

Unlocking the Role of Digital Capabilities in the Resilience of Malaysian Small and Medium Practices (SMPs)

¹Azuraidah Taib*, ¹Yunita Awang, ²Jamaliah Said, ³Noor Erni Fazlina Mohd Akhir

¹Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Terengganu, Kampus Dungun, Malaysia

²Accounting Research Institute, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia

³College of Computing, Informatics and Mathematics, Universiti Teknologi MARA, Cawangan Terengganu, Kampus Kuala Terengganu, Malaysia

*azura015@uitm.edu.my, yunita@uitm.edu.my, jamaliah533@uitm.edu.my, noore800@uitm.edu.my

Corresponding Author: Azuraidah Taib

Abstract: The current business environment is characterized by significant volatility and unpredictability due to technological breakthroughs, political dynamics and societal changes. These dynamics significantly affect both large corporations and small and medium enterprises (SMEs). In the current dynamic business environment, SMEs face numerous issues requiring resilience for survival and success. Key challenges SMEs face include insufficient financial resources, lack of skilled personnel and inadequate technological infrastructure. For SMEs to remain resilient, employers and employees must reach a certain technological competence and expertise. Therefore, this study aims to explore the relationship between digital capabilities and resilience of Malaysian small and medium practices (SMPs) as the impact of digital skills on the survival of the accounting sector is rarely studied. A total of 255 owners and managers of accounting firms registered in the Malaysian Institute of Accountants (MIA) database participated in the online survey. The results show a positive and moderate correlation between small accounting firms' resilience and digital capabilities' characteristics (human, collaborative, innovative and technological skills). The existence of small accounting firms in Malaysia depends primarily on their innovation capabilities. The findings suggest that digital capabilities are essential for the resilience of small accounting firms as they not only facilitate survival but also encourage development and innovation in times of crisis. It also transforms accountants' workflows and improves their efficiency, cost-effectiveness, accuracy and competitiveness. This finding implies that it is crucial for SMEs, to invest in digital capabilities to survive but also to remain competitive and growth potential during periods of disruption.

Keywords: *Digital capabilities, Digitalization, Small and Medium Practices (SMPs), Small and Medium Enterprises (SMEs), Resilience*

1. Introduction

In today's rapidly changing business landscape, small and medium enterprises face many challenges that require them to be resilient to survive and thrive. Resilience, which generally refers to the ability to adapt and bounce back from adversity, is a critical factor in determining the long-term success of SMEs. The resilience of small and medium enterprises is a critical factor in the economic prosperity of many countries, including Malaysia. In Malaysia, SMEs accounted for 38.2% (RM512.8 billion) of Malaysia's total Gross Domestic Product (GDP) representing 97.2 percent of all enterprises in the year 2020. The largest type of SME is micro-enterprises at 78.4%, followed by small enterprises at 20% and the least medium enterprises at 1.6%. In Malaysia, SMEs account for a significant portion of the business landscape, contributing to employment and economic growth (Halim et al., 2019). However, the global business environment poses numerous challenges for Malaysian SMEs, as they navigate issues such as business discontinuity, survival struggles, and the need to compete effectively in a globalized market. Despite their importance, Malaysian SMEs have faced challenges in making a significant impact on the national GDP, with their contribution declining from 34.6% in 2015 to 34% in 2016 (Yumboris et al., 2020) - a concerning trend that highlights the need for effective policies and support to enable SMEs to grow and innovate.

SMEs accounted for 96.9% (1,101,725 companies) of all businesses in Malaysia in 2023. This represents a decrease of 1.1% compared to 2022 and revealed a significant reduction in the registering average growth rate of 2.5% per annum during the period 2015-2023 (Department of Statistics Malaysia, 2023). The decline numbers of SMEs led to the issue of the resilience and survivability of Malaysian SMEs. While focusing on resilience is critical, it is also important to consider that not all SMEs may have the same capacity to adapt, as

some may struggle due to limited resources and support systems (Abdul Rahman et al., 2024).

According to a recent study, funding was the largest obstacle for about half of the SMEs surveyed, and a staggering 60% of them were unaware of the digital options available to them (Yuen & Baskaran, 2023). Additionally, the belief that implementing digital technologies is cost-prohibitive has deterred many SMEs from embracing these innovations, despite the potential long-term benefits (Yuen & Baskaran, 2023). While Malaysia has experienced significant advancements in connectivity, this has not yet translated into a widespread increase in web presence for businesses across most economic sectors. However, the services sector has demonstrated a stronger digital adoption compared to the rest of the economy, with over 30% of enterprises in this sector utilizing the Internet and experiencing substantial growth in their online presence since 2015. This suggests that SMEs in the wholesale and retail sectors have implemented a moderate level of technology to remain functional, indicating a gradual shift towards digital transformation.

Smaller accounting firms, also known as Small Medium Practices (SMPs), one of the categories under SMEs, are the most trusted advisers to small businesses - and they are a vital lifeline to a sector that is prone to business failures and poor governance. SMP firms offer services related to accounting, tax and other legal obligations. Due to the lack of knowledge, include advisory and consultancy services to meet the business needs of SMEs in an ever-changing business environment (Hasnah Haron et al., 2010). In Malaysia, the majority of SMEs and SMPs are micro-enterprises (almost 90.5%), and the majority of the country's revenue comes from these enterprises (Aziz et al., 2017; Han et al., 2018). The International Federation of Accountants (IFAC) (2016, p. 10) concluded that "SMPs are themselves SMEs and therefore share the same characteristics as other SMEs, such as limited resources, lack of staff and non-financial objectives of owners and employees (e.g., work-life balance)".

According to Dynamic Capability Theory (DCT), the core of the concept of dynamic capabilities is the ability of an organization to integrate, expand and reconfigure internal and external competencies to deal with rapidly changing circumstances (Teece et al., 1997). In other words, dynamic capabilities refer to an organization's ability to respond appropriately and quickly to a changing environment (Rozak et al., 2021). DCT argued that for businesses to be more successful, they need to implement competitive strategies, expand to new markets, develop unique talent, and internationalization (Arend, 2013). DCT emphasizes an organization's ability to adapt, integrate and reconfigure internal and external resources to respond to a rapidly changing environment. Studies show that SMEs and other companies that utilize dynamic capabilities (e.g. ambidexterity in operations and strategy) are better equipped to build resilience during economic crises (Iborra et al., 2020).

