



Journal for Social
Science Archives

Journal for Social Science Archives

Online ISSN: 3006-3310

Print ISSN: 3006-3302

Volume 4, Number 1, 2026, Pages 489 – 499

Journal Home Page

<https://jssarchives.com/index.php/Journal/about>



The Role of Online Social Capital in Advancing Sustainable Development Goals: A Review of Empirical Studies

Dr. Tasneem Akhter¹, Dr. Fazal Karim² & Dr. Malik Muhammad Shafi³

¹Assistant Professor of Economics, Faculty of Management Sciences, University of Central Punjab, Lahore,
Email: tasneem.akhter@ucp.edu.pk

²IDS, The University of Agriculture Peshawar, Email: flarimiiui@gmail.com

³Assistant Professor, IDS, The University of Agriculture Peshawar, Email: drmmms@aup.edu.pk

ARTICLE INFO

Article History:

Received: January 02, 2026
Revised: January 25, 2026
Accepted: February 03, 2026
Available Online: February 14, 2026

Keywords:

Online social capital, sustainable development, social networks, digital communication, community engagement

Corresponding Author:

Dr. Fazal Karim

Email:

flarimiiui@gmail.com



ABSTRACT

The rapid expansion of digital communication technologies has transformed the ways individuals interact, collaborate, and exchange information. One significant outcome of this transformation is the emergence of online social capital, which refers to the networks, relationships, and resources developed through online platforms. This study reviews empirical research examining the relationship between online social capital and sustainable development. Sustainable development aims to balance economic growth, social welfare, and environmental protection to ensure long-term societal well-being. Through a systematic review of empirical studies published between 2010 and 2021, this paper evaluates how online social networks facilitate knowledge sharing, community engagement, and collaborative initiatives that contribute to sustainable development. The review highlights that online social capital can enhance civic participation, support innovation, and strengthen community resilience. However, challenges such as digital inequality, information overload, cyberbullying, and filter bubbles may limit its effectiveness. The findings suggest that while online social capital provides significant opportunities for promoting sustainable development, it must be supported by strong institutional frameworks and offline social networks. The paper concludes by identifying research gaps and suggesting directions for future research and policy development.

Introduction

Origin of the Concept of Social Capital

The concept of social capital emerged primarily within the discipline of sociology and was later expanded by scholars in political science and economics. Although related ideas had been

discussed earlier, the term *social capital* became widely recognized through the contributions of several influential researchers, particularly Robert Putnam, who played a major role in popularizing the concept in contemporary social science research.

Early Foundations

The theoretical roots of social capital can be traced back to classical sociological thinkers such as Émile Durkheim, who highlighted the importance of social cohesion, shared norms, and collective consciousness within societies. Durkheim emphasized that strong social bonds and interconnected relationships are essential for maintaining social order and stability. His work provided an early foundation for understanding how social relationships and networks influence individual and collective behavior.

During the 1980s, sociologist James S. Coleman significantly advanced the concept of social capital. Coleman conceptualized social capital as a valuable resource embedded within social relationships, networks, and institutions. According to him, these social structures facilitate cooperation, coordination, and mutual trust among individuals, thereby enabling people to achieve shared goals and improve social outcomes.

The development of digital technologies and social networking platforms has significantly reshaped human interaction. Individuals and organizations increasingly rely on online networks to communicate, exchange knowledge, and build relationships. This transformation has generated growing academic interest in the concept of online social capital and its potential contribution to sustainable development.

Social capital generally refers to the shared norms, networks, trust, and relationships that enable individuals and groups to cooperate effectively and achieve common goals. It is considered an important resource for social and economic development because it facilitates collaboration, collective action, and access to information. Sustainable development, on the other hand, focuses on achieving economic progress, social equity, and environmental protection simultaneously without compromising the needs of future generations.

The integration of social capital and sustainable development has gained increasing attention in development discourse. Social capital enhances community participation, promotes cooperation, and strengthens social cohesion, which are essential elements for achieving sustainable development goals. With the rapid expansion of online communication technologies, social capital is no longer limited to face-to-face interactions. Instead, individuals can now build and maintain relationships through digital platforms such as social media, online forums, and virtual communities.

Online social capital refers to the resources individuals can access through their online relationships and digital networks. These resources may include information, emotional support, collaboration opportunities, and social influence. Such digital interactions have the potential to support sustainable development by encouraging knowledge exchange, community participation, and collective problem-solving.

