



## RESEARCH ARTICLE

## Digital Media and Business Performance: Interactive Effects of Digital Innovation and Business Network Resilience

Rudsada Kaewsang-on<sup>1</sup>, Ongcaruttiya Kittichotwattana<sup>2</sup>, Prachuab Tongsr<sup>3\*</sup>, Khanista Namee<sup>4</sup>, Madiha Hamid<sup>5</sup>

<sup>1</sup> Department of Business Administration, Prince of Songkla University, Songkhla, Thailand

<sup>2</sup> OUKA International Company Limited, Songkhla, Thailand

<sup>3</sup> The Department of Adult Education and Lifelong Education, Faculty of Education, Srinakharinwirot University, Bangkok, Thailand

<sup>4</sup> Faculty of Industrial Technology and Management, King Mongkut's University of Technology North Bangkok, Bangkok, Thailand

<sup>5</sup> UCP Business School, University of Central Punjab, Lahore, Pakistan

### ARTICLE INFO

Received: Sep 28, 2023

Accepted: Dec 3, 2023

### Keywords

Digital media

Business performance

Digital innovation

Business network resilience

Telkom foundation

Dynamic capability theory

### \*Corresponding Author:

prachuabt@g.swu.ac.th

### ABSTRACT

This cross-sectional investigation aims to scrutinise the nexus between digital media, business performance, and the effects of digital innovation and business network resilience within the Telkom Foundation offices in Pattani and Bangkok, Thailand. Additionally, it endeavours to analyse these dynamics within the framework of dynamic capability theory. A structured questionnaire was employed to collect data from 335 managers in Thai telecommunication offices in Pattani and Bangkok, utilising a stratified random sampling method to ensure a representative sample from various organisational levels. This approach enhances understanding of how digital innovation and business network resilience collectively influence business performance in diverse regional contexts. Employing Smart PLS software for data analysis enabled the assessment of structural relationships and interactions among variables. Results unveil a positive impact of digital media adoption on business performance in Thai telecommunication offices, with digital innovation and business network resilience reinforcing overall performance. The study further affirms the mediating role of digital innovation and network resilience in shaping organisational success. The findings underscore the strategic importance for organisations, including non-profits, to invest in digital media resources and cultivate collaboration to bolster network resilience. Aligning innovation strategies with resilience efforts is crucial, validating the applicability of dynamic capability theory. The results of this study show how important digital media, innovation, and the resilience of business networks are for improving the performance of telecommunications companies in Pattani and Bangkok, Thailand. They also show how useful dynamic capability theory is for dealing with digital problems.

## INTRODUCTION

Thailand's southern area is home to the city of Pattani. It serves as Pattani's provincial capital, located in Thailand's Deep South (Intanee et al., 2023). The history and cultural legacy of the city are extensive. However, because of its connection to the ongoing struggle between the Thai government and numerous separatist organizations in the southern provinces, it is also well-known for its complicated and frequently tumultuous past. Bangkok, also known as Krung Thep in Thai, is Thailand's largest and capital city (Ockey, 2021). Thailand's political, economic, cultural, and transportation centres are in the middle of the nation. Bangkok is renowned for its thriving street culture, busy marketplaces, cutting-edge buildings, and extensive cultural history (Thongsawang, 2022). The government of Thailand owns over half of the publicly traded shares of Telkom. According to Tang et al. (2023), Telekomunikasi Thailand (Telkom), a telecommunications goods and services provider, is committed to consistently assisting the education sector in implementing digital media business use. Telkom Institute ought to help its staff members accomplish these objectives by implementing business networks across the board, including the compensation plan. An ideal compensating plan would consider the compensable component that would establish the value that the employer should pay (Intanee et al., 2023; Thongsawang, 2022).

Pattani, on the other hand, represents a region with unique characteristics and challenges. Situated in southern Thailand, socioeconomic dynamics are influenced by cultural diversity and historical factors (Ausat et al., 2022; Pradiptasari and Gustomo, 2018). By including Pattani in the study, researchers aim to capture the regional variations and understand how the telecommunications sector operates and contributes to economic and social development in urban and rural settings. Telkom offers significant business lines in information transfer, internet access, and fixed-line telephone. It is run as the main business of the Telkom Company, which offers banking, real estate, digital media, and communications services, among other diverse industries (Zeng et al., 2022). To contend with escalating competition, Telkom Thailand

started modifying its organizational structure, networks, facilities personnel, and organizational culture in 2008. According to Pradiptasari and Gustomo (2018), compensable elements are aspects of the job that an organization values and supports in pursuing its goals and strategy. Compensable characteristics need to reflect personal fairness or consistency. The higher the salary that a skill will command, the more significant the correlation between its experience, abilities, and the company's goal (Ausat et al., 2022; Pradiptasari and Gustomo, 2018).

Pattani and Bangkok have 2.5 million registered citizens, making them Thailand's third most populated cities (Intanee et al., 2023). To create a variety of public facilities, Telkom industries, and services, Pattani and Bangkok cities in Thailand have successfully lured significant domestic and international investments in recent decades (Ockey, 2021). Pattani and Bangkok have many options because of their booming commercial, industrial, and educational sectors, contributing to the city's rapid population growth and economic boom. Thailand's social, cultural, and economic hubs are Pattani and Bangkok. One of Thailand's oldest cities still under continuous habitation is Pattani and Bangkok (Intanee et al., 2023; Ockey, 2021; Thongsawang, 2022). A growing phenomenon is the digitalization of commercial firms across industries, made possible by new digital technologies, including cloud-based computing, big data analytics, and robotics (Khan et al., 2022). To achieve significant business improvements like improving digital innovation and performance, optimizing operations, and developing new business models, the companies must be successful in accepting change through technological advances; otherwise, their rivals who do so will destroy them (Tortora et al., 2021; Xie et al., 2022). The growth of Thailand's media industry presents enormous opportunities and difficulties. The advancements in information and communication technologies impact the efficient creation and distribution of media content. Social media platforms are one specific technology that impacts how the media do business and how the public consumes media material (Mehralian and Khazaee, 2022; Tang et al., 2023; Yousaf et al., 2021). This has also occurred

in Thailand, as media viewers have used social media more often over time (Troise and Camilleri, 2021; Xie et al., 2022; Zhang et al., 2023). The media industry is economically reliant on two markets: viewers and advertisers, who both have sway over one another. Media material has to draw a sizable audience as its primary market.

The conventional corporate economy has given way to a digitalized one due to digital innovation (Purnomo et al., 2021; Wang and Teng, 2022), and big data and cutting-edge technology are key components of this new economic landscape. Digital innovation is no longer exclusive to software companies; the world's most valuable commercial organizations rank among the digital industries (Zeng et al., 2022). Businesses can reduce the time it takes to bring products to market (Xie et al., 2022), shorten the R&D cycle, save resources, and create value. Khin and Ho (2018) use digital technology in many simulation experiments, eliminating the need to repeatedly develop abrasives and saving resources (Hurtado-Palomino et al., 2022). It is easy to identify the limitations in terms of pertinent research. Firstly, case studies comprise most of the research already done; quantitative analyses are few. Secondly, digital innovation must be refined into these three dimensions because it encompasses multiple levels, including platforms, services, and products (Ahmed et al., 2022; Di Vaio et al., 2021).

