culture within the organization. Hence, it shifts their attention toward intangible factors
41 like the digitalization of CSR and promoting digital culture within organizations over tangible
42 ones. The implications are not only useful for emerging firms but also for other developing
43 economies in Asia and Europe, which can replicate the implications to secure SCP of SMEs
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46 It is self-evident that organizations' strategic move towards the adoption of digital CSR and
47 promoting digital culture within the organization will set a strong foundation for developing
48 stakeholders' engagement, which ultimately has a significant positive impact on their SCP. A
49 higher SCP in an organization reduces its financial distress and increases its mature life cycle
50 (Okazaki et al., 2020; Schultz & Seele, 2020). Hence, SCP is achieved through the successful
51 implementation of digital CSR initiatives, through which the organization incorporates the right
52 suggestions from stakeholders. Similarly, this study also guides the practical management of the
53 benefits of digital CSR activities for establishing stakeholder engagement. When organizations
54 include ethical and social standards in their digitalized practices, their stakeholders are more
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3 attached to and satisfied with their strategic plans, which, in turn, enhances their competitive
4 position in the market.

5 From a policy perspective, our findings suggest that governments and policymakers in
6 emerging economies should promote and support the digitalization of CSR initiatives among
7 SMEs, as this can help promote sustainable business practices and enhance SCP. Policymakers
8 can promote the adoption of digital CSR and culture within SMEs through training and
9 development programs. The social implications of this study are also significant. Digitalizing CSR
10 initiatives can positively affect society and the environment, which is a critical aspect of
11 sustainable development. SMEs can contribute to sustainable development goals by adopting
12 digitalization strategies for their CSR initiatives. Overall, the findings of this study have practical
13 implications for SMEs, policymakers, and society as a whole, highlighting the importance of
14 adopting digital CSR initiatives and promoting a digital culture within SMEs to enhance their
15 sustainability practices and lead to positive social and environmental impacts.

16 **7. Directions for Future Research**

17 This study focuses on the influence of digitalization of CSR on the SCP of SMEs in Pakistan.
18 However, to ensure the robustness and generalizability of the findings, future research should
19 include a more diverse range of respondents from different regions of the world. This broader
20 sample provides a more comprehensive understanding of how the digitalization of CSR impacts
21 the SCP of SMEs in various contexts. In terms of data collection methods, this study used a
22 convenient purposively sampling technique along with the snowball method. However, it is
23 recommended to employ a random sampling technique in future research to address the limitations
24 associated with these sampling techniques. Random sampling allows for a more representative
25 selection of participants from the target population, enhancing the external validity of the study.

26 Furthermore, while this study primarily focused on the financial indicators of SCP, it would
27 be valuable for future research to explore the non-financial outcomes of the digitalization of CSR
28 and their relationship with SCP. Investigating how the digitalization of CSR influences stakeholder
29 perceptions, community relations, and intangible assets such as brand value and reputation can
30 provide additional insights into the broader impact of digitalization of CSR on a company's
31 competitive position and long-term sustainability. Considering both the financial and non-financial
32 outcomes of the digitalization of CSR in future research would provide a more comprehensive
33 understanding of the benefits and impacts associated with adopting digital SCP practices in SMEs,
34 allowing for a holistic assessment of the value and significance of the digitalization of CSR.
35 Moreover, considering the moderating effect of CSR culture on the relationship between the
36 digitization of CSR and SCP can be another potential direction for future research. Exploring how
37 a strong CSR culture within an organization influences the impact of CSR digitization on SCP
38 could offer valuable insights. By understanding the mechanisms through which CSR culture
39 interacts with CSR digitization, organizations can gain practical implications for strengthening
40 their SCP. By addressing these research gaps, future studies can contribute to a more
41 comprehensive understanding of digitalization of CSR, its impact on SCP, and the underlying
42 factors that shape this relationship in different contexts.

