

Digital Transformation and Sustainability: A Study of how Firms Use Digital to Achieve Sustainable Goals

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Abstract - The globalisation brought about by the internet revolution of the twenty-first century has affected both technical and technological domains. As a result, a large number of e-commerce businesses worldwide were starting their digital transition. A firm needs to engage and conduct business with its surroundings. Consequently, there is an unbreakable bond and mutual reliance between business and the environment. The term "business environment" refers to the components of a business's surroundings that impact or define its efficacy and operations. A business organization's objective is to take advantage of opportunities and address issues that come up in the workplace. Analysing the business environment is essential for a company to thrive in its industry. Consequently, managers need to assess the workplace culture before putting forward winning business plans. The ability to handle competition is the cornerstone of developing a plan. Every strategy is predicated on comprehending the opposition.

Keywords: Digital Transformation, Digital Risk, Business Management

I. INTRODUCTION

Businesses are becoming more globalised and digital in nature in the modern day. The new way of conducting business, known as "digital transformation," makes use of digital technologies including social computing, big data, cloud computing, analytics, and more. A few decades prior, the digital rebuilding had already begun. These days, there has been a significant advancement in environmental awareness. Concerns over the climate, water, land, and environment are developing along with the global population (Li, 2022). Despite this, the economies of wealthy nations are growing in terms of products and services. Due to the industrial revolution, new businesses entered the market and changed their operations to become more digitally orientated. However, every firm has obligations to the environment, the economy, and society from an ethical standpoint. While increasing profits is a must for anyone with a business-oriented mindset, many organisations have recognised the value of sustainability in the business world and have incorporated it into their strategic business strategy (In Fig. 1) (Zheng & Zhang, 2023). The phrase "sustainability strategy" refers to a range of approaches, including "meeting the needs of the present generation without compromising the needs of future generations." A company's capacity to

accomplish its goals and boost long-term sustainable benefit for its stakeholders through the integration of social, economic, and human resources is highlighted by sustainability strategy from a business standpoint (Ufua et al., 2021). The adoption of business strategies, policies, and actions that satisfy the needs of the company and its investors or stakeholders today while safeguarding, preserving, and enhancing the natural and human capital that will be needed in the future is known as a sustainability strategy from a business perspective (Ji et al., 2023). A sustainability plan, which emphasises employee-centeredness, can assist an organisation in upholding environmental sustainability through the implementation of sustainable human resources (Fernando et al., 2024). It also makes it possible for organisations to have positive connections, achieve financial success, and have great social consequences. Additionally, a sustainability strategy permits the impact of stakeholders both inside and outside of companies. Due to the standardising backdrop of growing sustainability responsiveness provided by customers, clients, shareholders, stakeholders, and workers, sustainability has emerged as a strategic top priority for a significant number of businesses worldwide. This raises questions about how sustainability policies should be implemented in relation to a company's primary competitive advantage. Current ideas classify the implementation of sustainability strategies, for example, as susceptible to decoupling rather than integration. Decoupling, which results from a breakdown in the legitimacy of the policy and the firm's and its degree of execution, is defined as accepting "the policy symbolically, without executing it considerably." (Shen & Wang, 2023) clarified that, in contrast, the "tight integration" accounts for how a company incorporates its sustainability plan into its current competitive advantage, which is demonstrated through its services, goods, and practices. The areas where an organization's basic activities change the most are its management practices and its sustainable responses to the environment, society, and economy.

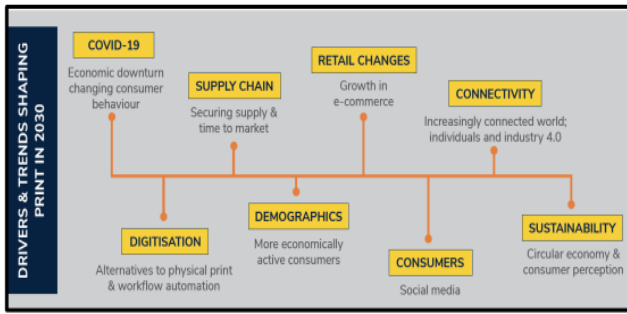


Fig. 1 Role of Business Strategy (Source: Web)

In this case, the introduction is examined in section 1 of the article. Section 2 describes the review of the work further Section 2 and 3 explains the goal of the work digital technologies, and Section 4 concludes the project (Obeidat & Yaqbeh, 2023).

