

BUSINESS REVIEW

STRATEGIC PLANNING GUIDELINES FOR SUCCESS IN INDUSTRIAL ENTERPRISES

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ABSTRACT

Objective: The objective of this research is to examine the organizational structure and operational characteristics of industrial businesses, investigate components of strategic planning guidelines, and develop a structural equation model, with the aim of achieving sustainable success for industrial enterprises.

Theoretical Framework: Content analysis method is a theoretical framework used to examine the presence and concepts of qualitative data. The framework is used to summarize findings and recommendations, from in-depth interviews and focus group discussions, into frequency values. Survey research framework is a structured approach that guides design, implementation, and analysis of surveys to gather data from targeted populations. The framework is used in quantitative research component, to collect and analyze data using descriptive and inferential statistics

Method: Qualitative research involved conducting in-depth interviews with 9 experts and facilitating focus group discussions with 11 qualified individuals. Quantitative research is conducted through surveys to 500 industrial business executives, utilizing descriptive statistics, correlation analysis, and multivariate statistics.

Results and Discussion: Findings from developed structural equation model indicated good alignment with observational data, with a Chi-square value of 0.094, Chi-square ratio of 1.115, goodness-of-fit index of 0.954, and a root mean square error of approximation of 0.015.

Research Implications: Strategic planning is significant in business operations. Well-formulated business strategies will impact managerial efficiency, creating opportunities and enhancing a competitive advantage for industrial enterprises.

Originality/Value: Findings revealed four significant factors contributing to success in industrial enterprises, listed in descending order of importance: 1) adaptive skills, 2) digital technology, 3) collaboration, and 4) organizational support.

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ORIENTAÇÕES DE PLANEAMENTO ESTRATÉGICO PARA O SUCESSO DAS EMPRESAS INDUSTRIAIS

RESUMO

Objetivo: O objetivo desta investigação é examinar a estrutura organizacional e as características operacionais das empresas industriais, investigar os componentes das directrizes de planeamento estratégico e desenvolver um modelo de equação estrutural, com o objetivo de alcançar o sucesso sustentável das empresas industriais.

Enquadramento Teórico: O método de análise de conteúdo é um quadro teórico utilizado para examinar a presença e os conceitos de dados qualitativos. O quadro é utilizado para resumir os resultados e as recomendações,

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a partir de entrevistas aprofundadas e discussões em grupos de discussão, em valores de frequência. O quadro de investigação de inquéritos é uma abordagem estruturada que orienta a conceção, implementação e análise de inquéritos para recolher dados de populações-alvo. O quadro é utilizado na componente de investigação quantitativa, para recolher e analisar dados utilizando estatísticas descritivas e inferenciais

Método: A investigação qualitativa envolveu a realização de entrevistas aprofundadas com 9 peritos e a facilitação de debates em grupos de discussão com 11 indivíduos qualificados. A investigação quantitativa é realizada através de inquéritos a 500 executivos de empresas industriais, utilizando estatísticas descritivas, análise de correlação e estatísticas multivariadas.

Resultados e Discussão: Os resultados do modelo de equação estrutural desenvolvido indicaram um bom alinhamento com os dados observacionais, com um valor de qui-quadrado de 0,094, um rácio de qui-quadrado de 1,115, um índice de adequação de 0,954 e um erro quadrático médio de aproximação de 0,015.

Implicações da investigação: O planeamento estratégico é importante nas operações comerciais. Estratégias empresariais bem formuladas terão impacto na eficiência da gestão, criando oportunidades e aumentando a vantagem competitiva das empresas industriais.

Originalidade/Valor: Os resultados revelaram quatro factores significativos que contribuem para o sucesso nas empresas industriais, listados por ordem decrescente de importância: 1) competências de adaptação, 2) tecnologia digital, 3) colaboração e 4) apoio organizacional.

Palavras-chave: Modelo de Equação Estrutural, Planeamento Estratégico, Planeamento Empresarial, Empresa Industrial.

DIRECTRICES DE PLANIFICACIÓN ESTRATÉGICA PARA EL ÉXITO DE LAS EMPRESAS INDUSTRIALES

RESUMEN

Objetivo: El objetivo de esta investigación es examinar la estructura organizativa y las características operativas de las empresas industriales, investigar los componentes de las directrices de planificación estratégica y desarrollar un modelo de ecuaciones estructurales, con el fin de lograr el éxito sostenible de las empresas industriales.

Marco Teórico: El método de análisis de contenido es un marco teórico utilizado para examinar la presencia y los conceptos de los datos cualitativos. El marco se utiliza para resumir las conclusiones y recomendaciones, procedentes de entrevistas en profundidad y debates en grupos de discusión, en valores de frecuencia. El marco de investigación de encuestas es un enfoque estructurado que orienta el diseño, la aplicación y el análisis de encuestas para recopilar datos de poblaciones objetivo. El marco se utiliza en el componente de investigación cuantitativa para recopilar y analizar datos mediante estadísticas descriptivas e inferenciales.

Método: La investigación cualitativa consistió en realizar entrevistas en profundidad a 9 expertos y facilitar debates de grupos focales con 11 personas cualificadas. La investigación cuantitativa se lleva a cabo mediante encuestas a 500 ejecutivos de empresas industriales, utilizando estadísticas descriptivas, análisis de correlación y estadísticas multivariantes.

Resultados y Discusión: Los resultados del modelo de ecuaciones estructurales desarrollado indicaron una buena alineación con los datos observacionales, con un valor Chi-cuadrado de 0,094, un coeficiente Chi-cuadrado de 1,115, un índice de bondad de ajuste de 0,954 y un error cuadrático medio de aproximación de 0,015.

