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Foreword

Content-wise, scholars on this issue are interested in 1) Smart city development in Thailand; 2) Effects of the occurrence of aviation accidents; 3) Motivation and purchase/usage intention issues for customers in Cambodia (Thai facial skin care products), China (high education and wellness tourism in Thailand), and Thailand (hormonal contraception). The data analysis methods vary from qualitative content analysis to quantitative OLS regression, fixed-effect panel regression, factor analysis, cluster analysis, and PLS-SEM.

Natnicha Chotpittayanon of the College of Politics and Government, Suan Sunandha Rajabhat University, finds the importance of smart government management and local leadership in a sustainable smart city, from a survey of 395 local government officials and 10 in-depth interviews. The author calls for digital infrastructure with smart city solutions.

Xiangyu Liang, Benjapon Prommawin, and Pithoon Thanabordeekij of Chiang Mai University examine the impact of aviation accidents and incidents on the number of passengers. A fixed-effect panel regression model is used to analyze a dataset of 169 countries from 1970 to 2020. Prompt and transparent communication, enhanced safety standards, compensation, and support are suggested to mitigate the negative impacts.

Heang Seavmey and Sunida Piriyapada of Panyapiwat Institute of Management tested the Extended Theory of Planned Behavior (ETPB) with 200 Cambodian customers for their purchase intention of Thailand's facial skin care products. With "Smart-PLS 4.0", they find a significant influence of attitude, subjective norms, perceived behavioral control, the perceived value of quality, perceived cultural values and beliefs, the perceived value of price, and E-word of mouth.

Nattanun Siricharoen of Huachiew Chalermprakiet applies Content Analysis to interviews with 15 doctoral students and 43 undergraduates from China. The author finds Chinese students are drawn to Thai universities because of their educational standards, flexible teaching methods, facilitation to break down language barriers, and potential career opportunities.

Nareeya Weerakit and Gao Jing of Prince of Songkla University explore the push and pull motivations and preferences of young wellness tourists in Chengdu, China. The cluster analysis segments a sample of 445 respondents into two groups, and the factor analysis indicates four motivational factors as "social, cultural, and environmental wellness", "personal well-being and fitness", "service and facility-related wellness", and "escape".

Kunsalyn Srinamon, Natwara Mahawongsanan, Supanika Leurcharusmee, and Pithoon Thanabordeekij of Chiang Mai University study factors affecting the intention to use hormonal contraception of female undergraduate students. Applying OLS regression on data from a sample of 213 respondents, they find a positive and significant influence of "attitude and self-regarding preference", "subjective norm", and "perceived behavior control".

Prof. Dr. Tang Zhimin
Editor-in-Chief

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The Key Factors for Local Development towards Sustainable Smart City and Quality of Life Enhancement

Natnicha Chotpittayanon[1]

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Abstract

The purpose of this research was 1) to examine the factors that influences local development for a sustainable quality of life in a sustainable smart city, 2) to study the relationship of these factors and 3) to provide guidelines for enhancing local development. The research employed a combination of quantitative and qualitative approaches. Data was gathered from a sample group comprising local government officials who were involved in smart city development. The sampling methods utilized probability sampling with a total of 395 participants. The study involved in-depth interviews with key informants totaling 10 individuals. Data analysis was conducted using mean, standard deviation, Pearson's correlation coefficient, multiple regression analysis, and content analysis. The findings of the research were 1) Overall, the level of local development aimed at achieving a sustainable quality of life in a sustainable smart city was high. Smart government management was ranked as the most influential factor. 2) The local leadership had the most significant impact on the development of the region for a highly. Moreover, it demonstrated a positive correlation in the same direction, ranging from 0.727 to 0.851. The foundational structural factors of a smart city exhibited the highest level of interrelation, and 3) Guidelines for the development of a smart city should focus on establishing an environmental system to foster the development of digital infrastructure and the implementation of smart city solutions in all areas. Collaboration between the public and private sectors in utilizing technology and innovation to enhance the quality of life.

Keywords: Local Development, Sustainable Smart City, Quality of Life

Introduction

Currently, Thailand faces multifaceted challenges that impact its development. Societal and economic dimensions both underscore the populace's aspirations for higher income levels and the resolution of poverty and inequality issues. Development concerns encompass unequal access to public services and opportunities, necessitating ongoing developmental efforts. The economic structure has yet to fully embrace innovation, and productivity remains relatively low in the service and agricultural sectors. The workforce's quality and capabilities have not kept pace with the country's development needs. Motivating investment and economic development

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remains a critical focus. In the realm of public sector management, there is a need for enhanced continuity and adaptability to address diverse challenges and meet population demands in resolving various issues. Additionally, environmental considerations, such as natural resource restoration and preservation, play a pivotal role in sustainable national development. Climate change and environmental degradation present new challenges in this dimension. Furthermore, rapid demographic shifts, including a declining working-age population and an aging demographic, bring about significant changes. Advances in science and technology, intricate regional integration, and openness across sectors contribute to novel challenges in terms of national stability, economy, society, and the environment (Office of the National Economic and Social Development Council, 2018).

The proportion of people residing in urban areas compared to rural areas has been steadily increasing, leading to rapid and continuous urbanization. This trend has spawned a range of associated problems, including overcrowding in housing and workplaces, as the workforce seeks convenient and cost-effective living arrangements for their daily commutes. This, in turn, has driven up urban housing prices, making such accommodations accessible to only a minority with sufficient income. Transportation systems often struggle to meet both the quantity and quality demands, exacerbating the situation. Environmental concerns, such as air pollution, noise pollution, water contamination, and waste accumulation, pose significant threats to the health of urban residents. Moreover, they negatively impact the overall quality and efficiency of urban life and work. The development of smart cities in Thailand is imperative as it can alleviate population congestion in major urban areas by redistributing growth to surrounding regions. This can reduce disparities and enhance national competitiveness by modernizing cities to align with community social ideals. This entails leveraging digital technology and information communication to boost the efficiency and quality of community services, ultimately reducing costs and consumption while improving residents' quality of life (National Economic and Social Development Council, 2021).

The well-being of the population requires attention and development because when people enjoy a good quality of life, they can contribute to the stability and advancement of their families and the nation. A good quality of life encompasses elements such as reducing inequalities, fostering a healthy environment, and promoting a high standard of living (Trevittaya, 2016; Chittmittrapap et al., 2022; Thabngern et al., 2022).

Local governance plays a crucial role in enhancing the quality of life for the population through the implementation of smart city management. This approach aims to improve the efficiency, effectiveness, and safety of local areas, with a strong emphasis on innovation and the use of modern technology to establish interconnected communication networks within the city's systems. The goal of local governance in smart city management is to ensure that residents enjoy a high quality of life while promoting livability, sustainability, and efficiency within the city (Chaiprasert, 2022). This approach seeks to enhance service delivery and city management efficiency while simultaneously reducing costs and resource consumption. It places a significant focus on well-designed solutions and collaboration with various stakeholders (Digital Economy Promotion Agency, 2022). The success of a smart city is assessed across seven dimensions, which include: 1) Smart Environment, 2) Smart Energy, 3) Smart Economy, 4) Smart Living, 5) Smart Government, 6) Smart Transportation and Logistics, and 7) Smart Citizens (Giffinger et al., 2007; Glasmeier & Christopherson, 2015; Dameri, 2017; Smart City Thailand Office, 2019; Kokpol et al., 2020; Raksapol & Phosing, 2021).

The infrastructure of a smart city serves as the core for development and operations in a city that aims to promote connectivity and collaboration among organizations and residents in that area. The development of smart city infrastructure comprises three main components: 1) Traditional public infrastructure, 2) Digital public infrastructure, and 3) Natural public infrastructure, also known as green infrastructure (Chourabi et al., 2012).

Local readiness for transitioning to a smart city, with the goal of enhancing service delivery efficiency and resource management, leads to the city's sustainability and the creation of value for its residents. The readiness for smart city transformation is based on three key components: 1) Organizational and personnel readiness, 2) Resource readiness, and 3) Community and citizen readiness (Leatchaturanon & Boonsaya, 2021; Kokpol et al., 2020).

The potential of local leaders serves as a gauge of an organization's success, underscoring their crucial role. In the realm of smart city development, relying solely on traditional leadership skills may fall short when confronting intricate challenges. Furthermore, the continually evolving technological landscape necessitates leaders to adapt and enhance their skills and innovative thinking to effectively navigate these changes. Leaders should possess the ability to construct collaborative networks, forging connections among individuals both within and outside the organization, including stakeholders (Johansen, 2012; Jaitip & Chienwattanasook, 2018). The potential of leaders in smart city development encompasses three facets: 1) Local leadership attributes, 2) a growth mindset, and 3) network-building for collaboration.

Smart city development entails the integration of data and telecommunications technology with infrastructure and public services. This aims to enhance the convenience of life for the population, foster improvements in urban governance and creative urban innovations, and utilize the city as a hub for local economic development (Chaiprasert, 2022). To materialize smart cities, it is imperative to oversee three pivotal technology domains: 1) Smart power grids, 2) City data management, and 3) Smart information and communication systems.

The research questions for this study aim to seek answers regarding: What factors influence the development of a high-quality life in sustainable smart cities? How do local development factors affect the quality of life in sustainable smart cities? Considering the variables: Smart City Infrastructure, Smart City Readiness, Local leadership potential and Technology and Innovation Management. In order to generate ideas for the development of smart cities in various dimensions, to promote long-term smart city development, and to lead to improved quality of life for the population. It can propose guidelines for improving the quality of life of the population in smart city areas for government agencies, local authorities, and urban development organizations to be incorporated into clear plans or policies that serve as effective tools to drive sustainable development.

Research Objectives

1. Investigate factors contributing to sustainable local development for improving quality of life in smart cities.
2. To study the relationship of local development for the sustainable improvement of quality of life in smart cities.
3. Propose guidelines for local development to achieve a sustainable improvement in the quality of life in smart cities.

Research Questions

1. What factors influence the development of a high-quality life in sustainable smart cities?
2. How do local development factors affect the quality of life in sustainable smart cities?

Literature Review

"Smart city" refers to a city that leverages technology and innovation to enhance the efficiency of services and city management, as well as to reduce city expenses and resource consumption. It emphasizes well-designed solutions that integrate contributions from various sectors, including the public sector, private sector, and civil society. It involves the integration of data and digital technologies into infrastructure and various services with the aim of addressing collective issues and making the urban environment more sustainable and livable. It is a city that is still in the investment and development phase, continually improving its basic systems and public services by using intelligent solutions to enhance capabilities and extend the lifespan of infrastructure assets. This is done with the goal of improving the quality of life for residents, making it a modern and desirable city where people enjoy a higher quality of life, happiness, and sustainability. Efforts are made to address various public issues by applying information and communication technology based on the involvement of stakeholders in urban development and local governance (European Parliamentary, 2014).