II. LITERATURE REVIEW

As a result of the growth and transition of digital commerce and technologies, Gil-Gomez et al., (2020) claims that society and the environment would undergo drastic change. Businesses undergoing a digital transformation can improve their supply chains, modify their goods, process information and knowledge more quickly, and use less energy overall. As a result, the digital transformation is raising competition in the environment, economy, and society in addition to having an effect on profitability. By raising awareness of issues like global warming, the effects of company pollution, and social and economic responsibilities, digital enterprises also have an impact on sustainability. Businesses undergoing a digital transformation can improve their supply chains, modify their goods, process information and knowledge more quickly, and use less energy overall. As a result, the digital transformation is raising competition in the environment, economy, and society in addition to having an effect on profitability. Digital businesses also have an impact on sustainability because they raise awareness of issues like pollution, global warming, and corporate social and economic responsibility (Oleksandr et al., 2024).

According to (Šimberová et al., 2022), digitalisation forces management to conduct operations digitally and forces businesses to develop and implement new strategies. Several European businesses have already begun their digital transformation with sustainability as a guiding principle. Sustainability emerged as a concern for the public and private sectors in Austria. Concerns about digital transformation and sustainability are raised by SMEs in Finland. Sustainability strategies in a digital business plan enhance managerial capacities to improve the company's financial performance, and digital operations are not functional if the sustainability strategy is not applied correctly (Xu et al., 2023). Sustainability is therefore given top priority in Swedish markets as well. The Swedish government is concentrating on digital initiatives to achieve sustainable digital transformation. The goal is to achieve sustainable digital

transformation in order to take the lead globally in using this potential.

In comparison to countries in Latin America or Europe, Asian nations like China, Bangladesh, Pakistan, India, and Malaysia have seen a rise in international usage and business opportunities due to improved digital innovation, the emergence of digitalisation, and e-commerce marketing and trade. This is according to a report published (Mohamed Hashim et al., 2022). Pakistan's digital endeavours have begun with the state's focus on creating a digitised Pakistan. The digital Pakistan project was started in 2019 by Pakistan's Prime Minister, Imran Khan. Pakistan has established a set of measures aimed at promoting digitality. These measures involve both public and private sectors working together to create a digital and revisionist Pakistan through increased connectivity, improved digital infrastructure, funding for digital literacy and skills, and bolstering innovation, entrepreneurship, and small and medium-sized businesses (SMEs) (Xu et al., 2022). This initiative by the Pakistani government will also attract private companies to participate in the country's digital technology projects, thereby leveraging the significant potential for various industries, including B2B and B2C enterprises. The goal of the research is to establish a connection between digital business transformation and sustainability strategy in the e-commerce industry. The report also shows how sustainability is greatly impacted by digital revolution. Additionally, the research will highlight the obstacles B2C e-commerce businesses must overcome in order to implement sustainability, as well as the ways in which digitising a firm might profit from a sustainability strategy.

III. RESEARCH FRAMEWORK

Every research project starts with a theoretical or conceptual foundation (Diaz & Montalvo, 2022). It determines the formulation of the research problem, the method of investigation, and the significance of the information gleaned from the study for the researcher. According to (Ionaşcu et al., 2022), a conceptual framework is a web of related ideas that when taken as a whole offer a complete understanding of a phenomenon or event. A conceptual framework can be used for many different purposes. First off, the research design and technique of the study may be developed and improved upon continuously thanks to the conceptual framework, which offers an integrated methodological environment. Secondly, the researcher can more carefully formulate, hone, and define the research question with the use of a conceptual framework. The choice of data analysis framework and procedure is also framed and guided by the conceptual framework. Another application is that the conceptual framework serves as a starting point for writing and in-depth analysis of the research findings and analysis. Placing a research in its many crossing, constantly-evolving contexts and concepts is one method to think across these different roles and functions of a conceptual framework. This chapter provides an explanation of the study's conceptual framework in Fig. 2.

