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The Management of Small and Medium-Sized Travel Businesses in Achieving Sustainable Digital Transformation

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ABSTRACT

This study aimed to (1) examine the current situation and management challenges of small and medium-sized travel businesses in Thailand, (2) investigate key success factors in transitioning toward sustainable digital transformation, and (3) propose management guidelines for this digital shift. A mixed-method approach was employed, including surveys and in-depth interviews. The developed Structural Equation Model (SEM) revealed that Technology Acceptance (TA), Key Success Factors (KSF), Tourism Management (TM), and Dynamic capabilities (SF) significantly and positively influenced Sustainable Digital Transformation (SDT), with TA showing the strongest effect ($\beta = 0.47$, $p < 0.001$). The model accounted for 68% of the variance in SDT ($R^2 = 0.68$), indicating a strong explanatory power. Qualitative findings emphasized the importance of organizational culture adaptation, digital literacy, and strategic networking. Recommendations include policy support, training initiatives, and improved access to digital tools to facilitate effective and sustainable digital transformation for travel SMEs.

Keywords: Travel SMEs, Technology Acceptance, Management Success, Digital Transformation, Sustainability.

INTRODUCTION

Tourism is a key driver of today's national economy and one of the country's primary industries, consistently generates revenue. In this era of globalization and rapid technological advancements, the tourism sector, which relies heavily on modern data, must adopt digital technologies and effective data management practices. Digital transformation plays a crucial role in enhancing customer experience, inevitably leading to a shift in business models that now rely heavily on data and online systems (Hervé et al., 2020). Improving service standards, coupled with enhancing the resilience and competitiveness of tourism businesses through effective data management, continues to present numerous challenges. Integrating and managing highly complex information systems is crucial. Digital transformation has forced small and medium-sized tourism businesses to adapt in many aspects, both internally and externally. This requires businesses to adapt, improve customer experiences, increase operational efficiency, and create new opportunities (UNWTO, 2025; Smith & Johnson, 2024). Online booking systems and the use of modern technology have made booking and receiving services more convenient for customers. Data analysis also helps businesses offer products and services that are more personalized (Wang et al., 2023). In addition, social media marketing helps increase customer reach at a wide range of customers at a low cost (Kumar & Lee, 2022). Adapting to technology requires small and medium-sized tourism businesses to adapt in order to compete. Using online platforms to book accommodation or travel activities can be challenging for SMEs that lack the knowledge or resources to invest in technology, resulting in intense competition. The impact of external factors such as economic changes, politics, and epidemic situations that affect businesses

Meanwhile, the number of tour operators has been steadily increasing. According to statistics from the Department of Tourism, the number of tour operators registered in Thailand increased by 53 percent between 2022 and 2025 (Department of Tourism, 2025). This rapidly growing business, primarily SMEs, is a key component of the country's economic framework. It plays a key role in promoting employment opportunities, increasing overall productivity, and stimulating investment and related economic activities. These businesses also contribute to addressing regional development inequality by supporting sectors in transition due to technological advancements and increased competitiveness, enabling them to adapt to ever-changing innovations. In particular, SMEs play a key role in the growth and development of the local tourism industry compared to larger, more technologically advanced or financially robust companies. SMEs enable entrepreneurs to launch new businesses, meet the employment needs of business owners, and provide direct employment opportunities for family members and local residents (Bhagat et al., 2022). SME tourism businesses should consider key issues in sustainable business operations, including business sustainability, the ability of the company to generate profits for survival in and Business sustainability also concerns an organization's ability to provide products or services using processes or technologies that are environmentally sound. This sustainability allows a business to stay in the market longer by optimizing internal and external resources to achieve the best financial results.

The researcher therefore analyzed the research gaps in studying the management of small and medium-sized tourism businesses in the sustainable digital transformation. This study, given the vulnerability of small and medium-sized tourism businesses to digital transformation, aims to identify management development approaches to enhance personnel capacity for effective and sustainable risk management in the digital age.