Smart city is a form of applying technology or information and communication to increase the efficiency and quality of community services, while also helping reduce costs and consumption for the population. It aims to enhance the efficiency of living for residents. It is a city capable of creating a connection between the conventional or physical assets of the city with its existing social assets to develop services, infrastructure, and improvements in various aspects of the city, such as roads, bridges, tunnels, railways, subways, airports, ports, communication, water, electricity, and significant buildings, to make the most of these resources. It plans preventive maintenance activities and surveillance in the dimension of security while providing the best service to the citizens (Dameri, 2017). It is a city with waste management, traffic control, and the use of technology to facilitate sub-systems of the city, such as energy, water, environmental management, employment opportunities, economic prosperity, and innovation. However, it also emphasizes healthcare, sustainability, quality of life, work, public convenience, and data disclosure (Glasmeier & Christopherson, 2015).

The Smart City Office in Thailand was established under the supervision of the Ministry of Digital Economy and Society's Digital Economy Promotion Agency on October 15, 2017. Its primary mission is to formulate a comprehensive master plan, and action plans, and execute initiatives for advancing smart city development, all in alignment with the Thailand 4.0 development roadmap and the 20-year national strategy. In the second phase of this strategy, it has actively championed the growth of smart cities through the application of cutting-edge technology to enhance urban environments, thus rendering them more habitable, secure, and ecologically sound. Additionally, it has strategically designed infrastructure that corresponds with economic potential and societal needs, with particular attention given to accommodating the increasing elderly demographic in the years ahead.

Furthermore, an imperative exists for the efficient management of public transportation within urban regions, ensuring widespread accessibility for residents and reducing operational expenses for businesses in these areas. Over the long run, the ultimate goal is to establish seamless connectivity among service systems and infrastructure networks linking central cities across the nation, thereby enhancing the quality of life for individuals residing in diverse locales and propelling the digital economy. It is of paramount importance that all segments of society possess a clear understanding of the operational mechanisms and methodologies involved in this endeavor, placing significant emphasis on enhancing quality of life, resource management, and technological innovation. The overarching objective is to transform cities into more livable, efficient, and environmentally sustainable hubs.

The sustainability of success in smart city development relies on a well-defined, flexible, and responsive urban system framework. This framework should leverage current technology and incorporate a participatory approach that involves local residents. It should effectively integrate physical, digital, and human resource components. To achieve this, four primary focal points need comprehensive design and planning (Iamtrakul et al., 2021): 1) Accessibility of Data and Technology: Ensuring access to data and technology resources is fundamental. It guarantees that citizens can easily access information and technology, 2) Sustainability through Adaptable Transformation: Sustainability should take the form of a flexible and self-sustaining transformation, capable of continuous maintenance and adaptation, 3) Prioritizing Transparency and Open Data: The practice should prioritize transparency and the availability of data that can be practically utilized, and 4) Promoting Public-Private Collaboration: Attention should be directed toward stimulating private sector investment motivation to achieve public-private partnerships. This involves establishing a government data platform and allocating city management budgets to cover local and other levels effectively.

The characteristics of smart city development and the goals of assessing its success according to central government policy involve a city that has been certified as a smart city by the Smart City Development and Management Committee and has received approval from the Smart City Development Promotion Committee. The design of smart city success encompasses seven dimensions (Office of the Digital Economy Promotion, 2022) such as 1) Smart Environment 2) Smart Energy 3) Smart Economy 4) Smart Living 5) Smart Government 6) Smart Mobility and Transportation, and 7) Smart People or Citizens (Giffinger et al., 2007; IBM Global Business Services, 2009; Glasmeier & Christopherson, 2015; Dameri, 2017).

The role of local authorities in smart city management is to enhance local efficiency, effectiveness, and security through innovation and the use of modern technology to establish an interconnected communication network within the city. Local authorities play a significant role in transforming their regions into thriving, sustainable, and efficient urban centers by leveraging information technology to drive urban development. This involves enhancing residents' quality of life (livability), bolstering urban sustainability, improving management efficiency, and utilizing information technology for urban development. Local government organizations are integral to regional development, fostering innovation, and adopting contemporary information technology systems to effectively manage and develop their areas. They also strive to enhance the skills of local administrators and civil servants, ensuring they maintain high levels of professionalism, respond promptly, and meet the public's needs in an era where technology plays a pivotal role in all aspects of local development (Chaiprasert, 2022).

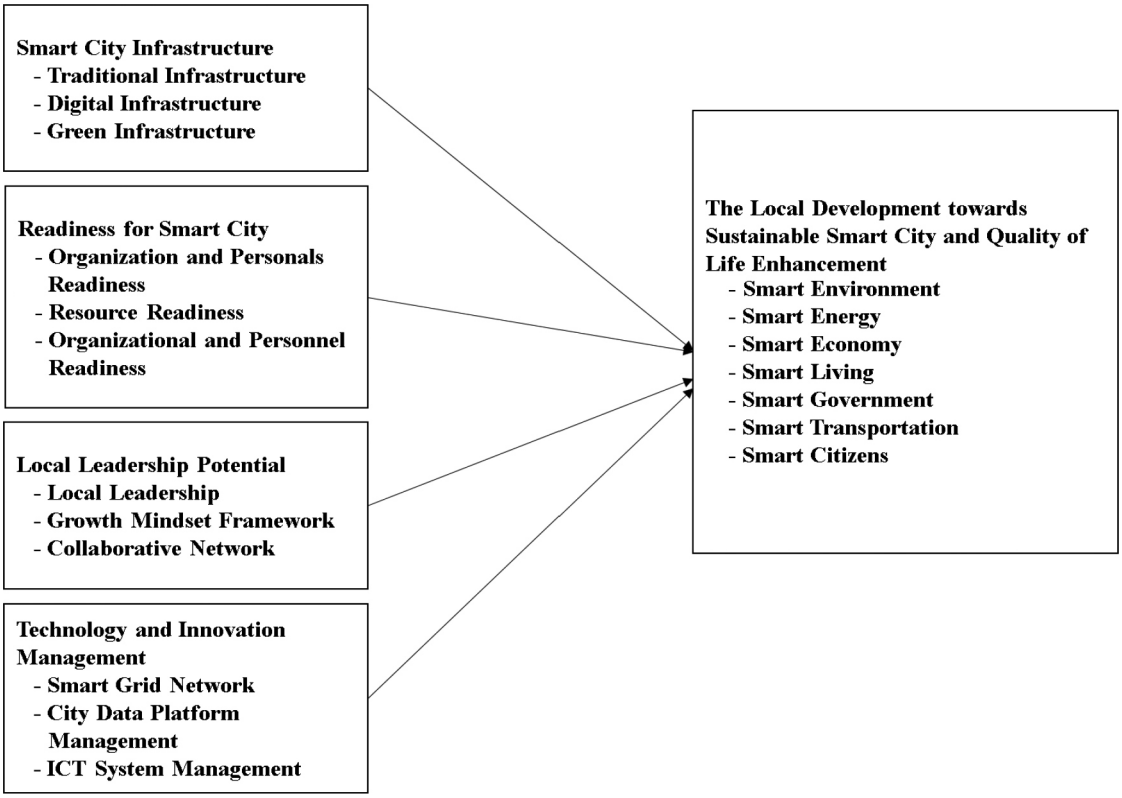

Figure 1 Conceptual Research Framework

From the research framework, it highlights independent variables: Smart City Infrastructure, encompassing traditional, digital, and green infrastructure. Smart City Readiness, which involves organizational and personnel readiness, resource readiness, and community and citizen readiness. Local leadership potential, composed of local leadership, a growth mindset framework, and a collaborative network. Technology and Innovation Management, covering smart grid, city data management, and smart information and communication technology systems. Dependent variables encompass the development of localities for a high quality of life in sustainable smart cities, including smart environment, smart energy, smart economy, smart living, smart governance, smart transportation, and smart citizens.

Through the researcher's study of relevant concepts, theories, and research, significant factors that drive the success of smart city development for the improved quality of life of the population have been identified. These key factors include: 1) Smart city infrastructure is a crucial system for developing cities efficiently and sustainably. These foundational structures serve as the core for using technology and innovation to promote smart city development. 2) Readiness for smart city development involves harnessing existing technology and innovation to benefit the city or fostering new innovations to meet the current and future needs of the population and society. 3) Leadership capability, in smart city development, traditional leadership skills alone may not suffice to address complex challenges. The rapidly changing technological landscape has shortened the development cycle due to the swift pace of transformative change and global volatility. Consequently, leaders must adapt, cultivate new skills and mindsets, harness creative potential, build networks, foster collaboration, and strengthen relationships both within and outside the organization, including stakeholders. 4)Technology and innovation management,

the core of smart city development is an information technology system that can be applied to the development of smart cities in diverse contexts. This includes transportation and traffic systems, electricity management systems, safety and security control systems, infrastructure monitoring and management systems, waste management systems, and government agency service systems, among others. As a result, residents experience a more convenient and secure way of life, increased access to crucial information, and a city that effectively utilizes technology to enhance service delivery and urban governance, and 5) Sustainable smart city development, the design of the smart city's success characteristics consists of 7 dimensions, namely: smart environment, smart energy, smart economy, smart living, smart governance, smart mobility or transportation, and smart people or smart citizen. This represents the characteristics of smart city development and the objectives for assessing smart city success in accordance with state policy.

Methodology

This research employs a mixed-method approach, primarily utilizing quantitative research and complementing it with qualitative research to enhance data quality.

1. Population and Sample Groups

1.1 The population for quantitative research comprises personnel from local government organizations in Thailand (Department of Local Administration, 2020), totaling 7,850 individuals. The population for qualitative research includes managerial and expert-level individuals associated with smart city development, representing both the public and private sectors.

1.2 The sample group in this research consists of personnel from local government organizations. The sample size is determined using the Yamane formula (1973) to ensure a higher level of research credibility. As a result, the researchers have selected a sample size of 400 individuals, meeting the specified criteria.

1.3 Key informants for this research are chosen through Criterion Sampling, following the methodology outlined by Miles and Huberman (1994). These informants are individuals who hold significance and relevance in the context of smart city development in Thailand. They are categorized into two groups: Group 1) Comprising key informants from government agencies responsible for formulating policies and strategies for local smart city development, with a total of 5 individuals. Group 2) Comprising key informants from private sector organizations actively engaged in providing smart city products and services, also totaling 5 individuals. All selected informants have given their consent for interviews, resulting in a combined total of 10 individuals participating in this study

2. Sampling Methodology

The sampling process adheres to the principles of Probability Sampling and utilizes both Stratified Random Sampling and Simple Random Sampling techniques. Each respondent represents a local government organization actively involved in driving smart city initiatives at the grassroots level. To facilitate quantitative data collection, the research team has designed and developed an online questionnaire using Google Forms. Data is collected via this platform and subsequently transmitted to the respective local government organizations in accordance with predefined sample proportions. A total of 400 samples were allocated, and the research team conducted follow-up phone calls to verify the responses received. In the end, a total of 395 responses were successfully obtained.

The researcher employed the following random sampling method:

1) Selection of Provinces: The researcher selected 76 provinces, excluding Bangkok, which is governed under a special administrative structure, to be included in the study. These provinces were chosen based on their population size and the presence of local government organizations relevant to the research.

2) Stratified Random Sampling: Within each province, a stratified random sampling method was used to categorize the local government organizations. Samples were then selected proportionally based on the number of organizations in each province.