Implicaciones de la Investigación: La planificación estratégica es importante en las operaciones empresariales. Las estrategias empresariales bien formuladas repercutirán en la eficacia de la gestión, creando oportunidades y aumentando la ventaja competitiva de las empresas industriales.

Originalidad/Valor: Los resultados revelan cuatro factores significativos que contribuyen al éxito de las empresas industriales, enumerados por orden decreciente de importancia: 1) capacidad de adaptación, 2) tecnología digital, 3) colaboración y 4) apoyo organizativo.

Palabras clave: Modelo de Ecuaciones Estructurales, Planificación Estratégica, Planificación Empresarial, Empresa Industrial.

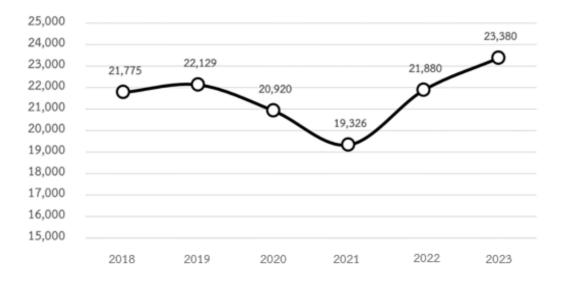
1 INTRODUCTION

Over the past decades, globalization has strengthened the ties among nations, leading to increased flows of capital, labor, knowledge, goods, and services. Various countries have experienced robust economic growth, while others, including Thailand, are at pivotal points of transformation. This transition necessitates coping with heightened competition and pressures amidst the global tide of change across economic, social, political, and technological domains. Issues such as free trade, environmental preservation, and interconnected network data systems have become increasingly prevalent in societies worldwide, including Thailand, impacting both opportunities and challenges for development. Consequently, there is a pressing need to develop strategies and frameworks for Adaptive Skills, strengthening competitive capabilities, and leveraging benefits from such transformations. Given the perpetual and rapid changes unfolding globally and the inevitability of continuous transformations in the future, societal landscapes are replete with political competition, economic conditions, and evolving social dynamics that affect Adaptive Skills efforts. Moreover, advancements in communication technology, information technology, and innovation have facilitated various operations, influencing the functioning of both public and private sector organizations. As a result, businesses must adapt and devise new strategic management approaches to meet environmental demands and accommodate the changes of this era.

Data on the legal status of businesses reported to the Department of Business Development, for the years 2019 to 2024, reveals another indicator reflecting the fragility of the private sector. The number of business closures has continued to rise compared to previous years, painting a picture of an economy rife with negative factors that have repercussions on the performance of many enterprises. This includes eroded confidence in private sector business operations. The current situation is particularly concerning for businesses that have accumulated impacts from previous periods, characterized by economic downturns, trade wars, domestic purchasing power constraints, and technological changes. These factors have led to a downturn in economic activities, particularly in export-oriented industries and the service sector, hence significantly affecting related businesses. The status of business operations as reported to the Department of Business Development accurately reflects these prevailing economic conditions.

Figure 1

Number of business closures, from 2019 to 2024 (Department of Business Development, 2024).



As aforementioned, it is evident that strategic planning guidelines for success in industrial enterprises significantly impact organizational management efficiency, promoting substantial growth during periods of crisis posed by highly developed country competitors worldwide. This is particularly relevant to Thailand's industrial sector, which is susceptible to significant impacts from global developments. Given the urgency of this matter, it is imperative for all stakeholders to develop solutions. Therefore, the researchers aim to examine strategic planning guidelines for success in industrial enterprises and conduct investigations to determine strategies for successful strategic planning in industrial enterprises, which will benefit all stakeholders involved in promoting sustainable societal and economic development for the nation.

2 RESEARCH OBJECTIVES

- 1. to examine the general organizational structure and operational characteristics of industrial businesses that focus on developing strategies for organizational business planning;
- 2. to investigate the components of strategic planning guidelines for success in industrial enterprises;
- 3. to develop a structural equation model of strategic planning guidelines for success in industrial enterprises.

3 HYPOTHESIS

- H1: Organizational Support directly influences Collaboration;
- H2: Organizational Support directly influences Adaptive Skills;
- H3: Organizational Support directly influences Digital Technology;
- H4: Adaptive Skills directly influences Collaboration;
- H5: Adaptive Skills directly influences Digital Technology;
- H6: The level of importance of strategic planning guidelines for success in industrial enterprises differs when categorized by the size of the businesses.

4 THEORY AND LITERATURE REVIEW

4.1 ORGANIZATIONAL SUPPORT

Successful organizations must ensure they have appropriate structures in place. Moreover, businesses need to engage in integration and processes to create flexible environments, both internally and externally, adapting to increasingly complex and rapidly changing environments. Natto and Mokoaleli (2022) stated that governance influences and impacts operational outcomes significantly. Corporate governance is essential for managing operations to achieve goals and objectives, while fostering confidence and transparency within the organization, and accounting for the importance of stakeholders (Kassaw, 2023). Further, businesses aim for long-term operational success. Effective corporate governance helps to enhance business management systems by controlling operations through committees, management teams, and shareholders, emphasizing participation and transparency to align performance with company objectives, and therefore, fostering stakeholder confidence and engagement (Abdullah & Tursoy, 2023). Good corporate governance helps maintain financial structures to increase profitability, leading to operational outcomes aligned with set objectives (Yusheng & Anyigbah, 2019). Additionally, regular measurement and evaluation of performance allow for timely planning and operational adjustments, with performance indicators in four aspects: financial, customer, internal processes, and learning and development (Parajuli & Shrestha, 2020).