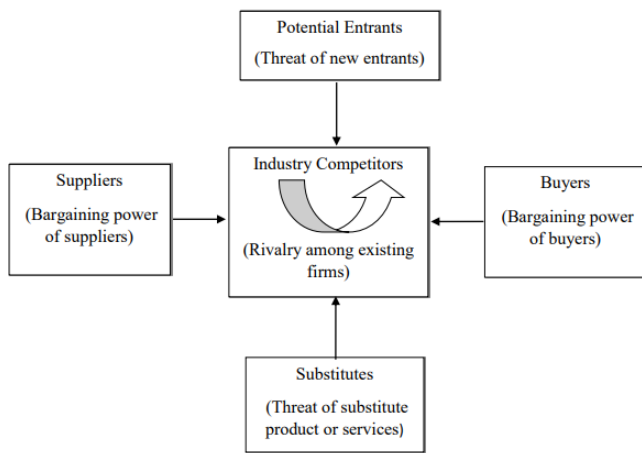


Fig. 2 Illustration of the Frame Work

Companies don't just happen to exist. They are there to provide the commodities and services that the environment needs. They take cues from their surroundings. According to this straightforward systems paradigm, an organization's ability to successfully manage its resources and capabilities in relation to external demands arising from the environment will determine how successful it is. Successful organisations are those that offer the integrating mechanism by examining both the internal and external environments. It is simpler to say than to accomplish this (Li & Lin, 2024). Strategic management offers the integrating mechanism. Managers must wisely coordinate and integrate all functional areas rather than focussing on individual functional divisions, lest their organisations are made up solely of disparate parts. In order to create organisations that can outperform competitors and defeat the competition, managers must formulate strategies and implement them (Rosário & Dias, 2022). In Fig. 3 displays the flowchart of various printing processes.

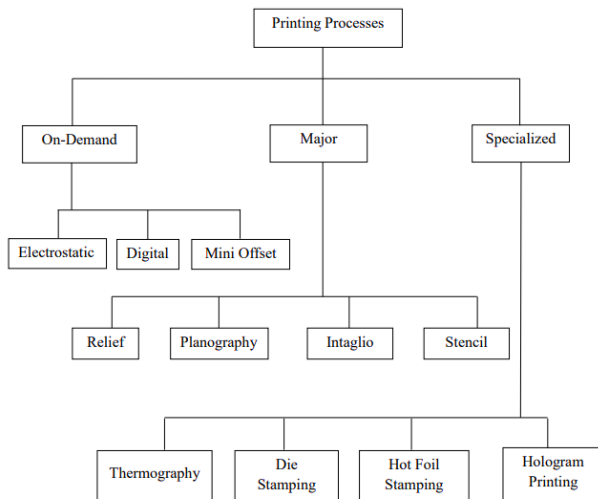


Fig. 3 Flowchart Showing Various Printing Processes

The Greek word *strategos*, which literally means "general," is where the word strategy originates. Nowadays, the term "strategy" is a cliché in the business world. A strategy is a devious plan or tactic used to gain an advantage over a knowledgeable opponent. Strategy is more than merely

weighing your options and picking the best one. Instead, it includes evaluating the effects of every option and then choosing the input combinations that will save the greatest money. Developing a strategy is a continuous activity rather than a one-time event. Businesses are always developing and putting into practice strategies to increase customer value in order to create value for the stakeholders (Nayal et al., 2022). An organization's goals, policies, and activities are intended to work together as a coherent whole through the use of strategies. By using a well-thought-out strategy, organisations are able to gather and use their resources and carve out a place in the market by considering external elements, such as their competitors. The following three crucial questions must be addressed: (1) where are we right now, (2) where do we want to go, and (3) how are we going to get there? Examining the company's internal environment and competitive posture within the industry is necessary for answering the first question. The second question's response focusses on the organization's goal-setting, both short- and long-term. Identifying the tactics to achieve the objectives is the subject of the third question. Concurrent usage of corporate, business, and functional strategies is common in business organisations. It is critical for strategists to examine the company organisation from a variety of angles. It is important to carefully analyse both the internal and external environments. In order to ensure that the business organisation succeeds, the strategist should assess the organization's strengths and weaknesses and seize any possibilities that present themselves in the business environment (Philbin et al., 2022).

It is critical for strategists to examine the company organisation from a variety of angles. It is important to carefully analyse both the internal and external environments. In order to ensure that the business organisation succeeds, the strategist should assess the organization's strengths and weaknesses and seize any possibilities that present themselves in the business environment. Strategic management is the act of matching an organization's internal assets and capabilities with the opportunities and threats presented by its external environment. Organisations that help "resources and competencies" and "environmental demands" align are successful. Without well-defined strategies, organisations degenerate into a collection of disjointed departments, functional divisions, and components that lack direction. Before developing plans, top management must assess the external environment to find opportunities and threats as well as the internal environment to determine strengths and weaknesses. This is known as a SWOT (strengths, weaknesses, opportunities, and threats) analysis. A SWOT analysis is the initial step in the strategic management process. SWOT analysis is a planning methodology that aids in the creation of a strategy plan for businesses to achieve objectives, enhance performance, and maintain market relevance. Organisations use SWOT analysis to determine their strengths, weaknesses, opportunities, and threats in relation to market rivalry, organisational growth, products and services, and corporate objectives (Feroz et al., 2021).

IV. CHALLENGES ENCOUNTERED BY ORGANIZATIONS USING BIG DATA

The answering printing presses/allied units' unit size is determined by the annual turnover and the amount invested in plant and machinery/equipment (Fig. 4). Thirty-two (23.6%) large units, thirty (24.4%) tiny units, thirty (25.2%) micro-units, and thirty (24.8%) small units were present.

