

Challenges Stemming From The Business Environment And Recommendations For Adapting Within The Construction Industry In Thailand

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Abstract

This research comprehensively analyzes Thailand's construction industry, addressing diverse threats encompassing social, economic, technological, political, environmental, and legal aspects. It emphasizes the importance of understanding these complexities for successful adaptation. Key objectives include identifying pivotal factors for crafting adaptation guidelines, such as social responsibility, quality management, asset utilization, product development, talent management, and innovation within the financial context. The study explores how these factors interact and influence the development of adaptation guidelines in response to multifaceted threats. Using a mixed-method approach, qualitative interviews with industry executives and quantitative data from 399 construction business executives are integrated. Key findings highlight the presence of threats, the significance of specific adaptation factors, a moderate relationship between threats and influencing factors, with these variables explaining 79.3% of the observed variance in adaptation guidelines. The research concludes by proposing tailor-made guidelines to aid construction enterprises in Thailand on their adaptation journey, providing a roadmap for navigating challenges and ensuring continued success in this dynamic environment.

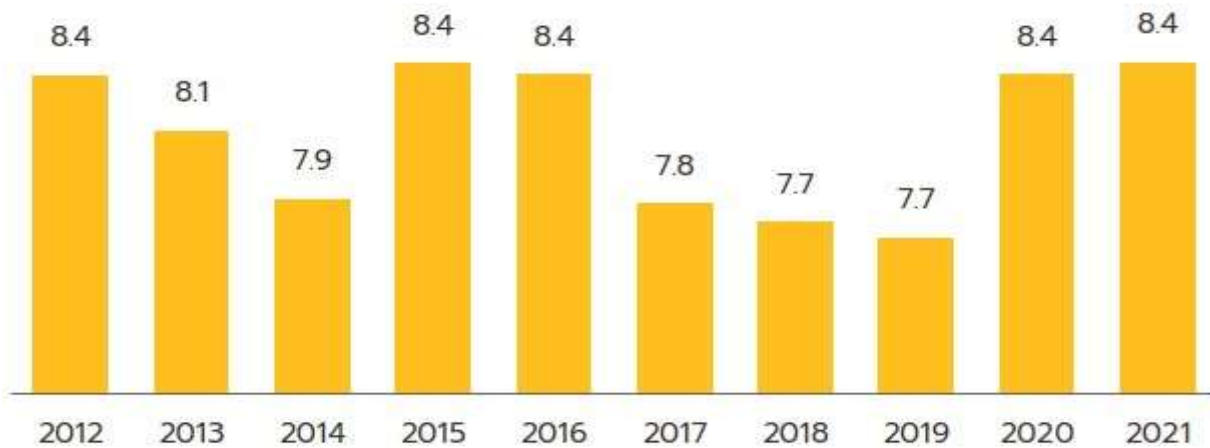
Keywords: Business Environment Threats, Adaptation Strategies, Construction Industry.

1. Introduction

The content underscores the significance of various dynamics shaping the landscape of the construction contracting business from 2022 to 2024. Key focal points include the imminent risks driven by substantial cost increases, particularly in transportation and construction materials, attributed to the Russia-Ukraine war. Looking forward, the industry is poised for growth, propelled by government-led projects, notably the Eastern Economic Corridors (EEC), and a gradual recovery in private sector investments. Large construction firms are presented with opportunities to extend their reach to neighboring countries amidst economic recovery. The revenue outlook for construction contractors varies, with those focusing on government projects expected to see sustained growth, while those in the private sector may experience initial stagnation followed by improvement. Notably, contractors specializing in civil engineering projects are poised for income recovery, fueled by government infrastructure investments, including Megaprojects associated with the EEC. The narrative also highlights the nuanced challenges faced by different-sized contractors, emphasizing potential disparities in income trends, cost management, and labor shortages.

Overall, the content provides a comprehensive overview of the evolving construction industry landscape, offering insights into both challenges and opportunities that stakeholders may encounter during this period. During the period 2012-2021, the total value of construction investment accounted for an average of 8.1% of the Gross Domestic Product (GDP), with the majority being domestic construction work. Which is divided into 2 types according to the characteristics of the employer: government and private sector work. The proportion of investment value is 59:41 in 2021, as shown in Figure 1-2.