3) Simple Random Sampling: To complete the sample of 400 respondents, a simple random sampling method was used. The names of local government organizations in each province were assigned numerical labels. Then, a random drawing was conducted to select respondents from these organizations, with one representative from each organization. These representatives are individuals with relevant experience in smart city development within their respective local government organizations, and they served as survey respondents.

3. Research Tools

In this study, the researchers designed a questionnaire that encompasses variables specified in the measurement index. The questionnaire comprises seven sections: Section 1 General information about the questionnaire respondents. Respondents can choose answers using a checklist and a rating scale to evaluate the general situation, Sections 2-6 Surveys focusing on local development for sustainable high-quality living in smart cities, addressing seven dimensions, and Section 7 Comments and suggestions (if applicable). For Sections 2 to 6, criteria and result interpretations were established based on Gleim and Gleim's (2003) scoring criteria. Respondents' opinions were converted into levels of agreement using a 5-point Likert scale (Likert, 1967).

Qualitative research data were gathered through in-depth interviews conducted individually. Semi-structured interviews were utilized for this purpose. The interviews use questionnaires that cover variables based on the measurement index. There are a total of 5 questions, each addressing the following key dimensions of smart city development:

1) What are the strategies for developing the smart city's infrastructure?

2) How should readiness for becoming a smart city be developed?

3) What strategies should be adopted to enhance the capabilities of local leaders?

4) What are the strategies for technology and innovation development and management?

5) How should local areas be developed for sustainable, high-quality living in a smart city?

The researchers performed an Item-Objective Congruence Index (IOC) analysis to evaluate the consistency between questionnaire items and objectives. Five qualified individuals assessed the congruence level. To assess the questionnaire's reliability, the researchers conducted a pilot test on local government personnel who were not part of the sample, totaling 30 sets. This aimed to determine the questionnaire's reliability using Cronbach's alpha coefficient analysis, resulting in reliability values for each dimension ranging between 0.976 - 0.986. The overall questionnaire reliability was determined to be 0.993, indicating a high level of reliability (Cronbach, 1970).

4. Data Analysis and Statistical Methods

4.1 Descriptive Statistics: Computed frequency, percentages, means, and standard deviations to describe respondent characteristics and variable distributions, explaining questionnaire respondent traits and variable nature. Conducted factor analysis to explore factors influencing sustainable high-quality living in smart cities. Respondent opinions were measured on a 5-level Likert scale (Likert, 1932), and mean values were interpreted following Gliem and Gliem's (2003) criteria for Objective 1.

The interpretation of scores based on the following criteria:

Average Score 4.21 - 5.00	=	Highest level
Average Score 3.41 - 4.20	=	High level
Average Score 2.61 - 3.40	=	Neutral level
Average Score 1.81 - 2.60	=	Low level
Average Score 1.00 - 1.80	=	Lowest level

4.2 Inferential Statistics: Utilized correlation coefficient and multiple regression analyses for Objective 2 and hypothesis testing.

4.3 Content Analysis: Analyzed data from in-depth individual interviews in the qualitative research component to describe factors influencing sustainable high-quality living in smart cities. This data helped build a conceptual framework, enhancing clarity in discussing quantitative research findings, and addressing Objective 3 in proposing guidelines for local development to achieve a sustainable improvement in the quality of life in smart cities.

Research Results

In terms of the general information about the respondents in the questionnaire, it was observed that the majority of the sampled individuals were males aged between 41 and 50 years, holding bachelor's degrees. They held positions as academic staff members in local government organizations at the sub-district level, serving populations of no more than 10,000 people, with their respective organizations maintaining an annual budget of less than 50 million Baht.

The research analysis results, presented in alignment with the research objectives, are detailed as follows:

The analysis outcomes regarding the level of local development for sustainable high-quality living in smart cities and the factors contributing to sustainable smart city development in Thailand are presented, including mean values and standard deviations.

Table 1 The level of Local Development for Sustainable Improvement Quality Living in Smart Cities

No.	The Level of Local Development for Sustainable	$\bar{x}$	S.D.	Level	Rank
1	Smart Environment	3.65	0.74	High	4
2	Smart Energy	3.50	0.74	High	7
3	Smart Economy	3.60	0.78	High	5
4	Smart Living	3.81	0.69	High	3
5	Smart Government	3.92	0.71	High	1
6	Smart Transportation	3.59	0.77	High	6
7	Smart Citizens	3.84	0.79	High	2
Overall		**3.70**	**0.64**	**High**	**-**

Table 1 shows that the overall level of success in sustainable smart city development is high ($\bar{x}$ = 3.70, S.D. = 0.64) When examining individual dimensions, it is evident that the dimension of smart government management has the highest level of success ($\bar{x}$ = 3.92, S.D. = 0.71), whereas the dimension of smart energy exhibits the lowest level of success ($\bar{x}$ = 3.50, S.D. = 0.74).

Table 2 The Level of Factors Contributing to Sustainable Local Development for Improving the Quality of Life in Smart Cities.

Factors	$\bar{x}$	S.D.	Level	Rank
Smart City Infrastructure	3.64	0.68	High	2
Readiness for Smart Cities	3.60	0.73	High	3
Local Leadership Potential	3.85	0.79	High	1
Technology and Innovation Management	3.49	0.71	High	4
Overall	**3.64**	**0.64**	**High**	**-**

Table 2 shows that, overall, factors contributing to sustainable local development for improving the quality of life in smart cities have a high level ($\bar{x}$ = 3.64, S.D. = 0.64) Specifically, the dimension of smart city infrastructure has the highest level ($\bar{x}$ = 3.85, S.D. = 0.79), while technology and innovation management exhibit the lowest level ($\bar{x}$ = 3.49, S.D. = 0.71).

2. Multiple Regression Analysis Results: Examining the Relationship between Smart City Infrastructure, Smart City Readiness, Local Leadership Potential, Technology, and Innovation Management with Sustainable Local Development for Quality of Life Improvement in Sustainable Smart Cities.

2.1 Smart city infrastructure significantly influences sustainable local development for improving the quality of life in sustainable smart cities, with a substantial coefficient of determination (R2 = .722, F = 103.70, β = .850, p = .000) at a statistical significance level of

.01. Specifically, smart city infrastructure, represented by green infrastructure, has the highest predictive power, with a regression coefficient of .314 (B = .314), followed by digital infrastructure with a regression coefficient of .268 (B = .268), and traditional infrastructure with a regression coefficient of .156 (B = .156).

$$Y = .814 + .314x_1 + .268x_2 + .156x_3$$

2.2 Smart city readiness significantly influences sustainable local development for improving the quality of life in sustainable smart cities, with a coefficient of determination (R2 = .651, F = 740.78, β = .807, p = .000) at a statistical significance level of .01. Specifically, community and citizen readiness have the highest predictive power, with a regression coefficient of .285 (B = .285), followed by organizational and personnel readiness, with a regression coefficient of .318 (B = .318), and resource readiness, with a regression coefficient of .109 (B = .109).

$$Y = 1.102 + .285x_1 + .318x_2 + .109x_3$$

2.3 The potential of local leadership influences sustainable local development for improving the quality of life in sustainable smart cities, with a coefficient of determination (R2 = .530, F = 448.79, β = .728, p = .000) at a statistical significance level of .01. The highest predictive power is attributed to the establishment of collaborative networks, with a regression coefficient of .352 (B = .352), followed by local leadership status, with a regression coefficient of .305 (B = .305), and the growth mindset framework, with a regression coefficient of .163 (B = .163).

$$Y = 1.226 + .352^{**}x_1 + .305^{**}x_2 + .163^{**}x_3$$

2.4 Technology and innovation management significantly influence sustainable local development for enhancing the quality of life in sustainable smart cities, with a coefficient of determination (R2 = .626, F = 666.85, β = .791, p = .000) at a statistical significance level of .01. Specifically, smart information and communication technology system management has the highest predictive power, with a regression coefficient of .303 (B = .303), followed by smart electrical network management, with a regression coefficient of .176 (B = .176), and city data management, with a regression coefficient of .231 (B = .231).

$$Y = 1.213 + .303x_1 + .176x_2 + .231x_3$$

Table 3 Results of Correlation Coefficient Analysis

Factors	(r)	Sig.	Level	Direction
Smart City Infrastructure	.851**	.000	Highest	Positive
Readiness for Smart Cities	.806**	.000	High	Positive
Technology and Innovation Management	.791**	.000	High	Positive
Local Leadership Potential	.727**	.000	High	Positive

** Significance level of .01

Table 3 reveals a positive and significant correlation among the factors contributing to sustainable local development for enhancing the quality of life in smart cities. The correlation coefficients between the independent and dependent variables range from 0.727 to 0.851, with statistical significance at the 0.01 level. In simpler terms, an improvement in smart city

infrastructure, higher smart city readiness, increased local leadership potential, and enhanced technology and innovation management all lead to a better quality of life in sustainable smart cities. Specifically, the strongest correlation exists between smart city infrastructure and the improvement of local quality of life (r = 0.851), followed by smart city readiness (r = 0.806), technology and innovation management (r = 0.791), and local leadership potential (r = 0.727).

Table 4 Analysis Results of Correlation Coefficients Considered by Dimension

Factors	(r)	Sig.	Level	Direction
Traditional Infrastructure	.752**	.000	Highest	Positive
Digital Infrastructure	.770**	.000	High	Positive
Green Infrastructure	.803**	.000	High	Positive
Organizational and Personnel Readiness	.757**	.000	High	Positive
Resource Readiness	.690**	.000	High	Positive
Community and Citizen Readiness	.767**	.000	High	Positive
Local Leadership	.677**	.000	High	Positive
Growth Mindset Framework	.566**	.000	Moderate	Positive
Collaborative Network	.696**	.000	High	Positive
Smart Grid Network	.691**	.000	High	Positive
City Data Platform Management	.756**	.000	High	Positive
ICT System Management	.771**	.000	High	Positive

** Significance level of .01

Table 4 shows that green infrastructure has the highest positive correlation (r = 0.803) with local development for a better quality of life in sustainable smart cities, followed by the Smart Information and Communication Technology system (ICT) (r = 0.771) and digital infrastructure (r = 0.770). Conversely, the growth mindset framework among local leaders exhibits the lowest correlation (r = 0.566) with local development. Encouraging the adoption of a growth mindset among local leaders in government organizations can enhance local development to enhance the quality of life in sustainable smart cities.

The results of the qualitative research data analysis from key informants are comprised of two groups: Group 1 includes key informants from government agency administrators who play a role in implementing policies for regional development towards smart cities, consisting of 5 individuals. Group 2 encompasses key informants from private sector agency administrators who are involved in smart city products and services, totaling 5 individuals. All informants have given their consent or permission for the interviews, making a total of 10 individuals. It was found that guidelines for developing smart city infrastructure that align with the population's needs include planning urban areas that are in line with the community's requirements, creating public spaces that are creative and beneficial for the public, such as parks, sports fields, libraries, and health and wellness facilities. Leveraging technology to improve city management and

development, such as smart traffic systems, sensor-based environmental control, convenient and efficient transportation, and using information technology to develop digital public service systems. The significance of having an efficient transportation system, promoting creative urbanization, emphasizing the development of infrastructure that focuses on distributing benefits and resource accessibility to reduce inequality and enhance the well-being of the population. It is crucial to adapt and flexibly adjust smart city systems in changing scenarios. Connecting to the internet and communication systems to enhance data exchange between different smart city systems and the importance of creating an environment that efficiently supports people's work and lifestyles.