Currently, we live in a world of constant change, a world of technology, and a world of borderless communication. Given the rapid and continuous nature of these changes, managers

must adapt and keep pace while ensuring management is conducted to be swift, responsive, cost-effective, and innovative. Managers must manage to achieve results on both fronts: efficiency and effectiveness. Efficiency involves achieving objectives by evaluating resource utilization, encompassing financial resources, time, raw materials, labor, and other factors, while effectiveness pertains to achieving the organization's objectives. Therefore, applying management knowledge in organizational management is crucial, which managers cannot deny and must continuously learn. If managers or organizations fail to adapt to changes, not only will the managers not survive, but neither will the organizations (Bateman & Snell, 2009).

4.2 COLLABORATION

Efficient management for effectiveness requires the involvement of all parties in organizational management. Collaboration within an organization is crucial for the company's development to gain a competitive edge. The management process should involve development in various aspects, with managers and relevant individuals participating collaboratively to ensure positive outcomes for operational efficiency. When managers, employees, and stakeholders collaborate in operations, they effectively manage tasks to achieve common goals. This includes participating in organizational management planning, leading the organization, providing control, sharing information, and communicating, which enhances the efficiency of management and operations (Hill, 2018).

Collaboration in the workplace serves as a platform for personnel to demonstrate their ability to work together effectively. Doylie (2019) explains that collaborative skills help individuals within organizations participate productively and efficiently. Successful collaboration requires a spirit of cooperation and mutual respect, with managers typically seeking efficient employees who are willing to be part of the organization and are eager to strike a balance between personal success and group objectives. Factors contributing to successful collaboration include: 1) establishing clear agreements regarding the roles of individuals in the collaborative process, 2) ensuring clear internal communication essential for job performance, 3) holding meetings or consultations regarding objectives and methods for project or task completion, with all personnel equally prepared, 4) accepting and respecting the participation of all collaborating members, and 5) setting group objectives above individual satisfaction.

Collaboration in the workplace is a crucial factor in organizational operations and development because effective work arises when employees operate in an environment that

allows them to communicate and collaborate freely. When an organization's environment emphasizes teamwork, employees feel like integral parts of the organization and are more committed, rather than merely employees working for a paycheck. Various methods or strategies facilitate the transition from individualistic to collaborative thinking, including actively involving each employee in collaborative strategic groups (Campbell, 2017).

4.3 DIGITAL TECHNOLOGY

The integration of digital technology to enhance or develop various aspects of businesses, such as elevating customer experiences, improving work processes, or creating new business models, is essential. The core focus of digital transformation lies more in strategy than technology. Therefore, implementation involves blending multiple strategies across business, technology, and information systems. Well-known digital technologies beneficial for business organizations include Artificial Intelligence, Big Data, Cloud Computing, Machine Learning, and the Internet of Things. Employing these technologies within an organization can lead to improved operational outcomes, such as enhanced productivity (Tambe, 2014). Moreover, investing in digital technology can elevate a business's value, as the resulting enhanced productivity adds value to existing organizational resources (Cockburn et al., 2019). However, digitalization poses challenges, where reports suggest a 70 percent failure rate in digital transformations (Tabrizi et al., 2019). The challenges of digital transformations are multifaceted; besides being a complex task requiring operations in various dimensions, organizations must be able to devise suitable digital strategies and effectively implement them. Additionally, they must balance resource allocation between new digital ventures and existing organizational businesses (Kane et al., 2015; Correani et al., 2020; Margiono, 2020; Lee, 2021).

The use of integrated digital technology to enhance organizations begins with high levels of competitiveness in businesses. Therefore, entrepreneurs should prioritize improving the quality of products and services, under the belief that high quality can lead to increased sales. Entrepreneurs must find ways to motivate buyers to purchase products. Nowadays, marketing has evolved into the era of digital transformation in Industry 4.0, which provides vast interconnected data access from the internet, or through websites, with vast amounts of information. Using social media involves interacting with friends in offline communities to online platforms, and extending behavioral patterns to the era of social networking for business purposes. This media has become the primary mode of communication, accessed through

mobile phones, significantly contributing to the role of digital media in enhancing organizational efficiency (Sandra & Thomas, 2011). Organizations must develop smart businesses by utilizing digital technology to manage various situations (Rungroj & Chainat, 2022). This aligns with Vittayaprapat et al. (2021), emphasizing the importance of prioritizing the operational guidelines when elevating work standards towards the smart electronics industry, starting with the integration and application of innovations and technology. Increasing the management efficiency, to step into the smart electronics industry, enhances an organization's ability to compete in the global market. In line with this, Ramart et al. (2023) suggested that hospitality businesses should implement cutting-edge information technology systems, to cater to customer needs and enhance convenience, including robust customer data security measures for accessing services. The adoption of such advanced technology is poised to significantly influence the future sales of hotel businesses. Furthermore, Taksin et al. (2022) highlighted the pivotal role of technological innovation within organizations, promoting employee development and propelling industry advancement.