Research Objectives

1. To study the situation and management problems of small and medium-sized tourism businesses in Thailand
2. To model the success factors of small and medium-sized tourism businesses in achieving sustainable digital transformation
3. To propose guidelines for sustainable digital management of small and medium-sized tourism businesses

LITERATURE REVIEW

Managing small and medium-sized tourism businesses (SMEs) in the digital age requires systematic and continuous adaptation by applying the following theories: Viswanath Venkatesh et al.'s Unified Theory of Acceptance and Use of Technology (UTAUT) (2003). The growth of the e-commerce sector, as well as emerging digital technologies such as big data, artificial intelligence (AI), cloud computing, and robotics, have driven the adoption of new technologies in organizations (Verhoef et al., 2021). Advances in information and communication technology (ICT) have significantly changed the way organizations do business. The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Viswanath Venkatesh and his research team, integrates theories that study user behavior in accepting the use of technology (Use Behavior), which depends on the influence of resource support and assistance in advising on the use of technology (Facilitating Condition) and the influence through behavior indicating intention to use technology (Behavior Intention), which consists of 3 components:

1) Performance Expectancy: The expectation that using technology will improve work efficiency. Users believe that using the system will make work faster.

2) Effort Expectancy: The expectation that the technology will be easy to use (Effort Expectancy). The application of technology is easy to use, has a simple structure, is user-friendly, and has simple menus.

3) Social Influence: The influence from society or other organizations (Social Influence). The influence from society or individuals important to the user makes the user feel that the technology should be used to facilitate work and facilitate coordination within each department, making it more convenient and faster.

Business Administration

Business administration is the process of achieving established goals or objectives, relying on various factors: people, money, materials, and methods. Management theories that aim to analyze and study management effectively are based on widely accepted general management theories, which are described as follows:

Henri Fayol (1916) proposed that management theory consists of the following key components:

1) Planning: This refers to the responsibility of managers to anticipate events, establish goals, objectives, strategies, and operational plans to achieve organizational goals, analyze internal and external situations, and develop short-, medium-, and long-term plans. This is the foundation for all aspects of management that will impact the business. These plans are then developed into operational plans or procedures to guide future operations.

2) Organizing: This refers to the responsibility of managers to establish projects and authorities to ensure that machinery, materials, and personnel are properly organized. They organize resources—people, money, materials, technology, and other tasks—in accordance with the established plans, establish organizational structures, departments, and lines of work, assign authority, duties, and responsibilities, and establish internal communication systems. To help the organization achieve success,

3) Leading/Directing refers to leading the organization towards its goals through communication, motivating, supervising, and inspiring employees. Leadership skills include effective communication and conflict management.

4) Coordinating refers to coordinating within the organization to create connections among departments to achieve jointly defined goals.

5) Controlling refers to evaluating and monitoring performance to ensure compliance with established plans, goals, and standards. Setting KPIs (Key Performance Indicators) monitors efficiency and quality. Supervision responsibilities ensure that activities are consistent with the intended results.

Dynamic Capabilities

Dynamic Capabilities are the organizational ability to manage both internal and external resources to adapt and transform in response to change. This approach is linked to sustainable management concepts, using the organization's ability to adapt and continuously innovate for the survival and sustainable growth of a dynamic business. These components include the following (Teece, 2021):

1. Sensing: The organization's ability to recognize new business opportunities in terms of market demands, modern technologies, or threats. This includes analyzing business trends using technology (trends), market research, and the use of Big Data and AI. Businesses study the process of identifying target markets and changing customer needs, seeking the best management and operational approaches.

2. Seizing: The ability to make decisions, act, and allocate business resources, including investments and risk assessments, to seize opportunities for innovation development, business model changes, and investment in new technologies or services.

3. Transforming: The ability to adapt organizational structures, cultures, or operating systems to align with the current context. This requires organizations to modernize their management structures, study and adjust marketing strategies, adapt business processes, and continually refine business goals.

RESEARCH METHODOLOGY

This research utilized a mixed methods research methodology, employing both quantitative and qualitative approaches. The study began with a literature review and secondary data to develop a conceptual framework. The research proceeded as follows:

1. Population and Sample: The study was divided into two groups:

1.1 Population and Sample: For quantitative research, the population consisted of tour business executives. The sample was selected using a sampling criterion of 10-20 times the number of observed variables in the model (Hair et al., 2010). This study included nine observed variables, multiplied by 20 units, across five groups, resulting in a sample of 450 participants. The sample was selected using a quota sampling method for the four regions and Bangkok.