Discussion

Regarding research objective 1, the study revealed that the factors influencing sustainable local development for enhancing the quality of life in smart cities, overall, are at a high level. Local leadership potential has the highest average value, followed by smart city infrastructure, smart city readiness, and technology and innovation management, which have the lowest average values.

The level of sustainable local development aimed at improving the quality of life in smart cities is notably high. This assessment encompasses seven key dimensions, including smart environment, smart energy, smart economy, smart living, smart governance, smart citizens, and smart transportation. These findings are consistent with prior research (Dameri, 2017; Theeramonpraneet, 2023; Jumnong & Lowatcharin, 2022) that underscores the integration of information and communication technology, coupled with urban planning and design, as instrumental in enhancing the effectiveness of governmental systems and fostering innovation in tackling urban complexities. The success of smart governance is characterized by unwavering commitment to ethical practices, transparency in operations, public convenience, and the accessibility of government information through diverse channels. The array of services offered is diverse, with ongoing enhancements in operational efficiency, along with the application of innovative service strategies to make government services more accessible, efficient, and comprehensive (Giffinger et al., 2007).

The accomplishments in the realm of smart citizens are apparent through the collaborative endeavors of diverse social groups, the cultivation of a creative environment for the public, the promotion of communal learning, and the empowerment of citizens with knowledge to harness technology for improved livelihoods (Giffinger et al., 2007). In terms of achievements in smart living, there is ample telephone and internet coverage, spaces designed to contribute to the well-being of the populace, and advancements in safety measures, such as widespread closed-circuit camera installations. The community benefits from disaster alert systems and a range of means for hazard monitoring and warning. Moreover, convenient educational facilities, technology, and learning tools are readily accessible (Jensantikul, 2020).

Success in the realm of the smart environment is realized by leveraging technology for waste management, disposal, and recycling. Effective management of green spaces adheres to established standards to mitigate carbon dioxide emissions. Additionally, technology is instrumental in water quality management, wastewater treatment, and drainage systems. Community engagement in natural resource conservation is evident, and efficient technology is deployed for disaster monitoring (Giffinger et al., 2007).

Success in the realm of smart economy involves developing the city as a business hub through innovation and creative thinking, utilizing technology to support the growth of the local economy (Jensantikul, 2020; Raksapol & Phosing, 2021). Success in smart transportation entails connecting transportation networks within the area through diverse and accessible modes of transportation. Effective management of public transportation systems is achieved through the application of various technologies, incorporating environmentally friendly vehicles, and establishing interconnectivity in transportation networks via information technology (Sutthi-amporn et al., 2022). Success in smart energy involves advocating for reduced electricity consumption, raising awareness, promoting the use of alternative energy sources, and applying information technology to develop community energy systems (Raksapol & Phosing, 2021).

In research objective 2, it becomes evident that factors such as smart city infrastructure, local leadership potential, smart city readiness, and technology and innovation management exert a significantly positive influence on sustainable local development, ultimately enhancing the quality of life in sustainable smart cities in Thailand. These factors exhibit a strong statistical correlation, with a significance level of 0.01. This correlation underscores that the presence of smart city infrastructure, preparedness for smart city development, effective local leadership, and enhanced technology and innovation management lead to a higher degree of sustainable development in Thailand's smart cities.

Conversely, the growth mindset framework among local leaders demonstrates the weakest positive correlation with the success of sustainable smart city development in Thailand. This observation aligns with the findings of Theeramonpraneet's (2023) research, emphasizing the transition to smart cities through the utilization of technological tools to enhance the operational efficiency of the public sector. This transformation involves streamlining administrative processes in public service delivery, expediting services, conserving energy, optimizing resource utilization, and delivering comprehensive benefits to the local population. Such development initiatives aim to enhance the local population's quality of life across various dimensions while adapting to the available human resources, budget constraints, local context, and indigenous knowledge to effectively harness technology and innovation.

Furthermore, the strategy for smart city development within local municipalities and government organizations extends beyond mere reliance on central policies. It necessitates the cultivation of innovative solutions for local development using digital technology to facilitate the emergence of new developmental frameworks within the legal boundaries defined by local governments. In this context, local leaders must possess a visionary perspective on technological advancement and foster a culture of continuous learning among their personnel. This cultivation of digital technology expertise enables the creation of innovations across diverse domains, thereby ensuring maximum benefits for the local population.

Research objective 3 aims to propose strategies for local development that enhance the quality of life in sustainable smart cities. It commences with an analysis and assessment of the city's readiness for development, encompassing infrastructure, budget, and local leadership. Clear objectives and development areas are delineated. Subsequently, the focus shifts to planning and developing the city's infrastructure, including the establishment of a secure data collection and management system. Additionally, data custodians are designated to ensure orderly data access and management.

Prioritizing sustainable and efficient city development is of paramount importance. This entails giving due emphasis to existing infrastructure and transitioning toward digital and green infrastructure to facilitate sustainable and efficient urban growth. Multidimensional preparedness is imperative, including the equipping of government personnel with digital skills and knowledge of smart city technologies. It also entails developing personnel capable of driving smart city policies through appropriate digital skills.

Creating a thriving and well-connected urban environment in a smart city necessitates a focus on services and urban development that align with the needs of the population. This endeavor aims to establish a sustainable city for the future. Local leaders must possess the knowledge and digital communication skills required for smart city development. They assume a pivotal role in shaping policies and legislation pertinent to smart city development. Furthermore, fostering a positive attitude toward adapting to smart cities is crucial, along with the establishment of collaborative networks with relevant agencies to propel smart city development.

Highlighting the use of technology and innovation to foster sustainability across economic, social, environmental, and quality of life dimensions is paramount. Prioritizing the application of technology and innovation will yield sustainable economic growth and enhance the quality of life for the local population. Specifically, efficient city data management assists in decision-making and problem-solving, thereby enhancing administrative efficiency. Establishing a central data repository that consolidates data from various agencies facilitates efficient data management and processing.

Furthermore, the development of an ICT system that connects resources and services within the city enhances citizen-friendly service delivery and supports communication and information sharing between government agencies and the public.

Conclusions

Based on the findings of earlier quantitative and qualitative research, the researchers have proposed strategies for local development to address research objective 3. These strategies are aimed at enhancing the quality of life in sustainable smart cities and encompass several key aspects:

1) Community and Citizen Needs: Prioritize the development of an efficient transportation system, foster a culture of creativity, and build infrastructure that emphasizes the equitable distribution of benefits and improved resource accessibility. Utilize technology to enhance the daily lives of all city residents.

2) Environmental Considerations: Create environmentally friendly living conditions to minimize environmental impact and enhance the value of local resources. Promote awareness and understanding of smart cities among both public and private sector personnel.

3) Education and Access: Strengthen knowledge and expertise in smart city-related fields, especially among local leaders and personnel. Establish educational systems and ensure access to information to facilitate the sustainable use of natural resources. Foster collaborative and cooperative communities for local decision-making and problem-solving.

The long-term outcomes of sustainable smart city development are expected to result in an enhanced quality of life and increased happiness among residents in growing and evolving cities.

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The model of guidelines for local development in a sustainable smart city, depicted in Figure 1, positions Smart City Infrastructure as the foundational element at the bottom. This infrastructure serves as the cornerstone for advancing local development towards a sustainable quality of life in smart cities. Smart City Readiness and Technology and Innovation Management are positioned in the middle, while Local Leadership Potential assumes a central role in driving local development towards a high-level, sustainable quality of life in smart cities, as illustrated in the model.

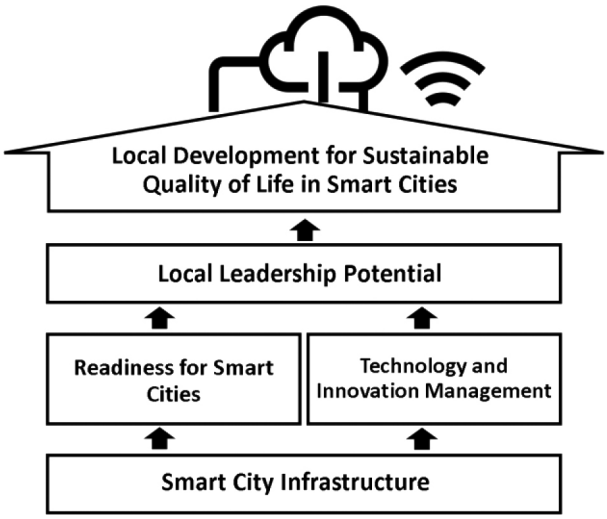

Figure 2 The Guidelines for Local Development in a Sustainable Smart City

The study, as depicted in Figure 2, concludes that the key success factors for local development aimed at improving the quality of life in sustainable smart cities in Thailand encompass Smart City Management, Leadership Potential, Smart City Readiness, and Smart City Infrastructure. These factors are harmoniously integrated, leveraging cooperation from the public sector, private sector, civil society, education sector, and the general public to propel the most sustainable and efficient development of smart cities in Thailand. The guidelines for sustainable smart city development in Thailand revolve around Smart Government Management, which employs innovative services to offer convenience to citizens and stakeholders, ensuring convenient access to comprehensive public services while upholding the principles of transparency in operations and continuous improvement. The primary objective is to establish an informed smart city capable of effectively harnessing technology for the well-being of its residents, nurturing a high quality of life. Infrastructure development includes bolstering safety through disaster monitoring, intelligent water management, waste and pollution control, air quality management, and the creation of green spaces to foster an environmentally friendly smart environment. Transportation is seamlessly interconnected within the area through various transportation modes, and urban and community development aligns with local identities to bolster innovative and creative economic growth. Particular emphasis is placed on the development of smart energy through the utilization of renewable energy sources to ensure the long-term sustainability of the smart city.

Recommendations

1. Applying Research Findings

Based on the research findings, several recommendations emerge for implementing smart city development in diverse dimensions to foster long-term smart city growth and improve the well-being of the population. Critical success factors for driving smart city development encompass efficient technology and innovation management, intelligent technology application across various smart city domains such as transportation and traffic systems, smart energy management, security and safety control systems, status monitoring, infrastructure management systems, waste management, and public service delivery. Organizations should undergo digital transformation, integrating technology into every facet of their operations and establishing forward-looking growth objectives to adapt to the digital era effectively. Furthermore, preparing communities and citizens in smart cities is crucial, with a focus on smart city infrastructure development, secure data storage and management, and sustainable management practices.

2. Academic Research Recommendations

Sustainable smart city development offers a vision for propelling the nation forward, necessitating the appropriate adoption of technology and innovation to generate economic and social value across various sectors, including industry, agriculture, and services. This approach creates a value chain across all sectors, enhancing the quality of life for the populace. Leveraging smart technologies to attain efficient, precise, and effective production processes while fostering seamless collaboration among various smart technologies ultimately improves the quality of life. Developing smart city infrastructure should prioritize providing easy access to public services that are convenient, rapid, and secure, all while reducing environmental impact, minimizing energy consumption, and simultaneously stimulating economic growth.