Increasing business performance and bringing new ideas are two ways that businessmen develop themselves to keep their firms afloat in the face of the numerous issues and rivalry that commercial organizations face today (Ahmed et al., 2022). Organizations need innovation to have a competitive edge and respond quickly to economic shifts (Ausat et al., 2022; Hurtado-Palomino et al., 2022). As a strategic goal, organizations continue to emphasize contemporary work procedures, enjoyable services, and innovative commodities (Fu et al., 2022; Varadarajan, 2020). Businesses gain from innovation since it allows them to take advantage of new products and market prospects and react quickly to problems (Hurtado-Palomino et al., 2022; Salamah, 2023). Innovation can help businesses in several ways, such as enhanced profitability (Mehralian and Khazae, 2022), enhanced business performance (Wang and

Teng, 2022), and improved efficiency. Tang et al. (2023), and competitiveness in the organization (Andonov et al., 2021).

Business network resilience refers to an organization's ability to withstand and recover from disruptions, such as natural disasters, cyberattacks, supply chain disruptions, and other unforeseen events that can impact its operations (Bondeli and Havenvid, 2022; Shashi et al., 2020). A resilient business network can adapt and continue functioning or quickly recover, minimizing downtime and maintaining critical business processes in the face of these challenges. Previous research by Bondeli and Havenvid (2022), Ivanov (2021), and Zeng et al. (2022) has concentrated on how to increase resilience at the individual and group levels concerning how to build business network resilience.

Looking into how digital innovation and business network resilience affect business performance in the context of digital media is important from a theoretical point of view because it sheds light on the complex dynamics that shape modern business landscapes. By bridging the theoretical realms of digital innovation and network resilience, this research contributes to a more holistic understanding of how these pivotal elements synergize to impact business outcomes. Moreover, the study offers insights into the moderation factors influencing these relationships, providing a nuanced comprehension of when and how these elements influence them (Bondeli and Havenvid, 2022; Shashi et al., 2020). Furthermore, the research contributes to business environments' dynamic and adaptive nature, acknowledging the role of digital innovation and network resilience in navigating uncertainties and disruptions.

The present study determines the relationship between digital media and business performance: interactive effects of digital innovation and business network resilience in Telkom Foundation offices in Pattani and Bangkok cities of Thailand, as well as the dynamic capability theory involved. The ability of a company to innovate, adapt, and react to changes in its external environment throughout time is the focus of this theory. The special and adaptable procedures, practices, and skills companies build to efficiently manage their resources and adjust to changing conditions are known as dynamic capabilities (Teece,

2014; Yudistria, 2019). The structure of this document is as follows: The theoretical underpinnings of business network resilience, digital innovation, digital media use, and company performance are covered in Section 2. In Section 3, the research technique is presented. Results and analysis are presented in Section 4, after which the major discussion, practical and theoretical implications, and recommendations for further research are considered.

## LITERATURE REVIEW

However, the existing literature needs to provide a comprehensive theoretical framework that captures the dynamic nature of this interaction, especially within the context of digital media. This research addresses this gap by focusing on the telecommunications sector in Pattani and Bangkok, providing a nuanced understanding of how digital innovation and business network resilience jointly influence business performance in diverse regional settings. These areas' unique socio-economic and cultural characteristics present an opportunity to investigate the contextual nuances that shape the relationships between digital advancements, network robustness, and overall organizational success. Zeng et al. (2022) and Zhang et al. (2023) have delved into the implications of digital innovation on organizational performance, providing valuable insights into the benefits and challenges associated with technological advancements. Similarly, the contributions of Bondeli and Havenvid (2022) and Zeng et al. (2022) have underscored the critical role of business network resilience in mitigating risks and enhancing organizational sustainability in volatile environments. However, a comprehensive theoretical framework that explicitly examines the interactive dynamics between digital innovation and business network resilience, particularly in the dynamic landscape of digital media, needs to be more conspicuously present.

### **Dynamic capability theory**

The resource-based view theory is extended by the dynamic capability theory, Teece (2014), which may be used to examine the need for resilience network requirements following disruptive events. The resource-based view emphasizes that for an organization to establish a competitive edge, it

must acquire the capabilities necessary to overcome obstacles (Chowdhury and Quaddus, 2017; El-Den et al., 2017). The conventional resource-based approach, however, cannot appropriately define capabilities in situations where dynamic changes occur in unpredictable settings. The dynamic capability theory, which considers the peculiarities of contingencies by preparing the appropriate resources and capabilities to react to situation-specific changes (Chowdhury and Quaddus, 2017; Teece, 2014), fills this gap in the traditional resource-based view. The ability of a company to integrate, construct, and reconfigure organizational resources using its processes in response to changes and uncertainties in the environment and to create new strategies that add value is the fundamental tenet of the dynamic capability theory (Chowdhury and Quaddus, 2017; Teece, 2014). In a similar spirit, we contend that for an organization's supply chains to endure over time, they must acquire the dynamic skills necessary to reduce vulnerabilities in an unpredictable environment.

Our theoretical framework's pillar is dynamic capability theory, which speaks to businesses' capacity for creativity and adaptability to achieve long-term success (Chowdhury and Quaddus, 2017; Teece, 2014). To maintain performance, a company must make timely modifications to its procedures and strategy to incorporate new ideas. Therefore, digital innovation is their top priority for businesses functioning in today's fast-paced world. To respond to quickly changing surroundings and dynamic capability theory, enterprises need to be able to adapt, integrate, and rearrange their assets and skills. In this research, this theory involves using digital media to adapt business performance, business resilience networks, and digital innovation (Chowdhury and Quaddus, 2017; Teece, 2014). According to Chowdhury and Quaddus (2017) and Teece (2014), the dynamic capability theory emphasizes that organizations that succeed in the market should swiftly reorganize their capabilities and resources to regain their expertise during challenging periods.

### **Digital media business use and business performance**

According to Ahmed et al. (2022), local media in Thailand originated with a desire to establish a networked broadcasting system, initially discussed

during the early stages. At the time, the idea of digital media that must be able to create their network and distribute their material in the community was offered during a conversation between media practitioners, researchers, and a few legislators. Numerous studies on local media have shown that digital technology might be adapted to local media to broaden its concept, particularly for youth (Garrido-Moreno et al., 2020; Khan et al., 2022). Furthermore, the dynamic capability theory offers a theoretical perspective on how different technological platforms are implemented in local media. Dynamic capability theory provides a technique to observe how innovations are adopted by digital media since it merely shows how innovations are disseminated through certain channels within a given time frame to a particular social system (Krings et al., 2021). In this instance, digital media is viewed as innovative, and digital media can be understood within the framework of an institution that serves as a social system (Mehralian and Khazaee, 2022; Zeng et al., 2022).

Numerous studies have explored how businesses leverage digital media platforms like social media, websites, and mobile apps to engage with customers, promote products or services, and enhance their competitive advantage (Maryani et al., 2020; Troise and Camilleri, 2021; Kurniawati and MeilianaIntani, 2016). These investigations have consistently indicated that firms embracing digital media as part of their strategy tend to experience improved customer reach, brand visibility, and engagement. Additionally, digital media facilitates real-time customer communication and offers valuable insights through data analytics, contributing to better-informed decision-making (Krings et al., 2021; Zhang et al., 2023). However, while there is a growing consensus on the potential benefits of digital media in business, it is essential to consider contextual factors such as industry type, company size, and digital maturity level, as they may influence the relationship between digital media use and business performance. Additionally, more research is needed to look into the long-term effects and possible downsides, like privacy concerns and digital fatigue, to fully understand how the use of digital media affects business outcomes (Garrido-Moreno et al., 2020; Khan et al., 2022).