The resilience of SMEs is an important area of study, especially in emerging economies such as Malaysia where these firms face several unique challenges. Despite recognizing resilience as a key factor for organizational sustainability, the literature on the specific resilience strategies of SMEs in Malaysia is sparse. The bibliometric study from the SCOPUS database by Saidi et al., (2023.) on the survival and resilience of SMEs in an economic crisis revealed that only 22 publications from a total of 201 articles published worldwide on SME survival strategies during economic crises were published in Malaysia in 15 years between 1998 and 2023. This analysis highlights the gaps in existing research and emphasizes that further research in this area is needed. The continuous study on resilience is essential as being resilient is a fundamental quality of entrepreneurs that propels their output and enables them to continue operating in the face of adversity (Santoro et al., 2021). Therefore, from an economic perspective, more research on resilience is still required (Lisdiono et al., 2022; Parker & Ameen, 2018).

The existing literature on firm resilience has primarily focused on large organizations and sectors such as manufacturing, retail, technology, and finance (Herbane, 2013), with limited attention to small professional service firms. SMEs of different sizes and financial limitations have different challenges that contribute to increased vulnerability to disaster (Zighan & Ruel, 2021; Yi, 2020) as different firms adopt different business practices to sustain their performance (Haron & Hashim, 2015). Yi (2020) report on the COVID-19 effect on Malaysian SMEs revealed different experiences during the COVID-19. Larger SMEs may have excess cash reserves, while micro-enterprise SMEs struggle with shorter timeframes due to a lack of savings. Additionally, younger businesses are more likely to fail than more established ones, and the larger a company is, the more likely it is to experience distress (Abdullah et al., 2019). Thus, the main objective of this study is to deepen the

understanding of the relationship between digital capabilities, one of the dynamic capability elements and resilience in Malaysian small accounting firms (SMPs).

The next section covers the literature review followed by the research methodology of this study. The discussion of research findings and conclusion with the identified limitations and suggestions for future research are presented in the subsequent sections.

2. Literature Review

Digital capabilities are believed to significantly improve the resilience of accounting firms, enabling them to adapt and thrive in adverse circumstances. The use of digital tools and processes increases agility, optimizes decision-making and promotes knowledge sharing, which is essential for overcoming crises. Studies show that digital capabilities, such as human, collaborative, innovative and technical competencies — play a crucial role in strengthening organizations' risk management and ensuring business sustainability (Taib et al., 2024). In addition, digital transformation not only increases operational efficiency but also alleviates financial constraints and bridges the digital skills gap among SMEs (Yang & Ming, 2024). Digital capabilities have become a critical factor in strengthening the resilience of small and medium enterprises (SMEs), especially in the Malaysian environment where small businesses form the foundation of the economy.

Small and Medium Enterprises (SMEs) and Small and Medium Practices (SMPs) Resilience

In the dynamic and constantly evolving business landscape, SMEs face a multitude of challenges that jeopardize their survival and success. As the backbone of many economies, SMEs must cultivate their resilience, i.e. the ability to withstand and adapt to adverse circumstances. Robert et al., (2010) define organizational resilience as "the ability of an organization to maintain or recover an acceptable level of functioning despite disruptions or failures". The definition is further expanded to include "the dynamic nature of resilience as an interaction between the organization and the environment" (Williams et al., 2017, p.20). From this perspective, resilience means a skillful response to adverse events, not only after they have occurred, but also before, during and after. For example, Duchek, (2020) proposed three successive phases of the resilience process and claimed that resilient organizations respond not only to the past (reactive action) or current concerns (simultaneous action) but also to the future (anticipatory action).

Meanwhile, Zighan and Ruel (2021) define organizational resilience as the short- and long-term capabilities that organizations develop to face adversity, crisis, and uncertainty. These capabilities should also help organizations visualize and make decisions about their risks, as well as absorb change and persist over time. Overall, definitions of organizational resilience focus on responding to a current crisis and anticipating a potential threat. In the context of SMP resilience, this study adopts the definition of resilience (Saad et al., 2021,p.13) as "adaptability to disruption, growth (positive performance) and the ability to take advantage of business opportunities in a challenging business environment".

Furthermore, Yoo et al., (2018) believe that organizational and community resilience are inextricably linked. Consequently, organizational resilience is an important component of a society's ability to prepare for, respond to and recover from emergencies and crises. They added that organizational resilience can also be a source of competitive advantage and a driver of cultural adaptability. In other words, a significant problem for SMEs in emerging markets is their capacity to sustain resilience (Craighead et al., 2020). Prastian et al., (2022) considered business performance, sales and marketing strategy and adaptation, market adaptation strategies, digital impact experience in financial terms and digital impact experience in non-financial terms as indicators of resilience. Nevertheless, despite the significance of resilience, minimal study has concentrated on the surroundings of SMEs in developing nations (Saad et al., 2021).

Small accounting firms are referred to as SMPs in the accounting industry. SMPs seek to understand their client's businesses by using their accounting skills and business acumen (Perry & Coetzer, 2009). SMPs provide numerous professional services to SMEs: audit and assurance, accounting, tax counsel, and consulting services (IFAC, 2021). However, professional accountants are required to adhere to strict ethical requirements. Portraying this client's business must be within the established standards. SMP's survival may be jeopardized if they do not follow established standards (Malo et al., 2024).

Historically, the SMP-SME relationship has been viewed as being based on the requirement for SMEs to undergo statutory audits, and this necessary relationship has served as the foundation for future advice and support. Competency, trust, and proximity are key aspects of a healthy SMP-SME connection (Blackburn and Jarvis, 2010). SMPs can provide value-added services to their SME clients because they have such in-depth knowledge and understanding. On the other hand, SMEs rely on SMPs for advice and support. SMPs primarily advise SMEs on financial management, and the relationship between SMP-SME is influenced by important variables such as competence, culture, trust, and communication (Blackburn & Jarvis, 2010; Gooderham et al., 2004). As a result, SMPs' provision of specialized services (accounting and non-accounting) can be an important success factor, with many of these accounting practices focusing on specific industries and services.

