Strategic Realignment in the Face of Digital Disruption: Exploring the Intersection of Technological Innovation, Organizational Change, and Competitive Strategy

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ABSTRACT

This research elucidates and investigates the changing strategic responses to digital disruption, revealing the main enablers, obstacles, and organizational practices that lead to a successful digitalization process in business. This study adopts a mixed-methods research design to use qualitative interviews to garner valuable insights into organizational perspectives on digital transformation, complemented by quantitative analysis of 386 respondents to test the validity of the conceptual framework developed. It highlights that cultural orientation, availability of resources, and knowledge management capabilities are the key enablers of digital transformation and financial constraints. All of this creates a great deal of difficulty; for external factors and organizational inertia Moreover. Consequently, sustainability and resilience emerged as two key strategic themes that can help organisations As such, the talk delivers on its promise of outlining the key strategic options for companies that seek to gain advantage in a disruptive environment. The conceptual framework that has been proposed for this study shows a good degree of predictive validity in explaining more than 70% of the variance in digital disruption outcomes. In addition, internal validity of the framework is supported by statistical testing, and thereby strengthening this framework as an effective instrument for future research and practice where digital transformation strategy is concerned. In so doing, this study provides fresh insights on how organisations can prepare and adapt to forces of digital disruption and chart a right path and a new organisational excellence in the digital economy.

Keywords: Digital Disruption, Drivers, Challenges, Strategic Approaches



INTRODUCTION

Innovation is one of the fundamental drivers of organisations and, as such, of their economic sustainability, evolution and growth. Michael Porter's theory of competitiveness states that the competitiveness of a nation, and therefore of its industrial and economic fabric, depends on the capacity to innovate and improve. Innovation activities constitute, in fact, together with human capital, one of the main factors that determine the competitive advantages of advanced industrial economies. In Porter's words, the only sustainable competitive advantage is permanent innovation (Jiang & Zhao, 2020). For this reason, it is essential to focus on the way in which innovation processes are managed within the organisation since the existence of these factors alone does not produce value, as the success will depend on the way in which these innovation activities are managed (Liu *et al.*, 2020).

The innovation processes of organisations must offer a response to both the unpredictability of the markets and the opportunities that exist today. The world has evolved; it is no longer the same as a few years ago when everything was much more stable and predictable. There are now a series of external factors that force organisations to manage their processes differently in a much more open way (Cho & Moon, 2024).

Therefore, companies differ both in the type and degree of innovation, as well as in the reflection that this has on the scope of their competitive advantages in the market (Si & Chen, 2020). In addition, technological change and innovation activities are not homogeneously distributed among the various industrial sectors (Kivimaa *et al.*, 2021), making the knowledge acquired from these innovative processes tacit, that is, not articulated and not transferable to the entire organisation and the sector in general (Liu *et al.*, 2020).

In the modern business world, the term disruptive innovation has emerged in the past couple of decades, which is the focus of this article. According to Amit & Zott (2020), disruptive innovations are those that produce a break in the company's old business model. One of the most cited examples of disruptive innovation, the one we always mention, is the one developed by Steve Jobs when he removed the keyboard from cell phones and replaced it with a screen, which not only showed high-definition images but also obeyed the user's commands when playing. Disruptive innovation is often differentiated from sustained innovation (Amit & Zott, 2020). An innovation can be considered supportive when it uses technology that results in a better product or service. However, disruptive innovation follows a different logic. While conventional companies are dedicated to improving their products and services to serve the most demanding customers with greater purchasing power, companies with an innovative mindset and vision of opportunity also invest in those market segments considered less profitable: those with less purchasing power and new customers (Bresciani *et al.*, 2021).

Disruption, then, occurs when these companies decide to focus on providing these consumers with a satisfactory product at a price lower than that offered by the vast majority of competitors. Therefore, in this way, they develop niches that have been previously unexplored in different business areas (Olabode *et al.*, 2022). Disruptive innovation, therefore, must provoke a disruption in the current logic and business model. It is the emergence of a new market that competes with non-consumers but offers the product to people whom until then were not consumers, often at an inferior quality but at an affordable price (Bresciani *et al.*, 2021).

LITERATURE REVIEW

THEORETICAL DEBATE

Innovation in business models is addressed in academic and professional literature, providing valuable theoretical and conceptual frameworks that underpin this research. One of the approaches analysed is the theory of disruptive innovation proposed by Christensen (2013). This theory explains how disruptive innovations—those that are initially dismissed by established companies but manage to meet the needs of an emerging market segment—eventually transform and displace traditional business models (Ho, 2022). In the current business context, collaborative economy platforms and emerging technologies represent examples of disruptive innovations that challenge conventional models, forcing established companies to adapt and reinvent themselves (Si *et al.*, 2020).

Another relevant framework is the open innovation model. This approach suggests that firms should not rely solely on their internal capabilities but should also leverage external ideas, knowledge, and technologies while allowing their innovations to be commercialised through external channels. Collaboration with strategic partners, such as technology providers, start-ups, and other actors, is important to drive business model innovation, given the multidisciplinary nature and complexity of today's business environment (Carrasco-Carvajal *et al.*, 2023).

Barney's (1991) resource-capabilities theory provides a valuable perspective. This theory suggests that firms gain sustainable competitive advantage by identifying, developing, and exploiting valuable, rare, inimitable, and non-substitutable resources and capabilities (Thomas & Douglas, 2024). In the business context, unique resources and capabilities, such as specialised knowledge, organisational culture, and experience in delivering customised services, are key sources of differentiation and enable firms to develop innovative business models that are highly tailored to customer needs.

Osterwalder's Business Model Canvas is also a practical and widely used tool for analysing and designing innovative business models. This model describes the nine essential building blocks that make up a business model: customer segments, value proposition, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure (Rachmad, 2021). By providing an integrative and structured view, the model facilitates the identification of innovation opportunities and the exploration of new strategies in various business sectors. Finally, the customer experience theory, developed by Pine and James, considers it important to create memorable and meaningful experiences for customers rather than focusing solely on the delivery of products and services (Ikenga & Egbule, 2024).

Overall, in today's business world, creating unique and personalised experiences is a key driver for business model innovation, as consumers seek authentic, exciting and enriching experiences that transcend generic and standardised offerings. These theoretical and conceptual frameworks provide a basis for understanding the drivers, challenges and opportunities associated with business model innovation. They also offer tools and approaches to analyse, design and implement innovative strategies that allow companies to remain competitive and adapt to a constantly evolving environment.

DRIVERS AND CHALLENGES OF DISRUPTIVE INNOVATION

Regarding key trends, the literature indicates that digitalisation and the use of emerging technologies are encouraging innovative business models. The importance of integrating digital technologies for growth and innovation in business management is widely acknowledged. In this way, the trend towards consumer-centred approaches and the use of enabling technologies in innovative business models is pointed out (Chin *et al.*, 2022).

