The Transformative Role of Technological Innovation in Reshaping Business Communication Practices and Strategies

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Abstract

In the rapidly evolving landscape of the new economy, the integration of research, technology, and innovation has become a cornerstone for driving sustainable development. This paper examines the transformative role of technological innovation in reshaping business practices and communication strategies, focusing on how these advancements contribute to a more sustainable, resilient, and inclusive economic framework. The new economy, characterized by the pervasive influence of digitalization, automation, and the growing importance of knowledge-based industries, necessitates that businesses embrace innovative technologies to remain competitive and foster long-term sustainability. Technological innovations, such as artificial intelligence, blockchain, and advanced communication tools, are revolutionizing traditional business models by enhancing operational efficiency, reducing costs, and minimizing environmental impacts. These innovations enable businesses to develop more sustainable practices while improving communication with stakeholders, fostering transparency, and facilitating collaboration. As a result, the synergy between business innovation, technology adoption, and communication strategies not only drives economic growth but also supports broader sustainable development goals. These include promoting inclusive growth, reducing social and economic inequalities, and addressing pressing environmental challenges. However, realizing the full potential of these innovations in the new economy requires a comprehensive and collaborative approach. This paper highlights the need for a robust framework that promotes research and development, encourages the widespread adoption of emerging technologies, and ensures that innovation efforts are closely aligned with sustainable development objectives. Governments, private sector entities, and academic institutions must work together to create an enabling environment that supports technological advancement and its application in business and communication. By fostering such collaboration, the new economy can be harnessed as a powerful force for achieving sustainable development, ensuring that economic progress is both inclusive and environmentally responsible.

Keywords: Technological Innovation, New Economy, Sustainable Development, Business Models, Communication Strategies.

1.0 Introduction

Communication, as a management function, is the process of creating, communicating, and interpreting ideas, facts, opinions, and feelings about work performance, organizational

effectiveness, and efficiency as well as goal attainment in an organization (Radovic Markovic & Salamzadeh, 2018). In business, communication plays a very important role in facilitating transactions as well as other processes that ultimately result in the transaction being executed. At its core, business communication encompasses the exchange of information within and outside a business. This exchange can take various forms, including written documents, verbal conversations, presentations, and visuals. Internally, business communication involves the flow of information among employees, departments, and hierarchical levels (Zabelavičius, (2024). It is the lifeline that keeps different parts of the business interconnected and working in harmony.

Externally, business communication extends beyond the business's front door. It encompasses interactions with customers, suppliers, partners, regulatory bodies, and the broader industry. These external exchanges are critical for building relationships and fostering collaboration. Business communication is not limited to a singular method. It incorporates a spectrum of elements: written communication in the form of emails, reports, memos, and documentation; verbal communication including meetings, presentations, and everyday conversations; digital communication through various digital platforms, such as social media and other online channels, and; Visual Communication through charts, graphs, and multimedia presentations (Kalogiannidis, 2020).

For most businesses, increasing sales and fostering business growth require good communication with clients and staff. For instance, communicating with the business' customers about their experience with the business' product or services not only allows one to develop his/her communication skills further but also helps build trusting relationships and return business (Duran & Castillo, 2023). The ultimate goal of business communication is to convey information effectively, ensuring clarity and understanding among all stakeholders. Poor or ineffective communication normally leads to organizational mismanagement and undesirable business results. Effective communication is, therefore, the ultimate goal of business communication, guaranteeing comprehension and clarity for all parties involved. It is a significant factor in decision-making, problem-solving, teamwork, and, above all, reaching the organization's overarching business objectives.

Effective communication; reinforces brand messaging, builds customer and other stakeholder relationships, boosts creativity and innovation, and encourages feedback and boosts employee

morale (Guffey & Loewy, 2019). It plays a pretty important role in team management, decision-making, problem-solving, collaboration, and, most importantly, in achieving your overall business goals. Eighty percent of employees who work for small businesses in general feel appreciated and heard, which makes them happy. Small organizations tend to be more intimate and have simpler communications. Open communication leads to higher employee engagement, which can help the business's bottom line (Andrea, 2023).

Efficient business communication is the cornerstone of a well-functioning machine. It aids in preventing misunderstandings, streamlining processes, fostering a positive workplace culture, and enhancing the overall efficiency and productivity of the business. This underscores the need for finding more efficient ways of business communication. Furthermore, in the current dynamic business landscape, communication methods change, evolve, and even disappear. Technological advancements, cultural shifts, and changes in consumer behavior all influence how businesses communicate. Staying attuned to these shifts is vital for maintaining relevance and effectiveness in communication strategies.