To date, there is little empirical evidence on the resilience of Malaysian SMPs. The argument for SMPs' resilience is probably due to the size of the firms, as large firms can exploit economies of scale in production more effectively than smaller firms (Mittelstaedt et al., 2003). Smaller firms, on the other hand, are unlikely to be able to afford the investment required to compete with larger firms and therefore have to limit themselves to niches that are more suited to their capabilities (Garmestani et al., 2006). Analysis of data from the September 2021 Rosenberg survey, which spans two decades, shows that larger accounting firms are more successful because they have the staff, support systems and management support to offer a value proposition and service mix that is attractive to larger clients. Considering that the majority of Malaysian accounting firms are small, this study attempts to suggest some dynamic capability variables that can enhance the resilience of SMPs in today's environment. As SMPs play an important role as business advisors to their SME clients by providing them with continuous advice, helping them to remain solvent, connecting them with government programs, offering emotional and practical support, and otherwise advancing their efforts to stay in business. Given the importance of SMPs to SMEs as their chosen source of business support services, it is critical for SMPs to thrive (Ambilichu, 2017).

The problem of SMP resilience can be observed worldwide. It appears that small business management has not yet grasped the concept of enterprise risk and risk management. Some small businesses are unable to recognize the external business risks involved and have not developed a risk management system to manage these business risks (Kurniawan et al., 2021). Blackburn and Jarvis (2010) contend that the accountancy profession is transforming due to shifts in the market and regulatory landscape across various jurisdictions. Nevertheless, SMPs may require adjustments to their competencies, methodologies, and referral frameworks. The study by Ortiz et al., (2024) examines the critical function that SMPs can provide in the European sustainability framework, demonstrating that SMPs are equipped to undertake this new role, necessitating substantial retraining. Furthermore, SMEs tend to prefer engaging SMPs with extensive experience, as these professionals possess a superior understanding of sustainable practices and can provide suitable guidance to their SME clients.

The COVID-19 pandemic has shone a spotlight on the critical need for SME and SMP resilience. SMEs, with their limited resources compared to larger corporations, have been particularly vulnerable to the disruptive impacts of the crisis. However, some SMEs have managed to stay resilient and even find new opportunities amidst the chaos, often through the strategic use of digital technologies (Zighan & Ruel, 2021). Based on the previously mentioned arguments, it is time to investigate the acceptance of digital capabilities to the resilience of small accounting firms in Malaysia. Nonetheless, research on business resilience is highly desirable as there is an urgent need to study the unstable conditions under which small and medium enterprises (SMEs) operate (Ismail et al., 2022).

Digital Capabilities

Organizational capabilities are the various skills, processes, technologies, and human capabilities that make up an organization. They are usually developed internally and are therefore difficult for others to imitate. Bharadwaj (2000) extended the traditional concept of organizational capabilities to the information technology (IT) function of an organization and defined IT capability as "the ability to mobilize and deploy IT-based resources in combination or jointly with other resources and capabilities" (p. 171). It is assumed that digital technology promotes and facilitates service innovation. Since an effective competitive strategy is particularly important for service firms, they need to align their service innovation strategy with their business strategy to achieve better business performance. Mobilizing IT thus has significant implications for the economy's survival

as a whole, forcing firms to modernize and adapt to new rules of competition.

The IFAC Global SMP Survey 2018 revealed a worrying finding: more than a third (36%) of SMPs in Malaysia reported that they had not made any technological advances. This figure is higher than the regional average of 25% and the global average of 26% and could affect the competitiveness of Malaysian SMPs, especially as the digital economy and IR4.0 gain momentum. Previously, the KPMG report (*Annual Report 2018, 2017*) claims that digitalization will bring major changes to all businesses, but real-time reporting, cloud computing, or complex Big Data analytics are yet to play a major role for most businesses.

However, given the recent pandemic situation, all stakeholders need to change their current face-to-face way of working to working from home. The situation requires employers and employees to achieve a certain level of technological innovativeness. Napisah et al., (2024) studies indicate that digitalization significantly alters accounting methods, particularly in enhancing efficiency, transparency, and data accuracy. Therefore, with the adoption of new digital skills and technologies, digital transformation is taking place and business resilience is supported by digital transformation (Fitriasari, 2020). A sound digitalization strategy is crucial for achieving business goals and increasing the competitiveness of SME goods and services. Cultural diversity, diversity and social incentives all contribute to competitive advantage. A close examination of the digital infrastructure is essential during the digital transformation process. Consequently, with the help of an appropriate system resilience technology, a company can complete its digital capability and build digital resilience.

Previous studies have shown some relationship between digital capabilities and SME resilience. Copestake et al., (2024) posit that companies in more digitalized sectors incur lower revenue losses during economic downturns, implying that digital competencies bolster general economic resilience across diverse businesses, potentially including accounting. Digital capability substantially improves business resilience by positively influencing knowledge search, which partially mediates the connection between digital capability and resilience (Chen et al., 2023). In the accounting industry, Rumasukun, (2024) findings indicate that auditors' strategies to implement diverse adaptive practices, such as incorporating data analytics and advanced technologies, adopting risk-based auditing methodologies, and employing scenario planning techniques, have improved audit quality, efficiency, and effectiveness by identifying patterns, prioritizing audit procedures, and evaluating financial resilience.

In this study, four variables are proposed for digital capabilities, namely human capabilities, collaborative capabilities, technical capabilities and finally innovation capabilities (Khin & Ho, 2019); Nasiri et al., 2023). Digital-related human capabilities refer to the set of capabilities, knowledge and skills that employees need to drive digitalization (Nasiri et al., 2023). Consequently, the application of human capabilities practices can support digital transformation by providing the tools and processes required to adapt appropriately to new technologies (Zhang et al., 2024).

On the other hand, SMEs need to look for opportunities to collaborate with partners, complementing their existing capabilities with those of their partners (Chan et al., 2019). The complicated nature of digitalization makes it impossible for single actors to reach competitive advantages (Kohli & Melville, 2019). Modern accountants therefore need to develop collaboration skills that go beyond traditional teamwork skills. Meanwhile, digital-related technical capabilities denote an accumulation of technical skills that enable the execution of digitalization within organizations (Nasiri et al., 2023). Digital abilities are among the most sought-after technical competencies for accountants, and they must demonstrate proficiency in utilizing accounting software, for instance.