**H1:** Digital media business use has a significant influence on business performance.

### **Mediating role of digital innovation**

According to Di Vaio et al. (2021), the findings indicate that digital innovation has the potential to substantially mitigate the impact of digital media usage by businesses on their performance. Research from Wang and Teng (2022), who assert that digital innovation can improve corporate performance, as well as research from Magistretti et al. (2021), which demonstrates how the use of digital media in business influences digital innovation, support this claim. Using digital media in business aids in enhancing customer service and creating novel items that hasten the development of inventive solutions for corporate operations (Yousaf et al., 2021). In addition to knowing what to do and how to deal with difficulties when anything goes wrong, having a bright personality is beneficial when someone is in danger online (Purnomo et al., 2021; Tang et al., 2023). Using the newest digital technology, advanced innovation market products, models, and business practices are developed through digital innovation (Varadarajan et al., 2022). Using the most recent digital applications helps businesses create innovative ideas faster and offers competitive advantages for raising the calibre of creative goods and services. Several other studies, including Tortora et al. (2021) and Varadarajan et al. (2022), who both claim that innovation can hasten the introduction of new goods that enhance performance, make similar claims. Utilizing technology to develop new goods, enhance current ones, and produce inventive results is the goal of digital innovation (Magistretti et al., 2021; Pradiptasari and Gustomo, 2018). Digital innovation is being used instead of resources for operations, and using it could have several benefits (Hurtado-Palomino et al., 2022; Purnomo et al., 2021). Manufacturing companies use digital innovation to boost innovation and increase the usefulness of their products. Digital technology makes it possible to process, retrieve, and store data. It also impacts product development and design, which helps businesses become more sustainable. As such, data analysis makes it possible to accurately foresee patterns in changing customer demand for the best possible product development (Tortora et al., 2021). It is crucial to recognize

digital innovation's role in the innovation process. This includes introducing new products, enhancing production procedures, reorganizing organizational structures, and developing and altering business models. Digital innovation is the application of knowledge-based technology, communication, and interaction technologies (Ahmed et al., 2022; Hurtado-Palomino et al., 2022). Digital innovation transcending organizational boundaries and user innovation collaborating with users are two ways that it can assist businesses in gaining digital media business use and business network resilience to improve business performance (Ahmed et al., 2022; Di Vaio et al., 2021; Hund et al., 2021; Magistretti et al., 2021; Tortora et al., 2021; Xie et al., 2022). According to Varadarajan et al. (2022), digital innovations can enhance the performance of businesses. The study by Purnomo et al. (2021) also supports these findings, demonstrating that digital innovation significantly and favourably affects corporate performance. Hence, **H2:** Digital innovation mediates between digital media business use and business performance.

#### **Moderating role of business network resilience**

Digital media business technologies emphasize enhancing an individual's capacity to manage new hazards associated with online actions that can impede transformative efforts and result in loss of money or reputation (Zeng et al., 2022). The developments in digital media business use show how a person's capacity for digital resilience raises security levels and sustains the high-performance level of innovation processes that boost digital innovation practices within a particular organization. The usage of digital media in business is a must for enhancing a person's capacity for digital resilience, which enables them to recognize online threats and musters the emotional fortitude to face misfortune and adversity, ultimately spurring digital innovation inside the company (Gianiodis et al., 2022; Shashi et al., 2020; Xie et al., 2022). Between a company's digital innovation and its usage of digital media for business, digital resilience serves as a link. Digitally resilient businesses use their personnel's abilities and resources to overcome obstacles and seize opportunities that foster digital innovation (Chowdhury and Quaddus, 2017; Ivanov, 2021). Through creatively executing novel work practices

to design innovative products and services that raise the level of digital innovation in the company, people using digital media for business can act with resilience and overcome various technological challenges and security threats (Azadegan and Dooley, 2021; Bondeli and Havenvid, 2022). Utilizing digital media for commercial purposes makes it possible to gauge how well people can adapt to the most recent technological advancements in digital resilience. Due to these technological advancements, businesses' digital innovation processes become more flexible (Gianiodis et al., 2022). Additionally, prior research demonstrates that workers with a high level of digital resilience may engage with security requirements and innovation practices (Shashi et al., 2020). The most recent developments in digital media business usage boost companies' capacity for digital resilience, which aids in their ability to innovate more and create new goods and services that enable them to expand and reap the greatest financial rewards in rising markets (Gianiodis et al., 2022). The ability of a worker to handle the expected consequences of unfavourable cyber events, including both planned and accidental actions, is known as digital network resilience (Xie et al., 2022).

Business network resilience is more likely to develop when the organizational cooperation setting fosters inter-partner risk management, acquiring knowledge, and confidence (Gianiodis et al., 2022). This essay clarifies how responsible innovation could contribute to developing a high degree of business network resilience in these three factors. Regarding inter-partner risk management, responsible innovation is beneficial for reducing information asymmetry and the uncertainty of innovation activities during the collaboration phase, helping the firm reduce hazards and weaknesses in its business network. This is because anticipating responsible innovation implies a firm's ability to identify and consider potential risks and opportunities (Bondeli and Havenvid, 2022; Ivanov, 2021). Furthermore, more and better ties between corporate partners are made possible through responsible innovation, which can enhance innovation. Digital media businesses prioritize the behaviour of their digital tools, encompassing activities such as learning, taking action, perceiving, and interacting within intricate environments (Zeng

et al., 2022). Meanwhile, employees' digital resilience capabilities enable them to operate effectively in challenging and stressful situations. This resilience mitigates financial losses, safeguards the company's reputation, and stimulates heightened innovation efforts. Furthermore, it establishes protocols that promote increased digital innovation across the organization (Shashi et al., 2020; Xie et al., 2022). Therefore,

**H3:** Business network resilience has a moderating impact on digital innovation and business performance.

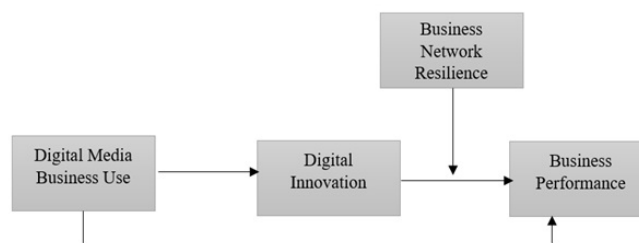
**Digital innovation and business performance**

Creating cutting-edge business concepts, offerings, and procedures through digital media applications is known as digital innovation (Ahmed et al., 2022). Digital media emphasizes the transformational function made possible by the program and the change of the features and allows objects to blend the user experience, for example, through phone and internet content (Khin and Ho, 2018). Innovative goods and services that encourage the creation of new company value through digital innovation can be produced using digital media Tang et al., 2023). Digital media facilitates the simultaneous usage of many technological systems by various users and boosts the ability of the exhibits to make valuable and useful connections with other performers (Tortora et al., 2021). A broad term for creating, exploring, and fusing various roles made possible by digital media to enhance corporate performance is "digital innovation." Varadarajan et al. (2022) broadly define digital innovation as developing new products, services, procedures, or business models by applying digital technology. Their definition encompasses a range of innovation outputs, including new customer experiences, platforms, products, and services, as well as additional value streams; all of these

outcomes depend on the use of digital technologies and digitalized processes (Pradiptasari and Gustomo, 2018; Purnomo et al., 2021).

