Chapter 5
Digital Entrepreunerial Transformation (DET) Powered by New Normal Sustainable Developmental Goals (n-SDGs): Elixir for Growth of Country's Economy

Tran Dieu My Nguyen, Subhra R Mondal, and Subhankar Das

Introduction

Theglobal community is currently dealing with the effects of the coronavirus pandemic, which has affected people's daily lives (Mondal et al., 2022). The pandemic has also affected the business world. Understanding the impact of COVID-19 on businesses and industries is a vital aspect of developing a sustainable development strategy (Tiwari & Mondal, 2022). This topic is often used to describe the various ways in which technology can influence business activities. While the literature has focused on the supply side's actions toward sustainable development, there is a substantial gap in our understanding of the demand side's reaction to the same. Some of the most notable examples of how technology can affect sustainable development are artificial intelligence, Big Data, and the Internet of Things (Mondal & Das, 2021). We will explore the various applications and services of technology to determine their potential impact on society.

The pandemic that affected the world in 1918 was one of the most significant events in recent history. It disrupted the normal activities of society and caused many people to flee the country (Sharma & Das, 2021). The effects of the pandemic healed and transformed the environment for the non-human population. Following

T. D. M. Nguyen
Association of Vietnamese Scientists and Experts, Ho Chi Minh City, Viet Nam
e-mail: trandieumy.nguyen@avseglobal.org

S. R. Mondal · S. Das (✉)
Institute of Development Economics Research, University of Economics, Ho Chi Minh City, Viet Nam
e-mail: subhankardas@idr.edu.vn

S. R. Mondal
e-mail: subhrarmondal@idr.edu.vn

S. R. Mondal et al. (eds.), *Sustainable Development and Innovation of Digital Enterprises for Living with COVID-19*,
https://doi.org/10.1007/978-981-19-2173-5_5

the pandemic, people became more aware of how their actions and business objectives affect the planet (Das, 2021a). It has led to the rise of the importance of sustainable business. With increasing consumers pressuring enterprises to improve their environmental performance, sustainable business has become a strategic priority (Siri & Das, 2021). Due to the increasing number of companies reporting their environmental, social governance (ESG) initiatives have become the norm (Ravi & Mondal, 2021). Today, the concept of sustainability has broadened to include various aspects of human capital development and business models. The cognitive enterprise and its virtual operations are now the new norms for the business world. Consumers have become more demanding in the retail space when choosing sustainable products and services. According to a study conducted by the IBM Institute of Business Value, around 55% of consumers consider sustainable and environment-friendly brands when making purchases.

Levitating Enterprises and Their Sustainability Look Out Through Global Capability Centers (GCC)

A Global Capability Center is an integral part of many large organizations. It provides a variety of beyond cost benefits while also driving the parent organization's sustainability goals. From the point of view of GCC, cognitive sustainability has the following essential features.

1. ***Digital innovation and transformation:*** GCCs play a critical role in driving an organization's digital transformation. They are equipped with the necessary capabilities to deliver the best possible customer experience and business processes. As organizations become more conscious about their sustainable sourcing practices, they are increasingly looking at GCCs to help them innovate and deliver these goals. In 2019, 59% of the new investments in Indian startups were made by global MNCs, equivalent to $ 1.5 billion.
2. ***Unrelenting Developmental Activity***: After the pandemic, GCCs faced various challenges maintaining business continuity and productivity. The concept of self-driven teams became more prevalent. As organizations return to the workplace, they create a sustainable, productive work model and cost-efficient (Duman & Das, 2021).
3. ***Continuous human capital development***: With the increasing number of employees working from home, virtual talent management is becoming an integral part of any organization's strategy. It includes identifying and developing the right skills and expertise across various platforms such as online learning.
4. ***Environmental and Social Protection***: With the increasing number of organizations measuring and improving their environmental impacts, this area is becoming a key strategy component. Currently, less than 1/3rd of the companies in the compression petroleum gas (CPG) Grand Retail sectors have defined a sustainable progress metric (Yegen & Mondal, 2021).

Mercedes-Benz is a global company that believes in the importance of social mobility. The Mercedes-Benz Research and Development Institute is a leading research and development organization that works on developing various components and systems for the company (Das, 2021b). Walmart Global Technology is responsible for leading the development of A.I., Blockchain, and IoT initiatives. Over a billion devices send out messages about their temperature, energy consumption, and daily operating functions (Sharma et al., 2020). To manage this massive volume, the team at Walmart Global Tech developed proprietary software that can detect abnormal events. The company's solution, Demand Response, can help retailers reduce their energy consumption. Through Demand Response, retailers can reduce their energy consumption without affecting the customer experience. In addition, it allows them to manage their energy consumption in response to peak demand. Often, the GCCs are integrated into the parent company's sustainability agenda.

In response to the COVID-19 pandemic, the United Nations developmental program (UNDP) warned that the deprivation experienced by many people during the mid-1980s is now comparable to the mid-1980s. The pandemic has highlighted the importance of technology in developing economies. The 2030 Agenda aims to build a more inclusive, resilient, and green economy (Mondal, 2020a). In 2019, the enterprises had not achieved their goals. As a result, we have identified key emerging trends to help them achieve a green economy. Modern technologies have made it possible for developing nations to collect and use geospatial data. In the Maldives, for instance, the UNDP uses drones to monitor disaster risks. In Peru, the UNDP uses spatial data to identify areas to improve forest management.