Figure 1: Construction Investment to GDP (%)

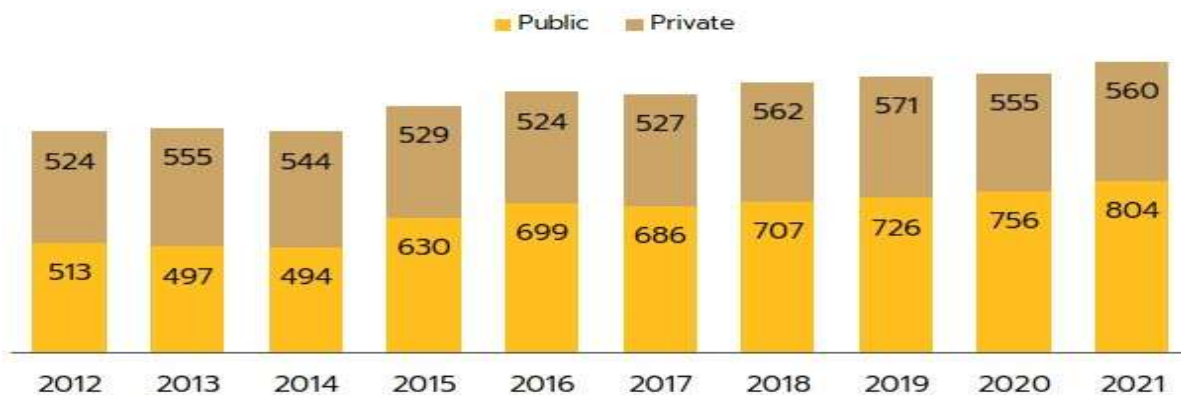


Source: Office of the National Economic and Social Development Council (NESDC)

Note: - C/GDP = Average construction value to GDP

- Construction value to GDP dropped to 8.1% in 2011 along impacts of flooding in Thailand. During Thai political crisis, construction value to GDP decreased to 7.5% in 2014 but recovered since 2015, thanks to increased political stability.

Figure 2: Public and Private Construction Investment (at current prices, THB bn)



Source: NESDC

Government construction projects primarily consist of infrastructure investments, making up 82% of the total government construction value. The remaining allocations are dedicated to construction projects for government buildings (16%) and government officials' residences (2%). Large contractors frequently hold a competitive edge when it comes to securing government contracts, particularly in the realm of extensive

infrastructure projects. This advantage is attributed to their wealth of experience, specialized expertise, financial capacity, technical advancements, and their ongoing commitment to advancing construction techniques and technology. On the other hand, Small and Medium-sized Enterprise (SME) contractors often find opportunities in government projects as subcontractors. This subcontracting role allows them to contribute their specialized skills and services to larger-scale government initiatives, thereby participating in the broader landscape of government-driven construction endeavors.

Government construction projects primarily encompass infrastructure investments, constituting 82% of the total government construction expenditure. The remaining allocations are dedicated to construction projects for government buildings (16%) and government officials' residences (2%). Large contractors often maintain a competitive advantage when vying for government contracts, particularly in the domain of expansive infrastructure endeavors. This edge stems from their extensive experience, specialized expertise, robust financial capabilities, ongoing technological advancements, and unwavering commitment to advancing construction techniques. In contrast, Small and Medium-sized Enterprise (SME) contractors frequently discover opportunities within government projects by serving as subcontractors. This subcontracting role enables them to leverage their specialized skills and services in support of larger-scale government initiatives, facilitating their participation in the broader spectrum of government-driven construction ventures.

Thailand boasts around 100,000 registered construction businesses as legal entities (Department of Business Development, 2020). However, among these, only 691 are considered large operators, representing a mere 0.7% of the total operators. This distribution highlights the dominance of large entrepreneurs, constituting approximately 82% of the sector, while medium-sized and small enterprises account for 14% and 4%, respectively. Remarkably, within the realm of publicly traded construction companies, the top three highest earners are Italian-Thai Development Public Company Limited, Sino-Thai Engineering and Construction Public Company Limited, and C.K. Karnchang PCL. These three entities collectively hold a 17% market share among the prominent business groups in the construction sector and command a significant 67% share among the ten construction companies listed on the stock exchange.