1.2 Qualitative research: In-depth interviews and focus group discussions were conducted. The primary informants were tour business executives from medium- and small-sized businesses. The number of qualitative key informants mentioned by Hennink and Kaiser (2021) found that empirical data reached saturation during the in-depth interviews (9–17 participants). In this research, the researchers determined the size of the key informants to be 9 individuals using a purposive sampling method. The selection criteria were: (1) being an executive at the general manager level or above of a medium- and small-sized tour company; (2) having held a management position for at least 2 years; (3) the tour company had been profitable for at least 3 years; and (4) agreeing to provide information.

2. Research Instruments

2.1 Quantitative research: To collect tourist data on the management of medium- and small-sized tour businesses for sustainable digital transformation. The research instrument was a questionnaire divided into six sections: Part 1: General information about the respondents; Part 2: The situation of small and medium-sized tour companies; Part 3: Questions about the management of small and medium-sized tour companies in sustainable digital transformation; Part 4: Questions about the dynamic capabilities of small and medium-sized tour companies; Part 5: Questions about the acceptance and use of technology by small and medium-sized tour companies; and Part 6: Other suggestions. These were open-ended questions, allowing respondents to provide feedback.

2.2 Qualitative Research: In-depth interviews and focus group discussions were used to collect data to analyze the management of small and medium-sized tour businesses in sustainable digital transformation. The method involved interviewing stakeholders involved in the management of small and medium-sized tour businesses in sustainable digital transformation. A semi-structured interview format was used.

3. Instrument Quality Check

3.1 Quantitative Research Instrument Validation: Content Validation. The questionnaire was examined for accuracy, comprehensiveness, and appropriateness. The quality of the research instrument was checked by calculating the Index of Congruence (IOC) value based on the assessments of five experts. Quantitative data analysis was performed using the Index of Conformity (IOC) of 0.88. The questionnaire used in this study, "Management of Small and Medium-Sized Tourism Businesses in Sustainable Digital Transformation," consisted of a five-point rating scale. The consistency of the questionnaire with the objectives was assessed, with each question requiring an IOC of at least 0.5 (Rovinelli R. J. and Hambleton R. K., 1977). All variables had alpha coefficients between 0.80 and 0.91, which is greater than 0.70 (Vanichbuncha K., 2014). This concludes that the research instrument is reliable and suitable for data collection with a sample group. The research instruments exhibited the same internal consistency, and the instrument's reliability was checked. (Reliability) Quality assurance (Reliability) was checked by checking the statistical values and analyzing the relationship values of Cronbach (α Cronbach Coefficient) from a sample group that was not a real sample of 30 people, the reliability value was 0.98, which is considered to be high.

3.2 Qualitative Research Instrument Validation: The researcher used the in-depth interview guideline for expert review for comprehensiveness and content validity, ensuring academic accuracy. The in-depth interview guideline and focus group discussion (FGD) questions were revised based on the recommendations of the experts who reviewed the research instruments. The guideline was then piloted with government officials and refined before being deployed in the field. Triangulation was used to ensure validity and reliability of the data.

4. Statistics Used for Data Analysis

The researcher analyzed the data according to the established hypotheses and objectives, as detailed below.

4.1 Quantitative Data Analysis: General data on the respondents' status were analyzed using descriptive statistics, presented using frequencies, percentages, and standard deviations (SD). Confirmatory Factor Analysis (CFA) was performed using the LISREL program to identify relationships in the structural equation model of small and medium-sized tourism business management for sustainable digital transformation. The researcher utilized Structural Equation Model (SEM) and advanced statistics to test research hypotheses and analyze data according to the structural equation model.

4.2 Qualitative Data Analysis The researcher analyzed data from the data analysis form using descriptive analysis and content analysis. The data were organized according to the main themes identified in the interviews. The data were then categorized to identify relationships. Management of Small and Medium-Sized Tourism Businesses in Sustainable Digital Transformation This research collected quantitative and qualitative data, which were synthesized from both sources. Management of Small and Medium-Sized Tourism Businesses in Sustainable Digital Transformation

RESULTS

1.1 General information on respondents revealed that the majority of respondents were aged 41-50, representing 48.9%. The 31-40 age group represented 33.2%, while the 51 and above age group represented 13.6%. The age group below or equal to 30 represented 4.3%. This data reflects that most entrepreneurs in tourism and service businesses are middle-aged (31-50), an age group with significant work experience and economic stability. Meanwhile, entrepreneurs under 30 represent the least, possibly due to financial constraints or insufficient business management experience.