3. Policy Recommendations

The development of smart cities in Thailand should be an inclusive, collaborative process involving both public and private sector entities. It should also account for technological advancements and societal changes to achieve sustainable and advantageous development for urban and rural populations alike. Smart city development in Thailand must align with the goals and requirements of the population.

4. Future Research Recommendations

Subsequent research endeavors should concentrate on the study of leading smart cities as templates for smart city development in Thailand, offering insights into the promotion of smart cities in diverse provinces throughout the country. Furthermore, conducting more comprehensive data analysis employing Structural Equation Modeling (SEM) can augment our comprehension of smart city development factors and their interrelationships.

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The Effects of the Occurrence of Aviation Accidents on Air Passengers

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Abstract

This paper examines the impact of aviation accidents and incidents on the number of passengers carried by air transport. A fixed-effect panel regression model is used to analyze a dataset of 169 countries from 1970 to 2020. The study finds that aviation incidents positively and significantly affect passenger numbers. However, aviation accidents hurt the number of air passengers. In addition, fatalities in commercial and all flights hurt passenger numbers. These findings have important implications for policymakers and aviation industry professionals seeking to understand and mitigate the impact of aviation accidents and incidents on passengers, such as prompt and transparent communication, enhanced safety standards as well and compensation and support.

Keywords: Aviation Accidents, Aviation Incidents, Aviation Fatalities

Introduction

In every aviation accident, a lesson is taught, and flying is made safer. Despite better aeronautical technology and weather forecasting equipment, air accidents still occur. Although aircraft are proven to be the safest among all modes of transport, they still tend to cause significant social panic and influence consumer behavior. Based on a study conducted by Renn (1998) on the role of risk perception in risk management, he concluded that a risk that kills a few people at a time is preferred over a risk that kills many people at once. Although air crashes are rare, passengers are still more likely to avoid air travel after an accident since every crash event is nearly always catastrophic.

From a global perspective, a fatal air accident significantly impacts the passenger capacity or the number of passengers. One of the fatal accidents in recent years is China Eastern Airlines Flight 5735, which happened on March 21, 2022. The passenger capacity of civil aviation in March was 15.37 million people, based on Figure 1. The passenger capacity in April was 7.87 million people, a 7.5 million decrease after the accident

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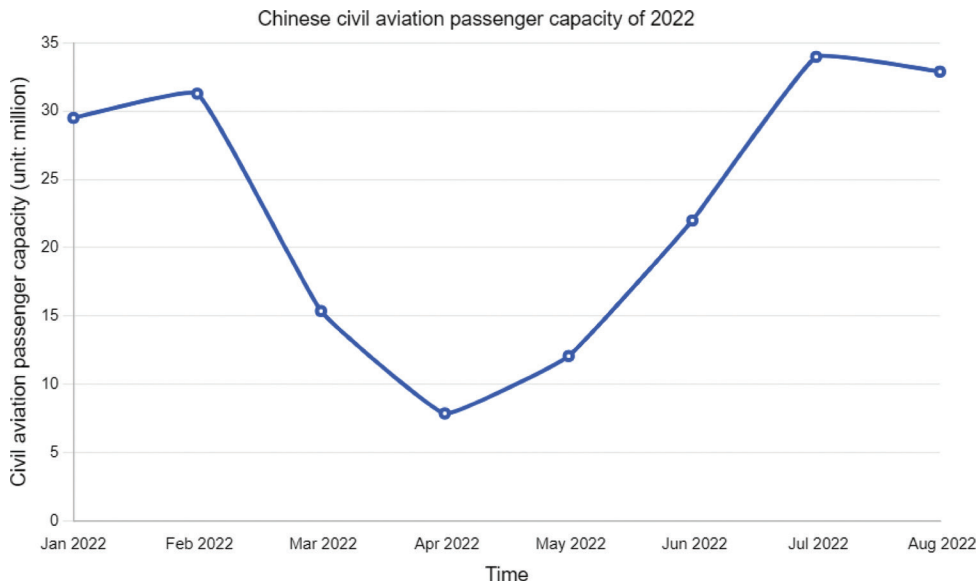

Figure 1 Chinese Civil Aviation Passenger Capacity of 2022

This study focuses on the number of air passengers in 169 countries, including countries with frequent air accidents, such as the United States, the Russian Federation, the United Kingdom, Germany, France, and China. Based on the data provided by the ASN Aviation Safety Database, since 1919, 507 aviation accidents have occurred in China, of which 128 were fatal. In the United Kingdom, 268 out of 836 accidents were fatal. In Germany, 166 out of 513 accidents were fatal. France has 197 fatal accidents out of 548. The country with the most aviation accidents was the United States, with 4,330 accidents, 1,669 of which were fatal.

An indirect relationship between aviation accidents and the number of air passengers has been indicated by previous research. Many papers found that passengers' risk perception or public perception was significantly impacted by aviation accidents (Lirn & Sheu, 2009); Fan et al., (2019); Blangé (2016); Li et al., (2015); Li et al., (2018)). These perceptions indirectly affect the travel mode choice, attitude towards an airline, or attitude towards traveling to a country. The change in consumer behavior eventually affects the number of passengers carried by air.

Based on a study conducted by İnan and Gökmen (2021) on the factors affecting air transportation passenger numbers, GDP per capita was chosen as the control variable in this research. Since people are still in a worldwide COVID-19 pandemic, and most governments have implemented travel restrictions in 2020, government COVID-19 restrictions were included as another control variable.

This research uses regression models to analyze the effects of aviation incidents and accidents on the number of passengers carried by air transport. Specifically, the fixed effect panel data regression model is used to analyze the effects of the intensive margin variables "number of aviation incidents" and "number of aviation accidents" and two control variables, "government COVID-19 restrictions" and "GDP per capita", on the number of air passengers. Furthermore, a fixed effect panel regression model is conducted to examine the impact of accidents to analyze the relationship between fatalities and air passenger numbers. The data were obtained from The World Bank, ASN Aviation Safety Database, and Our World in Data Website.

Since most news media focus on commercial flight accidents, not all general or military aviation accidents can make headlines due to limited public interest, access, and national security concerns. Therefore, this research separates the data on aviation incidents and accidents into "commercial" and "general and military aviation" categories.

Given that airline accidents cause a certain amount of social panic when there have been some casualties among passengers and that many studies have proven that airline accidents have an impact on passengers' risk perceptions, which in turn affects their behavior, it is expected that the number of air incidents, air accidents and fatalities from commercial flights will have a negative impact on the number of air passengers. No impact is expected for air incidents, air accidents, and fatalities from "general and military aviation" flights due to the lack of media exposure.

Since the study focuses on country-level data, the results will be more beneficial for the government rather than the airline companies. Based on the findings, the aviation regulations can be modified, or the government can implement more regulations to help the country's aviation industry recover from the impact of a recent air accident and restore people's faith in the aviation industry.

Literature Review

Many different pieces of research have been conducted on the impact of aviation accidents. In this part, the impact of aviation accidents on the number of air passengers will be shown with real examples. Passenger behavior and travel mode choice directly impact the number of air passengers. Previous research on how aviation accidents affect passenger behavior and their travel mode choice will also be presented, more specifically, how passenger behavior and travel mode choice are affected by aviation accidents.

Background

Fatal aviation accidents have occurred worldwide, and each time after the accident, there has always been a decrease in the number of passengers traveling by air. On July 23, 2014, TransAsia Airways Flight 222 crashed into buildings while approaching land in bad weather at Magong Airport. Among the 58 people on board, only ten survived. The number of passengers carried and the load factor in August 2014 decreased following the accident, based on the passenger number and the load factor (passenger/seat) provided by the Civil Aeronautics Administration and MOTC (Li et al., 2015) in Figure 2.

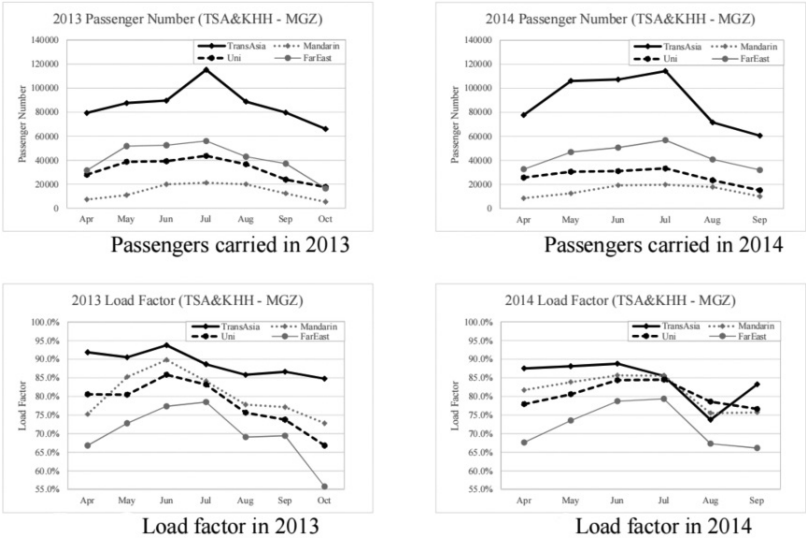

Figure 2 The Passenger Number and the Load Factor of TransAsia in 2013 and 2014

On March 8, 2014, Malaysia Airlines Flight 370 disappeared while flying from Kuala Lumpur International Airport in Malaysia to its planned destination, Beijing Capital International Airport. After the three-month disappearance of MH370, Malaysia Airlines said the dramatic impact of MH370 resulted in its worst quarterly earnings in more than two years. Passenger traffic fell sharply. The disappearance of MH370 caused high cancellations and a decline in long-haul travel. Bookings from China declined by 50-60% (most passengers on MH370 were Chinese). This can be shown by the apparent drop in the passenger load factor of Malaysian Airlines in 2014 (Figure 3).

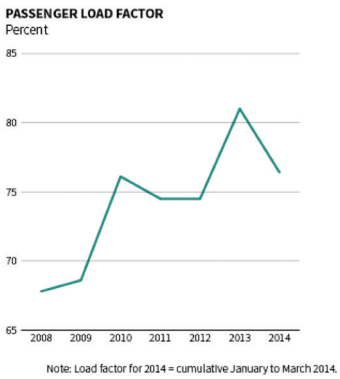

Figure 3 The Passenger Load Factor of Malaysian Airlines: 2008-2014

Previous Research

Previous research has studied the impact of aviation accidents on passenger behavior. Most researchers find that air accidents impact passenger risk perception, and the change in passenger behavior can affect the airline company and the country's tourist industry. A study led by Lirn and Sheu (2009) found that trip time, house, household income, and worry about flight safety significantly influenced passengers' preferred transportation mode choice between surface and air transport mode. Another study by Fan et al. (2019) showed that the perceived

risk of flying the airline negatively affects the attitude toward flying the airline. Furthermore, the perceived risk of flying the airline could indirectly affect the attitude toward visiting the country (Fan et al., 2019). Research conducted by Blangé (2016) showed that safety perception impacts passengers' choice of flight and willingness to pay. Two studies led by Li et al. (2015) and Li et al. (2018) showed that airline safety perception contributes largely to behavioral intention, and air accidents also strongly impact public perception. Both studies indicated that the impact of aviation accidents would decrease over time, but if another accident occurs within a short period, the impact will deteriorate again.