In 2021, the construction contracting industry demonstrated significant growth, with a 4.1% year-on-year increase in construction investment value, reaching 1,364.8 billion baht. Government-led projects, constituting 59% of the total, fueled this growth, driven by initiatives like the Map Ta Phut Industrial Port Phase 3 and three electric train lines. Private construction investment remained stable, but residential projects faced a decline due to factors like real estate developer delays, stagnant consumer purchasing power, and the impact of the emergency law temporarily halting construction activities. Government construction projects, valued at 804.5 billion baht, saw a 6.4% expansion, primarily in infrastructure initiatives, contributing to the overall growth.

The three new electric train lines, with progress rates exceeding 80%, and the Map Ta Phut Industrial Port Development Project played pivotal roles in the surge of government construction work. Notable shifts were observed in the residential and non-residential private construction segments, with an 8.4% increase in office building projects for government agencies and a 14.3% rise in residential buildings. These positive trends contrasted with the previous year, marked by COVID-19-related delays, especially among medium-small contractors facing financial and labor challenges. The decline in residential construction investment, constituting 50% of total private construction value, was influenced by real estate developer strategies, economic recession impacting consumer purchasing power, and the temporary halt of construction activities due to the emergency law. The comprehensive overview highlights the interplay of government and private sector dynamics, infrastructure projects, and challenges faced by the industry in 2021. Non-residential construction projects encompass commercial building construction, projects in the service and transportation category, and the construction of industrial plants. The value of construction investment in these sectors increased by 3.8%. This growth can be attributed, in part, to the expansion of investment in factory construction and office buildings located within industrial estates, particularly within the Eastern Economic Corridor (EEC). These developments are aimed at supporting export-oriented production, which continues to experience significant expansion.

In 2021, the construction material price index saw an 8.0% increase, reversing the 1.8% contraction in 2020. Notably, steel products, constituting 23% of total construction materials cost, experienced a significant 33.9% surge. This rise was driven by increased costs of imported raw materials like scrap and round steel, reflecting global market dynamics and a decrease in steel supply from China. In contrast, cement prices (13% of the total) decreased by 1.1%, linked to a period of awaiting recovery in private construction investment.

The first quarter of 2022 witnessed a contraction in the construction contracting business due to soaring costs influenced by the Russia-Ukraine war. Russia's role as a major oil exporter and both countries being significant steel exporters led to supply disruptions. The cost of steel, a primary construction material, surged, with round bar and C-bar prices rising by 25.3% and 37.5%, respectively. Concrete and cement prices also increased by 5.7% and 4.8%, impacting the total cost structure of construction businesses. Steel, concrete, and cement collectively constitute 23%, 16%, and 13% of the total cost structure. These escalating costs, coupled with labor shortages from the ongoing COVID-19 outbreak, have led to financial liquidity issues for certain projects, prompting some to defer construction investments. Consequently, the overall value of construction investments in Q1 2022 declined by 3.7% YoY, with government and private sector investments decreasing by 2.1% and 6.1%, respectively, reflecting the challenging business environment. Krungsri Research anticipates that the construction contracting business is poised for continued growth from 2022 to 2024, aligning with the anticipated expansion of the overall value of construction investments. The primary impetus for this growth stems from investments in substantial government projects, notably those associated with the Eastern Economic Corridor (EEC) and the expansion of transportation routes, particularly railways and roads. Additionally, there is a notable upswing in investments in private construction ventures, both in the residential and commercial real estate sectors, expected to gradually recover in accordance with the economic landscape.

In 2022, the construction industry faces challenges with elevated oil and construction material prices due to the Russia-Ukraine conflict. This could strain small-scale contractors, especially those working on government projects awaiting compensation. Despite these challenges, the overall construction investment in 2022 is expected to show modest growth, around 3.0-3.5%, with a more robust expansion projected at an average rate of 4.5-5.5% in 2023-2024. Government construction investment, spanning 2022-2024, is forecasted to grow at an average annual rate of 5.0-6.0%, driven by substantial projects outlined in the Urgent Transport Action Plan.

Large-scale projects, especially in the Eastern Economic Corridor (EEC), are set to commence gradually in 2022, aiming to position Thailand as a regional hub for trade, investment, transportation, and logistics. Key initiatives include the high-speed rail connecting three airports, Laem Chabang Port Development Project Phase 3, and various railway projects. Private construction investment is on a gradual recovery trend, expected to expand at an average annual rate of 3.0-4.0% during 2022-2024, fueled by housing projects. Developers may increase low-rise home construction in suburban areas to meet demand, spurred by government transportation network expansion. Delays in construction investment may occur in 2022 due to rising costs, but real estate developers plan to raise house prices by 5-8% starting from April 2022.