Fintech is emerging to improve the lives of rural communities. A mobile app and satellite-based data can help minimize the impact of weather-related crop loss on farmers. It can provide them with automated payouts (Das, 2020a). Data collected by satellites can be used to develop microinsurance plans for farmers. A consortium of insurers uses this technology to create the World Food Program plans (Das, 2021c). One example is the GCash Forest Platform, which the UNDP manages. People can collect points for various sustainable activities through an app, such as walking and buying organic produce.

The rise of the internet of things has created new opportunities for managing resources and environmental data. Sensors have gained widespread acceptance from smart cities to intelligent agriculture (Das, 2021c). Smart meters and demand-side monitoring are critical components of the internet that allow developers to connect to other applications. Despite the numerous advantages of technology, most developing nations still lack reliable and affordable connectivity (Mondal, 2021). To break the paradigm of global north developing nations, we need to provide training and skills-building so that people in developing countries can use the technology locally. We should also find ways to finance the expensive technology, such as satellite imagery, often used for machine learning. During a hackathon in Rwanda, several teams of young engineers came up with a simple and cost-effective way to transmit data from remote regions without internet connectivity (Duy et al., 2020). Another idea was to collect meteorological data at manual weather stations.

Many companies have made commitments to sustainability, but are they really for branding or addressing climate change? Doing business as usual is not enough to meet the goals of the Sustainable Development Goals. Change must be systemic across all the organization's operations. Companies need to work with various partners across various sectors to promote sustainability effectively (Van et al., 2020). This will enable them to implement best practices and avoid making unrecognizable changes.

In 2015, the global community adopted the 17 Sustainable Development Goals. These goals, also known as Agenda 2030, set out goals and targets for developing nations. The plans are built on the various advancements made in sustainable development over the past three decades (Siri et al., 2020). They are also built on the achievements of the previous global goals, which were implemented from 2000 to 2015. Through adopting these goals, the U.N. recognized the importance of local authorities in addressing the various challenges posed by sustainable development. Localizing the SDGs is a process that involves assessing and adjusting strategies to support the implementation of the goals and objectives of the Sustainable Development System (Singh et al., 2020). The 2030 Agenda is one of the system's goals, which aims to apply to all communities. The localization of global goals and efforts has been a vital part of sustainable development since it allows local communities to participate in the decisions affecting their local economies (Sharma & Das, 2020). Over the years, technology has played an essential role in global efforts to improve sustainable development.

The rise of extensive databases has created new forms of wealth powered by data. While oil is driven by scarcity, data can provide value (Das, 2020b). Countries should start acquiring the data to develop effective and efficient use. The Fourth Industrial Revolution has brought about various changes in how the world works (Mondal, 2020b). One of these is the emergence of a new paradigm of digital transformation. Due to the emergence of digital technology, we expect the various economic sectors to be changed entirely globally (Nadanyiova & Das, 2020). The skills needed to use the data collected will create a competitive advantage. Developing nations should also prepare themselves for the changes brought about by the new economy (Mohanty et al., 2019). Doing so will allow them to take advantage of the opportunities presented by the new environment (Behera et al., 2019). Data-driven governance is a critical component of the 2030 Agenda for Sustainable Development. E-governance can help improve the delivery of services to citizens, enhance the interactions with industry, and lower corruption (Das & Mondal, 2016; Singh & Das, 2018). Digital transformation is a process that involves the complete transformation of an organization or a group of people's activities, methods, and models (Jain et al., 2018; Mondal et al., 2017). It is focused on accelerating the impact of digital technologies on society (Gupta et al., 2019). The scope of digital transformation is explored in a study that aims to identify the role of Big Data and e-government in localizing SDGs.

The digital transformation of society presents a potential opportunity to support the goals of the Sustainable Development System (SDGs). Big data is a massive volume of collected data that can be used to identify patterns and improve decision-making. It can be accessed through various sources such as email, web searches, and mobile banking transactions (Chaudhry & Amir, 2020). The analysis of collected data

can provide policymakers with valuable information on the status of their programs and projects. Using digital technology, local governments can benefit from the data collected by collecting and analyzing it, which can help build resilient and sustainable communities. Local governments can use several best practices to measure the impact of digital transformation (Hervé et al., 2020). This chapter aims to analyze the impact of digital transformation in different countries. One of the main advantages of localization is that it allows local governments to implement and manage their local development programs and projects effectively. It also allows them to provide a better service to their local communities. Using technology, local governments can now effectively implement and manage their local development programs and projects, which can help them achieve the goals of the SDGs (Nandi et al., 2020). Aside from raising sustainable revenue streams, local governments also need to ensure that their programs and projects are aligned with the needs of their local communities (Orji et al., 2020).