Technology forms a very important part of business communication today. Technology is a force multiplier in technical terms and enables the firm to reach millions of people across the world in a very short time. The importance of technology in business cannot be understated. The way we communicate, transact business, shop, live, and work has all been altered by technology in the last several years. It has become an integral part of our routine and now forms an indispensable aspect of life. Enterprises throughout the globe are depending on nascent technology to enhance their edge over competitors and propel their expansion strategies. Today, we cannot even contemplate doing business without the Internet, video conferencing, project management software, and more. In fact, the role of technology in business will only continue to expand. In actuality, technology's place in business will only grow. This fact necessitates incorporating technology into business processes and particularly communication. The aim of this paper, therefore, is to examine the arguments regarding the transformative role of technological innovation in reshaping business communication practices and strategies from across different contexts on the globe.

2.0 Literature Review

Communication is an essential part of any company. Moreover, good communication skills are incredibly important in the business world. Communication researchers have increasingly sought to connect and to integrate effects across levels of analysis, from the "micro" to the macro. Persuasion studies have focused on the chain of individual-level communication processes leading to behavior change. Some researchers tried to explain the shifting nature of organizations as they are formed and transformed through the relational interactions among members, external audiences, and cultural meaning systems (Cooren, Taylor & Van Every, 2006). Similarly, the social cognitive theory of Albert Bandura (1986) and the trans-theoretical model of Jams Prochaska et al. (1994), for example, recognize that an individual's behavior is formed in the context of the larger community and social environment. Therefore, planned interventions must include efforts to change the larger environment as well. One such intervention in communication is technology innovations.

The Diffusion of innovations theory popularized by Everett Rogers in 1962 explains how, why, and at what rate new ideas and technology spread which is very important in understanding the diffusion rates of business communication technologies across the world. On his part Davis (1989), through the Technology Acceptance Model (TAM) postulates that the acceptance of technology is predicted by the users' behavioral intention, which is, in turn, determined by the perception of technology usefulness in performing the task and perceived ease of its use. Venkatesh et al., (2003) in their UTAUT model seeks to explain technology innovation adoption from the performance expectancy point of view as a determinant of the acceptance of technology. However, from the Diffusion of Technology Theory (Rogers, 1962), the Technology Adoption Model of Davis (1989), and Venkatesh et al., (2003) UTAUT model, we can appreciate that distribution of technology is not ubiquitous and there are disparities in technology across different contexts and also within the same contexts. Therefore, this may limit the effectiveness of communication technologies. A case in point is contexts where the internet is still limited, it may not be possible to communicate effectively using internet-based communication applications like email or social media.

Business Communication Technologies

The use of technology in business communication spans over four hundred years, though the advent of modern business communication can be traced back to almost 200 years ago when the first telegraph was invented in 1837 by William Cooke and Charles Wheatstone making the delivery of messages became even quicker. This was followed in succession by the Morse Code, the telephone, radio, television, and the fax machines whose first commercial fax equipment was made available by Xerox in the 1960s. Finally, the 1990s saw the introduction of email which brought the cost and time of delivery down to nearly zero, no matter how far apart the recipients are.

Television was invented in the 1920s, but two-way video communication came much later. Video conferencing first became an established part of the commercial scene in the 1980s, around the same time that mobile phones became widely available. Texting and real-time chat enhanced the usage of mobile phones and computers, giving businesses more options for "always on" or instant connection. Today, affordable and convenient audiovisual technology has brought business communication almost full-circle. While participants may physically be far away from one another, they do speak face-to-face. They are simply using a web-based video conferencing platform that also supports live chat, document sharing, and many other forms of collaboration such as Veeting Rooms.

Imperatively, the evolution of business communication technologies has led to the emergence of technologies in the 21st century, which support rich forms of communication across the globe. This means that business people are no longer constrained by their travel plans and capabilities when intending to attend meetings, but rather can fully participate in meetings online via the technology interfaces made available by mostly digital technologies. However, while the technologies are now mature enough to support rich communication forms, constraints to business communication and adoption of the technologies are still evident across the world. These include, competence, adoption, policy, and infrastructural challenges in business communication using technologies. This means that the principles of business communication must still be upheld and communication strategies developed to navigate the communication barriers to ensure the purpose of effective business communication of ultimately, guaranteeing comprehension and clarity for all parties involved is guaranteed without contextual limitations.

3.0 Methodology

The study used a systematic literature review approach where apart from the conceptual and theoretical literature, the study relied on empirical studies for data and conclusions of the study. Several search terms were used in the survey of the literature as shown in Table 1.