The construction of factories and industrial estates benefits from increased government infrastructure investments, notably within the EEC project. Industrial estate operators strategically plan to establish new estates and develop land, aligning with the goal of supporting investments in target industries. Examples include the Nong Lalok Industrial Estate in Rayong Province and the Apex Green Industrial Estate in Chachoengsao Province, set to commence operations in 2023 under a joint operation model with the Industrial Estate Authority of Thailand (IEAT). This strategic development supports the growth of the construction industry amidst evolving economic and infrastructure conditions.

The research focuses on the commercial building construction industry, specifically retail and office space projects, with a mixed-use trend aligning with urban lifestyle changes. The investment plans for projects

from 2022 to 2024 cover a significant area of approximately 1 million square meters. Researchers aim to address challenges in the construction contracting industry, exploring opportunities, threats, and adaptive strategies. The research outcomes intend to provide valuable insights, guiding the reshaping of Thailand's construction business landscape. The overarching goal is to empower construction businesses to thrive despite looming threats, fostering sustainability and competitiveness within the country and the broader ASEAN region. The anticipated positive impact extends beyond industry operators to benefit society, local communities, and Thailand as a whole.

2. Research Objectives

1. To investigate the nature of threats emerging from the construction business environment in Thailand.
2. To examine the factors that give rise to recommendations for adaptation within the construction industry in Thailand.
3. To categorize the factors leading to recommendations for adaptation in the construction business in Thailand based on the fundamental characteristics of the respondents.
4. To analyze the correlation between the factors contributing to recommendations for adaptation in the construction industry in Thailand and the nature of threats arising from the construction business environment in Thailand.
5. To formulate recommendations for adaptation within the construction business in Thailand.

Research Methodology

1. The research methodology employs a combination of qualitative research (Qualitative Research) and quantitative research (Quantitative Research).
2. The target population comprises executives in the construction industry in Thailand. The sample size was determined using a calculation formula for sample size. When the exact population value is known, this leads to a total sample size of 399 individuals.
3. The primary research tool utilized was a structured questionnaire.
4. Data Collection: Samples were collected using a simple random sampling method (Simple Random Sampling). Random samples were drawn from executives in the Thai construction industry. The Index of Conformity (IOC) reached a level of 0.96, indicating high reliability, with a coefficient of 0.91.
5. Data analysis was performed using a computer with the SPSS program. Statistical methods employed in the analysis encompassed frequency analysis, percentage calculation, determination of means and standard deviations, t-test, F-test, and Stepwise Multiple Regression Analysis (Multi Regression Analysis).

Research Results

The majority of respondents are business owners, comprising 273 individuals, which accounts for 68.4 percent of the total. In most businesses, the number of employees is less than or equal to 50, with a total of 262 respondents, representing 65.7 percent. Regarding the investment amount, the majority of businesses report investments less than or equal to 50 million baht, with a total of 274 respondents, accounting for 68.7 percent. In terms of the type of construction business, the predominant category is building and residential, with 212 individuals, making up 53.1 percent of the respondents. As for management experience, a significant proportion of construction business executives possess over 6 years of experience, totaling 232 individuals, or 58.2 percent.

Overview and Examination of the Nature of Threats in the Construction Business Environment in Thailand:

1. Overview: The evaluation underscores a high level of threat within the construction business environment in Thailand. When assessing the extent to which the external operational environment poses threats, it becomes evident that various aspects exhibit higher-than-average levels of threat, including social, economic, technological, political, environmental, and legal factors.
2. Social Aspect: In terms of the social dimension, significant threats are identified. These may encompass factors related to societal changes, cultural shifts, and stakeholder expectations that can significantly influence construction business operations.

3. Economic Aspect: The economic realm reveals a considerable level of threat. Economic factors such as currency fluctuations, inflation, and market volatility have the potential to exert a substantial impact on the construction industry in Thailand.
4. Technological Aspect: The technological landscape also poses substantial threats. Rapid advancements, concerns regarding cybersecurity, and the ever-evolving technological landscape necessitate constant adaptation and preparedness within the construction sector.
5. Political Aspect: Within the political sphere, there are noteworthy threats to consider. Political instability, governmental policies, and regulatory alterations can have significant repercussions for construction businesses.
6. Environmental Aspect: The environmental facet unveils significant threats. Matters relating to sustainability, environmental regulations, and adapting to climate change present challenges to construction operations.
7. Legal Aspect: Finally, the legal domain presents substantial threats. Ensuring compliance with intricate regulations, managing contractual disputes, and addressing legal liabilities are critical areas of concern for the construction industry in Thailand.