4.4 ADAPTIVE SKILLS

Organizational culture adaptation to accommodate new work patterns is crucial to ensure that the organization has employees ready to drive it forward and can withstand pressure from changes in the business environment. Organizations need to consider adapting their culture to align with the directions and new work patterns that will emerge. Meister (2021) raises management issues that businesses in the 'new normal' may need to consider adapting, such as remote work, training and development frameworks, using online channels for internal communication, and prioritizing collaborative work among diverse employees. This is in line with Lowe & Arora (2020), who analyzed that employees in organizations in the 'new normal' are trending towards collaborating through digital systems, instead of commuting to work. Organizations must adopt a new organizational culture that supports changed work patterns, but still encourages engagement and collaborative work experiences among remote employees as if everyone were working in the same location. Furthermore, Adecco (2020) examined that due to the innovation-driven competition among businesses in the 'new normal,' organizational culture must be adjusted to provide opportunities for employees to utilize creative thinking, develop new work innovations, and break out of traditional work frameworks. Adaptive Skills, therefore, helps promote successful and satisfying work outcomes. Arkoff (1968) stated that adapting in the workplace is an individual's effort to achieve their goals, and entails behavioral adjustments to foster relationships between individuals and their environment. When transitioning to digital technology-driven work environment, all work processes move online. The necessity for businesses to develop essential digital technology skills for employees has led to an increase in online training and development approaches (Kubheka & Naidoo, 2021). Currently, organizations are undergoing rapid changes, such as technological changes, which make employees more inclined to adapt and understand their work better. Adaptive Skills in the workplace is therefore highly significant, as employees are required to develop themselves systematically to become efficient practitioners, and to continuously improve their skills to adapt to constantly changing conditions.

5 METHODS

This study is conducted using a mixed-methods research approach, consisting of three components: qualitative research utilizing in-depth interview techniques, quantitative research employing survey methods, and qualitative research employing focus group discussion techniques to validate the research design accuracy.

5.1 RESEARCH PARTICIPANTS

In the first component, qualitative research using in-depth interview techniques, involved a total of 9 expert participants, where participant selection utilized purposive sampling. In the second component, quantitative research employing survey research methods, involved participants selected from industrial businesses certified under ISO 9001:2015 standards, operating within the organizational strategic planning context, totaling 12,711 companies (International Organization for Standardization: ISO, 2023). Sample size determination applied the criteria of component analysis research or structural equation modeling, with a highly rated sample size of 500 (Thaninthon, 2020). Multi-stage sampling methods are employed, including cluster sampling, categorized into two sizes of industrial businesses: small to medium-sized businesses and large enterprises. Probability sampling methods are used for the selection.

5.2 RESEARCH TOOLS

The first component of the qualitative research using in-depth interviews employed a structured interview questionnaire, developed during this study. The quantitative research implemented survey methods, employing a questionnaire and analyzing the Index of Item-Objective Congruence (IOC) between the questionnaire items and the research objectives. The questionnaire is tested on a sample group of 30 individuals. The analysis yielded item-level discrimination values for each question. For checklist-type questions, the standard deviation analysis resulted in values ranging from 0.48 to 1.18, and for scale-type questions, the Corrected Item-Total Correlation analysis resulted in values between 0.44 and 0.97. Additionally, the questionnaire's reliability is analyzed using Cronbach's Alpha Coefficient, resulting in a value of 0.99. The concluding phase comprised qualitative research employing focus group discussions, where discussions are recorded and guided by a moderator to facilitate in-depth analysis.

5.3 DATA ANALYSIS

Qualitative research using in-depth interviews employed content analysis method and summarized the findings into frequency values. Quantitative research through survey research methods analyzed general basic data using both descriptive and inferential statistics, employing the SPSS (Statistical Packages for the Social Science) and AMOS (Analysis of Moment Structure) software. Qualitative research using focus group discussion techniques utilized content analysis method and summarized the findings into opinions and recommendations obtained from the group discussions.

6 RESULTS

The research findings regarding strategic planning guidelines for success in industrial enterprises are summarized below.

6.1 QUALITATIVE RESEARCH USING IN-DEPTH INTERVIEWS

From the in-depth interviews and content summarization from experts, regarding the strategic planning guidelines for success in industrial enterprises, it is determined that there are

four key components to the guidelines: Adaptive Skills, Digital Technology, Collaboration, and Organizational Support, as listed in Table 1.

Table 1 *Mean and standard deviation, listed in descending levels of significance, of components for strategic planning guidelines for success in industrial enterprises.*

Components of Strategic Planning Guidelines for Success in Industrial Enterprises	X	S.D.	Significance Level
Overall Significance Level	4.44	0.19	High
1. Adaptive Skills	4.51	0.25	Very High
2. Digital Technology	4.50	0.26	Very High
3. Collaboration	4.40	0.26	High
4. Organizational Support	4.34	0.24	High

As observed in Table 1, the analysis of the significance level of components, in the strategic planning guidelines for success in industrial enterprises, reveals that, overall, there is a high level of significance, with a mean score of 4.44. When analyzing the significance level by component, it is determined that there are 2 components with the highest level of significance. These are ranked in descending order as follows: 1) Adaptive Skills, exhibiting a mean score of 4.51, and 2) Digital Technology, with a mean score of 4.50. Additionally, 2 other components are highly significant, ranked in descending order as follows: 1) Collaboration, with a mean score of 4.40, and 2) Organizational Support, exhibiting a mean score of 4.34.

Regarding the consideration of each item within the Adaptive Skills component, it is noted that the highest level of significance lies in closely examining consumer needs, in order to adapt and respond promptly to changing demands ($\overline{X}=4.65$). Further, under the Digital Technology component, the item with the highest significance level is providing support for the development of Artificial Intelligence (AI), to assist in complex tasks, data processing, and supporting the organization's smart systems ($\overline{X}=4.63$). As for the Collaboration component, the item contributing to the highest significance level involves reaching out for cooperation and support from educational institutions, to enhance knowledge among the organization's personnel ($\overline{X}=4.52$). Lastly, for the Organizational Support component, the most significant item entails recruiting experts in various fields to provide consultancy for planning within the organization ($\overline{X}=4.46$).

6.2 ANALYSIS OF THE OPTIMIZED STRUCTURAL EQUATION MODEL FOR THE SMART CITY DEVELOPMENT IN EASTERN ECONOMIC CORRIDOR FROM THE PERSPECTIVE OF THE INDUSTRIAL SECTOR

Figure 2
Structural equation model for the strategic planning guidelines for success in industrial enterprises, in standardized estimate mode, after model optimization.