Regarding challenges and obstacles, it is evident that the implementation of advanced technologies in management models faces challenges related to complexity and resistance to change. As a result, complexity is proposed as a key challenge in business model innovation. Together, institutional, organisational, strategic, technological and financial barriers to innovation in sustainable business models are identified (Kivimaa *et al.*, 2021).

Regarding opportunities and best practices, it is noted that sustainable business models offer opportunities to differentiate themselves in the market and adoption of innovation (Omrani *et al.*, 2022). On the other hand, the "Business Model Life Cycle Assessment" method is proposed to evaluate and guide sustainable business strategies. It is also suggested that established companies can address circular disruptive innovation through separate structures, clear innovation strategies and partnerships (Neligan *et al.*, 2023).

The review also shows that trends such as the adoption of circular and green business models, the integration of advanced technologies such as distributed databases and artificial intelligence, and the focus on co-creation and customer engagement are also drivers of innovation (Geissdoerfer *et al.*, 2023). Other relevant aspects include the importance of organisational learning and knowledge management as drivers of business model innovation, the need to balance different objectives in the iterative coordination of innovative organisations, and the relevance of prioritisation and timing in business model innovation (Agrawal *et al.*, 2023).

Business model innovation is an element that enables the adaptability and success of companies in an increasingly dynamic and complex environment. This transformation process covers various sectors and approaches, from sustainability and the circular economy to digitalisation and adaptation to global crises. As companies maintain competitiveness and relevance, the need to reinvent their business models becomes more pressing than ever (Neligan *et al.*, 2023). In the energy sector, particularly in the oil and gas industry, significant trends towards sustainability are observed. Ćetković & Skjærseth (2020) highlight how this industry in Norway is undergoing a transition towards more sustainable practices. However, this change is not without challenges. Companies face internal barriers and different levels of readiness for change among their employees and stakeholders. Despite these obstacles, this transition offers significant opportunities for restructuring and adaptation of the sector, allowing companies to position themselves as leaders in the new low-carbon economy.

In parallel, in the field of electric power, Kivimaa *et al.* (2021) point out that innovative business models drive the integration of consumers into energy systems. This trend presents opportunities and challenges, such as consumer participation in the energy market encouraging the adoption of renewable energy and energy efficiency (Kivimaa *et al.*, 2021). On the other hand, it requires significant adaptation of existing infrastructures and business models. Trends include consumer-centric approaches and the implementation of enabling technologies such as smart grids and the Internet of Things. Despite this, regulatory barriers limit the global adoption of these models, underlining the need for collaboration between the private sector and regulators (Corradi, Sica, & Morone, 2023).

Business model innovation goes beyond adapting to new technologies. As Moleka (2024) points out, it addresses the adaptation of entire organisational structures to dynamic environments. Current trends include not only digitalisation but also responses to stakeholder demands in areas such as sustainability and corporate social responsibility. Challenges relate primarily to the complexity of the transformation process, which often requires profound changes in organisational culture and operational processes. Opportunities, on the other hand, lie in the ability of companies to adapt to change, resulting in a competitive advantage and opening up new markets.

In the renewable energy sector, business model innovation is linked to financial and incentive factors. Chasin *et al.* (2020) developed a model that explains the incentives to implement innovative solutions in small companies in this sector. Their research highlights the critical importance of financial factors in creative activity, suggesting that financial support policies and tax incentives encourage innovation in this vital sector for the energy transition.

The ability of companies to innovate in their business models allows their stability. Schmidt & Scaringella (2020) emphasise the importance of adopting different approaches depending on the context; in that regard, they suggest that companies focus on discovery during periods of change, exploring new opportunities and models, while, in periods of stability, the focus should be on creating and refining existing models. This combined approach allows us to maintain long-term competitiveness and to adapt to market changes while optimising operations in stable times.

The complexity of business model innovation, an important barrier, requires tools for its understanding and management. Yuan & Yang (2022) highlight the role of system dynamics in improving managerial knowledge during this process. This methodology allows managers to visualise and simulate the complex interactions between different elements of the business model, facilitating informed decision-making and anticipation of possible unintended consequences. This is particularly valuable in the context of corporate innovation, where changes in one area have ramifications in other parts of the organisation.

In the context of small and medium-sized enterprises (SMEs), business model innovation presents unique challenges and opportunities. Zhang & Zhu (2021) identify the drivers of business model innovation in this sector, including the inherent innovative capacity of SMEs and the impact of the business environment. Their findings suggest that successful implementation of this innovation has a positive effect on business outcomes and performance, which is relevant in today's digital economy, where SMEs' agility and adaptability become a competitive advantage over larger, less flexible companies.

The ability to innovate in challenging and crisis contexts demonstrates its influence on business survival and success. Korede *et al.* (2023) explore how restaurant owners in Bangladesh innovated during the COVID-19 pandemic. Their study reveals how these entrepreneurs managed to combine traditional reluctance towards change

with the contemporary need for adaptation, forming a unique approach to innovation. This research underlines the importance of resilience and adaptability in business model innovation, especially in emerging market contexts and during global crises. Leadership is critical in business model innovation. Dani & Gandhi (2022) propose viewing innovation in business management models as an aspirational problem, requiring specific leadership virtues, i.e., leadership focused on doing one thing well is presented as an effective strategy to navigate the non-predictive outcomes associated with innovation and promote sustained innovation in the company.

Innovation in business management models encompasses a wide range of objectives and challenges. Allal-Chérif, Climent, & Berenguer (2023) noted that these innovation efforts face significant challenges, particularly for problemsolving methods. However, the potential for reward is equally substantial. The objectives of innovation in this context include the creation of new products, the improvement of existing services, the optimisation of internal processes, and the development of new revenue streams.

The transition to sustainable business models faces multiple barriers but also has important drivers. Naimi-Sadigh, Asgari, & Rabiei (2022) provide a comprehensive overview of these factors in this context. The barriers identified include institutional challenges, such as inadequate or contradictory regulations; organisational obstacles, such as resistance to change; strategic constraints, arising from a short-term view; resource allocation issues, especially in terms of funding for sustainable initiatives; technological challenges, particularly in the adoption of new technologies; and financial barriers, related to the high upfront costs of the transition to sustainability.

However, Naimi-Sadigh, Asgari, & Rabiei, (2022) identify important drivers that facilitate this transition. These include organisational learning, which enables the adaptation and improvement of sustainable practices; knowledge management, which is necessary to capitalise on lessons learned and best practices; and the effective mobilisation of internal and external resources to support sustainability initiatives. These drivers underscore the importance of a systematic and strategic approach to implementing sustainable business models, which goes beyond isolated initiatives to encompass a complete organisational transformation.