The objective of Social Capital is personified within marketing managers because they work to develop policies to improve customer value delivery in an Organization's global network. Theoretically, it could be claimed that other practical areas collect Social Capital within Organizational resources (Adler & Kwon, 2002; Leana & Van Buren, 1999) but the real roles and responsibilities are with the marketing managers. In a marketing management context, Social Capital has been primarily theorized as a supply reflecting the character of social relations within

an Organization (Peng & Luo, 2000; Tan & Litschert, 1994). In an appraisal of the SCtl literature, (Leana and Van Buren (1999) two concepts are mostly applied which are associability and trust.

This paper aims to review existing empirical research examining the relationship between online social capital and sustainable development. It explores how digital social networks contribute to sustainable development initiatives and identifies challenges that may limit their effectiveness. By synthesizing current literature, the study provides insights into the potential role of online social capital in promoting sustainable social, economic, and environmental progress.

Literature Review

The importance of Online social capital for a sustainable development

Online social capital and sustainable development are both areas of growing importance in today's world (Budhiraja, K. (2023), Almeida, et al. (2021) and Yang, S. and Sun, M. (2020)). Social capital refers to the resources that are available to individuals and communities through their social networks. While, the sustainable development is the concept of meeting the needs of the present without compromising the ability of future generations to meet their own needs. Online social capital has become an increasingly important component of social capital, as social networking sites become more ubiquitous and people rely more heavily on online networks for communication and networking (Forster, A.G. and Van de Werfhorst, H.G. (2020), Zhu (2019)). The literature on online social capital has focused on the ways in which online networks can provide access to information, resources, and opportunities that might not otherwise be available to individuals or communities. Sustainable development has also received considerable attention in the literature, as concerns about climate change, resource depletion, and social inequality have led to a growing recognition of the need for sustainable practices in all areas of life.

The concept of social capital has been studied and debated by social scientists for decades for example by Coleman, J. S. (1988) and E. Lee et al. (2014). It refers to the resources that are available to individuals and groups through their social networks and relationships. Recently, the role of online social capital has gained significant attention due to the widespread use of social media platforms. In this literature review, we will explore the importance of online social capital for sustainable development (Bao, et al, (2023)). Online social capital is defined as the sum of resources that individuals can access through their online social networks. These resources can include social support, information, and opportunities for collaboration. Many studies have shown that online social capital has a significant impact on individual and collective outcomes, such as health, education, and economic development. One area where the importance of online social capital is particularly evident is in disaster recovery efforts. In the aftermath of natural disasters, social networks play a crucial role in providing support and resources to affected individuals and communities. Online social capital can facilitate coordination and communication between individuals and organizations involved in disaster response efforts, leading to more effective and efficient recovery outcomes. In addition to disaster recovery efforts, online social capital has also been shown to be important for community development and sustainability. Studies have found that individuals who are more connected online are more likely to engage in civic activities, such as volunteering and participating in community events. Online social capital can also facilitate the sharing of information and resources, which can lead to increased innovation and economic growth. However, it is important to note that online social capital is not a substitute for traditional, face-to-face social networks. Instead, online social capital complements and extends these networks. The most effective use of online social capital occurs when it is combined with strong offline social networks and relationships. So, the importance of online social capital for sustainable development is clear. Online social networks can provide individuals and communities with access

to resources that can lead to improved outcomes in areas such as disaster recovery, community development, and economic growth. As such, it is important to develop policies and practices that support the development and maintenance of online social capital, while recognizing the unique role that offline networks play in social capital formation.

The literature on sustainable development has focused on a wide range of issues, from the role of technology and innovation in promoting sustainability to the need for social and institutional change to support sustainable practices (Telli and Gokmen (2019) and Bao, et al., (2023)). The intersection of online social capital and sustainable development is an area of growing interest and importance. Some research has suggested that online social networks can play an important role in promoting sustainable behavior by providing information, increasing awareness, and building support for sustainability initiatives (Eriksson, et al. (2021)). Other research has focused on the role of online networks in facilitating collaboration and collective action around sustainability issues. Overall, the literature suggests that online social capital can be an important tool for promoting sustainable development. However, more research is needed to understand the specific ways in which online networks can be leveraged to support sustainable practices and to address the social and institutional barriers that may hinder such efforts. As the world continues to grapple with complex social, economic, and environmental challenges, the role of online social capital in sustainable development is likely to become even more important.