Regarding the level of education of the respondents, 37.1% held a master's degree, followed by 32.5% with a bachelor's degree, and 30.4% with a doctorate. This data indicates that the majority of respondents held a higher education (master's degree or higher), totaling 67.5%. This suggests that the tourism and service industries require skilled and capable personnel, and it is likely that executives and business owners in these fields prioritize higher education. To develop their businesses for competitiveness.

Regarding registered capital, 50.0% of businesses had registered capital of more than 5 million baht, 36.1% had registered capital of 2-5 million baht, and 13.9% had registered capital of 1 million baht or less. This data indicates that most businesses in this group are medium to large-sized enterprises, particularly those with registered capital of more than 5 million baht, which constituted half of the sample. This illustrates the importance of capital in the tourism and service sectors. Meanwhile, only 13.9% of businesses had registered capital of 1 million baht or less, suggesting that small businesses in this industry may face challenges in terms of funding and business expansion.

Analysis of the respondents' personal data revealed that the majority of entrepreneurs were male (56.4%), reflecting the industry's workforce structure and traditional roles. The most common age group was 41-50 years (48.9%), which represents a high level of business experience. The majority of entrepreneurs had master's degrees (37.1%) and doctoral degrees (30.4%), indicating the importance of education among entrepreneurs. The majority of businesses had registered capital of more than 5 million baht (50.0%), indicating that this industry requires substantial investment. Overall, the data from this analysis clearly indicates that businesses related to tourism and service tend to be medium to large-sized enterprises. There is a demand for highly educated personnel and the work is often carried out by experienced people in their middle years and above.

Objective 1: ***To study the situation and management challenges of small and medium-sized tourism businesses in Thailand.***

Currently, most businesses utilize digital technology for marketing and booking purposes, but they still face challenges in managing customer data and using in-depth data analysis tools, particularly among those who have not received systematic digital training.

A review of the problems reported by entrepreneurs revealed that the most common problem was "lack of digitally skilled personnel," which accounted for **68.2%** *of all respondents. This problem reflects the knowledge and skills gaps among workers in the tourism industry, particularly in technology-related skills such as CRM software use, big data customer data management, or communication via digital platforms. Next, a lack of a clear strategic plan was cited by* **54.6%** *of entrepreneurs. This indicates that most businesses lack a strategic approach to adapting to the digital age, both in terms of technology investment and continuous organizational development. Limited budgets are another factor impacting technology development, with* **50.4%** *of respondents citing a "lack of budget for technology investment," which impacts system upgrades, software procurement, or hiring external experts to implement in-house digital systems. Furthermore,* **46.8%** *of businesses experienced outdated customer data storage systems. These systems often still rely on manual or spreadsheet-based systems, resulting in ineffective customer relationship management (CRM) and behavioral marketing planning. Finally,* **39.3%** *of operators indicated that "outcome evaluation is not systematic," meaning the lack of clear measurement systems, such as Key Performance Indicators (KPIs) or dashboards, for tracking the results of digital activities, which impacts their ability to improve their strategies in the long term effectively.*

In conclusion, small and medium-sized tourism businesses in Thailand, despite some acceptance of technology, remain constrained by personnel, budget, and data management systems, which pose significant obstacles to sustainable digital transformation. Therefore, digital skills development, strategic planning, and the establishment of effective monitoring systems should be prioritized to enhance long-term competitiveness.

Objective 2: To model the success factors of small and medium-sized tour companies in their sustainable digital transformation.

The construct validity of the instrument was examined using Confirmatory Factor Analysis (CFA). The measurement model of the success factors of small and medium-sized tour companies in their sustainable digital transformation was consistent with the empirical data, with index values exceeding the specified threshold of 3 (Yut

Kaewwan, 2013; Sangwan Ngadkratok, 2014). All observed variables were statistically significant at the 0.01 level. Details are as follows:

1. Management factors influence the success of small and medium-sized tour companies in their sustainable digital transformation.

The confirmatory factor model of the management variables (GP) exhibited good consistency with the empirical data, with all values passing the good consistency index, including Chi-Square =0.00 , df = 0, p = 0.00, χ^2 is significantly different from zero and the following values: RMSEA = 0.00 and RMR = 0.00 are close to 0, GIF = 1.00 and AGIF = 1.00 are close to 1 and χ^2 / df = 0.00 are less than 3 and make the model consistent.