Table 1: Tabulation of Search Terms

Key Terms	Related words/phrases
Technological innovation	Innovative technologies, business technologies
Business communication	Organizational communication, firm communication, SMEs communications
Communication strategies	Strategic communication, communication plans, communication patterns
Communication practices	Practices of communication, communication behaviors
Communication technologies	ICTs, digital communications
Internet	Online communications, social media, emails

These terms were searched online using search engines such as, Science Direct, Wiley Online Library and Taylor & Francis. The documents were assessed on the basis of the inclusion and exclusion criteria and those that met the initial inclusion criteria were further reviewed and excluded if they failed to meet in-depth review requirements. Table 2 shows the summary of the search results.

Table 2: Search Results

Category	Frequency
Databases	4 (Science Direct, Wiley Online Library, Taylor & Francis,
	Sustainability)
Total hits	93
Excluded after abstract	57
Included after title & abstract	36
Excluded after full text	27
Included after full text	9
Quality assessment	High

4.0 Findings and Discussion

Adoption of business communication technologies

The use of advanced technologies provides opportunities to enter the international market and remain competitive despite the challenges of globalization, liberalization, and scientific and technical progress (Awiagah, Kang, and Lim, 2016a). Since 2005, developed economies have embraced ICT at a far faster rate than emerging and developing nations, both in terms of size and penetration. Thus, in emerging economies, the impact of ICT adoption among SMEs is extremely moderate (Aslesen & Harirchi, 2015). An empirical study from China by Wang et al., (2020) on understanding behavioral logic of information and communication technology adoption in small-and medium-sized construction enterprises revealed that mimetic pressure (MP), strategic value judgment (SVJ), and behavioral control capability (BCC) can drive adoption behavior directly. Although normative pressure (NP) and efficiency value judgment (EVJ) do not exert direct effects on adoption behavior, their indirect effects on adoption behavior are fully mediated by adoption intention. However, the impact of coercive pressure (CP) on adoption intention and adoption behavior was not supported.

In the European Union alone, it is estimated that 58% of large enterprises are highly digitized, but only 20% of Small and Medium Enterprises (SMEs); 56% of computing companies, and just 8% of metal product companies (EC, 2021). Roman and Rusu's (2022) study on digital technologies and the performance of small and medium enterprises in the EU showed that the level of digitalization of SMEs has increased, especially in recent years due to Covid-19 pandemic restrictions. However, only a third of SMEs use or have started to implement digital technologies in their business. Most of them use basic digital technologies such as using email and/or owning a website. About 10% of SMEs, regardless of size, use advanced digital technologies. The main barriers identified in the way of digitalization of SMEs are mainly the lack of knowledge or skills or financing to adopt these technologies.

Hanggraeni (2021) studied Information and Communication Technologies (ICTs) adoption by MSMEs and local poverty using empirical evidence from Indonesia. Using OLS regression models with province and year fixed effects on our MSMEs survey data and local poverty measures, the study showed a robust, negative relationship between the adoption of ICTs by MSMEs and the number of poor populations in the corresponding region, controlling other factors.

Kumar, Goel, Joshi, and Johri (2024) analyzed factors affecting information & communication technology (ICT) adoption among MSMEs in India. The study identified perceived usefulness and social influence as pivotal factors influencing ICT adoption behavior. The study's emphasis on the significance of the perceived benefits of technology and the influence of social networks in steering the adoption trajectory within the MSME segment is also supported by the results of Hanggraeni (2021), who similarly highlight.

In Colombia, Duran and Castillo (2023) examined factors related to information and communication technologies adoption in small businesses in Colombia. The study revealed that traits such as owner age and gender affect adoption. Furthermore, variables such as the age and size of the company, the amount of computer equipment, business formalization practices, and social capital influence the use of these technologies. As such, the individual features of business owners are also determinants of technology adoption, and their inclusion becomes essential to supplement the analysis of these issues. In addition, the study supported the evidence that the acceptance of these technologies is positively related to the business size and infrastructure. The amount of computer equipment owned by the establishment also shows a positive effect, and for each additional piece of equipment, the probability of adoption increases by 23.5%, thus evidencing the importance of equipment provision for the use of such technology. Business formality also makes it more likely that the decision to adopt the technology is taken. The average marginal effect yields a value of 9.2%. Moreover, social capital variables such as being associated and affiliated to a cooperative have a positive impact, with marginal effects of 6.4% and 12.2%, respectively. The study, however, did not give an adoption rate of the communication technologies.

Nazir and Khan (2022) examined the impact and Factors Affecting Information and Communication Technology Adoption in Small and Medium-Sized Enterprises in Pakistan and concluded that several other factors influence the uptake of ICT. These include cultural factors that represent end-customers' perspectives; internal and external factors; characteristics of owner-managers; and regulatory and institutional support factors. Together these factors constitute the Perceived ease of Use. However, like Duran and Castillo (2023), Nazir and Khan (2022) failed to show the actual adoption rate of business communication technologies in Colombia.