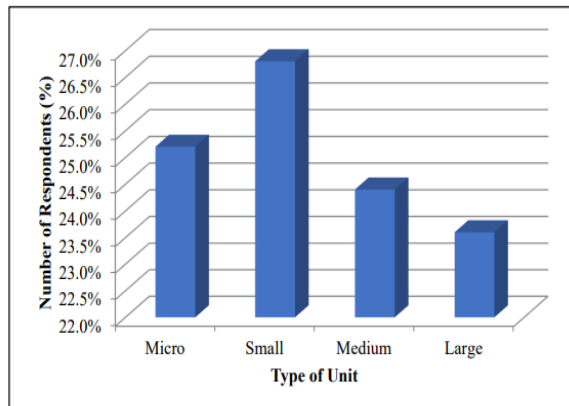


Fig. 4 Classification of Responding Printing Press/Allied Unit According to Unit Size based on Investment; Turnover

The number of workers in the units related to printing (Fig. 5 and 6). 51 units, or 40.2% of the total, employ fewer than 20 people. More than 100 people work in the majority of the units (37 units, or 29.1%), followed by 20–50 categories of employees (22 units, or 17.3%). The lowest percentage of responding units (17 units, 13.4%) have between 51 and 100 workers.

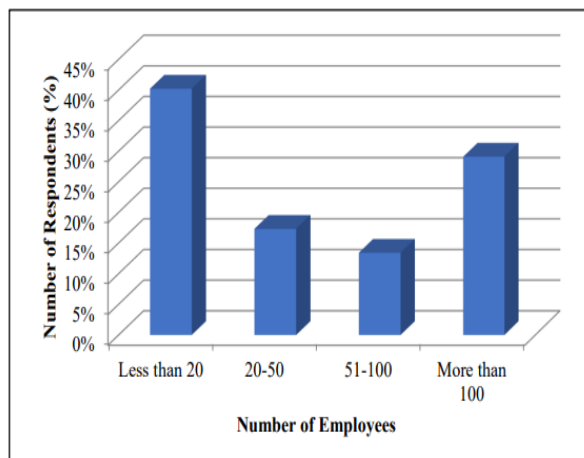


Fig. 5 Classification of responding printing press/allied unit according to number of employees

Three distinct categories were used to classify the designation. Managers make up the majority of responders (44.9%). 26% of respondents are managerial staff and other levels, while 29.1% of respondents are printing press or allied unit owners.

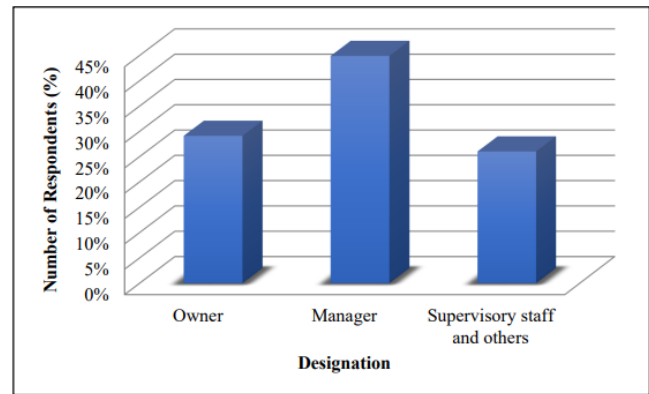


Fig. 6 Classification of Responders According to their Position/ Designation in the Printing Press/ Allied Unit

SWOT Analysis

The competitive landscape of the Indian printing business in the modern period is examined from two distinct angles: first, the possibilities that the industry participants have access to, and second, the risks that these players must contend with. Frontiers are defined as threats that can be transformed into opportunities via creative application of novel concepts or methods. The Indian printing and publishing sector has a multitude of opportunities as well as dangers. These result from shifts in national and worldwide technological, social, political, economic, and legal advancements (Martínez-Peláez et al., 2023).

Improved Equipment: Modern technology presents a chance for printer owners who can afford to modernise their current setup. Updated versions offer better and more inventive products and services, so they can adapt to the changing wants of consumers. The next big revolution in the printing business is predicted to be the use of digital technologies. The filmless printing technologies that are now becoming commercially viable, such as toner-based production, computer-to-plate (CTP), and direct imaging (DI), have altered the 21st-century printing industry. These advancements result in a shorter production time. A development of CTP technology, digital printing allows text and graphics to be sent directly from the computer to the printer. This technology has the advantage of reducing production time while increasing accuracy, speed, and output. This also contributes to reducing expensive waste. Small and medium-sized businesses might benefit from it since it allows them cater to niche markets that need low volume printed or published goods (Camodeca & Almici, 2021).