Based on the review above, as the world moves toward an increasingly complex and interconnected future, business model innovation remains a critical factor for business success. Organisations that can anticipate and respond to emerging trends, overcome the challenges inherent in change, and capitalise on new opportunities will be the ones to define industry standards and lead the transition to a more sustainable, digital, and customer-centric economy. Hence, innovation is not just an option but a necessity for long-term survival and success in the 21st-century business landscape.

RESEARCH AIM

Digital transformation is no longer an option but a necessity for companies facing the rapid evolution of technology. The proliferation of emerging technologies such as artificial intelligence, cloud computing, and big data has redefined customer expectations, operational efficiencies, and competitive dynamics. This study examines:

- 1. The forces are driving digital disruption.
- 2. Strategic frameworks companies use to adapt.
- 3. Case studies of successful and unsuccessful implementations.

RESEARCH OBJECTIVES

- Identify the key drivers of digital disruption across industries.
- Analyse strategic approaches to digital transformation.
- Evaluate the challenges companies face in adapting to digital disruptions.
- Propose actionable strategies for successful digital transformation.

RESEARCH QUESTIONS

- What are the key drivers of digital disruption across industries?
- What are the strategic approaches to digital transformation?
- What are the challenges companies face in adapting to digital disruptions?
- What actionable strategies can be used for successful digital transformation?

RESEARCH PROBLEM

With the continuous advancement of technological integration and modification, businesses in all industries appear to be at a turning point. Today companies wanting to remain competitive and relevant at the market, digital transformation is not an option any more but a requisite. Artificial Intelligence (AI), cloud computing, big data and other technologically growing spaces are changing the way businesses operate and how markets and customers operate too. And yet even when the shift is imperative, a lot of typical companies encounter difficulties during implementation of effective this transition.

Out of potential three questions central to this research case, the primary one is what caused disruption to take place in the first place and what are businesses doing to respond to it, why are they unable to fully take the step and digitize. More concretely, the purpose of this study is to address the question of what causes disruption – how technology changes at tremendous speed, how it advances faster than everyone and everything – and how organizations combat it. It also tries to answer the question of what organizations have to overcome: processes resistance, heritage systems, and organizational aspects, as well as simply the challenges of the process of adoption of new technologies.

As a synthesis, this research attempts to enhance understanding of the impact of disruptive technologies in relation to business adaptation.

RESEARCH HYPOTHESIS

This study aims to identify the enablers of digital disruption, the approaches taken by businesses in response to such disruptions, and the challenges faced in the business model evolution processes. From the literature review and research objectives, the following hypotheses were developed:

RESEARCH HYPOTHESIS

- H₄: There is a significant influence of culture, resources, and knowledge on digital disruption.
- H₂: There is a significant influence of sustainability and business resilience on digital disruption.
- H_a: There is a significant influence of financial constraints and resistance to change on digital disruption.

METHODOLOGY

The methodology of research is a set of decisions related to the collection and analysis of evidence to answer the research question. This study is based on a mixed methodology. Mixed methodology refers to the collection and analysis of qualitative and quantitative data and the triangulating of the results to achieve higher reliability and validity in the results (Bell, Bryman, & Harley, 2022). In order to achieve the aims and objectives defined in the introduction section, both qualitative and quantitative evidence with triangulation were considered the most suitable choice.

The research process started with conducting a large-scale review of the literature to understand and summarise existing theories and models of disruptive innovation. Qualitative data was retrieved from a variety of sources, mostly peer-reviewed articles (for their credibility), and results were presented in the form of a narrative in the literature review section.

Using a discussion of theories, drivers and challenges of disruptive innovation, the next stage was to collect and analyse empirical evidence. For this purpose, the researcher chose to conduct qualitative interviews to identify broad themes, explore perceptions among business professionals and determine the base for quantitative empirical collection (Ghauri, Grønhaug, & Strange, 2020). Semi-structured interviews were conducted among company executives who are working in companies that have undergone digital transformation as a part of their disruptive innovation strategy. Based on the results from interviews, a conceptual framework was developed. However, this conceptual framework needed empirical verification and validity. Therefore, a quantitative questionnaire survey was conducted to enhance further the value of the conceptual framework for disruptive innovation.

Based on the conceptual framework, this study designed a self-administered questionnaire. A questionnaire is a commonly used quantitative data collection tool which provides a large amount of data in a relatively time and cost-efficient manner (Hunziker & Blankenagel, 2021)). The questionnaire was distributed among managers and employees working in companies that are innovation savvy, with a particular focus on digital transformation. The questionnaire was organised into different sections. The first section focused on the demographic characteristics of participants, followed by multiple sections containing closed-ended statements as items that corresponded to the elements of the conceptual framework. All items were associated with a Likert five-point scale to achieve quantitative empirical evidence.

A snowball sampling technique was employed to recruit participants (Bell, Bryman, & Harley, 2022). The researcher started the recruitment of participants using personal networks and LinkedIn profiles. Invitations to executives were sent to allocate time for interviews. The researchers requested contact information from executives of potential participants and managed to conduct five interviews. The same strategy was employed to recruit participants for questionnaire recruitment. The search tools on LinkedIn allowed researchers to search for potential participants. A total of 100 managers and employees were recruited to achieve a reliable sample size.

Different analytical techniques were employed for data analysis and triangulation. For qualitative data from interviews, thematic analysis was employed. The thematic analysis helped retrieve broad themes relevant to the research objectives. Using these themes, a conceptual framework was designed. To analyse the validity of the conceptual framework, questionnaire data was analysed using statistical techniques, mainly descriptive analysis and correlation.

RESULTS

QUALITATIVE RESULTS

As mentioned earlier, the qualitative part of this study was based on interviews and focused on developing a conceptual framework for digital disruption and thematic analysis was used to analyse interview transcripts; therefore, this section presents the results of thematic analysis and conceptual framework as obtained from interview analysis. Based on interview analysis, the following themes were obtained, which are designed in a conceptual framework:

Key Drivers of Digital Disruption

Based on responses to questions about theoretical drivers of innovation, the study observed that all participants commonly agreed that a vision and orientation towards innovation are key drivers. Consider the following statement,

"I think it is the overall nature of work and nature of employees in the company. If you are a digital technology company, you are particularly focused on innovative ideas. For others, I think it is the leader who promotes innovative ideas" (Participant 1)

The statement above, in conjunction with other responses, clearly indicates an innovation culture. Pal, (2023) confirmed that innovation culture is the key theoretical driver of disruption. The culture includes the mission and vision of the company as set by the leaders, as well as daily processes and practices, as well as the values of the employees

when they are working in the company. Hence, in a modern business environment, the organisational culture is the foremost determinant of digital disruption. When compared to the theoretical debate in this article, it can be observed that this assertion is consistent with Moleka (2024), who identified the same factor.