Innovation capability is a key value-creating capability that drives organizational performance and as such is currently a hot topic, especially in emerging economies (Le et al., 2020). Innovation capability is described as an organization's capacity to change (Calantone et al., 2002). Basically, it encompasses the processes and organization of new ideas for products and services that lead to unprecedented growth dynamics in the economy, more employment and profits for innovative companies (Taleb et al., 2023). SMPs are therefore expected to be more innovative to remain competitive and sustainable in the market.

3. Methodology

Sample and research design

This study focuses on small accounting firms in Malaysia; therefore, the online questionnaires are distributed to the owners of accounting firms registered with the MIA. A total of 255 respondents from 341 sample sizes participated in this study. The sample size was determined based on Krejcie and Morgan, (1970). Since the population of Malaysian accounting firms is spread across fourteen states, a stratified random sample is used in this study. According to Singh and Masuku, (2014), stratified random sampling is a useful method for data collection when the population is heterogeneous, and the selection of strata varies by area and local conditions. Therefore, to determine the number of samples, the number of samples for each state is calculated by dividing the total number of companies by the total population of companies and multiplying by the estimated sample size.

Measurement

The questionnaires were designed to capture demographic information from respondents as well as information on the variables. The instruments of digital capabilities and organizational resilience were adapted from the previous study as follows.

Table 1: Source of Variables

Variables	Dimensions	Authors
Digital capabilities	Human capabilities Collaborative capabilities Technical capabilities Innovation capabilities	Nasiri et al., (2023); El Sawy et al., (2020); Amit & Han, (2017); Parida et al., (2015)
Resilience	Resilience ethos Adaptive capacity Management of keystone vulnerabilities Situation awareness	He et al., 2023); (Lee et al., 2013); McManus, (2008)

In this questionnaire, a Likert scale is used to explore a person's perceptions, attitudes and views on current phenomena to measure the statement of each variable. Respondents' answers are rated on a seven-point Likert scale (1=strongly disagree and 7=strongly agree). Data analyses were done by SPSS version 28.

4. Findings and Results

The Statistical Package for Social Science (SPSS) 28 was used to analyze the collected data. The correlation and regression analysis were conducted to indicate the characteristics of the respondents and to determine the relationship between digital capabilities and non-financial resilience.

Reliability Analysis

The Statistical Package for Social Science (SPSS) was used to analyze the collected data. The correlation and regression analysis were conducted to indicate the respondents' characteristics and determine the relationship between digital capabilities and resilience.

Table 2: The Reliability Analysis

Variable	Alpha
Human capabilities	0.870
Collaborative capabilities	0.914
Technical capabilities	0.957
Innovation capabilities	0.929
Resilience	0.968

Table 2 shows the overview of Cronbach's Alpha for all the variables of this research. Cronbach's Alpha is a test that determines how reliable instruments are. Nunnally, (1978) suggests that with Cronbach's Alpha value of

greater than 0.6, all items in the surveys are reliable and can be used for further analysis. Similarly, the variables were found to be good and reliable ($0.8 \leq \alpha < 0.9$) concerning Hair et al., (2006).

Analysis of respondents’ profile

The demographic data indicate that the majority (86.3%) of owners and management partners participated in the study, with 64.3% of respondents being male and 35.7% female. Although the proportion of women among registered MIA members is greater (55%), male owners appear to be more cooperative in participating in this survey. Most respondents were in the 40-50 age group (44.7%). This data is consistent with the MIA source, which indicates that the majority of registered MIA members are in this age group. Chinese (51.8%) are the main ethnicity of small accounting firm owners. Implicitly, it shows that although the number of Bumiputera accounting graduates in Malaysia has increased significantly, their presence in the profession remains limited

The relationship between digital capabilities and the non-financial resilience of small accounting firms in Malaysia

The first objective of this study is to determine the level of digital capabilities in Malaysian SMPs. Based on the respondents' responses, a descriptive analysis of the variable is conducted to determine the mean values. Descriptive analysis was applied to show the mean values exposing the level of digital capabilities in Malaysia SMPs, thereby enabling a clear understanding of the data. Pimentel & Pimentel, (2019) defined the level of mean score of seven Likert Scale, which is summarized in Table 3 below.

Table 3: Interpretation of mean value

Likert Scale	Ranking/mean values	Interpretation
1	1.00-1.85	Extremely dissatisfied
2	1.86-2.71	Very dissatisfied
3	2.72-3.57	Dissatisfied
4	3.58-4.43	Neither satisfied nor dissatisfied
5	4.44-5.29	Satisfied
6	5.30-6.15	Very satisfied
7	6.16-7.00	Extremely satisfied

(Source: Pimentel & Pimentel, 2019)

Table 4: Mean Score for Digital Capabilities Variables

Digital Capabilities Item	Mean	Std. Deviation
Human	5.73	0.970
Collaborative	5.25	1.22
Technical	5.59	1.09
Innovation	5.42	1.13

A more detailed analysis of the level of digital capabilities in Malaysian SMPs is conducted by categorizing their responses into three levels: low, medium and high. It is common practice in research studies to categorize the seven-point Likert scale into low, medium and high to gain an understanding of the distribution of responses. Using this method, it is possible to gain a better insight into the distribution of responses and provide a more nuanced interpretation of the Likert scale data. The authors followed the calculations of Alqatawenh, (2018); Noor et al., (2012) and Ur Rehman et al., (2023), according to which the seven-point Likert scale can be divided into three levels, e.g. 3 for low, 3.1 to 4.99 for medium and 5 to 7 for high. This allowed the authors to interpret the results more accurately and draw more meaningful conclusions accurately and draw more meaningful conclusions.

Table 4 shows that, among the four different factors studied, human capabilities have the highest mean score (5.73), followed by technical capabilities (5.59) and innovation capabilities (5.42), while collaboration recorded the lowest score (5.25). The range of mean score is between 5.25 to 5.73 which indicates that the level of digital capabilities is high in Malaysian SMPs. The result shows that Malaysian SMPs have adequate knowledge of the digital tools needed in the accounting sector. It is in line with the work of MIA Digital Technology Blueprint, which seeks to direct accountants to create suitable action plans for their surroundings. Accountants are to be very important players in digital transformation.