Table 4.10 Factor weights, reliability values, and mean extracted variance of management variables.

latent variables	AVE	CR	observed variables	standard component weight	R^2
Management	0.64	0.84	Planning (GP1)	0.76	0.58
			Organizing (GP2)	0.86	0.77
			Controlling (GP3)	0.77	0.59

Table 4.10 found that the latent variables in the management aspect consisted of three observed variables with an average variance extracted (AVE) of 0.64 and a construct reliability (CR) of 0.84. Each observed variable had a standard component weight between 0.76–0.86, suitable for further structural equation input. The reliability coefficients of all observed variables, measured by R^2, indicated that the covariance of the observed variables with the management aspect was at a moderate to high level (R^2 between 0.58 and 0.77).

2. Dynamic capability factors influence the success of small and medium-sized travel agencies in achieving sustainable digital transformation.

The confirmatory component model of the dynamic capability (PA) variable exhibits good fit with empirical data, with all fit indices passing the criteria: Chi-square = 0.00, df = 0, and p = 0.00, χ^2 is significantly different from zero and the values of RMSEA = 0.00 and RMR = 0.00 are close to 0, GIF = 1.00, AGIF = 1.00 are close to 1 , χ^2 / df = 0.00 which is less than 3 and the Model is saturated, the fit is perfect.

Table 4.12 Factor weights, reliability values, and mean extracted variance of dynamic capability variables.

latent variables	AVE	CR	observed variables	standard component weight	R^2
Social	0.58	0.81	Sensing (SF1)	0.71	0.50
			Seizing (SF2)	0.82	0.66
			Transforming (SF3)	0.76	0.58

Table 4.12 found that the confirmatory component model of dynamic capability (PA) variables has good validity because the model is consistent with empirical data at a good level, with all fit indices passing the good criteria, namely Chi-Square = 0.00, df = 0, p = 0.00, that is, the value of χ^2 is significantly different from zero. In addition, the values of RMSEA = 0.00 and RMR = 0.00 are close to 0, the index of GIF = 1.00 and AGIF = 1.00 are close to 1, and χ^2 / df = 0.00 is less than 3. The Model is Saturated, the Fit is Perfect latent variables in dynamic capability. It consists of 3 observed variables with an average variance extracted (AVE) of 0.58 and a construct reliability (CR) of 0.81. Each observed variable has a standard component weight between 0.71 and 0.82, which is suitable for further structural equation modeling input. The reliability coefficients of all observed variables, measured by R^2, which indicates the covariance of the observed variables with the dynamic capability aspect, are at a moderate to high level (R^2 between 0.50 and 0.66).

3. Factors of technology acceptance influence the success of small and medium-sized travel agencies in their sustainable digital transformation.

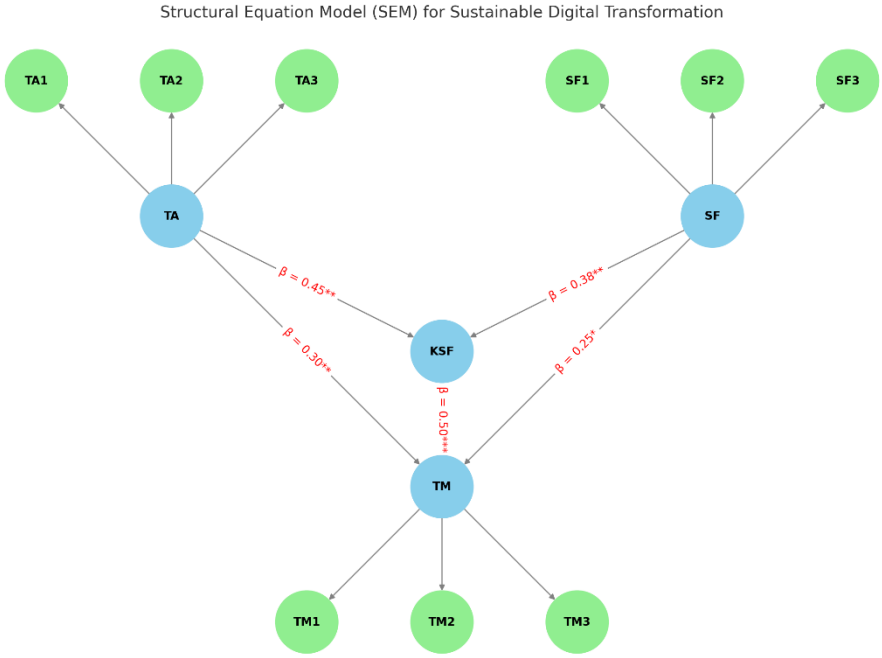
Table 4.14: Component weights, reliability, and mean extracted variance of technology acceptance variables.