The impact of online social capital in the development process

Social capital has been recognized as an important determinant of development for decades (Eriksson, et al. (2021)). Online social capital, which refers to relationships and networks formed through online platforms, has gained increasing attention in recent years. This review paper aims to examine the role of online social capital in the development process by analyzing relevant literature from multiple disciplines. The rise of the digital era has significantly impacted the way people engage with each other and their environment, leading to the emergence of online social networks. Online social networks provide a platform for users to connect with each other, share information, and develop relationships. Consequently, the concept of social capital has been extended to the online context, encapsulated as online social capital.

Several scholars have examined the relationship between online social capital and development. For example, Wellman et al. (2003) found that online networks can complement or even substitute offline networks in providing social support, career opportunities and access to resources. Ahmad, et al., (2019) further argued that online social connections can facilitate political participation, particularly among university students. Buttice et al., (2017)) also found that online social capital can help entrepreneurs acquire information, resources or customers that are critical for their businesses.

This literature review explores the evolving literature on the role of online social capital in the development process. Online social capital is defined as the resources available to an individual or a group based on their relationships within an online social network ((Eriksson, et al. (2021)). It is conceptualized as a subset of social capital, which is concerned with the value that people derive from their social networks. Scholars argue that social capital is essential for development in terms of economic growth, political stability, and community well-being. Accordingly, online social capital can contribute to development in the same way as traditional social capital. The literature suggests that online social capital can be measured in various ways. For instance, the number of friends, the frequency of interactions, and the amount of information exchanged are typical indicators used to measure online social capital (Barseli et al., (2019)). The literature also emphasizes the potential of online social capital in promoting civic participation, knowledge

sharing, health, and wellbeing. Online social capital has been positively linked to social support, trust, and the exchange of information. Research evidence indicates that online social capital plays a crucial role in the development process. For instance, studies have shown that online social capital can facilitate economic development by promoting entrepreneurship and job creation (Telli and Gokmen (2019)). It can also spur innovation by enhancing knowledge sharing and collaboration among individuals and organizations. Furthermore, online social networks can bolster political participation by providing a platform for citizens to influence policymaking ((Eriksson, et al. (2021)).

In conclusion, the literature suggests that online social capital has the potential to contribute to the development process. Through building social networks online, individuals and groups can access vital resources, including social support, knowledge, and political influence, that can help them to thrive economically, socially, and politically. However, there are concerns about the role that online social networks may play in exacerbating inequality, as some demographic groups are more likely to participate in online networks than others (Coleman, J. S. (1988) and E. Lee et al. (2014), Ahmad, et al., (2019), and Eriksson, et al. (2021)). Future research should explore these issues in more detail.

Synthesis of Literature Review

The relationship between online social capital and sustainable development remains an emerging area of research. Although empirical studies are limited, existing research provides valuable insights into how digital networks contribute to sustainability initiatives.

Several studies have found that online social capital positively influences sustainable development outcomes. Research conducted in different contexts shows that individuals engaged in online networks demonstrate stronger environmental awareness, community participation, and sustainable behaviors.

Empirical evidence suggests that online engagement enhances social capital by strengthening communication and trust among individuals. Increased social capital, in turn, contributes to sustainable development by encouraging cooperation, knowledge sharing, and community-based initiatives.

Studies involving university students and online communities reveal that digital networks can influence environmental attitudes and promote sustainable practices. Online platforms often serve as spaces where individuals share information about sustainability issues, environmental protection, and responsible consumption.

However, researchers also emphasize that online social capital alone cannot ensure sustainable development. Effective governance, supportive institutions, and strong offline community networks are necessary to translate digital interactions into tangible development outcomes.

Overall, the literature suggests that online social capital has the potential to support sustainable development efforts, but further empirical research is required to fully understand the mechanisms through which these digital networks influence sustainability outcomes.

Research Methodology

This study adopts a systematic literature review approach to analyze empirical research on online social capital and sustainable development. Systematic reviews involve collecting, evaluating, and synthesizing existing studies in a structured and transparent manner.

The review process follows a three-stage framework consisting of planning, conducting, and reporting. During the planning stage, the research objectives and review protocol were defined to ensure objectivity and transparency. The protocol established clear criteria for selecting and analyzing relevant studies.

In the conducting stage, empirical studies published between 2010 and 2021 were identified through academic databases. A total of 42 research articles were selected for detailed analysis based on their relevance to online social capital and sustainable development.

Each study was examined in terms of research design, data collection methods, measurement of online social capital, and reported outcomes related to sustainable development. The selected studies were then categorized according to themes such as social networks, trust, civic participation, and environmental sustainability.