In Kenya, Mutitu (2023) study on information communication technology adoption, external environment and firm performance of small and medium enterprises in Kiambu County, revealed that 98% of the SMEs had integrated ICT services in the organizations. Additionally, 98% of the respondents confirmed they used the Internet for their businesses. Okumu's (2023) assessment of factors influencing the adoption of emerging technologies by Micro Small and Medium agribusiness organizations in Kenya revealed that 66.7% of the MSMEs are using emerging technologies in their organizations.

Use of Technologies in Business Communication Strategies

Technology has revolutionized communication within organizations, offering benefits such as enhanced efficiency, collaboration, and remote work capabilities (Gataulin, 2024). By harnessing the power of technology and implementing effective communication strategies, organizations can foster a culture of effective communication and achieve their goals efficiently (Rogers, 2019). Utilizing technology to resolve issues quickly leads to happier customers who are more likely to be loyal to your business. In fact, 66% of US customers do more business with companies thanks to quality customer service. In the EU, Bilan, Oliinyk, Mishchuk, and Skare (2023) examined the impact of information and communications technology on the development and use of knowledge and established that, generally, the influence of ICT factors on knowledge development, and hence knowledge-based economies, allows one to identify the critical determinants of the success of leading countries. Using panel data analysis, the study by Roman and Rusu (2022) showed that the use of at least basic digital technologies and selling only it can be a way to stimulate the growth of added value and the employment of SMEs. Therefore, digitization of SMEs can increase their performance. On the other hand, adopting these technologies that involve increased additional costs can lead to a reduction in SMEs performance in the short term.

The study by Nazir and Khan (2022) revealed four (4) sub-themes emerging from the the impact of ICT usage on SMEs in Pakistan. These included the generation of employment opportunities, growth in labour productivity and technical efficiency, reduction in scale of fraud and the detection and prevention of financial crime and gaining of competitive advantage. The study further established that owner-managers of SMEs believe that ICT once adopted not only offers a competitive advantage but could also generates more flexible jobs, increase employee performance, and business financial efficiency.

These four advantages contribute to the perceived usefulness (PU) of the theoretical framework (TAM) of the literature. Hence, when ICTs are adopted successfully, with a positive owner-manager attitude by SMEs in Pakistan, are useful and positively impact business operations.

Effective communication is crucial for alignment, and its validity hinges on the recipient's comprehension of the sender's message (Izzati, Adnan, &Jambari, 2016). Soi et al., (2024) study further showed that information technology strategic alignment; has improved quality of service, improved production efficiency, improved processes in the company, has led to new Product development, has reduced pricing of products and cost of operations, has led to product diversification, has enhanced product differentiation, has introduced new markets, has improved Image and client loyalty, and IT Strategic Alignment has increased sales growth.

In Kenya, Mutitu's (2023) study found a moderate positive correlation for the relationship between ICT adoption and SMEs' performance. Soi, Nyang'au, and Mwalili (2024) study on technology communication and firm performance of Kenya Tea Producers Companies concluded that Technology Communication has a positive and statistically significant influence on performance of Tea Producers companies in Kenya. Findings revealed that effective exchange of ideas, information and knowledge between IT and business and inter/intra organizational learning influences performance of Tea Producers companies in Kenya. This implies that a unit improvement in Technology communication would lead to improvement in performance of Tea Producers companies in Kenya.

The impact of emerging communication technologies such as social media on communication performance of businesses have been established by several studies among them Oywaya (2023) who examined the Influence of Social Media Marketing on the Performance of Online Based Small and Medium Enterprise in Nairobi County, Kenya. Based on the four effects of social media marketing that guided the study, it was seen that brand awareness, quality of the content, video content, and content consistency has a strong positive relationship with the performance of an SME. This means the higher the brand awareness the higher the performance of an SME, the higher the quality of content, the higher the performance of a SMEs, the more the video content the higher the performance of an SME.

Munene and Maina's (2023) study on the effect of social media strategies on competitiveness of investment management firms in Kenya established that social media increased PR activity, and provides the most persuasive possible selling message to the right prospects. Moreover, the study found that knowledge shared between supervisors and subordinates. Further, the study found that it was uncertain whether social media: allows instant messages between the customers and the organization, and keeps in touch with the customers. The study further found that it was uncertain whether customer feedback on their social media pages is a major key to discovering and solving their customer problems.