Sustainable Objectives with Practical Implementation

The end of the millennium development goals (MDGs) marked the beginning of the 2030 Agenda, which included 17 plans to achieve sustainable development. From 2000 to 2015, the global campaign against poverty was launched based on the goals of the MDGs. However, many countries failed to meet their targets. During the last three years of the millennium, efforts were focused on accelerating progress on the remaining goals. Lessons were learned from implementing the Pacific Islands sub-regions acceleration efforts. The SDGs were developed following the lessons learned from the previous millennium development goals. They dealt with various issues, such as the importance of local governance and effective service delivery. The new set of goals, known as the SDGs, replaced the old ones (Papadopoulos et al., 2020). They provide a universal approach to development. The new Sustainable Development Goals (SDGs) goals are more ambitious than those set by the previous MDGs (Pillai & Sivathanu, 2020). They also reflect the importance of addressing environmental and social issues. During the SDGs, it is essential to acknowledge the advantages of the center (Ramírez et al., 2013).

Over the years, experts have rejected the idea of centralization as it could lead to development. Instead, it has been suggested that we move away from a centralized approach and toward a localized one (Rana et al., 2019). A political imperative argues that local communities should have the autonomy to make decisions. It allows them to have a stronger voice in shaping policies and solutions. The economic imperative argues that by reducing the government's role, SMEs will capitalize on new opportunities and develop new products and services (Sarkis et al., 2021). The economic imperative argues that by reducing governments' roles, SMEs will capitalize on new opportunities and develop new products and services. The service delivery imperative also contends that local institutions can offer better public service by being more competent to understand the needs of their local communities (Singh et al., 2019).

Decentralization also brings about improved accountability and transparency at the central level. Despite the advantages of centralization, localization still ensures the continuity of local development strategies and national security. Aside from keeping the development strategies and programs consistent, decentralized governance also allows local communities to develop their local development plans. Localization also helps communities get involved and contribute to the development process, enabling them to shape their own development goals and strategies.

According to Therborn, a localized concept allows decision-makers to understand the local context and issues, and this can help them make informed decisions. Developing and delivering services will enable communities to learn from their experiences and needs. It can help them overcome crises and create resilient communities. It can also enhance the local culture and traditions. Localization also allows local actors to scale up their efforts and prevent local marginalization. It can also improve the efficiency and effectiveness of international development programs. It also ensures that the development programs are not duplicated and waste less. Figure 5.1 explains that the four inputs such as community, effective sustainability, environmental protection, and innovation will help achieve the SDGs and MDGs.

Different countries have different policies when it comes to communities. In most cases, the role of communities has been neglected. Instead of focusing on the needs of individual communities, governments and markets have become the main drivers of addressing these issues. Local institutions are vital to ensuring that markets and governments behave properly. They can help bring back power to the people. For instance, local authorities can play a critical role in addressing education, transportation, and waste management issues. This idea of empowering communities is rooted in the belief that members of these communities will remain loyal to them.

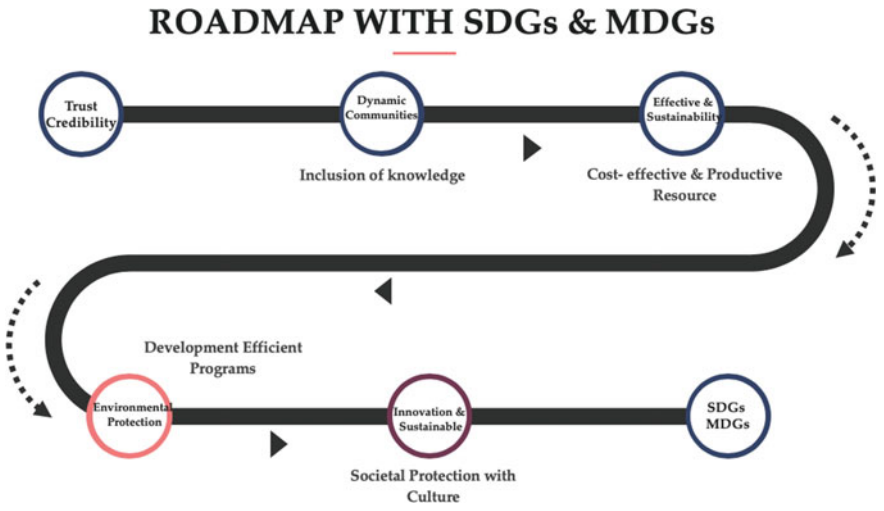

Fig. 5.1 Roadmap with SDGs and MDGs (*Source* Authors' creation)

This belief can help them develop their own capabilities and build their confidence in society. When communities are given more power over education, it can help them develop their own talents and build their own citizenship. The goal is to rebuild local autonomy and responsibility.

Instead of placing the local level at the periphery (Chou, 2020) proposed having local authorities as leaders who share the responsibilities of co-producing the economy. Cities can also benefit from having local authorities as they can provide a variety of services and solutions to address the needs of their communities. They can also raise private and public capital. Local authorities can also benefit from financing their local projects and initiatives through national and global instruments.