Digital innovation in the context of creative digital solutions that improve other companies' goods, services, and operations. Thus, "the development of new products, services, or solutions by using digital technology" is how we describe digital innovation. Tang et al. (2023) have listed the digital technologies used in innovation, including artificial intelligence, cloud computing, big data, virtual and augmented reality, and cyber-physical systems. Conversely, Khin and Ho (2018) and Magistretti et al. (2021) define digital technology as embedded devices, mobile, social media, and analytics. Business researchers and other academics have long been interested in business performance, regarded as the most significant indicator of a company's success. According to Hurtado-Palomino et al. (2022) and Tortora et al. (2021), business performance is the organizational effectiveness of a company in creating and delivering value to its internal and external customers. It is typically measured by the amount of money the company makes for its owners or shareholders, either profit or revenue over a given period. According to Pradiptasari and Gustomo (2018), this phrase is used interchangeably with related terms, such as organizational and company performance. Two broad categories can be used to characterize business performance: financial and non-financial (Hurtado-Palomino et al., 2022). Nonetheless, it has been examined as a multifaceted construct with financial and non-financial components in the literature on business performance (Mehralian and Khazaei, 2022). Hence,

**H4:** Digital innovation has a significant influence on business performance.



**Figure 1: Conceptual framework**

## RESEARCH METHODOLOGY

This research measures business performance in the presence of digital media business use as a predictor variable, digital innovation as a mediator, and business network resilience as a moderating variable. Based on this, a conceptual model was developed, and the research approach was quantitative and descriptive. Primary data was collected using the cross-sectional time horizon approach to test the hypotheses. A survey approach was used to gather the data from the respondents, and a questionnaire was chosen to collect the data. The questionnaire used in this research was adapted. The unit of analysis in this study was the managers from Telkom sector offices in Pattani and Bangkok, Thailand. A total of 400 questionnaires were distributed among the managers, and out of those, 335 were filled out properly and completed. This research addresses this gap by employing a stratified random sampling method, focusing on the telecommunications sector in Pattani and Bangkok. After gathering the data, statistical analysis was conducted. For that instance, SMART PLS was used to perform all the required statistical tests to measure the proposed hypotheses.

### Measurement

In this research, data was collected in the form of numerical data to conduct quantitative research, and for this purpose, a survey approach was used. The

questionnaire was the instrument of the study, and it was adapted. The instrument contains information regarding the study and demographic information of the respondents. Close-ended options were given so that the respondents could easily respond. The instrument also contains variable items, which were adapted from different sources according to the context of the study. The digital media business was the independent variable in this study, and it was measured using Troise and Camilleri (2021) scale. Six items were included in the questionnaire. The scale developed by Khin and Ho (2018) was used to measure digital innovation as a mediator, and a total of six items, which were based on a 5-point Likert scale, were adopted. The moderating variable of business network resilience was measured using the Xie et al. (2022) scale, and three items were adapted. The outcome variable of the study was business performance, which was measured by adapting the four items from the scale developed by Varadarajan (2020). After adopting all the items against each variable, the instrument was face-validated and distributed after the validation process.

### Demographics

Table 1 shows the demographic details and descriptive statistics of the sample for the current study ( $N = 335$ ) based on an initial evaluation of participant data. Smart PLS was used to assess the structural and measurement models.

**Table 1: Demographic profile**

Demography	Description	No. of Responses	%
Gender	Male	190	57
	Female	145	43
Age	25-45	75	22
	45-55	140	42
	Above 55	120	36
Education	Under-graduate	110	33
	Post-graduate	85	25
	Diploma	80	24
	Others	60	18
Firm	Private	185	55
	Public	150	45
Years of Experience	2-5 Years	95	28
	5-10 Years	130	39
	More than 10 years	110	33
Managers Type	Senior Managers	175	52
	Junior Managers	160	48
Enterprise Position	Small	125	37
	Medium	210	63



This study aims to assess the relationship between digital media and business performance, as well as the dynamic capability theory and the interaction effects of digital innovation and business network resilience in the managers of Telkom Foundation offices in Pattani and Bangkok, Thailand.

In the above table, the managers of Telkom sector offices in Pattani and Bangkok, Thailand, were male (57%) and female (43%). In the table above, the managers of Telkom Foundation offices in Pattani and Bangkok, Thailand, aged 25–45, were 22%, 45–55 were 42%, and those above 55 were 36%. Qualifications for undergraduates were 33%, post-graduates were 30%, diplomas were 24%, and others were 18%. The public firm was 45%, and the private firm was 55%. Years of experience of 2–5 years were 28%, experience of 5–10 years was 39%, and experience of more than 10 years was 33%. Managers categorized as senior managers were 52%, and junior managers were 48%. Enterprise position small was 37%, and medium was 63%.

#### **Units of analysis**

The unit of analysis was based on the context of the study, and managers from Telkom sector offices in Pattani and Bangkok cities in Thailand were targeted for gathering the data. A total of 400 questionnaires were distributed among the managers, and out of those, 335 were filled out properly and completed. The respondent rate was almost 84 percent, which was more than significant for conducting the analysis. As the population was unknown, the non-probability sampling technique was used, and under this technique, the contiguity sampling method was used to record the managers' responses. Those managers were directly approached for data collection by using the questionnaire. It was mentioned to the respondents that the data will remain secret and will not be shared with anyone or used for any other purpose except this research. All the ethical elements were considered, and no one was forced to collect data.

### **RESULTS AND INTERPRETATIONS**

SPSS Version 20 was utilized in this investigation for the respondents' profiling and data screening. The SmartPLS software, developed by Sarstedt and Cheah (2019), was utilized in conjunction with the Partial Least Squares (PLS) method of the Structural

Equation Model (SEM) to test the hypothesis. One benefit of PLS is that it allows the researcher to look at several interconnected dependent relationships between multiple latent concepts and the variables being measured and between the variables being evaluated and latent constructs. In addition, the PLS approach yields consistent and dependable results while requiring substantially fewer sample sizes and distribution requirements than variance assessments. It also does not require input data to be normally distributed, and it can be used with complicated structural equation models that contain a lot of constructs (Purwanto, 2021; Sarstedt and Cheah, 2019). The studies of Cheah et al. (2020) and Purwanto (2021) analyzed the measurement model initially and the structural model later. This method evaluated the measures' construct validity and fit before looking at the structural model's path coefficients or connections between the variables. The standard approach variance test findings will be explained before the measurement and structural model results are evaluated. The statistical method of SEM-PLS (Structural Equation Model-Partial Least Squares), provided by SmartPLS 3.2.9 software, was used to test the collected data. The outer and inner models are the two sub-models that comprise SEM-PLS analysis. The outer model demonstrates the manifest variable's representation of the latent variable to be measured. Simultaneously, the inner model displays the estimating capacity among latent variables or constructs.