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Appendix

Table I. Analysis of variables reliability using Cronbach's Alpha

Variables	Cronbach's alpha	F (sig)
CSR digitalization	0.964	2.406(0.014)
Digital organizational culture	0.851	1.863(0.000)
Sustainable competitive performance	0.873	3.613(0.029)

Table II. Statistics for demographic variables

Description	Frequency	Percentage	
Gender	Men	263	84.6
	Women	48	15.4
Age	20-30 years	33	10.6
	31-40 years	92	29.6
	41-50 years	147	47.3
	50 above years	39	12.5
Education	Bachelor/below	50	16.1
	Master	179	57.6
	MS / MPhil	65	20.9
	PhD	17	5.5
Size of firms	20-50 employees	31	10.0
	51-100 employees	46	14.8
	101-150 employees	57	18.3
	151-200 employees	154	49.5
	201-250 employees	23	7.4
Industry	Service	125	40.2
	Trading	121	38.9
	Manufacturing	65	20.9

Table III. The goodness of fit statistics

Models	CMIN	DF	CMIN/DF	GFI	NFI	AGFI	SRMR	RMSEA	PCLOSE
Measurement	161.120	132	1.221	0.955	0.973	0.941	0.036	0.010	1.000
Structural Model1	98.298	89	1.104	0.968	0.928	0.956	0.028	0.024	1.000
Acceptable range	-	-	1-3	>0.90	>0.80	>0.80	>0.08	<0.06	>0.05

Table IV. Factor loading, validity, and reliability

	Estimate	AVE	√AVE	C.R
Digital Organizational Culture.		0.709	0.842	0.880
DOC1	0.808			
DOC2	0.885			
DOC3	0.832			
Sustainable Competitive Performance		0.748	0.865	0.947
SCP1	0.856			
SCP2	0.877			

	Estimate	AVE	$\sqrt{\text{AVE}}$	C.R
SCP4	0.854			
SCP5	0.867			
SCP6	0.870			
SCP7	0.865			
CSR digitalization		0.743	0.861	0.963
DCSR1	0.870			
DCSR2	0.865			
DCSR3	0.856			
DCSR4	0.861			
DCSR5	0.862			
DCSR6	0.859			
DCSR7	0.863			
DCSR8	0.855			
DCSR9	0.868			

Table V. Descriptive statistics and correlation analysis

Variables	Mean	Std. Deviation	1	2	3
CSR digitalization	3.1981	1.05301	1		
Digital organizational culture.	3.2178	1.06286	0.149**	1	
Sustainable competitive performance	3.1861	1.08497	0.346**	0.305**	1

Table VI. Results of Structural Model1

	β	P value
SCP<--- DCSR	0.361	***

Note(s): N = 311; ***p < 0.001, DCSR = digitalization of corporate social responsibility, SCP = Sustainable Competitive Performance

Table VII. Results of moderator analysis

	β	P value
SCP <--- DCSR	0.666	***
SCP <--- DOC	0.618	***
SCP <--- DOCXDCSR	0.110	***

Note(s): N = 311; ***p < 0.001, DCSR = digitalization of corporate social responsibility, SCP = Sustainable Competitive Performance, DOC = digital organizational culture and DOCXDCSR = interaction term