Digital Transformation for Small and Micro Enterprises Aimed at SDGs and MDGs

The scope of digital transformation has been the subject of much research effort over the last two decades. Various studies have examined how it can be done and its multiple enablers. Over the years, numerous companies started adopting transformative technology, such as implementing an enterprise resource planning system or a customer relationship management system. Before, these were typically focused on improving processes and reducing costs. Companies have widely adopted cross-border technologies such as social media and e-commerce in the last couple of years. These technologies have enabled them to transform their businesses by taking advantage of the opportunities presented by the rapid emergence and adoption of digital platforms. Despite its complexity, digital transformation is still a managerial issue that businesses need to address. Aside from implementing technology, successful digital transformation also requires addressing various administrative problems such as improving processes and training employees. Firms need to redesign their businesses by adopting technology to improve efficiency and minimize costs to achieve digital transformation.

The goal of digital transformation is to improve the efficiency of businesses by adopting technology-based solutions. Although digital transformation is a technical issue, it's also managerial. Successful digital transformation involves acquiring and deploying technical expertise and implementing organizational processes designed to improve efficiency and minimize risk. This process can be achieved using data-based models. The successful digital transformation of MSEs depends on the joint efforts of the government and enterprises. The first step involves the establishment of a framework that enables the digital processing of MSE. The government can also play a leading role by raising awareness about digital transformation and improving the workforce's skills. Digital transformation for MSEs, their implementation is still challenging due to the lack of infrastructure. Digitization can help MSEs achieve their goals, but the exact demands of the organization may vary depending on its size and culture. This process can also lead to changes in the way the organization

operates. A variety of factors can affect the adoption of technology in an organization. Unfortunately, many organizations are still not fully prepared to implement digital transformation due to resources and capital. For instance, many of them still have no website. The classical business model has been replaced by an instant evolving and versatile model that responds to the needs of today's customers in real-time. This paradigm shift is known as the COVID-19 era.

Entrepreneurial Insight for Digital Enterprises During and Post-pandemic Times

Given the increasing number of threats and the need for more effective risk management, many MSEs will likely adopt digital technology in the next couple of years. Despite the advantages of digital technology, many developing countries still face challenges in adopting it. This paper outlines some of the factors that can prevent the adoption of digital technology in these countries. Digitization can help improve the survival rate of MSEs by allowing them to meet their social and environmental commitments. This paper focuses on the use of digital technology in urban enterprises. Mobile money is becoming a critical digital transformation priority for MSEs. This paper shows that small businesses widely adopt it in developing countries.

In most countries, mobile money is more prevalent than banks. The unbanked customers of MSEs are the main customers of these firms. Most of the time, owners of MSEs leave their establishments unattended, resulting in them losing sales. Physical distancing measures are also likely to be implemented in a post-COVID-19 world. However, online services such as payment services are still expected to remain prevalent. MSEs are expected to evolve in response to the changes brought about by the economic situation. One example of this is mobile money, which will allow them to collect and process payments directly from their customers. MSEs can use various communication platforms to educate their customers about mobile money transactions. They should also be aware of the risks associated with these transactions. These risks have adverse effects on the profitability and operations of service providers. Conducting frequent dialogue with regulators and service providers is also essential to minimize these risks.

Most informal MSEs are not eligible for stimulus financing due to documentation. Having a digital identity and records would enable them to be more inclusive and contribute to a more sustainable economy.

Digitization technology can help improve the employment prospects of MSEs and lower poverty and enable people to become more involved in sustainable development. Using digital technology, MSEs can be integrated into the circular economy and improve their environmental performance. Due to the vulnerability of MSEs, it is up to the supply chain partners to cooperate in developing digital tools and integrating them into their organizations. Governmental efforts can also support this process by introducing new digital address systems and mobile money interoperability. Most

MSEs have limited funds and do not have enough reserves to cover emergencies. It means that formal organizations should start integrating MSEs into their supply chains to improve efficiency and effectiveness.

Digitization can also leverage supply-sustainability practices. It can be part of a company's strategic plan to compete successfully in the long term. A positive relationship between information technology and corporate social responsibility has been found. Digitization can help organizations improve their transparency and connect their impacts to other sources. Although digitalization has been associated with positive environmental sustainability, some studies have found that intelligent technologies do not directly affect social and ecological sustainability. The literature has limited the interactions between digital development and ecological sustainability. The lack of awareness about digital transformation hinders organizations' efforts to sustain and grow their green and resilient digital maturity. Therefore many MSEs have to improve their internal capabilities and operations to implement digital transformation effectively. MSE decision-makers often miss an opportunity to entirely understand the various interests associated with digital transformation. The findings of this study revealed that both external and institutional capabilities play critical roles in managing the volatility of digital change. Deploying digital resources across various business processes can help minimize uncertainty and enable MSEs to be more resilient during a pandemic era. Although many enterprises have adopted various resilience measures to improve their response to the pandemic, the motivations behind these measures are usually internal. For instance, in response to the COVID-19 pandemic, Indonesia started to digitize its MSEs even before the global outbreak. There are three kinds of pressure in which new MSEs operate during COVID-19, which are as follows.