Another common driver of digital disruption identified from interview transcripts is resources and capabilities, as shown in the following excerpt,

"For me di, digital disruption is all about your ability to invest in new technologies. If you have enough investment and you can pay your employees to motivate them to adopt new technologies, you are good. However, innovative ideas come from your ability to manage knowledge and promote creativity in the company" (Participant 2)

There are two drivers in this statement. The first is the financial resources or the affordability of the company to buy and implement technologies, and the second is the creativity and knowledge management. Both of these factors are consistent with general literature and theoretical debate. Resources and capabilities theory by Barney confirms that available resources are important drivers of disruption while knowledge management is consistent with the open innovation model. Various empirical inquiries also show knowledge management is an important determinant of digital disruption, including Wamba *et al.* (2020), among many others.

Challenges to Digital Disruptions

In terms of challenges, the thematic analysis confirmed that financial constraint is a key challenge. Consider the following statement,

"In terms of technology, the primary need is funding. You can have an innovative leader and idea and a motivated workforce, but if you do not have money to invest, you continue to struggle" (Participant 5)

Financial constraints are a big issue and are commonly reported in both theoretical and empirical literature. The review confirms that lack of financial resources, particularly in the case of SMEs, is the strongest challenge to the adoption of new/digital technologies in the commercial sector. Recently, Opoku, *et al.*, (2024) confirmed that financial constraint is the main barrier to innovation and digital transformation of SMEs. The study suggested that SMEs need help to raise finding for their digital transformation. This challenge is also consistent with resource and capabilities theory as well as business model canvas theory, both of which clearly indicate that resources, particularly financial, are the main drivers of innovation and, therefore, lack of funding becomes a key barrier.

Besides, financial resources resistance to change is also identified as a key challenge to digital disruption. Consider the following statement,

"In my experience, people are the main challenge. If you can motivate them to adopt new technologies and innovate, they will boost your vision. Otherwise, you can give them all the incentives, train them, and invest in them, but they would not welcome new ideas. They are actually comfortable and settled, so they don't want change" (Participant 2)

The evidence above indicates resistance to change/new technologies is an important barrier, even if the company has resources and capabilities. In other words, the motivation of employees towards digital disruption is a challenge. Mercader, (2020) analysed determinants of the adoption of digital technologies using the TAM model and confirmed that resistance to change is the main barrier to the adoption of new technologies in businesses. The author argued that perceived usefulness and ease of use of new technologies motivate or demotivate employees towards technologies in business technologies. The literature review also confirmed that resistance to change is a key barrier to the adoption of new technologies in business models (Kivimaa *et al.*, 2021).

Strategic Approaches to Digital Transformation

In terms of strategic approaches to digital transformation, the most common strategy reported by interviewees is the pursuit of market trends such as sustainability and environmental protection, as shown in the following statement,

"In the recent past, I think sustainability strategy has been very important to adopt digitalisation. There is a lot of pressure on businesses to become environmentally friendly, and employees and leaders alike realise that they can achieve sustainability through digital technologies such as renewable energy" (Participant 5)

Other participants also confirmed that the pursuit of sustainability and environmental protection has motivated businesses to adopt new technologies and disrupt existing business models. According to Ahmad, Wu, & Ahmed (2024), sustainability emerged as a corporate social responsibility, but it has shown its ability to have a positive impact on business performance and longevity. The study explained that one of the main business objectives is to satisfy clients and stakeholders, particularly shareholders and customers. New technologies allow businesses to achieve higher cost efficiency and create a better image in the minds of customers by becoming environmentally friendly. There is a clear indication that sustainability strategy is one of the main drivers of digital disruptions in business models. The literature review also confirmed that sustainability is a driver of digital disruption among businesses (Omrani *et al.*, 2022).

Another common strategy that encourages digital disruption in business processes and models, as identified in the interview discussion, is reflected in the following statement,

"Technologies are overwhelming, you know! You cannot ignore them for too long. Customers expect you! Your competitors are rushing towards them! So you have to remain competitive in the market! So you know you have to adopt them and change in accordance with the market and rivals" (Participant 4)

The statement above can be related to the notion of a business resilience strategy. Business resilience refers to the ability of a business to adapt to market changes and achieve stability in a highly volatile business environment (Kumar *et al.*, 2024). Similarly, Abidi *et al.* (2023) also concluded, within the context of COVID-19, that business resilience strategies have become the main priority for businesses and digital technologies, which helped many sectors to navigate and stabilise during COVID-19 is a main business strategy for businesses. These findings are consistent with theoretical literature as well as empirical evidence. Porter's theory of strategic competitiveness confirms that companies need to adapt to emerging trends in the market and compete with their rivals if they are different from them. Porter's generic strategies have also confirmed technology as one of the most influential strategies for differentiation.

QUANTITATIVE RESULTS

The quantitative results below are based on a questionnaire survey. The questionnaire was organised in accordance with the conceptual framework (Appendix B). The purpose of the questionnaire was to test the reliability of the conceptual framework, which in turn reflects its ability to explain digital disruption in business entities. Regression and Cronbach's alpha techniques were used to confirm the reliability correlation.

Demographic Characteristics of Participants

The demographic characteristics of participants are summarised in Tables 1, 2 and 3, showing the gender, age, and experience of participants respectively. It can be observed that the majority of the participants were females (55%) but there is no significant majority in age distribution with a small majority of 39-48 years (27%). Similarly, there is no majority in the experience of participants showing 1 to 2 years as the highest frequency of (26%).

TABLE 1: GENDER

	Gender						
Frequency Percent Valid Percent Percent							
Valid	Male	172	44.6	44.6	44.6		
	Female	214	55.4	55.4	100.0		
	Total	386	100.0	100.0			

TABLE 2: AGE

	Age							
		Frequency	Percent	Valid Percent	Cumulative Percent			
Valid	18 to 28 years	91	23.6	23.6	23.6			
	29-38 years	92	23.8	23.8	47.4			
	39-48 years	106	27.5	27.5	74.9			
	Above 48 years	97	25.1	25.1	100.0			
	Total	386	100.0	100.0				

TABLE 3: EXPERIENCE

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than a year	98	25.4	25.4	25.4
	1 to 2 years	102	26.4	26.4	51.8
	2 to 3 years	97	25.1	25.1	76.9
	More than 3 years	89	23.1	23.1	100.0
	Total	386	100.0	100.0	

Correlation Analysis

Correlation analysis is a commonly used technique to assert if one variable shows changes due to changes in other variables (Gupta *et al.*, 2022). Table 4 below summarises the correlation coefficients of all variables in the conceptual framework.