The analysis revealed that online social capital can be measured through multiple dimensions, including network size, interaction frequency, trust, reciprocity, and civic engagement. These dimensions were often positively associated with various aspects of sustainable development, including economic growth, social inclusion, environmental awareness, and governance.

A systematic review approach was adopted to identify relevant empirical studies published between 2010 and 2021. A total of 42 papers were selected for data extraction and analysis. The papers are analyzed in terms of their research design, sampling techniques, measurements of online social capital, and their relationship with sustainable development.



Figure1: Systematic review stages

Planning stage

In the planning stage, it's crucial to determine the specific needs of the systematic review. A systematic review is necessary when researchers need to comprehensively and objectively summarize all available information about a particular phenomenon. Despite the ongoing research on the relationship capital social online and development sustainable, functions, benefits, and challenges, there is currently no systematic review that offers an in-depth analysis of the research and practice in this area.

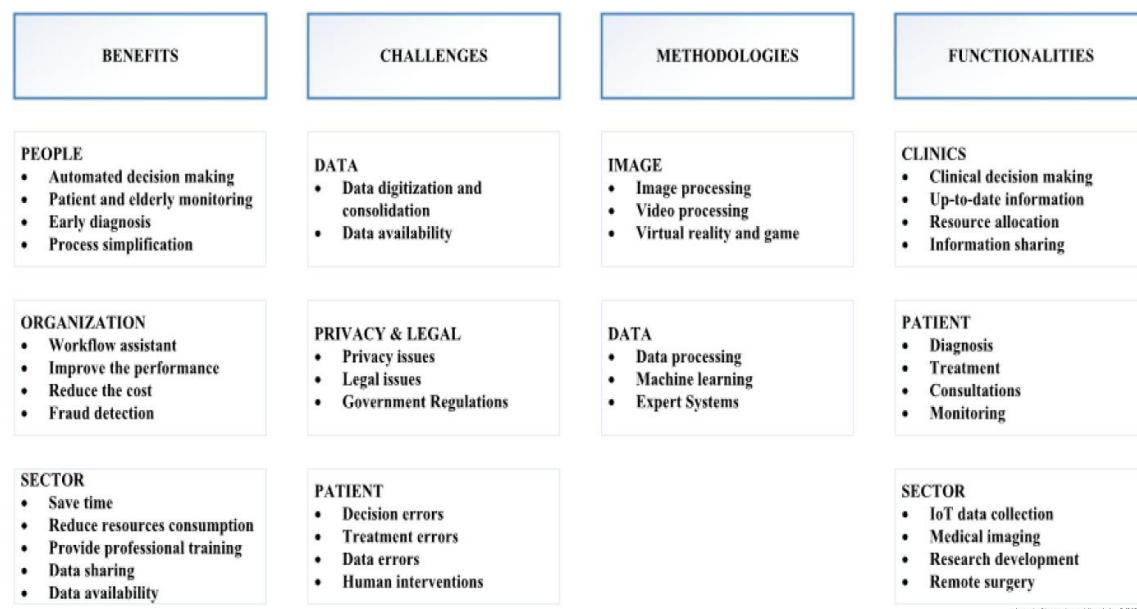
During the planning stage, the second step involves creating a research review protocol that forms the foundation for comprehending the current theories and practical perspectives on the subject

matter. A systematic review is undertaken by adhering to the protocol, which outlines the methodology. The significance of a pre-determined protocol is evident in its ability to minimize the occurrence of researcher subjectivity. Without it, researchers may choose studies or analyze data based on their personal expectations. The classification framework utilized in this research was first initiated by Ngai and Wat (2002) and was used to conduct a systematic review of journal articles exploring the impact of advanced technologies on different sectors.

Daskalopoulou et al. (2023) have utilized this classification framework to examine the advantages Social Entrepreneurship and Social Capital. Additionally, they have put forward an updated version of this framework in their research by incorporating the mediator/moderator approach to social capital identifies these pathways as being complementary value creation processes.