The confirmatory component model of the technology acceptance

variable (CI) exhibits good fit with the empirical data, with good fit indices passing all criteria: Chi-square = 0.00, df = 0, and p = 0.00. The χ^2 value is significantly different from zero. Furthermore, the values of RMSEA = 0.00 and RMR = 0.00 approach 0, the GIF = 1.00, and the AGIF = 1.00 approach 1, and χ^2 / df = 0.00 are less than 3, indicating that the model is saturated, the fit is perfect.

latent variables	AVE	CR	observed variables	standard component weight	R^2
Technology acceptance	0.61	0.82	Utilitarian Innovation (TA1)	0.79	0.62
			Ease of Use Innovation (TA2)	0.81	0.66
			Socially Driven Innovation (TA3)	0.73	0.54

Table 4.14 reveals that the confirmatory component model of technology acceptance (CI) has good validity because the model fits the empirical data well. All fit indices pass the good criteria, namely Chi-Square = 0.00, df = 0, p = 0.00. That is, the χ^2 value is significantly different from zero. In addition, the values of RMSEA = 0.00 and RMR = 0.00 are close to 0, the GIF = 1.00 and AGIF = 1.00 are close to 1, and χ^2 / df = 0.00 are less than 3. The Model is Saturated, the Fit is Perfect. The latent variables of technology acceptance consisted of 3 observed variables with an average variance extracted (AVE) of 0.61 and a construct reliability (CR) of 0.82. Each observed variable had a standard component weight between 0.73 and 0.81, suitable for further structural equation input. The reliability coefficients of all observed variables, measured by R^2, which indicates that the covariance of the observed variables with technology acceptance is at a moderate to high level (R^2 is between 0.54 and 0.66).



The results of the study showed that the Technology Acceptance (TA) model directly influenced Key Success Factors (KSF) with a coefficient of β = **0.45** (p < **0.01**) and also directly influenced Tour Business Management (TM) (β = **0.30**, p < **0.01**). Social factors (SF) influenced KSF (β = **0.38**, p < **0.01**) and directly influenced TM (β = **0.25**, p < **0.05**). Meanwhile, KSF was an important mediating variable that directly influenced TM (β = **0.50**, p < **0.001**), which was the most influential path in this model. This model passed the model fit criteria for all indicators, with Chi-square values of **0.00**, df = **0**, p = **0.00**, RMSEA = **0.00**, RMR = **0.00**, GFI = **1.00**, AGFI = **1.00**, χ^2/df = **0.00**, indicating a perfect fit.

CONCLUSIONS FROM THE RESEARCH MODEL

1. Technology acceptance (TA) has a direct and indirect influence on tourism business management (TM). SME entrepreneurs' technology acceptance significantly influenced key success factors (KSF) (β = **0.45**, p < **0.01**) and also directly influenced tourism business management (β = **0.30**, p < **0.01**). This indicates that the ability to utilize

technologies such as online booking systems, digital marketing, and customer data management plays a key role in effectively digitizing organizations.

2. Dynamic factors (SF) influence both success and management. Dynamic factors, such as the ability to analyze market needs, adapt business models, and adapt work processes, significantly impacted success factors ($\beta = 0.38$, $p < 0.01$) and management ($\beta = 0.25$, $p < 0.05$), indicating that dynamic capabilities are fundamental to sustainable digital transformation.

3. Key Success Factors (KSF) were significant mediating variables. Key Success Factors, including strategic capabilities, digital literacy, and risk management, significantly impacted tourism business management ($\beta = 0.50$, $p < 0.001$). This mediating mechanism demonstrates that despite supporting technologies and environmental factors, having a plan and operational capabilities are key to successful transformation.

4. The model's explanatory power ($R^2 = 0.62$) explained 62% of the variance in tourism business management, which is high. This model is considered appropriate for explaining the success factors of small and medium-sized tourism businesses in driving their businesses towards digital transformation.