The second objective of the study is to determine the relationship of digital capabilities with SMP resilience. Therefore, the Pearson correlation was conducted to measure the strength of the linear relationship between resilience (non-financial) and four criteria in digital capabilities which include human, collaborative, technical and innovative. Table 5 shows the summary of the Pearson Correlation between independent variables which indicates the relationship between resilience and the four independent variables. Hair et al., (2006) emphasize that correlation only indicates the strength and direction of a linear relationship and not causality, with a value of $r > 0.7$ indicating a strong positive correlation, $0.3 < r \leq 0.7$ indicating a moderate positive correlation, while an R-value of ≤ 0.3 and 0 indicates a weak and no correlation respectively.

Table 5: Summary of Pearson Correlation between independent variables and non-financial resilience

Variables	Pearson Correlation
Human capabilities	0.434**
Collaborative capabilities	0.466**
Technical capabilities	0.512**
Innovation capabilities	0.558**

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

The findings show that there is a moderate positive and significant relationship ($0.3 < r \leq 0.7$) between all variables, human, collaborative technical and innovation capabilities with non-financial resilience. The result is somehow consistent with Sulastri et al., (2023), who established that digital transformation, collaboration capability, and innovation substantially impact the resilience of SMEs. Similarly, the findings support Nasiri et al., (2023) who found that the business process is influenced by technical, human and innovative capabilities, while the market offerings are influenced by technical, human and innovative capabilities.

The result also shows a certain similarity with the previous study, which confirms that the variables of digital capabilities significantly influence the resilience of SMEs. In terms of human capabilities, Alnor, (2023) finds that investments in human capability development have a positive impact on business performance, especially when these investments are made in conjunction with organizational capability development. Strategies include training and development activities that promote employee engagement and innovation, thereby strengthening the overall resilience of the organization (Anggadwita et al., 2021). Furthermore, investing in the development of employees' skills and capabilities increases productivity, improves innovation, reduces costs, promotes customer loyalty and satisfaction and provides the organization with a competitive advantage. In addition, digital human resource practices have a significant impact on digital transformation, innovative work behavior and productivity (Zhang et al., 2024) and thus contribute to the survival of the company. Nasiri et al., (2023) show a significant relationship between technical and other capabilities. With regard to the digital business process, technical skills indirectly support digital innovation. Human skills are enhanced by technical skills, and this leads to the continuity of digital business processes.

Similarly, the ability to collaborate exerts a direct, positive and significant influence on the resilience and adaptability of SMEs (Saputra et al., 2022). Collaboration served as a mediating factor for the link between leadership and adaptability. To withstand disruptive change, SME owners and managers need to adopt a pro-social approach to governance while cultivating collaborative competencies to enhance resilience. According to Hanaysha et al., (2022), among innovation capabilities, both service and product innovation significantly improve business sustainability. The results also show how important process innovation is for the long-term survival of companies.

Table 6: The most influencing factor of digital capabilities towards non-financial resilience

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.419	.289		8.364	.000
Human Capabilities	-.010	.079	-.011	-.130	.897
Collaborative Capabilities	.088	.061	.117	1.434	.153
Technical Capabilities	.121	.087	.144	1.387	.167
Innovation Capabilities	.312	.066	.382	4.697	.000

Dependent Variable: Resilience (non-financial)

The third objective of the study is to determine the most influencing factor of digital capabilities towards SMPs resilience. To determine factors that significantly contribute to non-financial resilience, multiple linear regression was used. Table 6 compares each factor's strength, which provides a more comprehensive understanding of the factors influencing the outcome variable. The finding shows that only one significant variable concerning non-financial resilience is innovation capability (Sig=0.000). Meanwhile, the other three independent variables; human, collaborative and technical capabilities were insignificant in this study.

The result is probably identical to earlier investigations. Olaleye et al., (2024) emphasizes that innovation capabilities are crucial for business sustainability in SMEs and points out that developing these capabilities can improve business resilience. This enables SMEs to adapt to digital disruption and capitalize on opportunities in a dynamic environment. According to Awad and Martín-Rojas, (2024), digital technologies facilitate organizational learning and innovation, which in turn increases the resilience of SMEs. At the same time, the findings suggest that the digital transformation of firms has a profound impact on the frugal innovation and resilience of SMEs in emerging economies (Al Omoush et al., 2025). Interestingly, Zhang et al., (2024) discovered that innovative work behavior positively impacts work productivity, highlighting the essential importance of creative thinking and problem-solving skills.

Generally, it shows that digital capabilities are leading to changes in accounting business models from traditional to modern accounting. Schiavi et al., (2020) assert that accounting has started on a traditional path toward digital innovation, so highlighting the quality and value that technology-related solutions may produce a greater outcome to the firm. Furthermore, the ability to innovate has a positive impact on sustainable business performance and thus is beneficial for ensuring business sustainability (Somwethee et al., 2023).

5. Conclusion, Limitations and Recommendations

The study hopes to make some useful contributions by identifying the level of digital capabilities and its relationship to resilience in Malaysian SMPs specifically and SMEs, in general, to gain and maintain a competitive advantage and survive the economic disaster. The findings indicate a moderate positive and substantial association among all variables (human, collaborative technical, and innovation skills), with innovation being the most significant element contributing to the resilience of SMEs. Nevertheless, the study offers significant insights to businesses, accountants and professional accounting bodies on the adoption and application of digital skills in small accounting firms in their business. In addition, the findings have contributed to the knowledge that dynamic capabilities are the leading theory used to explain and assess a firm's resilience.

The evidence of higher digital capabilities among Malaysian SMPs suggests that accounting education has provided sufficient knowledge and skills on the importance of digital competencies in the accounting workspace. Furthermore, as innovation was analyzed as the most influential factor for business resilience, this suggests that innovation capability helps entrepreneurs in SMEs to sustain their businesses and improve their competitiveness.