Related research on this subject suggests that other factors may influence the number of air passengers. A study by İnan and Gökmen (2021) found a significant relationship between air transport passenger numbers and GDP and HDI. However, the relationships between air transport passenger numbers with the total population and geographic location are only significant in some countries.

Literature Review Conclusion

The literature review revealed that most of the existing research focused on the influence of a single air accident, air accidents on a type of airplane, air accidents of an airline, or air accidents in a certain region. However, there needs to be more research on the influence of aviation accidents on air transportation for the overall countries. In particular, there needs to be more research on the effect of aviation accidents on the number of air passengers. In this study, the data on the number of incidents, accidents, and fatalities were classified into two groups based on the nature of the flight: "commercial flights" and "general and military aviation flights" (Douglas, 2021). The different effects of aviation accidents on the number of air passengers in these two flight groups were explored through regression model analysis for panel data, making this study innovative.

Methodology

A fixed effect panel regression analysis was conducted on the number of air passengers in 169 countries from 1970 to 2020 to investigate the impact of aviation incidents and accidents on air passengers.

Conceptual Framework

Figures 4 and 5 depict the frameworks of the current study based on the literature review. The framework in 3.1 illustrates the hypothesized relationships between the number of aviation incidents and accidents, government COVID restrictions, GDP per capita, and air transport passengers.

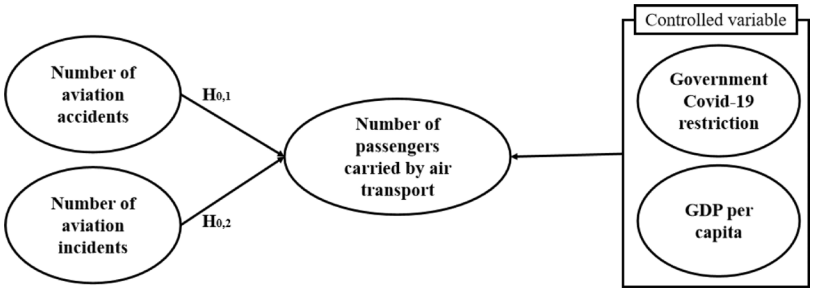

Figure 4 Conceptual Framework 1

On the other hand, the framework in 5 outlines the hypothesized relationships between the number of fatalities in air accidents, government COVID restrictions, GDP per capita, and the number of passengers carried by air transport.

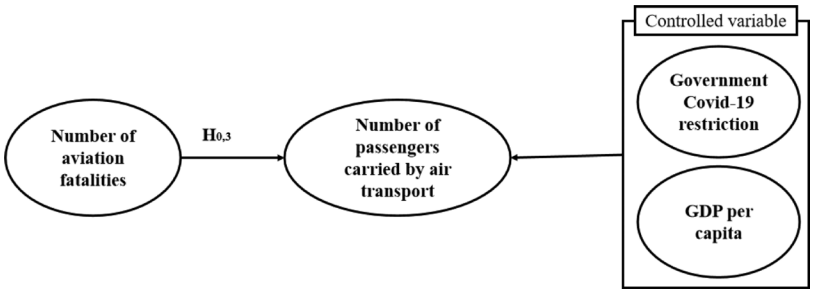

Figure 5 Conceptual Framework 2

The three main null hypotheses in frameworks 1 and 2 aim to estimate the effects of aviation accidents on the number of air passengers:

H0, 1: The number of aviation accidents does not positively influence the number of air passengers.

H0, 2: The number of aviation incidences does not positively influence the number of air passengers.

H0, 3: The number of fatalities does not positively influence the number of air passengers. These will be tested against the alternative hypotheses H1, 1; H1, 2; and H1, 3.

H1, 1: The number of aviation accidents does have a positive influence on the number of air passengers.

H1, 2: The number of aviation incidents does have a positive influence on the number of air passengers.

H1, 3: The number of fatalities does have a positive influence on the number of air passengers.

The Data

This research divided the factor of interest, "aviation incidents and accidents", into two cases. Case 1 is a frequency variable, the number of aviation accidents, where accidents are defined as occurrences in which a passenger, crew member, or person on the ground is fatally injured. Case 2 is a frequency variable, which is the number of aviation incidents, where incidents are defined as any occurrence, other than an accident, that is related to the operation of an aircraft and affects the safety of the operation. The data for both cases was provided by the ASN Aviation

Safety Database (Ranter, n.d.). The dependent variable, "Air passenger number", and the control variable, "GDP per Capita (Current US$)", were provided by The World Bank (World Bank Open Data, n.d.-a).

Since the worldwide COVID-19 pandemic has led to different travel restrictions in different countries, we believe that the last control variable, «government COVID-19 restriction», should be a dummy variable to quantify the restrictions. If the country's government implements the COVID-19 travel restriction, the value will be 1; if there is no implementation, the value will be 0. All the COVID-19 travel restrictions information will be obtained from the Our World in Data Website (Mathieu, 2020).

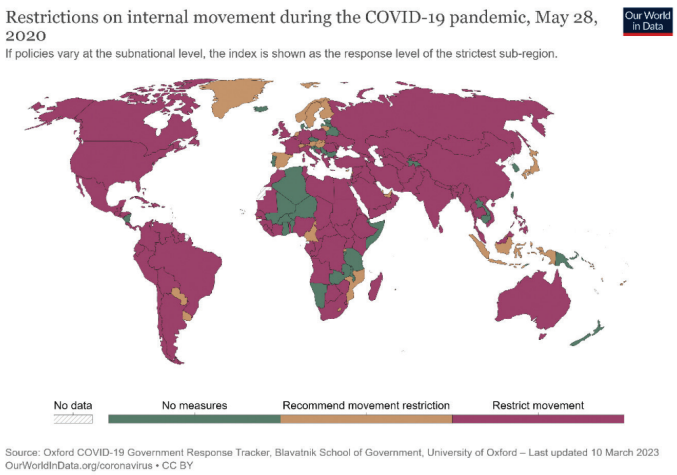

Figure 6 Restrictions on Internal Movement (May 28, 2020)

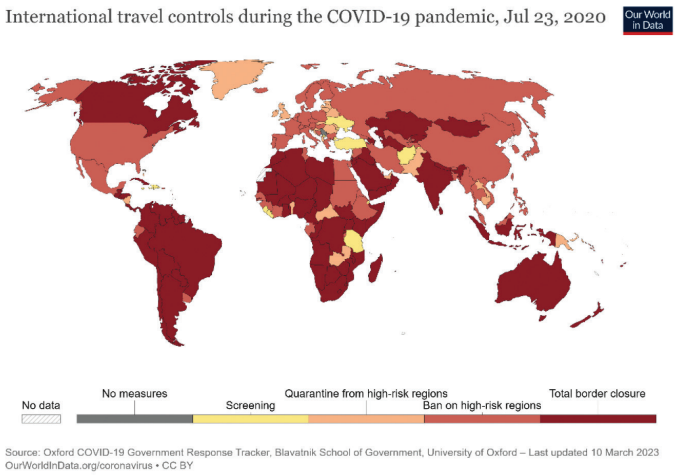

Figure 7 International Travel Controls (July 23, 2020)

All the data used in this study are annual data from the 169 selected countries from 1970 to 2020. The data on the number of incidents, accidents, and fatalities were classified into two groups based on the nature of the flight "commercial flights and general and military aviation flights" (Douglas, 2021). Commercial flights include domestic or international scheduled passenger flights, domestic or international non-scheduled passenger flights, cargo flights, private flights,

and executive and illegal flights. General and military aviation flights include military, ferry/positioning, test, training, official state, survey/research, parachuting, agricultural, demonstration, firefighting, aerial work (calibration, photo), and ambulance.

The selected 169 countries were classified into four groups based on their income level. According to The World Bank, countries with an income of $1,085 or less are considered "Low-income economies". An income level from $1,086 to $4,255 is considered in the group of "Lower-middle-income economies". When a country has an income level from $4,256 to $13,205, it is considered an "Upper-middle-income economy". When the income level reaches $13,205 or more, the countries are considered "High-income economies" (World Bank Country and Lending Groups, n.d.). These groupings are shown in the Summary statistics in Tables 1 to Table 4 below.

Table 1 Summary Statistics

Groups	Average Air Passengers	Average GDP Per capita (Current US$)
Low-Income Economies	354,551.71	556.21
Lower Middle-Income Economies	3,244,240.94	1,249.20
Upper Middle-Income Economies	9,698,986.29	3,741.45
High-Income Economies	24,278,517.82	21,271.06

Table 2 Summary Aviation Statistics (Commercial Flights)

Groups	Average Aviation Incidents	Average Aviation accidents	Average fatalities
Low-Income Economies	0.29	0.13	2.13
Lower Middle-Income Economies	0.45	0.25	6.59
Upper Middle-Income Economies	0.70	0.39	8.44
High-Income Economies	1.03	0.34	7.60

Table 3 Summary Aviation Statistics (General and Military Aviation Flights)

Groups	Average Aviation Incidents	Average Aviation Accidents	Average Fatalities
Low-Income Economies	0.08	0.09	1.50
Lower-Middle-Income economies	0.11	0.13	2.36
Upper-Middle Income Economies	0.20	0.21	1.84
High-Income Economies	0.27	0.24	1.36

Table 4 Summary Statistics (All Flights)

Groups	Average aviation incidents	Average aviation accidents	Average fatalities
Low-Income Economies	0.37	0.22	3.63
Lower-Middle-Income Economies	0.56	0.38	8.95
Upper-Middle Income Economies	0.90	0.60	10.28
High-Income Economies	1.30	0.58	8.96

The Model

The fixed effect panel data regression model used to examine or estimate the effects of the number of incidents and accidents for commercial flights data, general and military aviation flights data, and all flight data is shown below:

$$Passenger_{it} = \beta_0 + \beta_1 Incidents_{it} + \beta_2 Accidents_{it} + \gamma X_{it} + CountryFE + TimeFE + \varepsilon_{it}$$

i: country, i=1, 2, 3, …169 t: time, t=1970, 1971, 1972, …,2020

Where:

Passenger is the air passenger number in a million.

Incidents are the number of aviation incidents.

Accidents are the number of aviation accidents.

X_{it} are the control variables, which include:

1) GDP per capita in thousand for unit (country) i at time t.

2) Government COVID restriction for unit (country) i at time t.

The fixed effect panel data regression is also used to estimate the impact of the number of fatalities in air accidents for commercial flights data, general and military aviation flights data, and all flight data is shown below:

$$Passenger_{it} = \beta_0 + \beta_1 Incidents_{it} + \gamma X_{it} + CountryFE + TimeFE + \varepsilon_{it}$$

i: country, i=1, 2, 3, …169 t: time, t=1970, 1971, 1972, …,2020

Where:

Passenger is the air passenger number in a million.

Fatalities are the number of fatalities in aviation accidents.

X_{it} are the control variables, which include:

1) GDP per capita in thousand for unit (country) i at time t.

2) Government COVID restriction for the unit (country) i at time t.