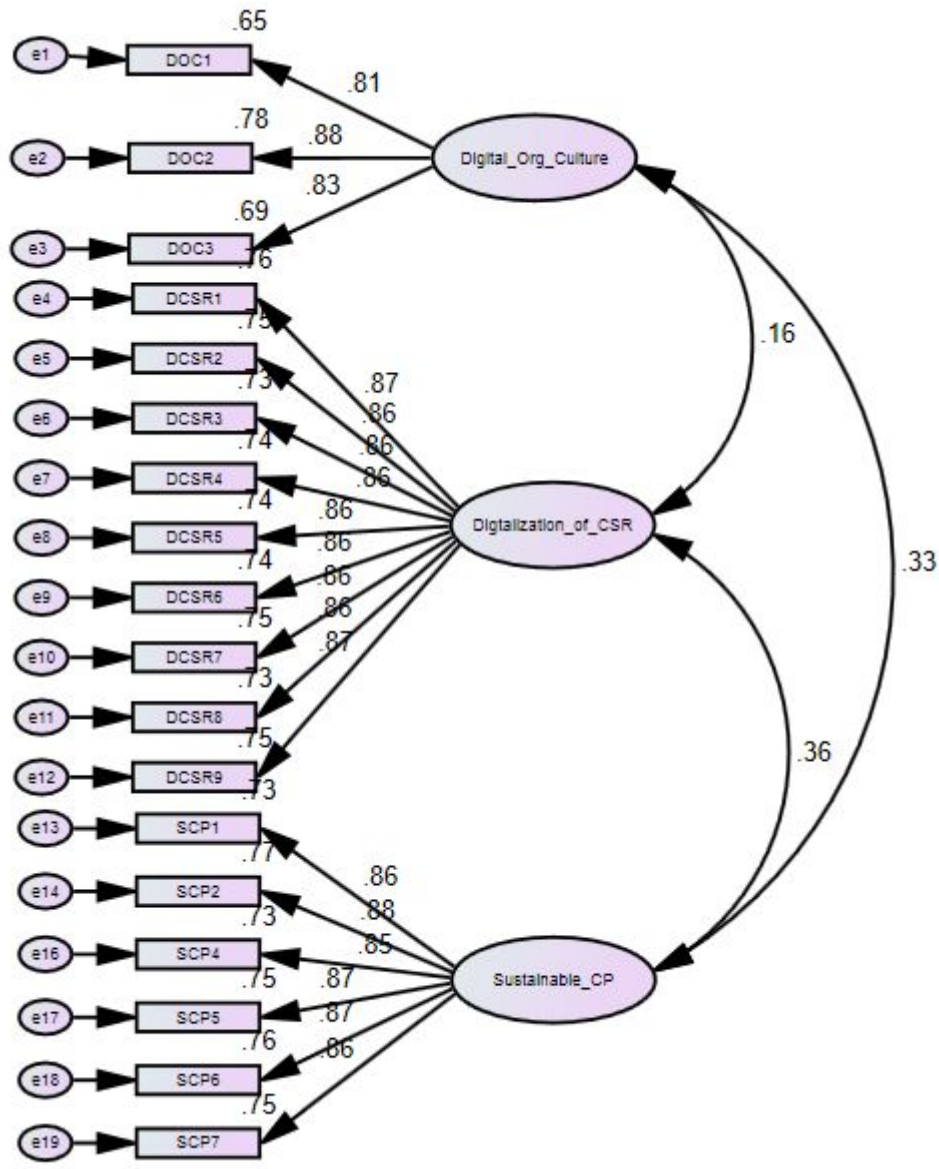


Figure A1. Measurement model

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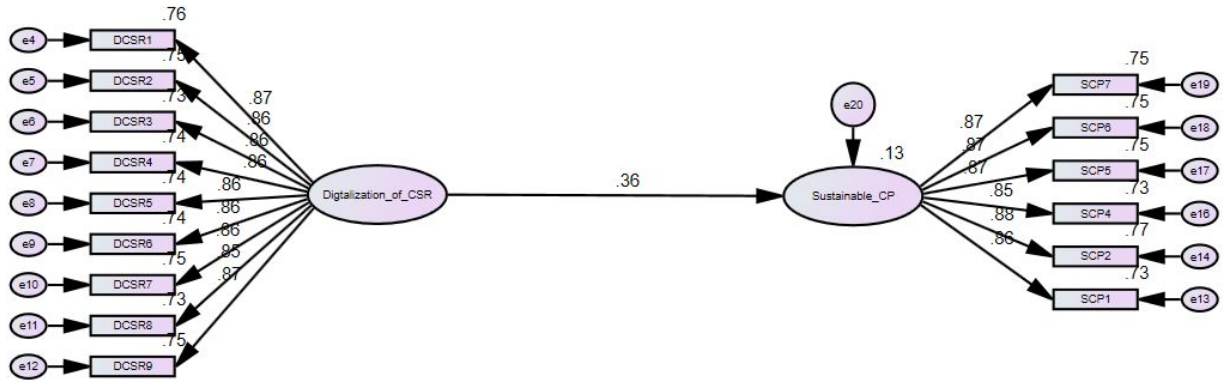