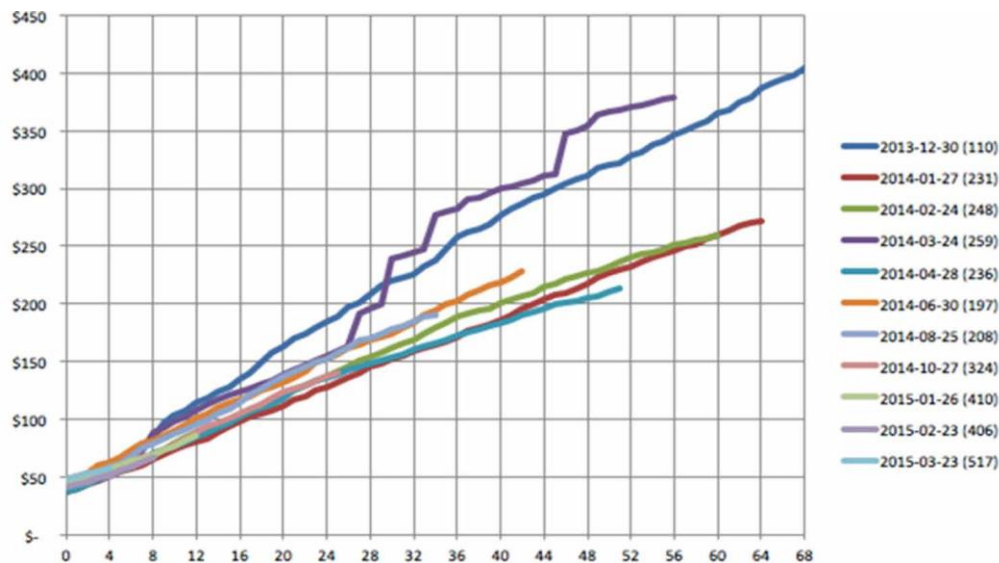
The framework is predominantly divided into four dimensions, which pertain to the benefits, challenges, methodologies, and functionalities. The categories under each dimension encapsulate various factors based on an analysis of relevant articles.

Fig. 2. Classification framework



In figure 1 found that online social capital can be measured through various dimensions such as social networks, trust, reciprocity, social norms and civic engagement. These dimensions were found to be positively associated with various aspects of sustainable development, including economic growth, social inclusion, environmental sustainability and governance. However, the strength of these associations varied across different contexts and populations. Moreover, the review highlighted the potential of online social capital to foster collective action and mobilize communities towards sustainable development goals. The findings suggested that digital technology and social media can be utilized to enhance social capital and promote sustainable development outcomes. However, some studies cautioned that online social capital alone may not be sufficient to achieve sustainable development goals, as offline social interactions and institutional mechanisms are also necessary.

Figure 1. Organization improving access to resources for the global markets and achieving success at the organizational level for SCtl from 2013 to 2015



Organization improving access to resources for the global markets and achieving success at the Organizational level. SCtl is the famous Virtual Capital (VC), which was founded in 2011. The main office of represented VC is situated in Palo Alto. The company was established in North America in the United States. The funds are found to be increasing for SCtl since 2013 and in 2014 the maximum increase is accounted for in the global markets. Figure 18 shows the results of the Organization improving access to resources for the global markets and achieving success at the Organizational level for social capital from 2013 to 2015. social capital personified by marketing managers in the Organization's global network can be of pronounced prominence to the Organization. Marketing executives are essential to the decision-making process for marketing policy and application. Organizations can begin to increase a more in-depth understanding of the resource frameworks they possess and those that they need to grow in order to establish a competitive advantage in the global marketplace. As such, the clarification of how an Organization's marketing managers exemplify social capital can serve as an assessment tool through which Organizations can determine their respective level of the intangible. While Organizations compete feverishly to attract the best marketers, little effort is normally expended toward the goal of retaining the employees.

Hypothesis 1: Social capital developed by an individual in the Organization's global network will be positively related to the degree of the marketing manager's contribution in the followings:

H1.1: Main Organization and all its local partners

H1.2: Synchronization between the Organization and its global partners

H1.3: Expedites information between the main Organization and its local partners (linking of H1.1 and H1.2)

H1.4: Enriches organizational interpersonal proficiency to introduce worldwide enterprises.

H1.5: Connotation between an Organization's SCtl in its global network and individual SCtl.