Results and Discussion

In this study, a fixed effect panel regression analysis was conducted to examine the relationship between aviation incidents, aviation accidents, and fatalities with air passengers using a dataset of 169 countries over a thirty-one-year period. The fixed effects were used to control for unobserved heterogeneity across countries and time. Since the FE model already controls for the impact of COVID restrictions, the dummy variable COVID restriction' is omitted in the FE analysis.

Results of the Impact of Aviation Incidents and Accidents

Table 5 Aviation Incidents and Aviation Accidents

List	Commercial (OLS)	Commercial (FE)	General and Military Aviation (OLS)	General and Military Aviation (FE)	All (OLS)	All (FE)
Incidents	14.79* (3.23)	4.35* (1.83)	35.32* (14.22)	7.29 (4.66)	12.46* (2.73)	3.98* (1.43)
Accidents	1.80 (1.61)	-9.49* (4.23)	13.34* (2.63)	-12.11* (5.84)	0.51 (1.68)	-8.63* (3.15)
GDP Per Capita (Thousand)	0.67* (0.18)	0.72* (0.32)	0.83* (0.25)	0.75* (0.34)	0.64* (0.17)	0.67* (0.28)
COVID Restriction	-4.89 (5.32)	- -	-3.39 (3.94)	- -	-4.47 (5.12)	- -
Country FE	NO	YES	NO	YES	NO	YES
Time FE	NO	YES	NO	YES	NO	YES
Adjusted R Square	0.61	0.81	0.51	0.80	0.64	0.82

Dependent variable: Air passenger number (million)

Robust standard errors clustered by country in parentheses.

* Significant at 5%

The OLS results show that aviation incidents and GDP per capita significantly impact the number of air passengers for both commercial and all flights. For general and military flights, the air passenger number is affected by incidents, accidents, and GDP per capita. The FE regression results in Table 5 revealed that for both commercial and all flights, the passenger numbers were significantly affected by aviation incidents, accidents, and GDP per capita. However, for general and military aviation flights, the passenger numbers were significantly affected by only aviation accidents and GDP per capita.

For commercial flights, the coefficients from the FE regression revealed that when the number of incidents increases by 1, the number of passengers increases by 4.34 million. When the number of accidents increases by 1, the number of passengers decreases by 9.49 million, and when GDP per capita increases by one thousand US dollars, the number of passengers increases by 0.72 million.

For general and military flights, the coefficients from the FE results indicate that an increase in the number of accidents by one leads to a decrease in the number of passengers by 12.11 million. An increase in GDP per capita by one thousand US dollars increases the number of passengers by 0.75 million.

For all flights, the coefficients obtained from the FE regression show that an increase of one incident increases to 3.98 million passengers. In contrast, the coefficients for accidents suggest that when the number of accidents increases by 1, the air passenger number decreases by 8.63 million. The coefficients for GDP per capita demonstrate that an increase of one thousand US dollars in GDP per capita leads to an increase of 0.67 million passengers.

Overall, a lower passenger number over time is associated with more accidents, as indicated by the negative coefficient in Table 5. This finding is consistent with previous research on the relationship between accidents and passenger numbers. However, the positive relationship between incidents and passenger numbers is unexpected.

Discussion of the Positive Impact of Aviation Incidents on Passenger Number

The positive coefficient of aviation incidents for all three fixed effect regression results might be due to the characteristics of aviation incidents. Aviation incidents in this report refer to any events during a flight that may pose a safety risk but do not harm passengers. For example, an incident could include turbulence, a bird strike, or a minor technical issue. These incidents do not typically receive widespread media coverage and are often seen as routine aspects of air travel. However, in some cases, incidents can sometimes generate media coverage that portrays the airline's response to the incident in a positive light. Suppose the airline is seen as handling the incident competently and professionally. In that case, it can increase confidence in the airline's safety and reliability, leading to an increase in passenger numbers.

Since the actual frequency of incidents that occurred in a given year and the country were used instead of the percentage of incidents that occurred out of the total number of flights, it is also possible that the positive effect of incidents is due to the limitation of data. The data used needs to be more adequate in addressing the indigeneity problem, leading to overestimating the incident's outcome. Moreover, it is widely observed that countries with higher income levels tend to have more flights, and not only do more flights mean more passengers and a higher chance for incidents to occur.

Discussion of the More Significant Impact of Aviation Accidents from General and Military Aviation

Table 5 shows the coefficient for general and military aviation accidents as 12.11, while the coefficient for accidents from commercial flights is -9.49. It can be inferred that accidents from general and military aviation have a more significant impact on the number of air passengers. This result is unexpected since commercial flights are the preferred mode of travel for most people. However, the higher coefficient for general and military aviation accidents can be attributed to several reasons.

First, aviation accidents involving high-profile people tend to receive more media attention, which can lead to increased public fear and uncertainty about air travel as a whole. This fear can discourage potential passengers from choosing air travel, even if they plan to fly on a commercial airline. One example of a devastating aviation accident is the Smolensk air disaster that occurred on April 10, 2010. The crash involved Polish Air Force Flight 101 near the Russian city of Smolensk, resulting in the loss of all 96 individuals on board. Notably, among the victims were prominent Polish figures such as President Lech Kaczyński, former President Ryszard Kaczorowski, senior military officials, government officials, members of Parliament, religious leaders, and family members of victims of the Katyn massacre.

Second, general and military aviation accidents may lead to changes in regulations or safety procedures that affect the entire aviation industry. For example, suppose an investigation into a military aircraft crash reveals a particular engine or instrument flaw. In that case, all aircraft using that equipment may be subject to new safety measures or restrictions. This could result in delays or cancellations for commercial flights using the same equipment, reducing the number of passengers carried.

Third, general and military aviation crashes are more likely to occur at smaller airports, which may not have the same resources and infrastructure as larger commercial airports. This can lead to disruptions in airport operations, including closures of runways and terminals, flight delays, and cancellations. These disruptions can cause a ripple effect throughout the aviation system, with passengers being rerouted or forced to cancel their travel plans altogether.

Results of the Impact of Fatalities

Table 6 Fatalities in Aviation Accidents

List	Commercial (OLS)	Commercial (FE)	General and Military Aviation (OLS)	General and Military Aviation (FE)	All (OLS)	All (FE)
Fatalities	0.24*	-0.03*	0.78	-0.22	0.25*	-0.04*
	(0.05)	(0.01)	(0.61)	(0.20)	(0.06)	(0.01)
GDP Per Capita (Thousand)	1.18	0.84	1.21	0.83	1.19	0.84
	(0.60)	(0.45)	(0.64)	(0.44)	(0.60)	(0.45)
Country FE	NO	YES	NO	YES	NO	YES
Time FE	NO	YES	NO	YES	NO	YES
Adjusted R Square	0.14	0.78	0.11	0.79	0.15	0.79

Dependent variable: Air passenger number (million)
Robust standard errors clustered by country in parentheses.
* Significant at 5%

In Table 6, it was shown by both OLS results and FE results that the number of passengers was significantly affected by the number of fatalities, but only for commercial flights and all flights. In all three data groups, GDP per capita was found to be an insignificant variable that affects air passenger numbers.

The coefficient from the FE regression demonstrated that for commercial flights when the number of fatalities increased by one, the number of passengers decreased by 0.03 million. For all flights, the coefficient of fatalities obtained from the FE regression suggested that an increase of one in fatalities resulted in a decrease of 0.04 million air passengers.

Overall, a lower passenger number over time is associated with more fatalities in commercial and all accidents, as indicated by the negative coefficient in Table 6.

Conclusions

The study conducted a fixed-effect panel regression analysis to examine the relationship between aviation incidents, accidents, and fatalities with air passenger numbers, using a dataset of 169 countries over 31 years. The fixed effects were used to control for unobserved heterogeneity across countries and time. The results revealed that passenger numbers were significantly affected by aviation incidents, accidents, and GDP per capita for commercial and all flights. Both aviation incidents and GDP per capita have a positive impact on air passenger numbers. Aviation accidents are the only significant variable that affects passenger numbers negatively. For general and military flights, only aviation accidents and GDP per capita are significant variables that affect air passenger numbers.

The study also found that fatalities in commercial and all flights significantly affected air passenger numbers. Lower passenger number over time is associated with higher fatalities in aviation accidents.

Overall, the study found that aviation incidents and GDP per capita positively impact air passenger numbers in commercial and all flights. Meanwhile, aviation accidents have a negative impact on all three flight groups. Additionally, fatalities in commercial and all flights have a negative impact on passenger numbers.

Policy Recommendation

Since the results suggest that only aviation accidents have a negative impact on passenger numbers, the recommended policies in this section will solely benefit the government and airlines in the event of an air accident.

Prompt and Transparent Communication

Prompt and transparent communication is critical after an aviation accident. Airlines and government officials should communicate with passengers and the public as soon as possible about the accident's cause, the extent of the damage, and what measures they are taking to ensure passenger safety in the future. The communication should be honest and transparent to build trust and confidence.

Enhance Safety Standards

The airline industry and the government should work together to enhance safety standards and regulations to prevent future accidents. Airline companies should ensure that their planes are appropriately maintained and their pilots adequately trained. They should also conduct regular safety inspections and implement safety measures to ensure the safety of passengers.

Offer Compensation and Support

In an aviation accident, the airline industry and government should compensate and support the affected passengers and their families. This can include financial compensation, medical support, and emotional support. This gesture shows empathy and concern towards the victims and their families, and it can help to rebuild trust and confidence in the airline industry.

Implement Changes

After an aviation accident, the airline industry and government should evaluate their safety protocols and procedures to determine what changes must be made to prevent future accidents. These changes may include updates to safety equipment, changes in pilot training, or modifications to aircraft design. Implementing changes demonstrates a commitment to passenger safety and can help regain passengers' trust and confidence.

Acknowledgments

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Testing an Extended Theory of Planned Behavior for Cambodian Customers' Purchase Intention of Thailand's Facial Skin Care Products

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Abstract

This study aims to understand how consumers view Thai cosmetic companies by investigating the purchase intention behaviors of Cambodian customers toward Thailand's facial skin care products using an Extended Theory of Planned Behavior (ETPB), which is important for marketers and practitioners alike in a time of globalization and greater cross-cultural connections. This study expands on the well-known Theory of Planned Behavior (TPB) by adopting an ETPB framework that includes new elements such as perceived value of quality, perceived cultural values and beliefs, and perceived value of pricing.

By using Google surveys, 200 people were polled quantitatively. The acquired data were reviewed utilizing the advanced license application "Smart-PLS 4.0" to provide support for each construct model. PLS-SEM was also utilized to assess the hypothesized variables' validity and reliability. The study found that the purchase intention of Thailand's facial skin care products by Cambodian consumers was significantly influenced by attitude, subjective norms, perceived behavioral control, perceived value of quality, perceived cultural values and beliefs, perceived value of price, and E-Word of Mouth. The study's findings provide useful information for anyone working in Thailand's facial skin care industry, both personally and professionally.