The Pressure of Peer Group Institutionalization & Digitalization on New Enterprises

According to institutional theory, a firm is organized and informed by its standards and practices when operating efficiently. This concept can be used to justify the digitization of MSEs. The institutional theory can study how MSEs respond to various pressures during and after the COVID-19 period. Researchers can then divide isomorphism into three phases: coercive, normative, and mimetic. This concept is also used to explain the effect of political and commercial pressure on the firms' ecological performance. In developing nations, international buyers and investors exert pressure on local MSEs to safeguard the environment. Non-profit organizations and regulators also exert pressure on the firms. The pressure exerted by investors and buyers can lead to the formation of environmental regulations and standards that are mandatory for MSEs. Authorities usually enforce these regulations and penalties even during the pandemic. They also promote digital transformation and make it easier for MSEs

to operate efficiently. The digital divide can also serve as a deterrent to prevent MSEs from participating in digital transformation. However, this can also help them gain government support.

Normative Pressure of Institutionalization & Digitalization on New Enterprises

The normative pressure from various sources is usually from trade unions, consumers, and other social organizations. Trade unions and other groups are known to create regulatory forces which affect expectations and behaviors. The goal of the regulatory pressure is to ensure that consumers and vendors use goods in socially responsible ways. The culture and profitability of businesses play a huge role in influencing trade union members. Through digital transformation, MSEs can use various tools to manage their public opinion on various environmental issues. Not driving public opinion can affect the credibility and image of MSEs. It can also lead to financial losses and damage their competitive advantage.

Reflective Pressure on New Enterprises for Keeping the Pressure of Digitalization

The digital transformation of MSEs allows them to react to mimetic pressure and gain a competitive advantage. It will enable them to adapt to the behaviors and actions of their competitors. The intense mimetic pressure that MSEs face will influence government and stakeholder decisions on implementing digital technologies. It will allow them to gain economic benefits by adopting certain practices. MSEs that can successfully implement digital transformation will most likely assume it due to its perceived advantages. The institutional theory investigates how MSEs monitor and manage their various resources and compete with their rivals through mimetic processes.

Resource-Based Competitive Advantage for New Enterprises

Resource-based competitive advantage refers to an organization's ability to acquire or develop a competitive advantage. This concept explains how intra-organizational relationships can help an organization overcome its competitive disadvantage. The resource-based competitive theory argues that an entity has intangible and physical resources that can be used to compete. The presence of these assets can help firms

establish a competitive advantage. Knowledge capability can help build an organization's intangible resources and develop and sustain a competitive advantage. This concept is why many studies focus on the relationship between firms' resources and their supply chain resilience. In 2020, researchers discovered that firms could develop a competitive advantage by acquiring or using blockchain technology-related resources. It has been stated that digitalization is an example of an organization's resource-based competitive advantage. This concept can support various aspects of an organization's operations, including strategy, goals, and resources. Dynamic capabilities theory can explain how MSEs can sustain their competitive advantage in a constantly changing environment.

The Dynamism of Enterprises That Will Enhance Their Sustainability

The dynamic capabilities of firms are often used in the literature to explain how firms respond to changes in the market and technology. They can create, extend, and modify a firm's resource base. According to Teece and colleagues, organizations can develop dynamic capabilities by building three broad clusters: sensing opportunities, seizing opportunities, and transforming the organization's business model. These capabilities help firms design and implement a strategy that competes effectively and gains a competitive advantage. According to the literature, managing the complexity of digital transformation requires MSEs to develop new capabilities and solutions that can help them overcome the challenges of adopting new technologies. The ability to see and interact with new digital opportunities can also imply changes in the way people behave and resources are used. This theory explains why MSEs change their resource configurations and strategies to respond to a constantly changing environment. Creating a competitive advantage comes with the right set of capabilities. Having these capabilities can help firms maintain business continuity in an unpredictable environment. MSEs must have sensing capabilities to monitor and analyze the external environment for threats and trends that can disrupt their activities. This capability can be used at all levels of the organization to provide actionable insight to the top management team.

Studies show that MSEs are increasingly focused on developing sensing capabilities to gather information from various sources—including devices, channels, and emerging user behaviors. Despite the advantages of having these capabilities, MSEs often face challenges in predicting the latest trends and implementing effective strategies to manage them. Building on this knowledge and using it for developing generative sensing capabilities is also necessary to prevent systemic failures. To address the various threats and opportunities presented by the COVID-19 era, MSEs must also create capabilities that can allow them to experiment with new business models and digital platforms. Despite the advantages of having to sense and seizing powers, firms are still required to develop transformative capabilities to realize the

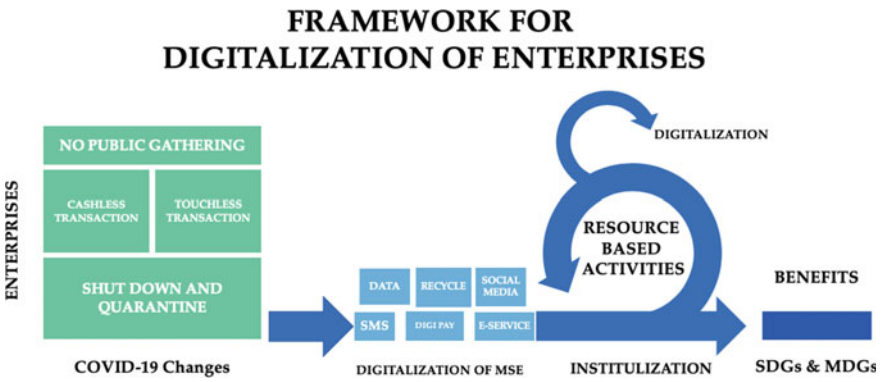

Fig. 5.2 Framework of digitalization (*Source* Authors' conception)

full potential of their digital strategy. The development of transformative capabilities supports the continuous renewal of organizational structures and assets to enable MSEs to respond to the changes brought about by the COVID-19 era.