		Drivers of Digital Disruption	Challenges to Digital Disruption	Strategic Approaches to Digital Disruption	Digital Disruption
Drivers of Digital	Pearson Correlation	1	.877**	.754 ^{**}	.836**
Disruption	Sig. (2-tailed)		.000	.000	.000
	Ν	386	386	386	386
Challenges to Digital	Pearson Correlation	.877**	1	.741 **	.758 ^{**}
Disruption	Sig. (2-tailed)	.000		.000	.000
	Ν	386	386	386	386
Strategic Approaches to	Pearson Correlation	.754**	.741**	1	.688 ^{**}
Digital Disruption	Sig. (2-tailed)	.000	.000		.000
	Ν	386	386	386	386
Digital Disruption	Pearson Correlation	.836**	.758**	.688 ^{**}	1
	Sig. (2-tailed)	.000	.000	.000	
	N	386	386	386	386

TABLE 4: CORRELATION ANALYSIS

Correlations

**. Correlation is significant at the 0.01 level (2-tailed).

As per the results above, all independent variables (drivers of digital disruption, challenges of digital disruption, and strategic approaches to digital disruption) show a strong positive correlation (coefficient>0.5) with the dependent variable of digital disruption. Furthermore, all variables show a statistically significant correlation (p<0.05). The most influential variable is drivers of digital disruption (r=.836, p=0.000), from which it can be inferred that the highest priority for business is to focus on drivers such as resources, organisational culture, etc. The second priority of business should be removing barriers (r=.758, p=0.000) such as acquiring funding and minimising resistance to change. The final priority should be identifying effective strategic business approaches (r=.688, p=0.000), such as sustainability and business resilience. Strong positive correlation coefficients clearly reflect the fact that the conceptual framework is reliable.

Regression

The regression model shows the impact of one variable on another and is commonly used for prediction purposes (Gupta *et al.*, 2022). Tables 5,6 and 7 below show each element of a regression model.

TABLE 5: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841 ^a	.707	.705	.40253

Model Summarv

 a. Predictors: (Constant), Strategic Approaches to Digital Disruption, Challenges to Digital Disruption, Drivers of Digital Disruption

TABLE 6: ANOVA STATISTICS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	149.641	3	49.880	307.847	.000 ^b
	Residual	61.895	382	.162		
	Total	211.536	385			

a. Dependent Variable: Digital Disruption

 b. Predictors: (Constant), Strategic Approaches to Digital Disruption, Challenges to Digital Disruption, Drivers of Digital Disruption

TABLE 7: BETA COEFFICIENTS

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.030	.108		9.565	.000
	Drivers of Digital Disruption	.520	.046	.685	11.278	.000
	Challenges to Digital Disruption	.059	.053	.066	1.115	.265
	Strategic Approaches to Digital Disruption	.129	.046	.123	2.815	.005

Coefficientsa

a. Dependent Variable: Digital Disruption

The coefficient of determination in Table 5 indicates that the model explains 70.7% of the variability in digital disruption as a dependent variable having drivers of digital disruption, challenges of digital disruption, and strategic approaches to digital disruption as predictors. Table 6 shows that the model is statistically significant (p=0.000<0.06). In Table 7 above, it can be observed that the strongest predictor of digital disruption in businesses is drivers of digital disruption (β =.520), followed by strategic approaches (β =.129) and, finally, challenges to digital disruption (β =.059). The regression model also adds to the reliability of the conceptual framework because it clearly indicates that the three determinants identified in the conceptual framework explain over 70% of the variability. The model is also consistent with qualitative interview findings, which show that drivers are more important than challenges and strategic approaches.

Internal Consistency - Cronbach's Alpha

Finally, Cronbach's alpha is used to demonstrate the internal consistency of questionnaire items as a data collection instrument. The Cronbach's alpha of.899>.7 reflects the high level of internal consistency and demonstrates that the questionnaire collects evidence that it intends to gather. Thus, it can be applied by business managers to evaluate digital disruption in their business context.

TABLE 8: CRONBACH'S ALPHA

Scale: All items

Case Processing Summary

		N	%
Cases	Valid	386	100.0
	Excluded ^a	0	.0
	Total	386	100.0

 Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's	Nofitome
Арна	NULLEINS
.899	20

DISCUSSION

This study aimed to determine the drivers, strategies, and challenges of digital disruption. Overall, qualitative findings are consistent with theoretical and previous empirical literature, while quantitative findings confirm the conceptual framework obtained from qualitative findings. Based on qualitative findings on drivers of innovation, it can be observed that culture, resources, and knowledge management are key determinants of growth. A detailed analysis shows that these three factors compromise many sub-factors. For instance, according to Gui, Lei, & Le (2022), innovative culture in an organisation is comprised of a wide range of factors such as leadership, open communication, acknowledging and rewarding creative ideas, and employee autonomy are some of the many factors that promote innovation in the company and its staff.

Similarly, the resources and capabilities of innovative companies include many sub-factors which overlap with cultural factors. For instance, Hanifah, *et al.* (2020) confirmed that human resources and technological resources are critical factors of organisational culture. Both of these factors are common determinants of innovation culture in any organisation (Nicolás-Agustín *et al.*, 2022). Finally, there are several studies such as Taghizadeh *et al.* (2021), confirmed that open communication, communication technologies, and the expertise and experience of employees are important determinants of knowledge management. These factors also overlap with factors of innovation culture and resource and capabilities theory.

The discussion on barriers to digital disruption confirms that the main obstacles are financial constraints and resistance to change. The findings also confirmed that these barriers are consistent with theoretical and empirical literature. It is important to note here that these barriers overlap with the drivers identified. Financial constraint, as a barrier, is also the driver of digital disruption. If the company lacks financial constraints, it is the main barrier, and vice versa. Hence, the resources and capabilities theory reinforces the assertion.

On the other hand, a detailed examination of resistance to change also shows overlap with factors of the driver. According to Alblooshi, Shamsuzzaman, & Haridy (2021), resistance to change or, conversely, motivation to adopt new technologies is dependent upon organisational culture and leadership. The author explained that leaders shape organisational culture and motivate employees towards change and new technologies. The ability of a leader to inspire people towards new technologies is a key determinant of the adoption of new technologies. This study can be extended to assert and confirm the discussion about the TAM model. However, interestingly, these determinants of resistance are also determinants of innovation and culture, which are strong determinants of digital disruption. Overall it can be confirmed that the main drivers and barriers to digital disruption are two sides of the same coin and that resource and capabilities theory helps explain digital disruption better than other theories.