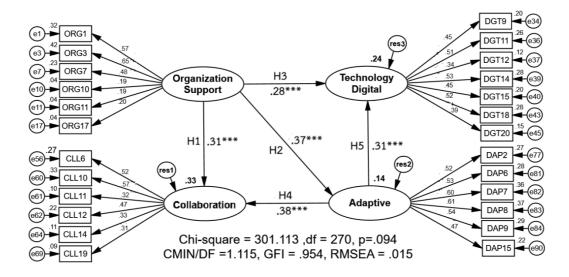


Table 2
Statistical results obtained from the structural equation model analysis, after model adjustments.

Variables	Estimate		D 2	T 7 •	C D	
	Standard	Non-standard	R^2	Variance	C.R.	P
Organizational Support				0.09		
Collaboration	0.31	0.31	0.33	0.06	3.61	***
Adaptive Skills	0.37	0.32	0.14	0.06	4.69	***
Digital Technology	0.28	0.25	0.24	0.05	3.37	***
Adaptive Skills			0.14	0.06		
Collaboration	0.38	0.44	0.33	0.06	4.44	***
Digital Technology	0.31	0.31	0.24	0.05	3.79	***
Organizational Support				0.09		
ORG1	0.57	1.00	0.32	0.18		
ORG3	0.65	1.24	0.42	0.19	7.71	***
ORG7	0.48	0.90	0.23	0.24	6.98	***
ORG10	0.19	0.35	0.04	0.29	3.29	***
ORG11	0.19	0.36	0.04	0.29	3.33	***
ORG17	0.20	0.37	0.04	0.30	3.44	***
Collaboration			0.33	0.06		
CLL6	0.52	1.00	0.27	0.24		

CLL10	0.57	1.08	0.33	0.21	7.19	***
CLL11	0.32	0.72	0.10	0.40	5.04	***
CLL12	0.47	1.03	0.22	0.33	6.57	***
CLL14	0.33	0.70	0.11	0.35	5.23	***
CLL19	0.31	0.61	0.09	0.31	4.98	***
Adaptive Skills			0.14	0.06		
DAP2	0.52	1.00	0.27	0.17		
DAP6	0.53	1.04	0.28	0.18	8.14	***
DAP7	0.60	1.14	0.36	0.15	8.69	***
DAP8	0.61	1.21	0.37	0.16	8.76	***
DAP9	0.54	1.03	0.29	0.17	8.18	***

^{***}Statistical significance level of 0.001

According to Figure 2 and Table 2, it is determined that the structural equation model, after model adjustments, comprises four latent variables, including one exogenous latent variable, namely Organizational Support, and three endogenous latent variables, namely Collaboration, Digital Technology, and Adaptive Skills.

Organizational Support has a significant direct influence on Collaboration, with a standardized regression weight of 0.31, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.14, with a variance of 0.06. It also has a significant direct influence on Adaptive Skills, with a standardized regression weight of 0.37, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.14, with a variance of 0.06. Additionally, it has a significant direct influence on Digital Technology, with a standardized regression weight of 0.28, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.24, with a variance of 0.05.

The Adaptive Skills component directly influences Collaboration with a standardized regression weight of 0.38, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.33, with a variance of 0.06. It also directly influences Digital Technology with a standardized regression weight of 0.31, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.24, with a variance of 0.05.

The Organizational Support component comprises 6 observed variables, ranked in descending order of standardized regression weights, as follows:

- 1. allocate sufficient knowledgeable and skilled personnel for the organization's operations (ORG3) with a standardized regression weight of 0.65, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.42, with a variance of 0.19;
- 2. develop strategic planning frameworks at all three levels: organizational, business, and operational (ORG1) with a standardized regression weight of 0.57, statistically

- significant at the 0.001 level. The coefficient of determination (R^2) is 0.32, with a variance of 0.18;
- 3. consider budgeting for the implementation of robotics systems to reduce human labor dependency (ORG7) with a standardized regression weight of 0.48, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.23, with a variance of 0.24:
- 4. establish clear business policies and directions (ORG17) with a standardized regression weight of 0.20, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.04, with a variance of 0.30;
- 5. create innovative networks and partnerships with external organizations (ORG11) with a standardized regression weight of 0.19 (C.R. = 3.33), statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.04, with a variance of 0.29;
- 6. source low-interest funding to reduce interest costs for organizational production (ORG10) with a standardized regression weight of 0.19 (C.R. = 3.29), statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.04, with a variance of 0.29.

The Collaboration component consists of 6 observed variables, listed in descending order of standardized regression weights as follows:

- 1. promote activities under innovative concepts for employees to enhance and develop work processes (CLL10) with a standardized regression weight of 0.57, statistically significant at the level of 0.001, and an R^2 value of 0.33, with a variance of 0.21;
- 2. create models and plan problem-solving activities for employees to work together to achieve organizational objectives (CLL6) with a standardized regression weight of 0.52, statistically significant at the level of 0.001, and an R^2 value of 0.27, with a variance of 0.24:
- 3. establish coordination among different departments' work processes (CLL12) with a standardized regression weight of 0.47, statistically significant at the level of 0.001, and an R^2 value of 0.22, with a variance of 0.33;
- 4. collaborate with business partners to create shared value, such as Corporate Social Responsibility (CSR) activities (CLL14) with a standardized regression weight of 0.33, statistically significant at the level of 0.001, and an R^2 value of 0.11, with a variance of 0.35;

- 5. build knowledge to manage work-life balance for employees (CLL11) with a standardized regression weight of 0.32, statistically significant at the level of 0.001, and an R^2 value of 0.10, with a variance of 0.40;
- 6. participate as members of external organizations to broaden partnership networks (CLL19) with a standardized regression weight of 0.31, statistically significant at the level of 0.001, and an R^2 value of 0.09, with a variance of 0.31.