Understanding how MSEs can create digital transformation capabilities is critical strategic question enterprises need to ask themselves. It is easier for large enterprises to become ambidextrous due to their more diversified resources. An ambidexterity capability can enable MSEs to address COVID-19 issues. This capability is being studied to see how it can build joint capabilities across various social, environmental, and economic factors. Figure 5.2 summarizes the framework for digital enterprises for developing COVID-19 recovery.

Implications of This Framework for Digital Enterprises

One of the most critical factors that supply chain organizations have to consider is the impact of digital transformation on their operations. It can be done by implementing robust and sustainable supply chain infrastructure. This infrastructure supports the practical process of businesses and enables them to integrate. For instance, policymakers can help develop a multi-agency platform to support MSEs in accessing digital technologies. They can also help SMEs develop and implement strategies and procedures related to digital transactions and financing. These developments can help improve the economic well-being of SMEs by reducing waste and improving the efficiency of their operations. However, they also require the involvement of MSEs in developing effective business continuity plans and strategies. Due to the complexity of the COVID-19 scenario, MSEs had to face more significant challenges and uncertainties. Through the lessons learned from this experience, they can develop effective strategies and procedures to address these issues.

Although the lessons learned from COVID-19 can be used for the long-term benefit of MSEs, many of them may not be able to address these issues immediately. As a result, the decisions made by MSEs are often affected by outside parties' concerns. One strategy that MSEs can implement is the stakeholder approach, which involves carefully analyzing the impact of the various problems on different stakeholder groups. The pandemic crisis highlighted the importance of having multi-dimensional stakeholder relationships.

Digitization can help people and organizations stay connected during extreme disruptions, but it can also lead to potential privacy infringements. The impact of digital transformation on social and environmental issues is complex. Various factors need to be considered before thoroughly assessing their impact. Some examples of social sustainability involve managing safety and health issues more effectively. However, this can be done without taking away from the rights of workers who might be exploited. During the COVID-19 disruption, the roles of technology and social responsibility shifted. The choice of technology was also related to the company's existing equipment and digital competencies.

Lack of resources and expertise in using more advanced technology solutions could also play a role. This issue should be considered when formulating new policies related to MSEs support measures. Challenges posed by the emergence of new digital technologies such as artificial intelligence (A.I.) can have ethical, social, and economic implications. Creating sustainable business models that can support service consumption opportunities can help MSEs improve their profitability. The impact of COVID-19 has caused MSEs to re-evaluate their core competencies and explore new options. Doing so can help them achieve faster and more intense growth. Developing new skills and taking advantage of new technologies can help MSEs endure the disruptions brought about by COVID-19 and remain competitive.

Conclusion

This chapter presents a case study on building resilient and sustainable supply chains following COVID-19. Lessons learned from successful digitization projects can help develop local MSEs in developing countries. Not only can digitization help establish sustainable supply chains, but it can also help improve the efficiency and profitability of MSEs. This paper provides theoretical frameworks that can support the development of sustainable digital transformation processes. Although digital transformation can help improve the efficiency and profitability of MSEs, it can also create challenges due to the lack of support from external stakeholders. Second, the roles of various institutions and stakeholder groups are complex. It is difficult to determine if consent should be provided through public or private means. Third, varying industrial requirements can also limit the spread of digital transformation across industries. Most of the time, barriers to the widespread adoption of digital technologies are created by those with limited or no access to these technologies. Some of these concerns were identified as areas of research that can help improve the success of

digital transformation in MSEs. This paper believes that the environment and context will allow MSEs to become more sustainable and environmentally responsible over the next couple of years.

References

Behera, M., Dash, M., Ayasa Kanta Mohanty, A. K., & Das, S. (2019). Entrepreneurial ecosystem: A geographical upliftment. *Revista Espacios*, 40, 26–36. http://www.revistaespacios.com/a19v40n01/19400126.html

Chaudhry, N. I., & Amir, M. (2020). From institutional pressure to the sustainable development of firm: Role of environmental management accounting implementation and environmental proactivity. *Business Strategy and the Environment, 29*(8), 3542–3554. https://doi.org/10.1002/bse.2595

Chou, M. (2020). Populism and localism: A new research agenda. *Democratization, 27*(6), 1102–1109. https://doi.org/10.1080/13510347.2020.1755265

Das, S. (2020a). *Media impact of advertising on consumer buying behaviour a comparative study of different media.* Shiksha o Anusandhan University. http://hdl.handle.net/10603/273691

Das, S. (2020b). Innovations in digital banking service brand equity and millennial consumerism. In *Digital transformation and innovative services for business and learning* (pp. 62–79). IGI Global. https://doi.org/10.4018/978-1-7998-5175-2.ch004

Das, S. (2021a). Digital entertainment: The next evolution in service sector. *Springer Nature.* https://doi.org/10.1007/978-981-15-9724-4.PrintISBN978-981-15-9723-7.OnlineISBN978-981-15-9724-4

Das, S. (2021b). *Search engine optimization and marketing: A recipe for success in digital marketing* (1st ed.). CRC Press. https://doi.org/10.1201/9780429298509

Das, S. (2021c) A systematic study of integrated marketing communication and content management system for millennial consumers. In *Innovations in digital branding and content marketing* (pp. 91–112). IGI Global. https://doi.org/10.4018/978-1-7998-4420-4.ch005

Das, S., & Mondal, S. (2016). *Yours digitally: Patanjali.* Available at SSRN 2737299.