#### **Measurement model**

Convergent validity and discriminant validity were evaluated to validate the measurement model. The degree to which a measure is highly associated with other measures measuring the same construct is known as convergent validity (Purwanto, 2021; Sarstedt and Cheah, 2019). According to Cheah et al. (2020) and Purwanto (2021), discriminant validity guarantees that a concept measure is empirically distinct and captures phenomena of interest that other measures in a structural equation model fail to capture. Since every construct in this study was modelled as reflecting, the indicators Cheah et al. (2020) and Purwanto (2021) should share a large percentage of the variance. Convergent validity was evaluated by looking at indicator reliability (outer loadings), Average Variance Extracted (AVE), and Composite Reliability (CR), as listed in Table II.

**Table 2: Composite reliability, Cronbach alpha, and AVE**

Construct	Item	Loadings	CA	CR	AVE
Digital Media Business Use	DMB1	0.727	0.849	0.89	0.579
	DMB2	0.818			
	DMB3	0.864			
	DMB4	0.775			
	DMB5	0.808			
	DMB6	0.524			
Digital Innovation	DI1	0.794	0.897	0.921	0.66
	DI2	0.834			
	DI3	0.799			
	DI4	0.794			
	DI5	0.823			
	DI6	0.832			
Business Network Resilience	BNR1	0.845	0.879	0.926	0.807
	BNR2	0.937			
	BNR3	0.909			
Business Performance	BP1	0.856	0.872	0.913	0.725
	BP2	0.868			
	BP3	0.894			
	BP4	0.783			

The AVE values were all greater than 0.5, which supported the convergent validity (Purwanto, 2021). The reliability of the measurements was then evaluated using Composite Reliability (CR), which ranks the indicators according to how reliable each one is on its own. The measures were deemed reliable since all composite reliability CR values were higher than 0.7. Cheah et al. (2020) and Purwanto (2021) state that while composite reliability is based on individual indicators, Cronbach's alpha estimates reliability based on inter-correlations of the variable's indicators.

We checked the discriminant validity by looking at how the square root of the AVE values correlated with the hidden variables (Cheah et al., 2020; Sarstedt and Cheah, 2019). After analysis, it was shown that

the Composite Reliability (CR) was higher than 0.60. Additionally, Table 1 displays the Cronbach alpha ( $\alpha$ ) result, which was greater than 0.70. As a result, the studies that validated and measured outcomes were all legitimate and dependable. The square roots of AVE for each construct, as shown in the table, were higher than the correlation for the other constructs in this study, confirming the discriminant validity of the constructs. The significance level of outside loading is compared to cross-loading in the discriminant validity assessment. When a construct's outside load exceeds its cross-loading significance, it differs considerably from similar structures. The build outer loadings (bold) are greater than the cross-loading, as Table 3 demonstrates. It implies that every construct assesses a distinct idea.

**Table 3: Discriminant validity**

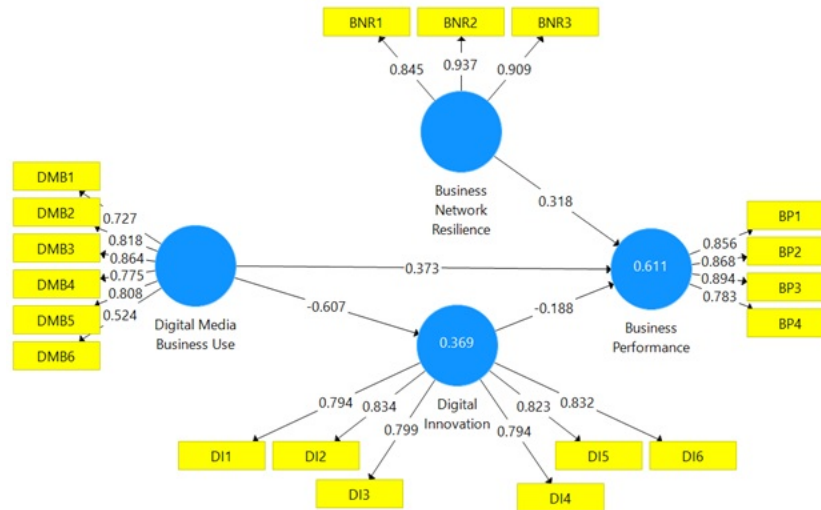
	BNR	BP	DI	DMB
Business Network Resilience	0.898			
Business Performance	0.712	0.851		
Digital Innovation	-0.77	-0.659	0.813	
Digital Media Business Use	0.668	0.699	-0.607	0.761

In a regression model, the R-square indicates the extent to which the independent variables can explain the variance in the dependent variable. While the value of  $R^2$  might vary significantly according to the study region, the path coefficients are necessary for the study to be considered essential. The recommended values of 0.19, 0.33, and 0.67 are

considered low, modest, and substantial (Sarstedt and Cheah, 2019). According to Table 4, the R square values for business performance were 0.611, the adjusted R square value was 0.607, and the digital innovation value of the R square was 0.369. The adjusted R square value was 0.367.

**Table 4: Assessment of R-square**

	R Square	R Square Adjusted
Business Performance	0.611	0.607
Digital Innovation	0.369	0.367



**Figure 2: Assessment of algorithm**

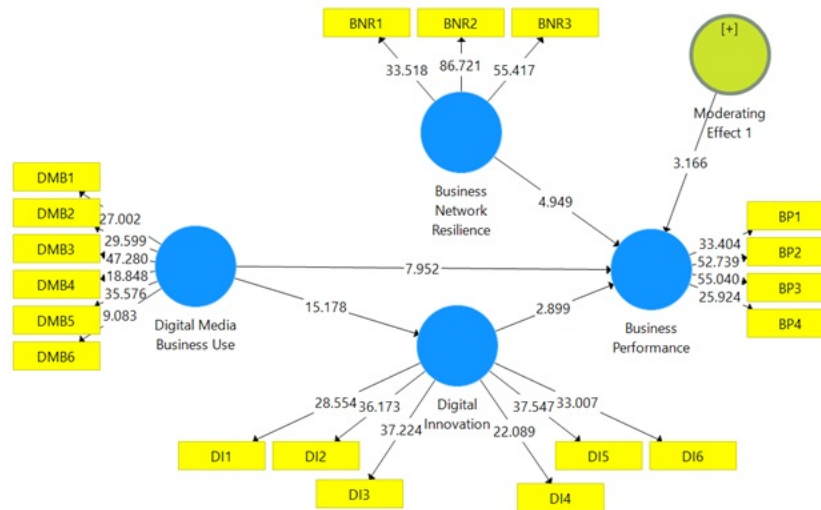
**Structural model**

The structural model route coefficients that support the proposed relationships were found statistically using the PLS-SEM bootstrapping method. The Structural Equation Model (SEM) illustrates a statistical model that shows the relationships between a set of latent variables and their observable indicators or variables. SEM is a flexible and useful statistical method that can be used to evaluate complex theoretical models and hypotheses. SEM uses factor, regression, and path analyses to create a comprehensive model that can account for the direct and indirect interactions between variables. Latent variables, or unobserved components assumed to underlie the observed variables, and observable variables, or measured variables, are included in the model (Cheah et al., 2020; Sarstedt and Cheah, 2019). The study employed structural equation modelling, or SEM, to test its hypotheses. According to the hypothesis results, all of the pathways were significant and positively correlated with one another. The mediation helps to clarify and characterize the link between the two major elements. The investigation of the mediation effect clarifies the mechanisms and

causes for the connection between these two variables (Cheah et al., 2020; Purwanto, 2021; Sarstedt and Cheah, 2019). Structural equation modelling allows an in-depth study of mediated interactions and indirect effects between variables. Interpreting the sequence and explaining observed effects requires a detailed analysis of mediation effects. Researchers can determine the importance of these mediation effects by evaluating the channels. "mediation" is a conflict-resolution process in which participants engage in dialogue with an unbiased third party. Table 5 shows that digital media business use positively and significantly predicted business performance ( $B = 0.373, p < 0.000$ ); thus, H1 is accepted. The use of digital media positively and significantly predicted business performance with the mediating role of digital innovation ( $B = 0.114, p < 0.038$ ); thus, H2 is accepted. Business network resilience is a moderating variable between digital innovation and business performance ( $B = 0.152, p < 0.002$ ); thus, H3 is accepted. The digital innovation positively and significantly predicted business performance ( $B = 0.373, p < 0.000$ ); thus, H4 is accepted.