The Adaptive Skills component exhibits 6 observed variables, arranged in descending order of standardized regression weights, as follows:

- 1. stimulate employees to change their thoughts and attitudes towards work to adapt to changing circumstances (DAP8). The standardized regression weight is 0.61, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.37, with a variance of 0.16;
- 2. initiate presentations of ideas for development and improvement to continually enhance operational processes (DAP7). The standardized regression weight is 0.60, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.36, with a variance of 0.15;
- 3. establish units to strengthen the potential of employees (DAP9). The standardized regression weight is 0.54, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.29, with a variance of 0.17;
- 4. support ongoing suggestion and continuous improvement activities, such as Kaizen, consistently (DAP6). The standardized regression weight is 0.53, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.28, with a variance of 0.18;
- 5. define roles, responsibilities, and authority boundaries for each position to promote flexibility in job execution (DAP2). The standardized regression weight is 0.52, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.27, with a variance of 0.17;
- 6. monitor domestic and international situations and trends, both present and past (DAP15). The standardized regression weight is 0.47, statistically significant at the 0.001 level. The coefficient of determination (R^2) is 0.22, with a variance of 0.22.

The Digital Technology component consists of 7 observed variables, listed in descending order of standardized regression weights, as follows:

- 1. seek various data management programs and software, such as Microsoft Power BI (DGT14) with a standardized regression weight of 0.53, statistically significant at the 0.001 level, an R^2 of 0.28, and a variance of 0.23;
- 2. process operations of various departments accurately and timely (DGT18) with a standardized regression weight of 0.52, statistically significant at the 0.001 level, an R^2 of 0.28, and a variance of 0.22;
- 3. design data storage according to importance sequences, including managerial, accounting and financial, engineering, research and development, human resources, and operational data (DGT11) with a standardized regression weight of 0.51, statistically significant at the 0.001 level, an R^2 of 0.26, and a variance of 0.21;
- 4. screen external data imports into the organization and internal data exports (DGT9) with a standardized regression weight of 0.45, statistically significant at the 0.001 level, an R^2 of 0.20, and a variance of 0.27;
- 5. implement a firewall system to safeguard and manage data ingress and egress, preventing attacks from malicious entities (DGT15) with a standardized regression weight of 0.45, statistically significant at the 0.001 level, an R^2 of 0.20, and a variance of 0.25:
- 6. promote digital system organization to support remote work and connect with organizational data as needed (DGT20) with a standardized regression weight of 0.39, statistically significant at the 0.001 level, an R^2 of 0.15, and a variance of 0.24;
- 7. advocate for electronic data storage (Electronics Data) (DGT12) with a standardized regression weight of 0.34, statistically significant at the 0.001 level, an R^2 of 0.12, and a variance of 0.31.

6.3 ANALYSIS OF THE GOODNESS-OF-FIT OF THE STRUCTURAL EQUATION MODEL PRIOR TO AND AFTER MODEL OPTIMIZATION

Table 3Statistical measures applied to evaluate the goodness-of-fit of the structural equation model, comparing pre- and post-model optimization results.

Statistical Measures	Statistical Criteria	Before Model Optimization	After Model Optimization	
CMIN–ρ	> 0.05	0.000	0.094	
)Chi-square probability level(> 0.03	0.000	0.094	
CMIN/DF)Normed chi-square(< 2.00	2.193	1.115	
GFI)Goodness-of-fit index(> 0.90	0.646	0.954	
RMSEA			_	
)Root mean square error of	< 0.08	0.049	0.015	
approximation(

According to Figure 2 and Table 3, which present the statistical results evaluating the goodness-of-fit of the structural equation models before adjustment, it is determined that the root mean square error of approximation (RMSEA) value is 0.049, meeting the criteria for goodness-of-fit with observational data. However, with the chi-square probability level (CMIN-P) value of 0.000, the chi-square ratio (CMIN/DF) value of 2.193, and a goodness-of-fit index (GFI) of 0.646, the model does not meet the criteria for goodness-of-fit with observational data.

Therefore, the researchers proceeded to adjust the model, considering the Modification Indices as suggested by Arbuckle (2016). The study assessed the values obtained from the prebuilt software, along with theoretical principles, to systematically remove inappropriate observed variables one by one. The new model is then processed until all four statistical values met the goodness-of-fit criteria, indicating that the structural equation model is complete and fits well with the observational data.

Following the model adjustments, it is observed that the chi-square probability level (CMIN-P) is 0.094, which is greater than 0.05, the chi-square ratio (CMIN/DF) is 1.115, which is less than 2.00, the goodness-of-fit index (GFI) is 0.954, which is greater than 0.90, and the root mean square error of approximation (RMSEA) is 0.015, which is less than 0.08. Therefore, it can be concluded that all four statistical values meet the evaluation criteria. This indicates that the structural equation model for the strategic planning guidelines is successful. After adjustments, the model is consistent with observational data.