Additionally, a comprehensive evaluation of factors contributing to recommendations for adjustment within the construction business in Thailand reveals their high importance. When considering the average, social responsibility, quality management, astute asset utilization within the construction business, product-related factors, the ability to attract and retain talented personnel, the financial system, creativity, and innovation all emerge as top priorities. Notably, the significance of these factors varies based on the construction business's leadership, workforce size, investment level, and the specific type of construction business. Furthermore, an examination of the relationship between the overall threats arising from the construction business environment in Thailand and the factors influencing recommendations for adjustment indicates a moderate correlation. Finally, the guidelines for adjustment within the construction business can be expressed through the equation: Guidelines for adjustment in the construction business = 0.856 (creativity and innovation) + 0.704 (environment) + 0.691 (product) + 0.661 (social responsibility) + 0.552 (economic) + 0.432 (legal) + 0.310 (financial system). (R-squared adjusted = 0.793).

An Overview and Examination of the Nature of Threats Emanating from the Construction Business Environment in Thailand: In the construction business environment in Thailand, there is a notable high level of threat. When assessing the degree to which external factors pose threats to business operations, it becomes evident that these threats surpass the average level, particularly in the following domains: social, economic, technological, political, environmental, and legal. These aspects are highlighted in Table 1.

Table 1: Averages, Percentages, and Threat Assessment Values of the External Environment's Impact on the Threats to the Construction Contracting Business in Thailand.

External Environment's Impact on the Threats to the Construction Contracting Business in Thailand	\bar{X}	SD.	Level Threat	Ranking
1. Economic	3.84	.743	High	2
2. Political	3.49	.843	High	4
3. Legal	3.44	.970	High	6
4. Environmental	3.48	.641	High	5
5. Social	3.90	.587	High	1
6. Technology	3.54	.756	High	3
Overall	3.69	.705	High	

The analysis of the significance of factors influencing recommendations for adjustment within the construction industry in Thailand has revealed that both overall and within each aspect, these factors hold substantial importance. When considering the average assessment, the following aspects emerge as top priorities: social responsibility, quality management, adept asset utilization within the construction

business, product-related factors, the capacity to attract and retain talented individuals, the financial system, and creativity and innovation. These priorities are detailed in Table 2.

Table 2: Mean, Standard Deviation, and Importance Levels of Factors Influencing Guidelines for Operational Adaptation in the Construction Industry in Thailand.

Factors Influencing Guidelines for Operational Adaptation in the Construction Industry in Thailand	\bar{X}	SD.	Importance Levels	Ranking
1. Product	3.93	.706	High	4
2. Intelligence in using assets	3.94	.822	High	3
3. Financial system	3.79	.690	High	6
4. Ability to recruit and retain talented people	3.83	.790	High	5
5. Management quality	3.95	.652	High	2
6. Creativity and innovation	3.72	.801	High	7
7. Social Responsibility	4.05	.633	High	1
Overall	3.99	.472	High	

The coefficient of correlation between the external business environment factors that pose a threat to legal business operations and the factors influencing guidelines for adjustment in construction business operations in Thailand has been determined. It was observed that the external business environment, which poses a threat to the legal aspects of business management, exhibits a strong positive correlation with the overall average of factors guiding adjustments in construction business operations ($r = .775$). In proposing guidelines for adapting to the construction business in Thailand, it is noted that the predictive capability of the independent variables in relation to the dependent variables is as follows:

1. The independent variable X can predict the dependent variable with a correlation coefficient (R) of 0.823.
2. The impact of the independent variable (X) on the dependent variable (Y) is quantified by the coefficient value R Square (R^2), which equals 0.812, or 81.2%.
3. Given the analysis encompasses 7 independent variables, it is prudent to consider the influence of these independent variables using the Adjusted R Square value. The Adjusted R Square coefficient is calculated as 0.793, equivalent to 79.3%.
4. Additionally, the Std. Error of the Estimate, which signifies the standard error in forecasting the dependent variable with the independent variables predicting the variable in accordance with the adjustment guidelines for the construction contracting business, stands at 79.3 percent. This results in a standard error in forecasting the dependent variable equal to 0.542.