The findings of business strategies for digital disruption confirmed that sustainability and business resilience are the main strategic approaches. Suppose we conduct a deeper analysis of sustainability strategy as a strategic approach towards digital disruption. In that case, the factors of the pursuit of sustainability are interlinked with factors of drivers and barriers to digital disruption. For instance, leadership is a common determinant which, according to Ojo, A. O., & Fauzi, (2020) is also one of the main determinants of sustainability strategy. Furthermore, Singh, Singh, & Khamba (2021) argue that financial constraints and resistance to change are the main barriers to sustainability strategy.

On the other hand, a deeper discussion of business resilience strategy also shows an overlap between business resilience as a strategic approach for businesses and drivers/barriers to digital disruption. Mubarik & Khan, (2024) also reported that the modern business environment has become increasingly volatile. The emergence of Amazon has changed the retailing industry (Mubarik & Khan, 2024). The need for a carbon economy is changing the transportation, logistics and supply chain industries (Bonsu, 2020).

CONCLUSIONS

This study aimed to identify drivers, challenges, and strategic approaches to digital disruption in a business context. Using a mixed-method research design, this study conducted interviews to acquire qualitative data. It developed a conceptual framework which helps to visualise and evaluate the overall status of digital disruption in a business context. The conceptual framework shows that the main drivers of digital disruption are culture, resources, and knowledge management. The main challenges to digital transformation are financial constraints and resistance to change. The main strategic approaches for digital transformation in the modern business environment are sustainability and business resilience strategies. The study then continued to validate the conceptual framework and designed a self-administered questionnaire. Using a sample of 386 participants, the study conducted a statistical examination of the reliability of the conceptual framework. The quantitative analysis shows that all determinants of the conceptual framework are strong predictors of digital disruption/transformation. The overall framework explains over 70% of the variability in digital disruption/transformation. The questionnaire design also shows a high level of internal consistency.

Based on the results and discussion provided in the previous section, this article concludes that in a modern business context, digital disruption is essential for business survival. Also, in view of the inferences contributed, this investigation reveals that businesses must analyse existing resources and acquire the resources necessary to adopt digital transformation technologies properly. Moreover, in view of the empirical evidence produced, this study relays that digital transformation is critically dependent upon the funding available for the acquisition and adoption of new technologies. Furthermore, using the arguments yielded, this study clarifies that for digital transformation, an organisation must develop a facilitating culture. Furthermore, in view of the illustrations found, this study declares that leadership vision and orientation towards creativity and innovation are essential for the adoption of disruptive digital technologies.

Additionally, in light of the empirical analysis discovered, this inquiry corroborates that sharing information, expertise, and ideas about new ideas is important for the promotion of digital disruption in business. In addition, in view of the deductions provided, this inquisition signifies that Funding is the most important barrier to digital transformation. Additionally, from the illustrations furnished, this investigation conveys that employee resistance hinders business ability to adopt new technologies. Moreover, using the arguments supplied, this investigation exhibits that a lack of strategic vision deprioritises the adoption of digital transformation. In addition, considering the data furnished, this work elucidates that lack of creativity, open communication, and autonomy are important barriers to digital innovations. In addition, in view of the facts extended, this study figures that poor organisational culture has a significant impact on digital transformation.

Also, using the assessments produced, this study validates that the recent surge of sustainability and environmental protection has pushed businesses towards the adoption of new technologies. In addition, using the deductions extended, this study indicates that a sustainability strategy enhances business competitiveness in the market. In addition, in view of the evidence furnished, this work gleans that digital transformation has become critical for business survival and longevity. Furthermore, taking into account the discussions produced, this research indicates that digital disruption aligns with business strategic objectives. Moreover, using the empirical information, this research evinces that technology is a traditional and most effective source of competitive advantage. In addition, grounded on the statistics shown, this study endorses that digital disruptions offer significant business benefits and a competitive advantage in the market. Additionally, based on the analysis supplied, this investigation reveals that the modern business environment is overwhelmed with digital disruption.

MANAGERIAL AND ORGANIZATIONAL IMPLICATIONS AND RECOMMENDATIONS

The primary managerial implication of the conceptual framework developed in this study is to aid managers and organisations to evaluate their innovative capabilities or readiness. This conceptual framework can be used by managers to evaluate current drivers, challenges, and strategic approaches of their business and identify any gaps. Based on gaps managers can make decisions to improve innovation adoption and/or digital transformation of their business. Furthermore, this article also serves as a guide for managers planning for digital transformation or boost current transformation process. The article clearly recommends that managers need to focus on funding as primary driver and barrier to digital transformation. Additionally, it is recommended that sustainability and resilience strategies of the business must incorporate modern digital technologies as a vehicle to boost digital transformation.

RECOMMENDATION AND RESEARCH SCOPE

Considering the proof furnished, this investigation endorses that digital transformation is essential for the strategic survival of modern businesses. In addition, grounded on the deductions shown, this research concludes that all stakeholders demand businesses to adopt modern technologies. Furthermore, in the light of the empirical evidence produced, this inquisition surmises that businesses must adapt to the current business environment by adopting digital transformation. The scope of this research is broad and generic because the aim was to develop a precise conceptual framework for managerial planning and decision making within the context of digital transformation. However, the evidence and research process specifically focused on business organisations therefore the conceptual framework has limited applicability in case of public entities or non-for profit entities.

ACKNOWLEDGMENTS:

We thank colleagues supervising and contributing professors and doctoral researchers for helpful comments on earlier drafts of this paper. This research was supported by **French University in Egypt; Nantes University** (France), University of Suffolk (UK) and University of Oregon (US).

CONFLICT OF INTEREST STATEMENT:

The authors declare no conflict of interest regarding the publication of this paper.

REFERENCES

- Abidi, N., El Herradi, M., & Sakha, S. (2023). Digitalisation and resilience during the COVID-19 pandemic. *Telecommunications Policy*, *47*(4), 102522.
- Agrawal, R., Yadav, V. S., Majumdar, A., Kumar, A., Luthra, S., & Garza-Reyes, J. A. (2023). Opportunities for disruptive digital technologies to ensure circularity in supply Chain: A critical review of drivers, barriers and challenges. *Computers & Industrial Engineering*, *178*, 109140.