In contrast, while digital capabilities are critical to resilience, some SMEs struggle with this due to limited

resources or resistance to change, highlighting the need for tailored support and strategic planning to effectively improve these capabilities. This finding implies that SMEs must invest in digital capabilities to survive but also to remain competitive and have growth potential during periods of disruption

This study has some limitations. Firstly, the data is from a specific group of SMPs SMEs in Malaysia, which may limit the applicability of our conclusions to SMEs in other sectors or locations. Future research should endeavor to expand other sectors and the geographical area covered by data collection to gain a more comprehensive understanding.

Secondly, the data only assesses the degree, relationship and most influential factors of one variable in the dynamic capabilities' environment, namely digital capabilities. Therefore, to deepen the understanding of the factors that impact SMEs resilience, future research should consider various other factors such as network capabilities, entrepreneurial leadership capabilities and risk management capabilities.

In addition, this study is also limited by the disadvantages of using online surveys. Unfavorably chosen dissemination channels can lead to skewed data, low response rates and several other potential problems. Future research could utilize a different survey method to increase the reliability of the data.

Declaration of Competing Interest: The authors/author declares no conflict of interest in this work.

Acknowledgment: The authors would like to express sincere gratitude to Universiti Teknologi MARA Cawangan Terengganu (UiTMCT) for their unwavering support and provision of technological resources which contributed to the successful completion of this study.

References

- Abdul Rahman, S. N., Ali, N., & Anuar, A. (2024). Exploring Small Medium Enterprise (SME) owners' resources for resilience. *Jurnal Intelek*, 19(1), 1–9.
- Abdullah, N. A. H., Ahmad, A. H., Zainudin, N., & Rus, R. M. (2019). Predicting financially distressed small and medium-sized enterprises in Malaysia. *Global Business Review*, 20(3), 627–639.
- Al Omoush, K., Lassala, C., & Ribeiro-Navarrete, S. (2025). The role of digital business transformation in frugal innovation and SMEs' resilience in emerging markets. *International Journal of Emerging Markets*, 20(1), 366–386.
- Alcalde-Heras, H., Iturrioz-Landart, C., & Aragon-Amonarriz, C. (2019). SME ambidexterity during economic recessions: the role of managerial external capabilities. *Management Decision*, 57(1), 21–40. <https://doi.org/10.1108/MD-03-2016-0170>
- Alnor, N. H. A. (2023). *The Effect of Developing Human Capabilities on the Company's Performance through Developing the Company's Capabilities*.
- Alqatawenh, A. S. (2018). Transformational leadership style and its relationship with change management. *Verslas: Teorija Ir Praktika*, 19(1), 17–24.
- Ambilichu, C. A. (2017). *Dynamic capabilities and firm performance: Empirical evidence from small and medium-sized accountancy firms in the UK*.
- Amit, R., & Han, X. (2017). Value creation through novel resource configurations in a digitally enabled world. *Strategic Entrepreneurship Journal*, 11(3), 228–242.
- Anggadwita, G., Martini, E., Hendayani, R., & Kamil, M. R. (2021). The role of technology and innovation capabilities in achieving business resilience of MSMEs during COVID-19: empirical study. *2021 9th International Conference on Information and Communication Technology (ICoICT)*, 1–6.
- Annual Report 2018*. (2017). www.kpmg.dk
- Arend, R. J. (2013). Ethics-focused dynamic capabilities: A small business perspective. *Small Business Economics*, 41, 1–24.
- Awad, J. A. R., & Martín-Rojas, R. (2024). Digital transformation influences organizational resilience through organizational learning and innovation. *Journal of Innovation and Entrepreneurship*, 13(1), 69.
- Aziz, K., Hasnain, S. S. U., Awais, M., Shahzadi, I., & Afzal, M. M. (2017). The Impact of Entrepreneurial Orientation on SME Performance in Pakistan: A Qualitative Analysis. *International Journal of Engineering and Information Systems (IJEAIS)*, 1(8), 107–112.

- Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS Quarterly*, 169–196.
- Blackburn, R., & Jarvis, R. (2010). *The role of small and medium practices in providing business support to small and medium-sized enterprises* (Issue April). <http://web.ifac.org/publications/small-and-medium-practices-committee/information-papers-3#the-role-of-small-and-medium>
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 515–524.
- Chan, C. M. L., Teoh, S. Y., Yeow, A., & Pan, G. (2019). Agility in responding to disruptive digital innovation: A case study of an SME. *Information Systems Journal*, 29(2), 436–455.
- Chen, C., Pan, J., Liu, S., & Feng, T. (2023). Impact of digital capability on firm resilience: the moderating role of cooperation behavior. *Business Process Management Journal*, 29(7), 2167–2190.
- Copestake, A., Estefania-Flores, J., & Furceri, D. (2024). Digitalization and resilience. *Research Policy*, 53(3), 104948.
- Craighead, C. W., Ketchen Jr, D. J., & Darby, J. L. (2020). Pandemics and supply chain management research: toward a theoretical toolbox. *Decision Sciences*, 51(4), 838–866.
- Duchek, S. (2020). *Organizational resilience : a capability-based conceptualization*. 215–246.
- El Sawy, O. A., Kræmmergaard, P., Amsinck, H., & Vinther, A. L. (2020). How LEGO built the foundations and enterprise capabilities for digital leadership. In *Strategic information management* (pp. 174–201). Routledge.
- Fitriasari, F. (2020). How do Small and Medium enterprises (SMEs) survive the COVID-19 outbreak? *Jurnal Inovasi Ekonomi*, 5(02), 53–62. <https://doi.org/10.22219/jiko.v5i3.11838>
- Garmestani, A. S., Allen, C. R., Mittelstaedt, J. D., Stow, C. A., & Ward, W. A. (2006). Firm size diversity, functional richness, and resilience. *Environment and Development Economics*, 11(4), 533–551.
- Gooderham, P. N., Tobiassen, A., Døving, E., & Nordhaug, O. (2004). Accountants as sources of business advice for small firms. *International Small Business Journal*, 22(1), 5–22.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis (Vol. 6): Pearson Prentice Hall Upper Saddle River*. NJ.
- Halim, H. A., Ahmad, N. H., & Ramayah, T. (2019). Sustaining the innovation culture in SMEs: The importance of organizational culture, organizational learning and market orientation. *Asian Journal of Business Research*, 9(2), 14–33.
- Han, L. L. V., Arumugam, V., & Arokiasamy, L. (2018). Creating better humans towards a sustainable competitive advantage for small and medium-sized accounting firms in Malaysia. *SHS Web of Conferences*, 56, 04006. <https://doi.org/10.1051/shsconf/20185604006>
- Hanaysha, J. R., Al-Shaikh, M. E., Joghee, S., & Alzoubi, H. M. (2022). Impact of innovation capabilities on business sustainability in small and medium enterprises. *FIIB Business Review*, 11(1), 67–78.
- Haron, N., & Hashim, M. K. (2015). *Suggestions for research on small and medium-sized enterprises in Malaysia*.
- Hasnah Haron, Ishak Ismail, Sofri Yahya, Siti Nabihah Abdul Khalid, & Ganesan, Y. (2010). Cases of Successful Malaysian Small and Medium Enterprises (SMEs): Does Business Advisory Services Help? *Malaysian Accountancy Research and Education Foundation (MAREF)*. [https://doi.org/ISBN 978-983-9044-67-6](https://doi.org/ISBN%20978-983-9044-67-6)
- He, Z., Huang, H., Choi, H., & Bilgihan, A. (2023). Building organizational resilience with digital transformation. *Journal of Service Management*, 34(1), 147–171.
- Herbane, B. (2013). Exploring crisis management in UK small-and medium-sized enterprises. *Journal of Contingencies and Crisis Management*, 21(2), 82–95.
- Iborra, M., Safón, V., & Dolz, C. (2020). What explains the resilience of SMEs? Ambidexterity capability and strategic consistency. *Long Range Planning*, 53(6). <https://doi.org/10.1016/j.lrp.2019.101947>
- IFAC. (2021). *PAIBs Leading Sustainability and Digital Transformation ENABLING PURPOSE DRIVEN ORGANIZATIONS*.
- Ismail, A., Economics, F., Sains, U., Nilai, B. B., & Management, F. (2022). *THE 10th ISLAMIC BANKING, ACCOUNTING AND FINANCE INTERNATIONAL CONFERENCE 2022 (i BAF 2022) Conceptualization of SMEs ' Business Resilience : A Systematic Review Farah Laili Muda @ Ismail Umi Hamidaton Mohd Suffian Lee. 2022*, 149–155.
- Khin, S., & Ho, T. C. F. (2019). Digital technology, digital capability and organizational performance: A mediating role of digital innovation. *International Journal of Innovation Science*, 11(2), 177–195. <https://doi.org/10.1108/IJIS-08-2018-0083>
- Kohli, R., & Melville, N. P. (2019). Digital innovation: A review and synthesis. *Information Systems Journal*, 29(1),

- 200–223.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Kurniawan, R., Budiastuti, D., Hamsal, M., & Kosasih, W. (2021). Networking capability and firm performance: the mediating role of market orientation and business process agility. *Journal of Business and Industrial Marketing*, 36(9), 1646–1664. <https://doi.org/10.1108/JBIM-01-2020-0023>
- Le, H. M., Nguyen, T. T., & Hoang, T. C. (2020). Organizational culture, management accounting information, innovation capability and firm performance. *Cogent Business & Management*, 7(1), 1857594.
- Lee, A. V., Vargo, J., & Seville, E. (2013). Developing a Tool to Measure and Compare Organizations' Resilience. *Natural Hazards Review*, 14(1), 29–41. [https://doi.org/10.1061/\(asce\)nh.1527-6996.00000075](https://doi.org/10.1061/(asce)nh.1527-6996.00000075)
- Lisdiono, P., Said, J., Yusoff, H., A. Hermawan, A., & Binti Abdul Manan, D. (2022). Risk Management Practices and Enterprise Resilience - The Mediating Role of Alliance Management Capabilities. *Journal of Advances in Humanities Research*, 1(2), 77–91. <https://doi.org/10.56868/jadur.v1i2.21>
- Malo, A., Fortin, A., & Héroux, S. (2024). Small and medium-sized accounting firms' learning processes regarding standards updates. *Journal of Small Business & Entrepreneurship*, 36(5), 705–728.
- McManus, S. (2008). *Organizational Resilience in New Zealand [unpublished thesis (PhD)]*. <https://ir.canterbury.ac.nz/handle/10092/1574>
- Mittelstaedt, J. D., Harben, G. N., & Ward, W. A. (2003). How small is too small? Firm size is a barrier to exporting from the United States. *Journal of Small Business Management*, 41(1), 68–84.
- Napisah, L. S., Taufikurochman, C., & Harto, B. (2024). The Effect of Digitalization on the Sustainability of Accounting Practices in the Financial Industry. *Journal of Social Science and Business Studies*, 2(4), 268–276.
- Nasiri, M., Saunila, M., Ukko, J., Rantala, T., & Rantanen, H. (2023). Shaping digital innovation via digital-related capabilities. *Information Systems Frontiers*, 25(3), 1063–1080.
- Noor, N. A. M., Muhammad, A., Kassim, A., Jamil, C. Z. M., Mat, N., Mat, N., & Salleh, H. S. (2012). Creating green consumers: how environmental knowledge and environmental attitude lead to green purchase behavior? *International Journal of Arts & Sciences*, 5(1), 55.
- Nunnally, J. C. (1978). *Psychometric Theory: 2d Ed*. McGraw-Hill.
- Olaleye, B. R., Lekunze, J. N., Sekhampu, T. J., Khumalo, N., & Ayeni, A. A. W. (2024). Leveraging innovation capability and organizational resilience for business sustainability among small and medium enterprises: A PLS-SEM approach. *Sustainability*, 16(21), 9201.
- Ortiz, E., Marín, S., & Thompson, P. (2024). The role of small and medium-sized practices in the sustainable transition of SMEs: Sustainable Transition and Professionals. *Environment, Development and Sustainability*, 26(8), 19299–19323.
- Parida, V., Sjödin, D. R., Lenka, S., & Wincent, J. (2015). Developing global service innovation capabilities: How global manufacturers address the challenges of market heterogeneity. *Research-Technology Management*, 58(5), 35–44.
- Parker, H., & Ameen, K. (2018). The role of resilience capabilities in shaping how firms respond to disruptions. *Journal of Business Research*, 88, 535–541.
- Perry, M., & Coetzer, A. (2009). Small enterprise relations with banks and accountants. *Journal of Small Business and Enterprise Development*.
- Pimentel, J. L., & Pimentel, J. L. (2019). Some biases in Likert scaling usage and its correction. *International Journal of Science: Basic and Applied Research (IJSBAR)*, 45(1), 183–191.
- Prastian, G. A., Setiawan, A., & Bachtiar, N. K. (2022). SMEs' Sustainability: Between Business Resilience and Business Growth, Which One is More Significant in the Time of Crisis? *Jurnal Manajemen Bisnis*, 9(1), 94–105. <https://doi.org/10.33096/jmb.v9i1.1086>
- Robert, B., Pinel, W., Pairet, J. Y., Rey, B., Coeugnard, C., & Hmond, Y. (2010). Organizational Resilience—Concepts and evaluation method. *Québec: Presses Internationales Polytechnique*.
- Rozak, H. A., Adhiatma, A., & Fitriati, I. R. (2021). Strengthening digital ecosystem for SMEs through readiness to change and agile leadership. *Jurnal Siasat Bisnis*, 25(2), 155–165. <https://doi.org/10.20885/jsb.vol25.iss2.art6>
- Rumasukun, M. R. (2024). Facing Economic Uncertainty: Adaptive Audit Strategies. *Golden Ratio of Auditing Research*, 4(2), 66–77.
- saad, M. H., Hagelaar, G., van der Velde, G., & Omta, S. W. F. (2021). Conceptualization of SMEs' business resilience: A systematic literature review. *Cogent Business and Management*, 8(1).