Duman, Ü. O., & Das, S. (2021). The dynamic rise of digital brands' market mavens in digital entertainment: A complete know how for curious customers. In *Digital entertainment* (pp. 147–172). Palgrave Macmillan. https://doi.org/10.1007/978-981-15-9724-4_8

Duy, N. T., Mondal, S. R., Van, N. T. T., Dzung, P. T., Minh, D. X. H., & Das, S. (2020). A study on the role of web 4.0 and 5.0 in the sustainable tourism ecosystem of Ho Chi Minh City, Vietnam. *Sustainability*, *12*(17), 7140. https://doi.org/10.3390/su12177140

Gupta, D. K., Jena, D., Samantaray, A. K., & Das, S. (2019). HRD climate in selected public sector banks in India. *Revista ESPACIOS*, *40*(11).

Hervé, A., Schmitt, C., & Baldegger, R. (2020). Digitalization, entrepreneurial orientation & internationalization of micro-, small-, and medium-sized enterprises. *Technology Innovation Management Review*, *10*(4), 5–17. https://doi.org/10.22215/timreview/1343

Jain, S., Jain V., & Das, S. (2018). Relationship analysis between emotional intelligence and service quality with special evidences from Indian banking sector. *Revista ESPACIOS*, *39*(33).

Mohanty, P. C., Dash, M., Dash, M., & Das, S. (2019). A study on factors influencing training effectiveness. *Revista Espacios*, 40, 7–15. http://www.revistaespacios.com/a19v40n02/19400207.html

Mondal, S. R. (2020a). *Factors influencing store image loyalty and satisfaction from customer perspective an empirical study in retail sector*. Shiksha o Anusandhan University. http://hdl.handle.net/10603/273688

Mondal, S. R. (2020b). A systematic study for digital innovation in management education: An integrated approach towards problem-based learning in Vietnam. In *Digital innovations for customer*

engagement, management, and organizational improvement (pp. 104–120). IGI Global. https://doi.org/10.4018/978-1-7998-5171-4.ch006

Mondal, S. (2021). A systematic study of new age consumer engagement and exploration for digital entertainment for over-the-top platforms in various digital media. In *Innovations in digital branding and content marketing* (pp. 113–133). IGI Global. https://doi.org/10.4018/978-1-7998-4420-4.ch006

Mondal, S., Das, S., Musunuru, K., & Dash, M. (2017). Study on the factors affecting customer purchase activity in retail stores by confirmatory factor analysis. *Revista ESPACIOS*, *38*(61).

Mondal, S. R., & Das, S. (2021). Examining diabetic subjects on their correlation with TTH and CAD: A statistical approach on exploratory results. In *Machine learning and the internet of medical things in healthcare* (pp. 153–177). Academic Press. https://doi.org/10.1016/B978-0-12-821229-5.00007-0

Mondal, S. R., Virgilio, F. D., & Das, S. (2022). *H.R. analytics and digital H.R. practices*. Springer. https://doi.org/10.1007/978-981-16-7099-2

Nadanyiova, M., & Das, S. (2020). Millennials as a target segment of socially responsible communication within the business strategy. *Littera Scripta*, *13*(1), 119–134. https://doi.org/10.36708/Littera_Scripta2020/1/8

Nandi, S., Sarkis, J., Hervani, A., & Helms, M. (2020). Do blockchain and circular economy practices improve post COVID-19 supply chains? A resource-based and resource dependence perspective. *Industrial Management & Data Systems, 121*(2), 333–363. https://doi.org/10.1108/imds-09-2020-0560

Orji, I. J., Kusi-Sarpong, S., Huang, S., & Vazquez-Brust, D. (2020). Evaluating the factors that influence blockchain adoption in the freight logistics industry. *Transportation Research Part E: Logistics and Transportation Review, 141*, 102025. https://doi.org/10.1016/j.tre.2020.102025

Papadopoulos, T., Baltas, K. N., & Balta, M. E. (2020). The use of digital technologies by small and medium enterprises during COVID-19: Implications for theory and practice. *International Journal of Information Management, 55*, 102192. https://doi.org/10.1016/j.ijinfomgt.2020.102192

Pillai, R., & Sivathanu, B. (2020). Adoption of AI-based chatbots for hospitality and tourism. *International Journal of Contemporary Hospitality Management, 32*(10), 3199–3226. https://doi.org/10.1108/ijchm-04-2020-0259