6.4 HYPOTHESIS TESTING RESULTS

Hypothesis testing is conducted to analyze the causal influence between latent variables in the structural equation model, for the strategic planning guidelines for success in industrial enterprises. There are a total of 5 hypotheses, as follows:

- 1. Research hypothesis testing to examine the causal influence between latent variables, Hypothesis 1:
- H1. Organizational Support directly influences Collaboration: The hypothesis testing results revealed that Organizational Support significantly influences Collaboration at a statistical significance level of 0.001. The Standardized Regression Weight is 0.31, therefore supporting the research hypothesis.
- 2. Research hypothesis testing to examine the causal influence between latent variables, Hypothesis 2:
- H2. Organizational Support directly influences Adaptive Skills: The hypothesis testing results showed that Organizational Support significantly influences Adaptive Skills at a statistical significance level of 0.001. The Standardized Regression Weight is 0.37, thus supporting the research hypothesis.
- 3. Research hypothesis testing to examine the causal influence between latent variables, Hypothesis 3:
- H3. Organizational Support directly influences Digital Technology: The hypothesis testing results indicated that Organizational Support significantly influences Digital Technology at a statistical significance level of 0.001. The Standardized Regression Weight is 0.28, thereby supporting the research hypothesis.
- 4. Research hypothesis testing to examine the causal influence between latent variables, Hypothesis 4:
- H4. Adaptive Skills directly influences Collaboration: The hypothesis testing results indicated that Adaptive Skills significantly influences Collaboration at a statistical significance level of 0.001. The Standardized Regression Weight is 0.38, hence supporting the research hypothesis.
- 5. Research hypothesis testing to examine the causal influence between latent variables, Hypothesis 5:
- H5. Adaptive Skills directly influences Digital Technology: The hypothesis testing results revealed that Adaptive Skills significantly influences Digital Technology at a statistical

significance level of 0.001. The Standardized Regression Weight is 0.31, aligning with the proposed research hypothesis.

6. Hypothesis aimed at examining the difference in the significance level of strategic planning guidelines for success in industrial enterprises, categorized by business size:

H6. The level of importance of strategic planning guidelines for success in industrial enterprises differs when categorized by the size of the businesses: From the hypothesis testing results, it is determined that the strategic planning guidelines for success in industrial enterprises, varies across different business sizes. Specifically, there is a statistically significant difference at the 0.05 level between small to medium-sized businesses and large-sized enterprises.

7 DISCUSSION AND CONCLUSION

The key findings from the research, on strategic planning guidelines for success in industrial enterprises, provide efficient strategies for organizational success. Understanding the principles and factors influencing management to achieve success is essential for strategic planning in industrial businesses to meet organizational goals. Based on the findings of this research, the researchers have discussed and summarized the conclusions, supported or contradicted by relevant research documents, into 5 points as follows:

1. Research findings indicate that the component with the highest mean value is the Adaptive Skills component (\overline{X} = 4.71), suggesting empirical evidence that organizations need to adapt to survive as economic and societal environments change significantly. As Phakamach et al. (2021) noted, modern managers must be capable of appropriately using leadership styles to create influential relationships conducive to achieving common organizational goals, instilling confidence, and providing support for everyone to achieve these goals. This can be accomplished by employing influence techniques and processes to engender trust, confidence in work performance, and promoting collaboration to create a conducive environment and support cooperation to benefit operations (Mukaram et al., 2021). Further, in the rapidly changing business landscape, organizations must adapt rapidly to changes. Therefore, adapting to change is a continuous effort. In the 21st century, top-level leaders of each organization must change their mindset and management methods to adapt to change, especially in the digital technology era where comprehensive strategic planning covering all aspects of the organization's operations is necessary. Top-level leaders are directly responsible for managing the organization's strategy at every stage (Soewarno & Tjahjadi, 2020; Hamdan et al., 2021).

This is in line with the research by Phakamach et al. (2021), which found that leaders must emphasize mobilizing talent within the organization to utilize their potential towards achieving goals, understand how to manage and invest in new technologies, understand team management techniques to maximize efficiency, promote leadership qualities among staff, and support the appropriate use of technology. Additionally, strategies and seeking opportunities for adaptation are integral components for both organizations and leaders. This adaptive leadership involves blending knowledge, skills, and creative ideas with management abilities to develop quality and efficient internal processes within the organization, consistent with Sunee & Thanin (2023), whose research found that as the world changes, so do business conditions. Intensified competition leads to increasingly complex environments, requiring organizations to adapt and manage change effectively to ensure sustainable success.

2. Research findings reveal that the most significant item, for the strategic planning guidelines for success in industrial enterprises, is closely examining consumer needs to adapt and respond to changing demands ($\bar{X} = 4.65$). Customer satisfaction or loyalty is a result of post-consumption evaluation related to consumer behavior, which refers to actions individuals take in decision-making, purchasing, and using various products or services to meet their needs (Solomon, 2009). Studying consumer needs closely affects business strategy formulation to align with changing consumer goals and needs. Consistent with Shen and Sun's (2021) research, organizational success in business adaptation under high-level competitive conditions partly comes from strategies to flexibly adjust organizational structures, enhance problem-solving capabilities, and capitalize on crisis opportunities timely. Additionally, it involves setting strategic flexibility to adapt to diverse customer changes. Therefore, businesses must closely assess consumer needs to adapt and respond to changes promptly, as well as apply digital technology to align with their business, especially in efficiently implementing operational strategies, and creating operational flexibility and adaptability, to respond to business challenges and opportunities. Zabarauskas and Hagi (2022) determined that businesses are transitioning towards digital transformation. Organizations utilize digital technologies to reach target consumer groups, driven by the result of customer-centricity across various aspects, thereby impacting brand products, customer experiences, and operational excellence through innovation, as well as efficient communication channels (Chowdhury et al., 2020). Marketing strategy planning directly influences business operations, clearly demonstrating that improving marketing strategies enhances organizational efficiency in meeting customer needs and providing services tailored to customer requirements (Ramart & Subanjui, 2024).