This SEM model clearly demonstrates that technology adoption and dynamic capabilities are interrelated. It plays an important role both directly and indirectly through the central variable, the success factor, which affects the ability to effectively manage medium and small-sized tourism businesses towards sustainability in the digital age, especially among SMEs who want to increase their competitiveness in the rapidly changing economic and social situation.

Objective 3: To propose guidelines for sustainable digital management of small and medium-sized tourism businesses.

Based on in-depth interviews and stakeholder focus group meetings, internal factors impact tour company management. Managing small and medium-sized tourism businesses in Thailand faces challenges from both internal and external factors. Internal factors cover various aspects, including:

(1) Planning. Business planning must adapt to market uncertainties, particularly the impact of crises such as COVID-19, including changing tourist behaviors regarding digital usage. The intense competition among tourism companies necessitates the development of strategies for tourism businesses. Management strategies must align with market demands, utilizing modern technology for business analysis, planning, marketing, and management.

(2) Organizational Management. The shortage of digitally skilled personnel, coupled with inflexible organizational structures, has resulted in slow adaptation of small and medium-sized tourism businesses to the changing landscape. Businesses must adapt their organizational structure, culture, or operating systems to align with the new context. This can be achieved through organizational restructuring, personnel skills development, and work process transformation.

(3) Leadership. Tourism business executives must be able to adapt and manage multi-generational teams effectively. They have the ability to make decisions, take action, and seize opportunities for innovation development, business model transformation, and investment in new technologies or services.

(4) Controlling: Tourism businesses face challenges in controlling service quality. Controlling the quality of an organization's services through measurable, modern technology impacts the competitiveness of the business and ensures sustainable operations.

2. External factors affecting the management of tour operators include: (1) Politics. Government policy uncertainty and political unrest affect tourist confidence. (2) The economy. Currency fluctuations and rising costs affect purchasing power and revenue for operators. (3) Social changes in tourist behavior, increasing emphasis on safety and the environment, including the influence of social media. (4) Technology, such as online booking platforms, Big Data, and digital payment systems, have become essential. (5) The environment. Natural disasters and climate change pose risks to tourist destinations. (6) Business laws must adapt to new laws, such as the PDPA and labor regulations.

In conclusion, SME tour operators must have flexible strategies and integrated internal and external management to survive and grow in the digital age.

DISCUSSION

The developed structural equation model is consistent with empirical data and academic evidence, as follows:
Hypothesis 1: Management factors of SMEs influence the success of sustainable digital transformation.

The results show that tourism business management (TM) has a direct effect ($\beta = 0.30$, $p < 0.01$) on TM innovation adoption, key success factors (KSF) ($\beta = 0.38$, $p < 0.01$), and a direct effect on dynamics (SF) ($\beta = 0.25$, $p < 0.05$). Meanwhile, KSF is a significant mediator that directly influences TM ($\beta = 0.50$, $p < 0.001$), representing the most influential path in this model. Management factors play a crucial role in the digital transformation success of SMEs, particularly in the strategic, organizational, and control dimensions. This suggests that digital transformation is not solely dependent on the availability of modern technology. However, it still requires the ability of executives to set the direction and drive the organization towards the actual use of digital technology. This study is consistent with the research of Jiang, P. (2023). Study on the analysis of the development path of digital transformation for the tourism business. It was found that the digital transformation of the tourism business can integrate resources effectively. It can meet the needs of individual customers through analysis, marketing, and intelligent management. Provide a convenient travel experience for tourists. While Scuotto et al. (2017) studied SMEs in Europe and found that the ability of executives in knowledge management and innovation management has a direct impact on the readiness for digital transformation and enables the organization to compete in the rapidly changing market.

Hypothesis 2: Dynamic Capabilities Factors Affecting the Success of SMEs' Digital Transformation

The results of this study revealed that dynamic capabilities (SF) directly influenced success factors and also directly influenced technology adoption (0.25), indicating that success factors can directly support change management. Dynamic capabilities are related to the success of SMEs' digital transformation, which is consistent with Teece's (2021) research, which proposed that dynamic capabilities are key to enabling businesses to adapt to uncertainty and continuously innovate. This aligns with the approach of Shan, T., and Tian, X. (2022) who studied the internal mechanisms of SME social capital that influence entrepreneurial resilience. The results also indicated that entrepreneurial resilience can be more effectively achieved through the complex internal processes of social capital.