- Ahmad, M., Wu, Q., & Ahmed, S. (2024). Does CSR digitalisation improve the sustainable competitive performance of SMEs? Evidence from an emerging economy. *Sustainability Accounting, Management and Policy Journal*, *15*(1), 119-147.
- Akinsola, J. E. T., Adeagbo, M. A., Oladapo, K. A., Akinsehinde, S. A., & Onipede, F. O. (2022). Artificial intelligence emergence in disruptive technology. In *Computational intelligence and data sciences* (pp. 63-90). CRC Press.
- Alblooshi, M., Shamsuzzaman, M., & Haridy, S. (2021). The relationship between leadership styles and organisational innovation: A systematic literature review and narrative synthesis. *European Journal of Innovation Management*, 24(2), 338-370.
- Allal-Chérif, O., Climent, J. C., & Berenguer, K. J. U. (2023). Born to be sustainable: How to combine strategic disruption, open innovation, and process digitisation to create a sustainable business. *Journal of Business Research*, 154, 113379.
- Amit, R., & Zott, C. (2020). Business model innovation strategy: Transformational concepts and tools for entrepreneurial leaders. John Wiley & Sons.
- Bell, E., Bryman, A., & Harley, B. (2022). Business research methods. Oxford University Press.
- Bonsu, N. O. (2020). Towards a circular and low-carbon economy: Insights from the transitioning to electric vehicles and net zero economy. *Journal of Cleaner Production*, 256, 120659.
- Bresciani, S., Huarng, K. H., Malhotra, A., & Ferraris, A. (2021). Digital transformation as a springboard for product, process and business model innovation. *Journal of Business Research*, *128*, 204-210.
- Carrasco-Carvajal, O., Castillo-Vergara, M., & García-Pérez-de-Lema, D. (2023). Measuring open innovation in SMEs: an overview of current research. *Review of Managerial Science*, *17*(2), 397-442.
- Ćetković, S., & Skjærseth, J. B. (2020). Creative and disruptive elements in Norway's climate policy mix: the smallstate perspective. In *Climate politics in small European states* (pp. 59-80). Routledge.
- Chasin, F., Paukstadt, U., Gollhardt, T., & Becker, J. (2020). Smart energy driven business model innovation: An analysis of existing business models and implications for business model change in the energy sector. *Journal of cleaner production*, 269, 122083.
- Chin, T., Shi, Y., Singh, S. K., Agbanyo, G. K., & Ferraris, A. (2022). Leveraging blockchain technology for green innovation in ecosystem-based business models: a dynamic capability of values appropriation. *Technological Forecasting and Social Change*, *183*, 121908.
- Cho, D. S., & Moon, H. C. (2024). *Competitiveness Of Nations 3, The: Emerging Technologies In The Fourth Industrial Revolution.* World Scientific Publishing Co Pty Ltd, Singapore. https://doi.org/10.1142/q0047.
- Corradi, C., Sica, E., & Morone, P. (2023). What drives electric vehicle adoption? Insights from a systematic review on European transport actors and behaviours. *Energy Research & Social Science*, *95*, 102908.
- Dani, M. V., & Gandhi, A. V. (2022). Understanding the drivers of innovation in an organisation: a literature review. *International Journal of Innovation Science*, *14*(3/4), 476-505.
- Geissdoerfer, M., Santa-Maria, T., Kirchherr, J., & Pelzeter, C. (2023). Drivers and barriers for circular business model innovation. *Business Strategy and the Environment*, *32*(6), 3814-3832.
- Ghauri, P., Grønhaug, K., & Strange, R. (2020). *Research methods in business studies*. Cambridge University Press.
- Gui, L., Lei, H., & Le, P. B. (2022). Determinants of radical and incremental innovation: the influence of transformational leadership, knowledge sharing and knowledge-centered culture. *European Journal of Innovation Management*, *25*(5), 1221-1241.

Gupta, S. P., Gupta, P. K., & Mohan, M. (2022). Business Statistics & Operations Research. Sultan Chand & Sons.

- Hanifah, H., Halim, H. A., Ahmad, N. H., & Vafaei-Zadeh, A. (2020). Can internal factors improve innovation performance via innovation culture in SMEs?. *Benchmarking: An International Journal*, 27(1), 382-405.
- Ho, J. C. (2022). Disruptive innovation from the perspective of innovation diffusion theory. *Technology Analysis & Strategic Management*, 34(4), 363-376.
- Hunziker, S., & Blankenagel, M. (2021). Research Design in Business and Management. *Wiesbaden: SpringerGabler*, 1.
- Ikenga, U. G., & Egbule, C. N. (2024). Strategic Model for Effective Digital Entrepreneurship for Small Business. In *New Strategy Models in Digital Entrepreneurship* (pp. 53-70). IGI Global.
- Jiang, C., & Zhao, X. (2020). The role of foreignness in the relationship between disruptive innovation and MNE performance. *Jiang, Chuandi and Zhao, Xing (2020)*" *The Role of Foreignness in the Relationship between Disruptive Innovation and MNE Performance,*" *American Business Review, 23*(1), 18-34.
- Kivimaa, P., Laakso, S., Lonkila, A. and Kaljonen, M., 2021. Moving beyond disruptive innovation: A review of disruption in sustainability transitions. *Environmental Innovation and Societal Transitions*, *38*, pp.110-126.
- Kivimaa, P., Laakso, S., Lonkila, A., & Kaljonen, M. (2021). Moving beyond disruptive innovation: A review of disruption in sustainability transitions. *Environmental Innovation and Societal Transitions*, *38*, 110-126.
- Kivimaa, P., Laakso, S., Lonkila, A., & Kaljonen, M. (2021). Moving beyond disruptive innovation: A review of disruption in sustainability transitions. *Environmental Innovation and Societal Transitions*, *38*, 110-126.
- Korede, T., Al Mamun, A., Lassalle, P., & Giazitzoglu, A. (2023). Exploring innovation in challenging contexts: The experiences of ethnic minority restaurant owners during COVID-19. *The International Journal of Entrepreneurship and Innovation*, *24*(1), 19-31.
- Kumar, V., Sindhwani, R., Behl, A., Kaur, A., & Pereira, V. (2024). Modelling and analysing the enablers of digital resilience for small and medium enterprises. *Journal of Enterprise Information Management*, *37*(5), 1677-1708.
- Liu, W., Liu, R. H., Chen, H., & Mboga, J. (2020). Perspectives on disruptive technology and innovation: exploring conflicts, characteristics in emerging economies. *International Journal of Conflict Management*, *31*(3), 313-331.
- Mercader, C. (2020). Explanatory model of barriers to integration of digital technologies in higher education institutions. *Education and Information Technologies*, 25(6), 5133-5147.
- Moleka, P. (2024). Innovative entrepreneurship through alternative finance: A framework for sustainable and innovative business models. In *Alternative Finance* (pp. 13-28). Routledge.
- Mubarik, M. S., & Khan, S. A. (2024). Disruptive Digital Technologies and Contemporary Supply Chains. In *The Theory, Methods and Application of Managing Digital Supply Chains* (pp. 15-39). Emerald Publishing Limited.
- Naimi-Sadigh, A., Asgari, T., & Rabiei, M. (2022). Digital transformation in the value chain disruption of banking services. *Journal of the Knowledge Economy*, *13*(2), 1212-1242.
- Neligan, A., Baumgartner, R. J., Geissdoerfer, M., & Schöggl, J. P. (2023). Circular disruption: Digitalisation as a driver of circular economy business models. *Business Strategy and the Environment*, *32*(3), 1175-1188.
- Nicolás-Agustín, Á., Jiménez-Jiménez, D., & Maeso-Fernandez, F. (2022). The role of human resource practices in the implementation of digital transformation. *International Journal of Manpower*, *43*(2), 395-410.
- Ojo, A. O., & Fauzi, M. A. (2020). Environmental awareness and leadership commitment as determinants of IT professionals engagement in Green IT practices for environmental performance. *Sustainable Production and Consumption*, *24*, 298-307.
- Olabode, O. E., Boso, N., Hultman, M., & Leonidou, C. N. (2022). Big data analytics capability and market performance: The roles of disruptive business models and competitive intensity. *Journal of Business Research*, *139*, 1218-1230.