Figure A2. Structural Model1

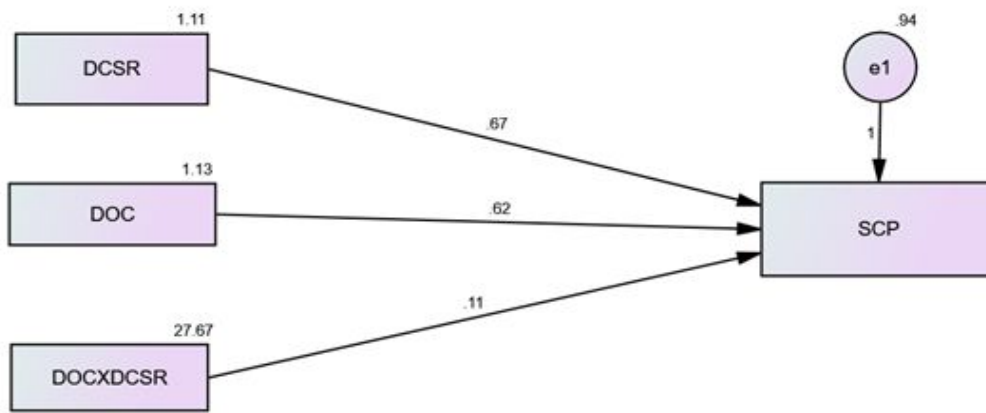


Figure A3. Structural Model2

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Appendix Questionnaire

SECTION A: Corporate Social Responsibility Digitalization

Please insert a check mark (√) in the appropriate column to indicate whether you agree or disagree with each of the following statements:

Corporate Social Responsibility Digitalization		1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DCSR1	Our organization implements special programs to minimize its negative impact on the natural environment and updates information related to the initiative on our internal media and mass media.					
DCSR2	Our company clearly defines its environmental policy, outlining its commitment to sustainable practices and responsible resource management, and uses interactive media channels to effectively communicate our environmental policy to stakeholders to receive their feedback.					
DCSR3	Our organization is committed to using a portion of its profits to help the communities and societies via social media platforms					
DCSR4	Our company contributes to the communities where we operate by engaging with them through various social media platforms.					
DCSR5	Our company incorporates digital charitable contributions as an integral part of its business operations					
DCSR6	Our company is committed to using digital technologies to improve customer satisfaction and address their concerns promptly.					
DCSR7	Our company is fully committed to investing in digital solutions to ensure the highest level of customer health and safety throughout its product usage.					
DCSR8	The company regularly updates customers about fake information related to products through its internal and mass media channels.					
DCSR9	Integrating digital technology into our CSR programs helps better fulfill our employees' needs and wants.					
DCSR10	Our company is actively implementing digital platforms to efficiently address and respond to employees' needs.					
DCSR11	Our organization views the implementation of digital solutions as a proactive step toward creating a respectful and diverse work environment that benefits all employees.					

SECTION B: Digital Organizational Culture

Please insert a check mark (√) in the appropriate column to indicate whether you agree or disagree with each of the following statements:

Digital Organizational Culture		1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
DOC1	We develop cutting-edge marketing programs for our services/products and our teams collaborate effectively in digital transformation initiatives.					
DOC2	There is a clear orientation to digital technology changes inside the organization's culture.					
DOC3	The culture of digital innovation and change takes part as a natural process within the organization					

SECTION C: SUSTAINABLE COMPETITIVE PERFORMANCE

Please insert a check mark (√) in the appropriate column to indicate whether you agree or disagree with each of the following statements:

Firm Sustainable Competitive Performance		1	2	3	4	5
		Extremely Declined	declined	Average	Improved	Extremely improved
SCP1	Return on investment (ROI)					
SCP2	Profits as a percentage of sales					
SCP3	Decreasing product or service delivery cycle time					
SCP4	Rapid response to market demand					
SCP5	Rapid confirmation of customer orders					
SCP6	Increasing customer satisfaction					
SCP7	Increasing profit growth rates and growing market shares					
SCP8	In reducing operating costs					

SECTION D: DEMOGRAPHICS

Gender	1	2
	Male	Female

Qualification/Education	2	3	4	5
	Bachelor and below	Master	MS/M.Phil.	PhD

Size of the firm Numbers of employees In our company	1	2	3	4	5
	20-50 employees	51-100 employees	101-150 employees	151-200 employees	201 -250 employees

Industry We deal in the Business of:	1	2	3
	Manufacturing	Trading	Services

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3 **Thank you for taking the time to answer, the questions to the best of your ability. Your**
4 **assistance is appreciated.**
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