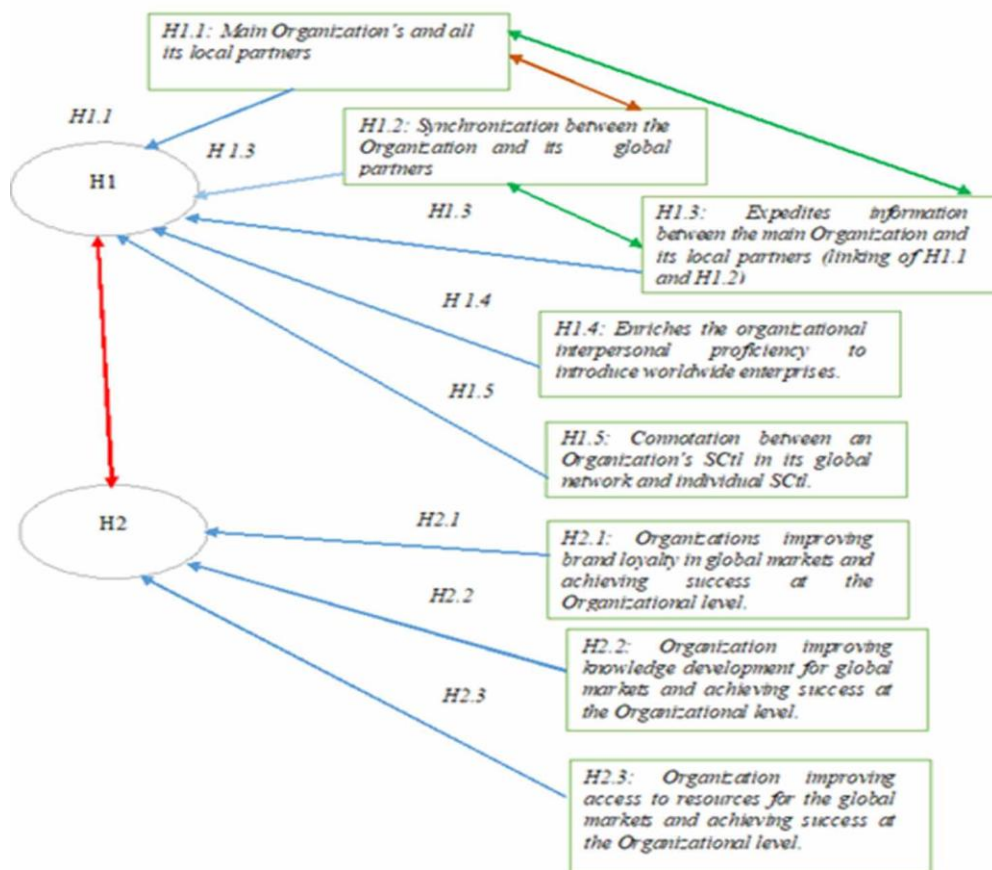
Hypothesis 2: Policies of marketing management cultivating SCtl within the Organization's global network for the following:

H2.1: Organizations improving brand loyalty in global markets and achieving success at the Organizational level.

H2.2: Organization improving knowledge development for global markets and achieving success at the Organizational level.

H2.3: Organization improving access to resources for the global markets and achieving success at the Organizational level.

Figure 2. The theoretical framework of the research objectives and the relationship



Results Analysis

Social capital at an individual level refers to “the standing one has in an organization and the concurrent ability to draw on the standing to influence actions of others in the organization” (Friedman & Krackhardt, 1997: 319).

Hypothesis 1: A marketing manager can build associability and trust within the Organization's global network through the exchange of codified (i.e., the knowledge that can be synthesized into a set of codes) and tacit knowledge (i.e., knowledge derived from doing, such as the social knowledge one gain by living in a foreign environment) across internal and external relations. As such, a marketing manager's Social capital, both in headquarters and local markets (i.e., internal and external social capital), facilitates information transfer and learning as well as providing political support within and between organizations in a global context. This enables marketing managers to play a unique strategic role in global organizations and within an Organization's global network.

Conclusion

This review highlights the growing importance of online social capital in promoting sustainable development. Digital communication technologies have created new opportunities for individuals and communities to collaborate, exchange knowledge, and mobilize collective action toward sustainable goals.

Empirical studies indicate that online social networks facilitate information sharing, community participation, and innovation. These networks can support sustainable development by promoting environmental awareness, encouraging civic engagement, and enabling cooperation among individuals and organizations.

However, the effectiveness of online social capital depends on several factors. Challenges such as digital inequality, misinformation, cyberbullying, and information overload may limit the positive impact of online networks. Additionally, sustainable development requires supportive institutional structures and strong offline community relationships.

Therefore, online social capital should be viewed as a complementary tool rather than a substitute for traditional forms of social capital. Integrating digital networks with community-based initiatives and policy frameworks can enhance their potential to support sustainable development.

Future research should explore the relationship between online social capital and sustainable development in different geographical and cultural contexts. Empirical studies focusing on specific sectors such as renewable energy, waste management, and sustainable consumption could provide deeper insights into how digital networks contribute to sustainable development outcomes.

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