Ramírez, R., Österman, R., & Grönquist, D. (2013). Scenarios and early warnings as dynamic capabilities to frame managerial attention. *Technological Forecasting and Social Change, 80*(4), 825–838. https://doi.org/10.1016/j.techfore.2012.10.029

Rana, N. P., Barnard, D. J., Baabdullah, A. M., Rees, D., & Roderick, S. (2019). Exploring barriers of m-commerce adoption in SMEs in the U.K.: Developing a framework using ISM. *International Journal of Information Management, 44*, 141–153. https://doi.org/10.1016/j.ijinfomgt.2018.10.009

Ravi, S., & Mondal, S. R. (2021). Digital entertainment based do it yourself content & advertisement as a factor of driving force for trust & customer patronage. In *Digital entertainment* (pp. 127–146). Palgrave Macmillan. https://doi.org/10.1007/978-981-15-9724-4_7

Sarkis, J., Dewick, P., Hofstetter, J. S., & Schröder, P. (2021). Changing of the guard: A paradigm shift for more sustainable supply chains. *Resources, Conservation and Recycling, 170*, 105587. https://doi.org/10.1016/j.resconrec.2021.105587

Sharma, E., & Das, S. (2020). Measuring impact of Indian ports on environment and effectiveness of remedial measures towards environmental pollution. *International Journal of Environment and Waste Management, 25*(3), 356–380. https://doi.org/10.1504/IJEWM.2019.10021787

Sharma, E., & Das, S. (2021). Integrated model for women empowerment in rural India. *Journal of International Development,* 1–18. https://doi.org/10.1002/jid.3539

Sharma, E., Nigam, N., & Das, S. (2020). Measuring gap in expected and perceived quality of ICT enabled customer services: A systematic study of top ten retailers of India. *International Journal of Applied Systemic Studies, 9*(2), 159–184. https://doi.org/10.1504/ijass.2020.113260

Singh, L. B., Mondal, S. R., & Das, S. (2020). Human resource practices & their observed significance for Indian SMEs. *Revista ESPACIOS*, *41*(07). http://www.revistaespacios.com/a20v41n07/20410715.html

Singh, R. K., Luthra, S., Mangla, S. K., & Uniyal, S. (2019). Applications of information and communication technology for sustainable growth of SMEs in India food industry. *Resources, Conservation and Recycling, 147*, 10–18. https://doi.org/10.1016/j.resconrec.2019.04.014

Singh, S., & Das, S. (2018). Impact of post-merger and acquisition activities on the financial performance of banks: A study of Indian private sector and public sector banks. *Revista Espacios Magazine, 39*(26), 25.

Siri, R., & Das, S. (2021). A study on processing of information storage & use of new age consumers in digital wellness sector through story telling & creating interest. In *Digital entertainment* (pp. 45–63). Palgrave Macmillan. https://doi.org/10.1007/978-981-15-9724-4_3

Siri, R., Mondal, S. R., & Das, S. (2020). Hydropower: A renewable energy resource for sustainability in terms of climate change and environmental protection. In *The handbook of environmental chemistry*. Springer. https://doi.org/10.1007/698_2020_635

Tiwari, M., & Mondal, S. R. (2022). Technological dynamism of workforce management for effective education service delivery during and after Covid-19. In *H.R. Analytics and Digital H.R. Practices* (pp. 199–215). Palgrave Macmillan. https://doi.org/10.1007/978-981-16-7099-2_8

Van, N. T. T., Vrana, V., Duy, N. T., Minh, D. X. H., Dzung, P. T., Mondal, S. R., & Das, S. (2020). The role of human–machine interactive devices for post-COVID-19 innovative sustainable tourism in Ho Chi Minh City, Vietnam. *Sustainability, 12*(22), 9523. https://doi.org/10.3390/su12229523

Yegen, C., & Mondal, S. R. (2021). Sharenting: A new paradigm of digital entertainment of new age parenting and social media. In *Digital entertainment* (pp. 213–231). Palgrave Macmillan. https://doi.org/10.1007/978-981-15-9724-4_11

Tran Dieu My Nguyen is a Master of Law works with Association of Vietnamese Scientists and Experts. The research areas are mostly concerned with legal aspects of sustainable practices for digital enterprises.

Subhra R Mondal, Ph.D., is working as senior research fellow with Institute of Development Economics Research, University of Economics, Ho Chi Minh City, Vietnam. Her research interests are brand management, brand equity with innovative tools, smart tourism, destination marketing, social media marketing, AI & Web 5.0, and digital recruitment. She has published 25 publications indexed with WoS and Scopus along with 2 books and 12 scientific monographs. She has over 12+ years of experience in research and teaching. She is associated with different collaborative projects in European and Vietnamese organizations.

Subhankar Das (Academician, Researcher, Author, Writer, Blogger, Data Science trainer, Social Media Marketing Consultant) received his Ph.D. in Social Media Advertisement & Media Planning. He has 12+ years of teaching and research experience. He is currently associated as senior research fellow with Institute of Development Economics Research, University of Economics, Ho Chi Minh City, Vietnam. He has published 20+ Research Papers in various International Referred Journals (Scopus, Thomson Reuters, SSCI, SCIE).