**Table 5: Direct and indirect relationship**

	Relationships	Original Sample	T Statistics	p Values	Decision
H1	Digital Media Business Use -> Business Performance	0.373	7.392	0.000	Supported
H2	Digital Media Business Use -> Digital Innovation -> Business Performance	0.114	2.080	0.038	Supported
H3	Moderating Effect 1 -> Business Performance	0.152	3.166	0.002	Supported
H4	Digital Innovation -> Business Performance	-0.188	2.183	0.030	Supported



**Figure 3: Assessment of bootstrapping**

**DISCUSSION**

The present study determines digital media and business performance and interactive effects of digital innovation and business network resilience in Telkom sector offices in Pattani and Bangkok cities of Thailand, as well as the dynamic capability theory involved. One of the features of the trade in its execution is small industrial business infrastructure, which is for businesses provided in an industrial complex with links to varied enterprises inside the industrial estate. A company must collaborate with other companies to succeed. This calls for digital innovation from the company, as this study demonstrates in telecommunication offices. All hypotheses were accepted.

In the Telkom sector offices in Pattani and Bangkok, Thailand, the results of media and business performance and the interactive effects of digital innovation and business network resilience were examined using the suggested conceptual model

in this study. The dynamic capability theory was also taken into consideration. Understanding the elements that promote digital innovation is becoming increasingly important for executives and academics, given the crucial role digital media consumption plays in the workplace. Organizations that want to become innovative must recognize that using digital media is a crucial component that fosters creativity in the digital space. The Telkom sector sits in the market development region and the competitive monopoly market. The exclusive competition market serves as a reminder that the Telkom sector is not the only foundation that operates educational institutions; rather, it must compete with others based on offering the best educational products and services. Because Telkom Foundation is located in this market, one required criterion is that they unquestionably have a different characteristic of the product or services they've offered; this serves as the organization's uniqueness. As such, the Telkom sector must support its employees with multiple capabilities, including

creative and innovative behaviour.

The outcome shows that digital media business use significantly influences business performance. Firstly, the use of digital media has revolutionized marketing and advertising strategies. Through platforms like social media, search engines, and email marketing, businesses can connect with their customers more personally and immediately (Garrido-Moreno et al., 2020; Troise and Camilleri, 2021). This enhanced engagement can increase brand visibility, customer loyalty, sales, and revenue. Secondly, digital media provides valuable data and analytics tools that allow businesses to track and measure their online efforts. This data-driven approach empowers companies to make informed decisions and optimize their strategies in real-time. By analyzing metrics such as website traffic, conversion rates, and customer behaviour, businesses can identify strengths and weaknesses in their digital presence and adapt accordingly. This continuous improvement process can lead to enhanced business performance over time.

The outcome shows digital innovation mediates between digital media business use and performance. As a result, adopting digital innovation has become a strategic business decision, and the competitive divide between companies that lead and lag in technology has grown. Businesses that innovate their products using digital technology can accomplish a dual benefit by enhancing their use of digital media for business purposes, which can also directly boost organizational performance. Businesses that cannot develop digital platforms or offer digital services could prioritize implementing digital advances following their unique circumstances (Di Vaio et al., 2021; Varadarajan et al., 2022; Jam et al., 2018). The study's findings regarding the mediating effect of digital innovation suggest that companies dedicated to adopting these technologies and strengthening their capacity to do so will be more likely to create creative digital solutions, enhancing organizational performance. Specifically, the noteworthy mediating impact of digital innovation underscores the critical role that digital innovation plays in converting digital media use and digital capacity into enhanced organizational performance. In general, the results highlight the need to harness a company's digital strength to drive digital innovation, which can improve the company's success.

The outcome shows that business network resilience has a moderating impact on digital innovation and business performance. First, when the ability to absorb information is greater, digital innovation has a stronger impact on business network resilience. Secondly, when digital media usage is higher, business network resilience has a stronger impact on organizational performance. According to Chowdhury and Quaddus (2017) and Ivanov (2021), using digital media focuses on enhancing a person's capacity for dealing with new hazards in online activities that can obstruct transformative actions and result in loss of money or reputation. Developments in digital media show how the capacity for digital resilience raises security standards and sustains the high-performance levels of innovation processes, which boosts the adoption of digital innovation practices in businesses. Additionally, prior research demonstrates that workers with a high level of digital resilience may engage with security requirements and innovation practices (Bondeli and Havenvid, 2022). The most recent developments in digital media use boost businesses' capacity for digital resilience, aiding their ability to innovate more and create new goods and services that enable them to expand and reap the greatest financial rewards in rising markets (Azadegan and Dooley, 2021; Jam et al., 2016). The ability of a worker to handle the expected consequences of unfavourable cyber occurrences, including both planned and unplanned actions, is known as digital resilience (Zeng et al., 2022). Using digital media is necessary to improve one's digital resilience, which boosts an individual's understanding of online hazards and gives them the mental fortitude to overcome suffering and adversity. Digitally resilient businesses use their personnel's abilities and resources to overcome obstacles and seize chances that foster greater digital innovation (Bondeli and Havenvid, 2022).

The outcome shows that digital innovation has a significant influence on business performance. First, digital innovation can transform goods and services, increasing their appeal to consumers and competitiveness. Businesses that use cutting-edge technology can develop distinctive products that meet changing customer demands and tastes. Increased market share, more consumer satisfaction, and,

ultimately, better business success can result from such innovations. The advent of smartphones and mobile apps changed how customers engage with companies, creating new opportunities for income generation and business strategies. Second, operational efficiency can be increased and internal processes streamlined via digital innovation (Hund et al., 2021). Automation, AI, and data analytics help businesses optimize their supply chains, cut expenses, and boost efficiency. Increased profit margins and better financial performance may follow from this. Companies that successfully use digital innovation to their advantage frequently have a competitive edge in terms of flexibility and the ability to react quickly to changes in the market.

## CONCLUSION

The Telkom offices in Pattani and Bangkok, Thailand, are crucial suppliers of digital solutions that digitalize businesses in other industries, and their innovation will further spark innovation in other industries. As such, they need to understand the driving forces behind the performance impacts of digital innovation. The study provides empirical evidence of the key drivers of digital innovation, which enhances performance, theoretically extending dynamic capability theory in the context of digital innovation. Tortora et al. (2021) point out that the importance of digital technologies in the innovation process has drawn attention from academics to the need for more theoretical and empirical contributions in digital innovation and technology research. Furthermore, Garrido-Moreno et al. (2020) ask academics to offer frameworks for innovation and strategy in the digital media business. This work presents and assesses a novel digital innovation model in response to these research requests, which academics may expand upon in the future.