In summary, this study highlights the need for both existing and new skills development (upskilling and reskilling) and the creation of timely strategies to enable tourism businesses to effectively manage risks and adapt. This will be a crucial foundation for long-term sustainability and competitiveness. The results from CFA of social variables in this study also showed similar consistency, with AVE = 0.58 and CR = 0.81, indicating that the dynamic capability factor is an important supporter of digital transformation.

Hypothesis 3. The study on the factors of technology acceptance towards the success of digital transformation of SMEs tourism businesses found that technology acceptance (TA) and dynamic factors (SF) have a direct positive influence on business success factors (KSF), especially technology acceptance (TA) with a coefficient of $\beta = 0.45$ ($p < 0.01$), indicating that the more the organization accepts technology, the more likely the business success factors are to be successful. Technology acceptance is a factor that directly influences the actual adoption of technology within the organization, especially in the dimensions of perceived usefulness (Perceived usefulness), perceived ease of use (Perceived ease of use) and consistency. The research of Tandafatu, N. K., Ermilinda, L., & Darkel, Y. B. M. (2024) studied the influence of digital transformation in the tourism industry on tourists' travel experience, the adoption of online booking platforms, the integration of virtual reality (VR) and augmented reality (AR) technologies, and the adoption of the Internet of Things (IoT) in tourist attractions. Study of global developments and the situation in Indonesia under the context of digital transformation in the tourism industry. The results show that this factor has a positive effect on tourists' travel experience by making it more accessible, immersive, and connected. facilities and the widespread integration of technology into tourism infrastructure. This is consistent with the research of Sharabati et al. (2024) to study the performance of SMEs through digital marketing strategies, including online advertising, social media marketing, search engine optimization (SEO), and customer engagement through digital channels. Further analysis of the impact of digital transformation on the relationship between digital marketing and company performance in the study of technology adoption, which currently recognizes the use of digital marketing as an important driver of SME effectiveness.

New Discovery

The researcher describes the management of small and medium-sized tourism businesses in their sustainable digital transformation.

1) Innovation adoption: Managing small and medium-sized tourism businesses requires organizations to apply various technologies to meet the needs of tourists due to changing behaviors. This includes integrating modern online booking systems, digital marketing that can accurately analyze tourist data, and customer data management, all of which play a crucial role in developing an organization into a digitally efficient and sustainable system.

2) Management: Organizations must define goals, objectives, strategies, and operational plans to achieve organizational goals, adaptable to the changing context of today's world. Executives allocate resources appropriately and lead the organization toward these goals through communication, motivation, supervision, and inspiration, with monitoring and evaluation to ensure targets are met.

3) Dynamic capabilities: Small and medium-sized tourism businesses must integrate sustainable management concepts by leveraging the organization's ability to adapt and continuously innovate. This ensures sustainable business survival and growth. Modern technology is used to identify market needs, manage risks or threats, and identify business trends. This approach involves researching and identifying appropriate management and operational approaches to seize opportunities for innovation development, business model modification, investment in new technologies or services, business process modification, operational transformation, and continuous adjustment of business goals.

Research recommendations

Policy Recommendations

1. The government should establish concrete policies to support the digital transformation of SMEs in the tourism industry.
2. Develop a specific digital development plan for small and medium-sized tourism businesses, focusing on funding, technology, and personnel support.
3. Develop a training system and develop digital skills for entrepreneurs, organizing training courses on digital management, such as the use of Big Data, online marketing, CRM systems, and cybersecurity.
4. Support the creation of a business ecosystem that promotes social and community collaboration.
5. Promote policies to build entrepreneurial networks and connect tour operators with national digital platforms.
6. Create incentives for the adoption of new technologies, such as tax incentives or financial support, for investment in digital systems, particularly online booking systems, customer management, and customer data analysis.

Practical Recommendations

1. Entrepreneurs should enhance the digital skills of their teams through internal training, inviting speakers, or participating in workshops from supporting agencies.

2. Develop internal management systems to support digital operations, such as using online accounting systems, storing customer data via the cloud, and chatbot systems for customer service.

3. Establish business partnerships in the form of Collaborative Networking, such as merging local tour operators to develop a joint booking platform or organizing events with government agencies.

4. Utilize social media and digital platforms to reach customers and build brands, particularly popular channels among target audiences such as Instagram, TikTok, or reviews from travel influencers.

5. Continuously monitor and evaluate digital operations to improve strategies and increase efficiency in customer service and cost management.

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