Internet: Enhancing communication is beneficial to the sector. The internet facilitates communication between printers and their suppliers and clients, strengthening the printer-customer relationship. This facilitates improved distribution, marketing, supply ordering, and print production management, among other tasks. As a result, the internet is becoming a crucial tool for printers.

Increasing Advertising Expenditures: The amount of money that advertisers spend on media, especially print ads,

has been rising continuously, which has increased industry revenue. There will likely be a rise in the demand for printed materials with advertising space. Election-related orders for the commercial printing industry, such as those for ballot printing and campaign materials for political parties and candidates, present an opportunity because they bring in a sizable amount of revenue for the printers.

Threats: Absence of a reading culture in the nation: The current generation is not interested in reading books. These days, most trade books are published. However, books other than trade books are what are driving the expansion of the printing and publishing sectors. Book publishers find it difficult to alter readers' preferences because they rely heavily on the reading public (Stroumpoulis, & Kopanaki, 2022).

Lack of Formal Courses on Printing and Publishing: A diploma in printing technology was offered at NRIPT, Allahabad, one of the few colleges that offered official studies in printing and publishing in the past. There are now more universities offering printing degree programmes, including GJU Hissar, Kurukshetra University, Kurukshetra, Manipal University, etc. Even so, there are still relatively few of them, which means that very few people are familiar with the many functions of printing presses and the connected activities. This typically leads to a shortage of available competent personnel.

Bounded Labour: Since printing is a technological subject, functioning efficiently requires possessing the right understanding. The machinery needs to be operated by skilled workers. Due to a shortage of trained workers, local printing enterprises are unable to grow or enhance their production output. This has an impact on the general calibre of services provided by employees in the printing and publishing sector as well.

High Operational Costs: High operating expenses for printing presses are a result of the high cost of raw materials like paper and ink. The tax rates levied on imported machinery and paper are also significant. This essentially raises the cost of manufacturing for publishers and printing mills. Publishers' access to their target customers is hampered by the distribution efforts of book wholesalers, who are impacted by additional expenses like freight and postage.

Rivalry among industry players: Due of the abundance of participants in the market, printers face fierce rivalry from one another. Printers have taken on several strategies in order to compete in the sector. While some printers focus on product distinction, others use price methods. There are sometimes price wars in this sector. The expansion strategy is one more tactic at their disposal. Where there is substantial export potential, some printers branch out to other nations. The competition for local printers comes from overseas printers, who have more advanced gear and can produce more.

High Investment Costs: The enterprises need to invest a significant sum of money to upgrade their printing equipment. They will be able to meet their customer's expectations for superior service with the help of new versions. Technology is changing at an extremely rapid rate. Due to the high expense of equipment, it is exceedingly difficult for a single company to replace its equipment as quickly as technology changes.

Inadequate Authentic Industry Statistics: Lack of sufficient basic data has severely impeded meaningful discussions of the printing and publishing difficulties. The players need to plan their tactics in order to compete in the global market. Authentic data is needed in order to create strategies. Regretfully, statistical data regarding the printing sector is scarce, and the veracity of the information that is accessible is also questioned.

V. CONCLUSION

The rewarding and risky aspects of the corporate world are inherent to it. The COVID-19 epidemic has spread quickly and widely around the world. All things considered, this epidemic has negatively impacted a number of industries, including the printing sector. The printing sector is seen as significant in India due to its role in packaging, which includes safeguarding pharmaceutical products, food items, and delivery. While many firms allow employees to work from home, printing companies, whose primary function is manufacturing, must manage operations on-site; as a result, all operations are currently closed owing to the lockdown. Because it's getting harder for printers to run their businesses. Anxiety, worry, and terror are prevalent among India's small and medium-sized printers. Printers have deliberately planned both their current and future operations. The Covid-19 pandemic has emerged during a period of heightened vulnerability in the world economy. There were already worries about declining investment levels, rising unemployment, and declining levels of consumption. Numerous indicators suggest that a major recession may soon befall some of the biggest economies. It's true that everyone feels cold in the winter, and India is no exception. We have only yet to witness a pandemic of this magnitude and speed in end-of-the-world films. Even if the majority of Indians have never seen the Covid-19 virus, everyone is nonetheless impacted by it. The entire nation is under attack from this pandemic, and all businesses have ceased operations. Everybody has their materialisation, whether it be in the automotive, hotel, airline, restaurant, media, or retail industries.

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