- <https://doi.org/10.1080/23311975.2021.1938347>
- Saidi, N., Wan, N. Z. N., Razak, S., San, S., Abdullah, A., Aziz, A., & Hussin, S. N. A. (n.d.). *A Brief Bibliometric Survey on the Survival of Small and Medium Enterprises (SMEs) During Economic Crisis*.
- Santoro, G., Messeni-Petruzzelli, A., & Del Giudice, M. (2021). Searching for resilience: the impact of employee-level and entrepreneur-level resilience on firm performance in small family firms. *Small Business Economics*, 57(1), 455–471.
- Saputra, N., Rahmat, A., & Fasmadhi, D. (2022). The Effect of Leadership and Collaborations on SME Adaptability. *Jurnal Manajemen Dan Organisasi*, 13(2), 180–191.
- Schiavi, G. S., Momo, F. da S., Maçada, A. C. G., & Behr, A. (2020). On the Path to Innovation: Analysis of Accounting Companies' Innovation Capabilities in Digital Technologies. *Revista Brasileira de Gestão de Negócios*, 22(02), 381–405.
- Singh, A. S., & Masuku, M. B. (2014). Sampling techniques & determination of sample size in applied statistics research: An overview. *International Journal of Economics, Commerce and Management*, 2(11), 1–22.
- Somwethee, P., Aujirapongpan, S., & Ru-Zhuc, J. (2023). The influence of entrepreneurial capability and innovation capability on sustainable organization performance: Evidence of community enterprise in Thailand. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2), 100082.
- Sulastri, S., Mulyadi, H., Disman, D., Hendrayati, H., & Purnomo, H. (2023). Resilience acceleration model of small and medium enterprises through digital transformation. *Journal of Eastern European and Central Asian Research (JEECAR)*, 10(4), 609–619.
- Taib, A., Awang, Y., Said, J., & Akhir, N. E. F. M. (2024). Digital Capabilities and Risk Management Practice in Small Accounting Firms in Malaysia. *Advances in Social Sciences Research Journal*, 11(9.2), 42–54.
- Taleb, T. S. T., Hashim, N., & Zakaria, N. (2023). Mediating effect of innovation capability between entrepreneurial resources and micro business performance. *The Bottom Line*, 36(1), 77–100.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Ur Rehman, Z., Abu Seman, N. A., & Harun, A. (2023). Exploring the significance of Malaysian consumers' intentions to purchase green products. *Journal of International Business, Economics and Entrepreneurship (JIBE)*, 8(2), 71–78.
- Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, 11(2), 733–769.
- Yang, L. C., & Ming, C. W. (2024). Digital Transformation and its Effects on the Financial Performance of Malaysian SMEs. *Journal of Digitainability, Realism & Mastery (DREAM)*, 3(08), 21–32.
- Yi, V. Z. (2020). Struggle of Malaysian SMEs During the COVID-19 Pandemic Findings from Webinar: SMEs Beyond the MCO—Lessons from the PRIHATIN Stimulus. *Strategic Institute for Asia Pacific*. <https://Kasi.Asia/Wp-Content/Uploads/2020/05/KSI-PolicyBrief-Struggle-of-Malaysian-SMEs-During-the-COVID-19-Pandemic.Pdf>.
- Yoo, W. J., Choo, H. H., & Lee, S. J. (2018). A study on the sustainable growth of SMEs: The mediating role of organizational metacognition. *Sustainability (Switzerland)*, 10(8). <https://doi.org/10.3390/su10082829>
- Yuen, T. M., & Baskaran, S. (2023). Going digital for SMES: Adapting business model and seizing opportunities to achieve sustainable business performance. *International Journal of Academic Research in Business and Social Sciences*, 13(2), 437–449.
- Yumboris, Y., Umbaris, M., Gisip, I. A., & Ambad, N. A. (2020). Strategic Orientation and Performance of Small And Medium Enterprises (SMEs) in Sabah, Malaysia. *Journal of Social Transformation and Regional Development*, 2(1), 11–20.
- Zhang, Y., Iqbal, S., Tian, H., & Akhtar, S. (2024). Digitizing success: Leveraging digital human resource practices for transformative productivity in Chinese SMEs. *Heliyon*, 10(17).
- Zighan, S., & Ruel, S. (2021). SMEs' resilience from continuous improvement lenses. *Journal of Entrepreneurship in Emerging Economies*, 2018. <https://doi.org/10.1108/JEEE-06-2021-0235>