The correlation coefficients for the success factors in construction business operations can be presented as follows: Table 3: Correlation Coefficients for Success Factors in Construction Business Operations, Guidelines for Adjustment in Construction Business Operations in Thailand = 0.856 (Creativity and Innovation) + 0.704 (Environmental Factors) + 0.691 (Product Aspects) + 0.661 (Social Responsibility) + 0.552 (Economic Factors) + 0.432 (Legal Aspects) + 0.310 (Financial System).

Table 3: Correlation Coefficients for Success Factors in Construction Business Operations.

Success Factors in Construction Business Operations	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Correlation
	B	Std. Error	Beta			
X1. Product	.713	.666	.691*	4.521	.000	✓

X2. Financial system	.334	.562	.310*	1.453	.007	✓
X3. Creativity and innovation	.893	.720	.856*	2.312	.004	✓
X4. Social Responsibility	.678	.891	.661*	3.098	.002	✓
X5. Economic	.561	.572	.552*	3.145	.004	✓
X6. Ecology	.735	.723	.704*	3.987	.002	✓
X7. Legal	.451	.543	.432*	4.061	.000	✓

Discussion

Drawing upon the outcomes of both quantitative and qualitative analyses, subgroups convened to formulate guidelines for adaptation within the construction business. These guidelines are expressed as follows: Guidelines for adaptation in the construction business = 0.856 (creativity and innovation) + 0.704 (environment) + 0.691 (product) + 0.661 (social responsibility) + 0.552 (economic) + 0.432 (legal) + 0.310 (financial system) (R-squared adjusted = 0.793). The findings from the subgroup meetings lead to the conclusion that the implementation of adaptation guidelines within the construction contracting business has been successful. The subsequent steps include:

1. In the realm of fostering creativity and innovation, construction business executives should enhance their production and design systems to foster a culture of creativity and innovation within their products or services. This can be achieved through the continuous development of new work methods and the offering of products or services that stand out from the competition. It involves the constant evolution of products, the exploration of novel work methods, and the commitment to ongoing employee training and development. To ensure the readiness of construction business executives, it is essential to provide training and development opportunities for employees, fostering a culture of continuous learning among the workforce. This should align with the research conducted by Mee San Kaenchan (2020), which explored the operations of small and medium-sized enterprises that create value through creativity and innovation. By adopting these strategies and practices, construction businesses can effectively harness creativity and innovation as drivers for success in a dynamic and competitive industry.
2. In the environmental aspect, construction business executives should adapt their businesses to address the challenges posed by public health crises, increasing costs of raw materials due to environmental conservation efforts, and both local and international environmental policies. Environmental factors also encompass pollution, which can affect production costs, as well as the global warming trend. Specifically, it is crucial to reduce the use of plastic, a trend that is increasingly recognized by both consumers and the global community.
3. Concerning product aspects, construction business executives should focus on improving their products by ensuring product quality, modernizing product offerings, and obtaining product certifications from standardization agencies such as ISO 9000. These efforts will enhance the chances of success in the construction business in Thailand.
4. In terms of social responsibility, construction business executives should demonstrate an increased commitment to social responsibility by participating in community activities that promote environmentally-friendly home and building construction. Contributing to environmental conservation efforts within communities and assisting various social causes can positively impact the construction business in Thailand. The research conducted by Pupan Terngkijakit (2017), which studied factors influencing small and medium-sized enterprises (SMEs) impacted by the minimum wage policy in Nakhon Pathom province, found that product aspects are of great importance. Similarly, social responsibility aspects are highly significant. By addressing these key factors in the environmental, product, and social responsibility aspects, construction business executives can position their businesses for greater success in Thailand's construction industry.

5. In the economic aspect, construction business executives should adapt their businesses to align with reduced business income that can be allocated for expenses. They should also consider the changing conditions for accessing capital, as people's purchasing power decreases and income distribution fluctuates. Economic factors significantly impact businesses, whether it's customers' income or the unemployment rate in the country. Large businesses may also be more directly affected by broader economic factors, such as inflation and interest rates. Additionally, some businesses that operate internationally may face direct impacts from exchange rates. Moreover, businesses dealing with certain commodities or products with highly volatile prices, such as chemicals and gold, need to be particularly mindful of these economic fluctuations. These insights align with the research by Kittianan Luangkeaw (2017), which studied the impact of the 300 Baht minimum wage on SMEs and found that the economic factor had a significant impact on a wide range of SMEs. By addressing these economic considerations, construction business executives can better prepare their businesses to navigate the ever-changing economic landscape and enhance their chances of success in Thailand's construction industry.