Wamuyu (2015) study on the impact of information and communication technology adoption and diffusion on technology entrepreneurship in developing countries focusing on Kenya, however, revealed that rapid changes in ICT trends and early adopters' switching behaviour negatively affect the survival of an ICT-based enterprise (ICT-BE), while customer satisfaction and entrepreneurial creativity positively influence the survival and success of an ICT-BE. Odera (2024) study on harnessing the potential of digital media for business growth of legacy media in Kenya revealed a promising yet evolving scenario of digital integration within Kenya's legacy media, emphasizing both opportunities and challenges. While the industry showcases initial strides in digital adoption, there are clear areas for improvement, particularly in leveraging analytics tools and addressing financial constraints and cybersecurity risks. In conclusion, the study underscored the need for a concerted effort to fortify digital literacy, enhance cybersecurity measures, and foster collaborative innovation.

Challenges of Use of Technologies in Business Communication Strategies

Despite increased awareness and growth in the adoption rate of ICT by MSME, ICT adoption still faces several challenges. Tarutė and Gatautis (2014) categorized these challenges into - internal and external categories. Behavioral intentions of MSME owner/manager to adopt ICT, cost of adoption, risk of failure, lack of knowledge and skills of the technology, and return on investment, are a few of the internal barriers to the adoption of ICT. Digital infrastructure, social and cultural barriers, and legal and political environment are prominent external barriers of ICT adoption.

Singh, Thakkar, and Jenamani (2022) examination of integrated gray-decision-making trial and evaluation laboratory (Grey-DEMATEL) framework to evaluate the ICT adoption barriers in manufacturing small and medium enterprises (MSMEs) running in developing countries focusing

on Indian MSMEs revealed that Indian MSMEs have faced challenges in adopting ICT, which has hindered their ability to compete globally. The ICT adoption problem started with Indian MSMEs in the early 2000 s. This was primarily due to several factors: One major origin of the ICT adoption problem in Indian MSMEs is the lack of awareness and understanding about the benefits and potential of ICT. Many MSMEs in India are not aware of how ICT can improve their business operations, enhance their efficiency, and expand their market reach (Hanggraeni, 2021; Singh et al., 2022). Another problem of ICT adoption by Indian MSMEs arises due to the high cost of adoption and lack of adequate financing (Cusolito, Safadi & Taglioni, 2016).

Kumar and Mittal (2020) conducted a qualitative exploration to identify the challenges hampering the seamless integration of digital technologies within the media. Through in-depth interviews and meticulous content analysis, the study revealed various obstacles hindering comprehensive digital adoption. Skill gaps, financial constraints, and infrastructural limitations emerged as prominent barriers in the media's full-scale digital transition. The study concluded by emphasizing the critical need for strategic investments, both in terms of skills enhancement and technological infrastructure, to effectively overcome these impediments and foster a more digitally integrated media landscape. Chebichiy and Odhiambo (2020) conducted a case study centered on exploring the challenges and opportunities of e-commerce in Kenya, specifically focusing on platforms like Jumia Kenya. Through interviews and a comprehensive review of e-commerce trends, the study highlighted how digital platforms play a pivotal role in propelling business growth. It revealed that while e-commerce platforms offer extensive opportunities for market expansion, concerns regarding digital infrastructure and regulatory frameworks posed substantial barriers to harnessing the full potential of digital technology for business growth in Kenya.

5.0 Conclusion and Recommendations

The study has examined the arguments regarding the transformative role of technological innovation in reshaping business communication practices and strategies from across different contexts on the globe. The studies generally underscored the importance of technology applications on business communication. Technology communications were generally found to positively impact the businesses' communication strategies and also the performance OF THE businesses. These included; PR activity, brand awareness, organizational learning, stimulating the growth of added value and the employment of SMEs, and effective exchange of ideas, information

and knowledge between IT and business and inter/intra organizational learning. However, however, revealed that rapid changes in ICT trends and early adopters' switching behaviour negatively affect the survival of an ICT-based enterprise (ICT-BE), while customer satisfaction and entrepreneurial creativity positively influence the survival and success of an ICT-BE. Further, consistent with the theoretical framework on diffusion and adoption of technologies, that is, Diffusion of Innovations, TAM, and UTAUT, it was evident that technology adoption the adoption rate of technology was not universal and this was attributed to several internal and external factors. Among these were; high cost of adoption and lack of adequate financing, financial constraints, and skill gaps. Also, infrastructural limitations emerged as prominent barriers in the media's full-scale digital transition and regulatory frameworks posed substantial barriers to harnessing the full potential of digital technology for business growth. However, realizing the full potential of these innovations in the new economy requires a comprehensive and collaborative approach.

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