Furthermore, this study closes gaps in the literature noted in previous sections. Four broad conclusions come from our hierarchical regression study. First, using digital media for business purposes improves performance. Second, business network resilience opportunities partially mediate the positive correlation between the use of digital media in business and the performance of the business. Third, digital innovation has a positive moderating effect

on the association between business performance and business network resilience. Fourth, business network resilience has a significant impact on business performance. Using digital media in business, managers with a strong business network can contribute to adopting digital innovation in companies. Accordingly, this study suggests that management should modify their conventional approaches and embrace the newest digital media to acquire digital innovation in their companies with highly business network-resilient managers.

## Implications

The study's conclusions have several theoretical and practical implications for organizations using dynamic capacity theory to improve organizational performance. This study suggests that managers consider using digital media and the newest technology. Businesses must recognize the value of digital innovation in this era of digital technologies. The study's findings indicate that management needs to be more adaptable to embrace the necessary adjustments and maintain digital innovation. It is recommended that management schedule regular training sessions for their staff, as this will facilitate learning and strengthen the connection between digital media usage and digital innovation. Though achieving sustainable digital innovation requires a sophisticated strategy, this study offers insights into the various facets of innovation and the digital platform. The findings also indicate that digital media business use has a major impact on digital innovation through online platforms, as previously shown. In addition, as noted in earlier sections of this study, dynamic capabilities have been shown to influence the welfare of people and the performance of businesses. Management should put the dynamic capability that digital platforms increase and resilience into practice to achieve sustainable digital innovation. The study supports the dynamic capability hypothesis with practical data. The findings indicate that enterprises possessing dynamic capabilities, especially in digital innovation and business network resilience, are more likely to adjust to evolving digital media environments. This, in turn, enhances their commercial performance. The study may provide cross-cultural insights into the dynamics of digital media, innovation, and resilience in a non-Western context because it is

being undertaken in Pattani and Bangkok, Thailand. This may enhance the dynamic capability theory's universal applicability.

In a practical sense, this study helps businesses in related industries by emphasizing the importance of fostering a culture focused on digital technology and improving management skills to provide creative digital solutions. It would motivate businesses to seize technological opportunities to raise their creativity and improve their business success if they understood the driving forces behind digital innovation and how it affects performance. It is also critical for businesses to understand how innovation mediates conflicts, as many need to invest more in digital innovation, most likely due to uncertainty regarding the effectiveness of novel digital solutions. Businesses are more inclined to pursue digital innovation if they understand its potential advantages and how to fuel it. Managers should focus on matching their network resilience with their digital innovation. This could entail encouraging cooperation and joint ventures to improve network resilience, which helps with digital innovation initiatives. Comparing the digital innovation and network resilience of organizations like the Telkom sector players against industry leaders might prove advantageous. Cooperation with other organizations within the industry or sector can also facilitate knowledge sharing and the exchange of best practices in the digital sphere. Policymakers in Pattani and Bangkok cities of Thailand should consider the study results when developing regulations about digital media, innovation, and company resiliency. Favourable regulatory environments can incentivize companies to make investments in these fields.

#### **Limitations and future research**

Some limitations of this study should be considered when assessing the findings. Firstly, this study only used data from the Telkom offices in Pattani and Bangkok, Thailand; therefore, it might be challenging to generalize the findings to other industries. More research should look into the relationship between different forms of digital innovation, such as process and product innovation, to determine the extent to which these findings can be applied to other industries. Second, self-reported data was also employed in this study, which may introduce bias and weaken the validity of the findings. Future

studies could assess digital innovation using objective measures and other aspects to increase the validity of the findings. They might also provide insight into workable strategies for encouraging digital innovation in companies. Thirdly, to gather information about implementing digital media business use, the researchers planned to send questionnaires to workers in various work settings within technology companies, mostly high-level positions like managers. Nevertheless, our research should have included the viewpoints of other employed workers who utilized digital media for work purposes. Future studies may look into additional workers in various roles who utilize digital media at work. Fourth, the data for this study were gathered using a quantitative method, which indicates a relationship between the variables but does not explain it. Future research investigations may employ a qualitative research methodology to ascertain such a relationship. In this research, business network resilience was examined as a moderating variable; in subsequent investigations, business network resilience and its effects might be thoroughly examined. The present study highlights the benefits of corporate network resilience that might arise from using digital media and advancing digital innovation. Future research can identify the detrimental effects of business network resilience that are pertinent to the idea and influenced by the newest digital technologies. The study's reliance on cross-sectional data may limit its ability to identify causal links. Research approaches that are longitudinal or experimental may yield more compelling evidence about the causal relationships between resilience, innovation, digital media, and corporate performance. The representativeness of the findings may be impacted if the study's sample was not chosen at random or experienced selection bias. To overcome this constraint, researchers had to specify the sampling strategy and possible bias causes.

#### **REFERENCES**

- Ahmed MD, Abd Alwahab MAA, Ali MH, Zainalabideen AH, Abd Alhasan SA, Alasadi SR, et al.; 2022. The relationship among digital innovation, digital marketing, digital technology, and corporate performance: Mediating role of green supply chain management of Iraq textile

- industry. *International Journal of Operations and Quantitative Management*, 28(2):486-505.
- Andonov A, Dimitrov GP, Totev V; 2021. Impact of E-commerce on Business Performance. *TEM Journal*, 10(4):1558.
- Ausat AMA, Widayani A, Rachmawati I, Latifah N, Suherlan S; 2022. The Effect of Intellectual Capital and Innovative Work Behavior on Business Performance. *Journal of Economics, Business, & Accountancy Ventura*, 24(3):363-378.
- Azadegan A, Dooley K; 2021. A typology of supply network resilience strategies: complex collaborations in a complex world. *Journal of Supply Chain Management*, 57(1):17-26.
- Bondeli JV, Havenvid MI; 2022. Bouncing back in turbulent business environments: Exploring resilience in business networks. *Industrial Marketing Management*, 107:383-395.
- Cheah JH, Thurasamy R, Memon MA, Chuah F, Ting H; 2020. Multigroup analysis using SmartPLS: Step-by-step guidelines for business research. *Asian Journal of Business Research*, 10(3):I-XIX.
- Chowdhury MMH, Quaddus M; 2017. Supply chain resilience: Conceptualization and scale development using dynamic capability theory. *International Journal of Production Economics*, 188:185-204.
- Di Vaio A, Palladino R, Pezzi A, Kalisz DE; 2021. The role of digital innovation in knowledge management systems: A systematic literature review. *Journal of Business Research*, 123:220-231.
- El-Den J, Adikhari P, Adikhari P, et al.; 2017. Social media in the service of social entrepreneurship: Identifying factors for better services. *Journal of Advances in Humanities and Social Sciences*, 3(2):105-114.
- Fu Q, Abdul Rahman AA, Jiang H, Abbas J, Comite U; 2022. Sustainable supply chain and business performance: The impact of strategy, network design, information systems, and organizational structure. *Sustainability*, 14(3):1080.
- Garrido-Moreno A, García-Morales V, King S, Lockett N; 2020. Social Media use and value creation in the digital landscape: a dynamic-capabilities perspective. *Journal of Service Management*, 31(3):313-343.
- Gianiodis P, Lee SH, Zhao H, Foo MD, Audretsch D; 2022. Lessons on small business resilience. *Journal of Small Business Management*, 60(5):1029-1040.
- Hund A, Wagner HT, Beimborn D, Weitzel T; 2021. Digital innovation: Review and novel perspective. *The Journal of Strategic Information Systems*, 30(4):101695.
- Hurtado-Palomino A, De la Gala-Velásquez B, Ccorisapra-Quintana J; 2022. The interactive effect of innovation capability and potential absorptive capacity on innovation performance. *Journal of Innovation & Knowledge*, 7(4):100259.
- Intanee S, Plengdeesakul B, Phumalee N; 2023. Exploring the Wisdom and Cultural Identity of Thai Muslim Pottery in Pattani Province. *Tuijin Jishu/Journal of Propulsion Technology*, 44(3):1996-2008.
- Ivanov D; 2021. Introduction to supply chain resilience: Management, modelling, technology. Springer Nature.
- Jam F, Kaur S, Kwee N; 2016. Interactive effects of gender and leadership styles on open service innovation: A study of Malaysian doctors. *International Journal of Environmental Research*, 13(3):1287-1304.
- Jam FA, Singh SKG, Ng BK, Aziz N; 2018. The interactive effect of uncertainty avoidance cultural values and leadership styles on open service innovation: A look at Malaysian healthcare sector. *International Journal of Business and Administrative Studies*, 4(5):208.
- Khan SA, Shahzad K, Shabbir O, Iqbal A; 2022. Developing a framework for fake news diffusion control (FNDC) on digital media (DM): A systematic review 2010--2022. *Sustainability*, 14(22):15287.
- Khin S, Ho TC; 2018. Digital technology, digital capability and organizational performance:



- A mediating role of digital innovation. *International Journal of Innovation Science*, 11(2):177-195.
- Krings W, Palmer R, Inversini A; 2021. Industrial marketing management digital media optimization for B2B marketing. *Industrial Marketing Management*, 93:174-186.
- Kurniawati EP, MeilianaIntani A; 2016. Effect analysis of the use of accounting information, managerial performance and employee performance Towards SMEs. *Journal of Administrative and Business Studies*, 2(3):130-142.
- Magistretti S, Ardito L, Messeni Petruzzelli A; 2021. Framing the microfoundations of design thinking as a dynamic capability for innovation: Reconciling theory and practice. *Journal of Product Innovation Management*, 38(6):645-667.
- Maryani E, Rahmawan D, Karlinah S; 2020. The implications of social media on local media business: Case studies in Palembang, Manado and Bandung. *Jurnal Komunikasi: Malaysian Journal of Communication*, 36(1):317-333.
- Mehralian MM, Khazae P; 2022. Effect of digital marketing on the business performance of MSMEs during the covid-19 pandemic: The mediating role of customer relationship management. In: 37th Digital Marketing and Customer Behavior Science Conference (2022).
- Ockey J; 2021. Pattani or Patani: Memory, forgetting, history, and the conflict in Southern Thailand. *Asia Pacific Viewpoint*, 62(2):179-192.
- Pradiptasari FR, Gustomo A; 2018. Proposed Competency-Based Job Evaluation System at Telkom Foundation. *Sustainable Collaboration in Business, Technology, Information and Innovation (SCBTII)*.
- Purnomo A, Septianto A, Rosyidah E, Ramadhani M, Perdana MD.; 2021. Mapping of Digital Innovation Research Themes: A 36-Year Review. In: *International Conference on Information Management and Technology (ICIMTech)*, vol. 1 IEEE p. 398-403.
- Purwanto A; 2021. Education research quantitative analysis for little respondents: comparing of Lisrel, Tetrad, GSCA, Amos, SmartPLS, WarpPLS, and SPSS. *Jurnal Studi Guru Dan Pembelajaran*, 4(2).
- Salamah SN; 2023. Financial management strategies to improve business performance. *Journal of Contemporary Administration and Management (ADMAN)*, 1(1):9-12.
- Sarstedt M, Cheah JH; 2019. Partial least squares structural equation modeling using SmartPLS: A software review, vol. 7. Springer.
- Shashi, Centobelli P, Cerchione R, Ertz M; 2020. Managing supply chain resilience to pursue business and environmental strategies. *Business strategy and the environment*, 29(3):1215-1246.
- Tang H, Yao Q, Boadu F, Xie Y; 2023. Distributed innovation, digital entrepreneurial opportunity, IT-enabled capabilities, and enterprises' digital innovation performance: A moderated mediating model. *European Journal of Innovation Management*, 26(4):1106-1128.
- Teece DJ; 2014. A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45:8-37.
- Thongsawang S; 2022. Legacy of Migration: the Muslim community in Bangkok. *Studies of Transition States and Societies*, 14(1):3-18.
- Tortora D, Chierici R, Briamonte MF, Tiscini R; 2021. 'I digitize so I exist'. Searching for critical capabilities affecting firms' digital innovation. *Journal of Business Research*, 129:193-204.
- Troise C, Camilleri MA.; 2021. The use of digital media for marketing, CSR communication and stakeholder engagement. In: *Strategic corporate communication in the digital age Emerald Publishing Limited* p. 161-174.
- Varadarajan R; 2020. Customer information resources advantage, marketing strategy and business performance: A market resources based view. *Industrial Marketing Management*, 89:89-97.

- Varadarajan R, Welden RB, Arunachalam S, Haenlein M, Gupta S; 2022. Digital product innovations for the greater good and digital marketing innovations in communications and channels: Evolution, emerging issues, and future research directions. *International Journal of Research in Marketing*, 39(2):482-501.
- Wang M, Teng W; 2022. Digital Innovation and Firm Environmental Performance: The Mediating Role of Supply Chain Management Capabilities. *Frontiers in Psychology*, 13:897080.
- Xie X, Wu Y, Palacios-Marqués D, Ribeiro-Navarrete S; 2022. Business networks and organizational resilience capacity in the digital age during COVID-19: A perspective utilizing organizational information processing theory. *Technological Forecasting and Social Change*, 177:121548.
- Xie X, Wu Y, Tejerob CBG; 2022. How responsible innovation builds business network resilience to achieve sustainable performance during global outbreaks: An extended resource-based view. *IEEE Transactions on Engineering Management*.
- Yousaf Z, Radulescu M, Sinisi CI, Serbanescu L, Păunescu LM; 2021. Towards sustainable digital innovation of SMEs from the developing countries in the context of the digital economy and frugal environment. *Sustainability*, 13(10):5715.
- Yudistria Y; 2019. The Role of Information Systems in the Effectiveness of Supply Chain Management. *Journal of Management Practices, Humanities and Social Sciences*, 3(1):25-29.
- Zeng X, Li S, Yousaf Z; 2022. Artificial Intelligence Adoption and Digital Innovation: How Does Digital Resilience Act as a Mediator and Training Protocols as a Moderator?. *Sustainability*, 14(14):8286.
- Zhang Y, Liu J, Wei Q, Cao Y, Gui S; 2023. Can HPWS Promote Digital Innovation? E-Learning as Mediator and Supportive Organisational Culture as Moderator. *Sustainability*, 15(13):10057.