- Omrani, N., Rejeb, N., Maalaoui, A., Dabić, M., & Kraus, S. (2022). Drivers of digital transformation in SMEs. *IEEE transactions on engineering management*.
- Opoku, E., Okafor, M., Williams, M., & Aribigbola, A. (2024). Enhancing small and medium-sized businesses through digitalisation. *World Journal of Advanced Research and Reviews*, 23(2).
- Pal, S. (2023). Strategic alchemy: Transmuting digital disruption into organisational triumph. *International Journal of Progressive Research in Engineering Management and Science (IJPREMS)*, *3*(06), 155-159.
- Rachmad, Y. E. (2021). *Disruptive Dynamics: Navigating the Tech-Led Business Boom*. Book of the Association for Information Systems Publishing, Professional Book Atlanta Special Issue, 2021.
- Schmidt, A. L., & Scaringella, L. (2020). Uncovering disruptors' business model innovation activities: evidencing the relationships between dynamic capabilities and value proposition innovation. *Journal of Engineering and Technology Management*, *57*, 101589.
- Si, S., & Chen, H. (2020). A literature review of disruptive innovation: What it is, how it works and where it goes. *Journal of Engineering and Technology Management*, *56*, 101568.
- Si, S., Zahra, S. A., Wu, X., & Jeng, D. J. F. (2020). Disruptive innovation and entrepreneurship in emerging economics. *Journal of Engineering and Technology Management*, *58*, 101601.
- Singh, C., Singh, D., & Khamba, J. S. (2021). Analysing barriers of Green Lean practices in manufacturing industries by DEMATEL approach. *Journal of Manufacturing Technology Management*, *32*(1), 176-198.
- Taghizadeh, S. K., Karini, A., Nadarajah, G., & Nikbin, D. (2021). Knowledge management capability, environmental dynamism and innovation strategy in Malaysian firms. *Management Decision*, *59*(6), 1386-1405.
- Thomas, G. H., & Douglas, E. J. (2024). Resource reconfiguration by surviving SMEs in a disrupted industry. *Journal of Small Business Management*, 62(1), 140-174.
- Wamba, S. F., Queiroz, M. M., & Trinchera, L. (2020). Dynamics between blockchain adoption determinants and supply chain performance: An empirical investigation. *International Journal of Production Economics*, 229, 107791.
- Yuan, H., & Yang, B. (2022). System dynamics approach for evaluating the interconnection performance of crossborder transport infrastructure. *Journal of Management in Engineering*, 38(3), 04022008.
- Zhang, F., & Zhu, L. (2021). Social media strategic capability, organisational unlearning, and disruptive innovation of SMEs: The moderating roles of TMT heterogeneity and environmental dynamism. *Journal of Business Research*, *133*, 183-193.

APPENDIX A - INTERVIEW QUESTIONS

- 1. Considering digital disruption as a product/process that disrupts existing status quo, how would you introduce digital disruption or any other company for that matter?
- 2. What resources are needed to promote innovation and achieve digital disruption?
- 3. Why do you think businesses fail to implement new technologies and achieve digital disruption?
- 4. In facing the challenges above, how do companies promote digital disruption?
- 5. What is the role of digital transformation in modern business strategic approaches?
- 6. How do you think digital technologies and transformation shape current business objectives?

APPENDIX B - CONCEPTUAL FRAMEWORK BASED ON INTERVIEW ANALYSIS



APPENDIX C – BLANK QUESTIONNAIRE

DEMOGRAPHIC CHARACTERISTICS

1. Gender	2. Age	3. What is the
Male	18 to 28 years	duration of current employment?
Female	29-38 years 39-48 years Above 48 years	Less than a year 1 to 2 years 2 to 3 years
		More than 3 years

Please	e select your desired response	Completely disagree	Partially Disagree	Neutral	Partially Agree	Completely Agree
1.	IV- Drivers of Digital Disruption					
1.	Businesses must analyse existing resources and acquire required resources to properly adopt digital transformation technologies		1	2345		
2.	Digital transformation is critically dependent upon the funding available for acquisition and adoption of new technologies		1	2345		
3.	For digital transformation, an organisation must develop a facilitating culture		1	2345		
4.	Leadership vision and orientation towards creativity and innovation are essential for adoption of disruptive digital technologies		1	2345		
5.	Sharing information, expertise, and ideas about new ideas is important for promotion of digital disruption in business		1	2345		
	IV- Challenges to Digital Disruption					
1.	Funding is the most important barrier to digital transformation		1	2345		
2.	Employee resistance hinders business ability to adopt new technologies		1	2345		
3.	Lack of strategic vision deprioritises the adoption of digital transformation		1	2345		
4.	Lack of creativity, open communication, and autonomy are important barriers to digital innovations		1	2345		
5.	Poor organisational culture has a significant impact on digital transformation		1	2345		
	IV- Strategic Approaches to Digital Disruption					
1.	Recent surges of sustainability and environmental protection have pushed businesses towards the adoption of new technologies		1	2345		
2.	A sustainability strategy enhances business competitiveness in the market		1	2345		
3.	Digital transformation has become critical for business survival and longevity		1	2345		
4.	Digital disruption aligns with business strategic objectives		1	2345		
5.	Technology is a traditional and most effective source of competitive advantage		1	2345		
	DV - Digital Disruption					
1.	Digital disruptions offer significant business benefits and competitive advantage in the market		1	2345		
2.	The modern business environment is overwhelmed with digital disruption		1	2345		
3.	Digital transformation is essential for the strategic survival of modern businesses		1	2 3 4 5		
4.	All stakeholders demand businesses to adopt modern technologies		1	2345		
5.	Businesses must adapt to the current business environment by adopting digital transformation		1	2345		