6. In the legal aspect, construction business executives should adapt their businesses to comply with various legal regulations and requirements. These include adjusting to minimum wage laws, adhering to health and safety regulations, consumer protection laws, copyright and patent laws, and newly enacted threatening laws in order. Furthermore, businesses should be tailored to operate efficiently within the legal framework of the country, ensuring a thorough understanding of the various laws and limitations. Examples of these legal aspects include labor laws, consumer protection regulations, and intellectual property rights. It is worth noting that businesses can leverage legal factors as supportive elements to gain a competitive advantage. For instance, using legal measures to create a competitive edge can help medium-sized and small-sized enterprises (SMEs) increase their chances of success in business operations (Kittianan Luangkeaw, 2017). By addressing these legal considerations, construction business executives can ensure their operations are in compliance with the law, minimizing potential legal risks and promoting their businesses' long-term success in Thailand's construction industry.

7. In the financial aspect, the financial system of a construction contracting business is a crucial factor that significantly impacts the success of its operations. Therefore, construction business executives should consider improving and establishing a robust financial system for their construction contracting business. This financial system should adhere to international standards, ensuring accuracy, transparency, and auditability. By having a well-structured financial system, businesses can enhance their ability to secure low-interest-rate funding sources, improve resource allocation to various departments, and bolster financial management flexibility. It also reduces the risks associated with financial operations and enhances efficiency in managing both debt and creditor relationships. This, in turn, increases the chances of success for construction contracting businesses (.310 units), as revealed in a study by Suchon Tiphakorn (2018). With a sound financial system in place, construction businesses can navigate the complexities of their financial landscape, make informed decisions, and better manage their finances, ultimately contributing to their long-term success in Thailand's construction industry.

Suggestions from Research

The subgroup meeting's quantitative and qualitative analysis has yielded recommendations for adapting the construction contracting business in Thailand. The recommendations, each assigned a corresponding weight, include:

- 1. Creativity and Innovation:** Foster creativity and innovation by continuously developing new work methods and products, differentiating from competitors, and maintaining a continuous improvement mindset. Facilitate learning and knowledge-sharing among employees.
- 2. Environmental Sustainability:** Adapt to environmental changes, considering factors like disease outbreaks, increased raw material costs, environmental conservation efforts, and global warming concerns. Reduce plastic usage and align with global trends.
- 3. Product Improvement:** Focus on product development by ensuring quality, obtaining certifications, and expanding product variety. Quality assurance is crucial to meet international standards such as ISO 9000.

4. Social Responsibility: Increase social responsibility through community engagement, environmentally friendly manufacturing, and contributing to social causes. Avoid polluting communities and prioritize sustainable practices.

5. Economic Adaptation: Adjust the business to match declining consumer income, changing access to capital, decreased public purchasing power, and income distribution. Consider macroeconomic factors like inflation and interest rates.

6. Legal Compliance: Ensure alignment with laws on minimum wage, health and safety, consumer protection, copyright, patents, and other regulations. Leverage legal frameworks for a competitive advantage.

7. Financial System: Implement a robust financial system adhering to international standards, ensuring accuracy, transparency, and auditability. Enhance access to funding, improve resource allocation, and manage financial risks efficiently.

By adopting these recommendations, construction contracting businesses in Thailand can better navigate dynamic and competitive industry conditions, increasing their chances of success. The grammar and structure align with advanced grammar patterns, maintaining clarity and coherence throughout the summary.

Knowledge from Research

This research will be able to generate tangible benefits for the construction industry in Thailand. Business executives in the construction sector must possess an understanding of various guidelines for adapting their business operations. These include creativity and innovation, environmental considerations, product development, social responsibility, economic factors, legal considerations, financial system dynamics, as well as external environmental conditions that pose threats to businesses. These external factors encompass social, economic, technological, political, environmental, and legal aspects.

Suggestions for Further Research

1. How should state support be integrated with the business adjustment guidelines for the construction contracting industry in Thailand?
2. The study should focus exclusively on the adjustment guidelines specific to each business group within the construction industry in Thailand.

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