- 3. From the hypothesis testing results, it is determined that the Adaptive Skills component exhibits a direct influence on the Collaboration component with a standardized regression weight of 0.38. This perceptual data illustrates that the strategy of networking among entrepreneurs, operating interdependently with stakeholders to make rapid and flexible decisions, developing collaboration with suppliers and manufacturers, large-scale ordering, product readiness, as well as cooperation within the organization and with internal units, promotes joint innovation (Chowdhury et al., 2020). Organizational operational adaptability allows for the organization to adapt to different situations, with sales forecasting adjusting more frequently and planning further ahead to accommodate the rapidly changing information and social trends through collaborative data sharing with partners and coordination. Teamwork and collaboration lead to success, where team members strive to develop knowledge, skills, and various abilities in their work, with everyone in the team adapting well and having good relationships. Strategies with common goals and objectives are created, fostering meetings for idea exchange, effective communication, and coordination, hence facilitating joint decisionmaking and actions (Klangwichid, 2003). This aligns with the study by Bravo, Lucia-Palacios, and Martin (2016), which suggested that team workflow processes are important for personnel to perceive goal attainment through interpersonal processes, which is key to explaining the perception of skill improvement and attitudes toward teamwork. This is consistent with Hasmi and Abu Hassan Asaari (2019) and Phakamach et al. (2021), who indicated that effective innovation development and the establishment of innovative organizations are achieved by supporting the involvement of personnel or relevant units in organizational management. Developing creative thinking can lead to organizational success as targeted in that strategy.
- 4. From the results of hypothesis testing, it is determined that the maximum overall influence was at the component level of Organizational Support, with a standardized regression weight of 0.45. This perceptual data illustrates that perceiving organizational support is an indication to employees of how much the organization values their work. It demonstrates concern and support for employees' well-being. Perceiving organizational support leads to employees feeling connected to the organization and their work, which impacts collaboration throughout the organization. This aligns with Phoades and Eisenberger (2002), who also discussed how perceiving organizational support is a factor contributing to organizational commitment, job involvement, and responsiveness, hence affecting job satisfaction and employee emotions, as stated by Mehreen Fatima (2015). In perceiving organizational support, personnel are continually assessed for cost-benefit balance, causing employees themselves to

evaluate benefits with the organization. This evaluation covers both costs, such as dedication to work, love, and loyalty to the organization, and benefits, such as the organization's recognition of employees and their work, care, and well-being. The outcome is the efficiency of work performance, as noted by Emanuela Ingusci (2016). When employees can perceive support, they become more dedicated and satisfied with their work, leading to more efficient work performance.

5. From the results of hypothesis testing, it is examined that the strategic planning guidelines for success in industrial enterprises, when categorized by business sizes, exhibits a statistically significant difference between small to medium-sized enterprises and large industrial businesses, at a significance level of 0.05. This implies that small and medium-sized industrial businesses focus on strategic planning in terms of enhancing competitive advantage, strategies for enhancing consumer responsiveness, and product strengthening through social network systems. Therefore, small and medium-sized businesses aim to utilize digital technology to operate marketing systems automatically with modern applications. They present products and services through various social media channels, emphasizing contemporary marketing platform strategies that can communicate with customers through smartphones or modern communication devices, consistent with Meesri (2015). Small and medium-sized enterprises are ready to drive the digital economy due to factors such as 1) strategies and leadership, 2) operational processes, 3) business models, 4) digital capabilities, and 5) government support policies, which have a positive correlation with digital readiness compared to large enterprises. Innovation potential enables competitiveness enhancement. Small and medium-sized enterprises (SMEs), as suggested by Yunis, Tarhini, and Kassar (2018), are indicating that SME entrepreneurs may not be able to significantly increase the organization's marketing efficiency if lacking digital marketing strategies to genuinely respond to customer needs (Yu, Jacobs, Chavez and Feng, 2016). When organizations have efficient strategic planning, particularly involving modern digital technology in operations, it becomes a success factor for businesses and serves as a link to enhance SME entrepreneurs' competitiveness, thereby improving marketing efficiency.

8 RECOMMENDATIONS

1. Businesses in the industrial sector should implement systematic and continuous strategic planning, which would result in businesses exhibiting sufficient flexibility to adapt to rapidly

changing circumstances in the present era. For instance, strategic planning concerning the development and enhancement of personnel skills and abilities is particularly crucial in the current era marked by swift transformations within industries and increasingly complex business landscapes. Consequently, investing in the development of personnel skills and capabilities emerges as a critical factor aimed at creating a robust foundation for future business endeavors.

- 2. Businesses in the industrial sector should prioritize the promotion of digital technology within their organizations, which is particularly crucial in the modern era. This importance stems from the rapid and pervasive changes brought about by digital technology, therefore impacting every aspect of business operations. Consequently, implementing digital technology within the organization can enable businesses to fully leverage the opportunities presented by the digital age. For example, integrating digital technology into automated manufacturing processes, implementing Enterprise Resource Planning (ERP) systems to enhance operational efficiency and reduce errors, establishing platforms or digital systems to facilitate efficient communication among various departments within the organization, utilizing Customer Relationship Management (CRM) systems, or employing Collaboration Platforms. Promoting digital technology within the organization not only enhances business efficiency and reduces costs, but also strengthens competitiveness and effectively meets market demands in the current age of digitalization.
- 3. Businesses in the industrial sector should promote workplace participation within their organizations by cultivating an inclusive organizational culture that encourages connectivity and supports collaborative work, decentralizing power, and facilitating decision-making or planning processes. This approach promotes a sense of ownership among employees in the organizational development process, consequently enhancing overall organizational efficiency. Additionally, external organizational membership further strengthens and holds significant importance in expanding business opportunities and contributing to business growth.

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