Keywords: Attitudes, Subjective Norms, Perceived Behavioural Control, Purchase Intention, E-Word of Mouth

Introduction

The main idea of purchase intention is what influences a customer's choice to make a purchase which has an impact on a business's success directly and is influenced by both internal and external influences. It essentially assesses the reliability of a customer's purchase decision (Cuofano, 2022). A cosmetic product is any item or combination of materials that is applied to the human body. Toner, moisturizer, serum, foundation, lipsticks, eyeliner, eyeshadow, and

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cleanser, as well as skincare, must all be covered. According to Allied Market Research, the global market for cosmetics was estimated at $380.2 billion in 2019 and is projected to increase by $463.5 billion by 2027. More crucially, the worldwide cosmetic business is rising so quickly because women's purchasing intentions are always increasing, even during global pandemics when skincare products were still in high demand since women always put cosmetics on, even when they are at home.

Thailand is one of the largest markets for color cosmetics and skincare among Southeast Asian nations. The luxury cosmetic and fragrance business in Thailand had a value of over 343 million US dollars, developing and extending native brands to foreign markets, according to statistics and facts about the country's cosmetics industry (Statista, 2022). The ASEAN economic union, which encourages free commerce among its members, has given the Thai cosmetics business more potential for growth (Statista, 2023). In addition, data on skin care product sales in Thailand from June 2021 to January 2022 revealed that the country's overall skin care product sales were over 740 million Thai baht. Around 7.5 thousand tons of skin care products were sold domestically and abroad in Thailand at that time. The cosmetics and personal care industries are doing well in Cambodia (Statista, 2022). Driven by a demand for natural, organic, anti-aging, and sun protection products. Distribution through traditional retail channels like supermarkets is still common, although e-commerce is expanding, particularly with younger customers. Facebook has a significant impact on purchase decisions. Due to the COVID-19 outbreak, customers prioritized essentials over face care products. Facial skin care in Cambodia experienced difficulties in 2021, whereas the market in Thailand is predicted to expand in 2022 due to the country's economic recovery, urbanization, and accessible product options (Statista, 2023). According to Statista's consumer insights, Cambodia's market of facial skin care products are expected to perform better than other categories like baby products, body care, and sun protection (Statista, 2023).

The research study has many wonderful benefits, including: Thailand's facial skin care companies can benefit from research by better understanding the needs and wants of their customers. This can influence marketing and product development in any cosmetics company, resulting in increased sales and client pleasure. Investors may locate possible Thailand's facial skin care products through research. information can help investors maximize their results by informing their investment decisions. This study helps marketers comprehend consumer preferences and market trends for successful brand promotion. Additionally, it provides information that is beneficial to many other industries, helping to build a solid knowledge of Thailand's facial skin care products and determining profitability and market impact.

Research Objectives

This study investigates Cambodian customer's perception of Thailand's face care products. There are two key objectives of this study:

1. To determine how attitudes, subjective norms, perceived behavior, perceived cultural values and beliefs, and perceived quality and price affect Cambodian consumers' propensity to purchase Thailand's facial skin care products.
2. To investigate the relationship between purchase intention and E word-of-mouth for Thailand's facial skin care product

Literature Review

Icek Ajzen invented the Theory of Planned Behavior (TPB), a psychological theory, in the late 1980s. It is used to forecast and explain human behavior in a variety of academic fields, including social psychology, environmental science, and health.

TPB claims that a person's attitude toward a particular activity, subjective norms, and perceived behavioral control. These elements work together to influence someone's intention to engage in an activity, which in turn forecasts their actual behavior. The authors added perceived cultural values and beliefs, the perceived value of quality, and the perceived value of price to the TPB. In order to provide insights into marketing strategies, this study applies this extension to Cambodian consumers' purchase intention of Thailand's face care products.

Attitudes (As)

An attitude is how they see a given behavior, whether positively or negatively. In other words, it is the person's subjective judgment of whether the conduct is desirable or undesirable. The individual's thoughts about the action, including their views on the anticipated consequences of the behavior and their views on the associated social standards, have an impact on attitude. Moreover, the creating of behavior is also consistent with the internal feeling that reflects people's satisfaction (Ajzen & Madden, 1986).

Subjective Norms (SN)

Individuals' perceptions of what other people think about their actions are referred to as subjective norms. This can include how the person feels about how their friends, family, and other significant people in their life see the conduct. The individual's perceptions of the associated social norms have an impact on subjective norms as well (Armitage & Conner, 2001).

Perceived Behavioural Control (PBC)

A person's perception of their ability to carry out the behaviour is referred to as perceived behavioural control. This may include their perceptions about their capacity to get beyond any challenges or limitations that might stand in the way of engaging in the habit. The person's prior interactions with the behaviour and self-confidence views have an impact on how much control they perceive they have over it (Ajzen & Madden, 1986).

Perceived Value of Quality (PVQ)

Many significant elements influencing purchase intentions for skin care products are perceived quality. Customers could place a higher priority on high-quality products that work well to produce the results they want. Also, for customers with low finances, pricing may be a major deterrent. Consumers in Cambodia are willing to spend more for high-quality products, according to earlier studies, but they may also put affordability first (Zeithaml, 1988b).

Perceived Cultural Values and Beliefs (PCVB)

The unique cultural environment in Cambodia may have an effect on consumers' intentions to purchase skin care products. For instance, skin whitening agents are frequently utilized in Cambodian culture since fair skin is highly regarded. Because of this, consumers' intent to purchase may be affected by their desire to meet this beauty standard. Due to a cultural belief in the advantages of natural cures, Cambodian customers might also prefer products containing natural ingredients (Li et al., 2008).

Perceived Value of Price (PVP)

Consumers' subjective assessments of a product or service's worth in relation to its cost are referred to as the perceived value of pricing. It is the perceived value that consumers place

on a product in relation to the price they are willing to pay for it. In other words, it refers to the perceived value that buyers have on a product in relation to the price they are willing to pay for it (Kortge & Okonkwo, 1993). As consumer behavior and purchasing decisions are influenced by perceived pricing value, it is crucial to understand this concept in marketing. Customers are more likely to purchase a product if they believe it gives great value for the money. In contrast, they are less likely to purchase a product if they believe it gives poor value for the money (Hsu et al., 2017)this study aims to explain the effects (i.e., attitude, subjective norm, and perceived behavioral control.

Purchase Intention (PI)

Purchase intention is a decision-making process that investigates consumers' motivations for choosing a specific brand (Fujiwara & Nagasawa, 2015). Purchase intention is defined by (Rezvani et al., 2012) as a scenario in which a consumer is inclined to acquire a specific product under certain conditions.

According to (Mirabi et al., 2015), customers' decision-making process when making a purchase is complex. Purchase intent is frequently linked to consumer behaviors which has shown a positive effect on customers' purchase intention.

E-Word of Mouth (eWOM)

An E-Word of Mouth strategy has been influenced by the possibility that individuals will make another purchase (Lin & Lu, 2010a). Social communication, which in this scenario refers to the effects that consumers have on one another when they communicate (Goldsmith, 2008). Additionally, when making another purchase, consumers mainly examine word of mouth (Arif & Siregar, 2021).

According to (Arif & Siregar, 2021), the simultaneous f-test result of 0.000 <0.05 indicates that purchase intention has a significant effect on electronic word of mouth. With this indication, the hypothesis received a perfect significant level of support.

Hypotheses in this study

H_1: Attitude affects purchase intention
H_2: Subjective norms affects purchase intention
H_3: Perceived behavioural control affects purchase intention
H_4: Perceived value of quality affects purchase intention
H_5: Perceived cultural values and beliefs affects purchase intention
H_6: Perceived value of price affects purchase intention
H_7: Purchase intention affects E-Word of Mouth

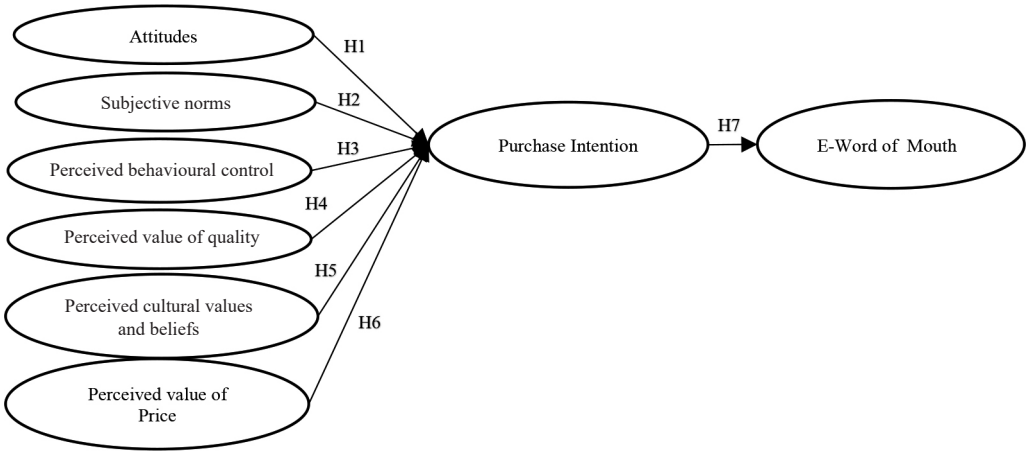


Figure 1 Conceptual Framework an Extended Theory of Planned Behaviours (ETPB) (Adapted from Ajzen, 2002; Ghazali et al., 2017)

Methodology

In this section, the study covers the population and samples, research instrument, data collection and analysis, and pilot testing to test the validation of each variable.

Population and Sample Size

The study's sample consisted of Cambodians living in Siem Reap who were between the ages of 19 and 60. Because they are the primary target market for Thailand's facial skin care products, their demographic is more accessible than representative (Statista, 2023).

The sample size for regression analysis is determined using the Green formula, which is perfect for surveys looking at hypotheses. Instead of the population size, the emphasis is on the number of known independent variables. Jackson (2003) came up with this equation, with the restriction that 'n' had to be more than or equal to 50 + 'm'.

The sample size is calculated as follows:

$n \geq 50 + 8\,(m)$

Where:

n = sample size

m = is predictor or independent variables

if m = 6, the sample size predicted

$n \geq 50 + 8\,(6) = 98$

As a result, because 98 were figured into the calculation, the required minimum sample size for this study was 200 participants. It was discovered that a sample size of 200 or more was suitable for factor analysis. Similarly this, a prior study recommended enrolling 200 participants or more to assist in verifying that the sample size is enough and reliable (Jackson, 2003).

Research Instrument

For this study, survey questions from earlier research have been adjusted. It comprises two sections and seven screening questions about buying face skin care products made in Thailand. A five-point likert scale is used for all section 2 questions response options. Reliability was confirmed through a pilot study with 30 participants. To overcome language barriers and improve

comprehension, the questionnaire was created in both English and Khmer.

The author divided the surveys into two sections to assess how Cambodian customers purchase intention different aspects of Thailand's facial skin care products. In the first section, the authors seeked to learn more about general information pertaining to respondents' demographics. In the second section, authors frequently asked questions about attitudes, subjective norms, perceived behavioural control, perceived cultural values and beliefs, perceived value of quality, perceived value of price, purchase intention, and E-Word of Mouth (Arif & Siregar, 2021).

Data Collection and Analysis

This study chose online questionnaires utilizing Google Forms to quickly collect data from a large number of participants. Nonprobability sampling was chosen (What Is Non-Probability Sampling?). The target respondents were sent a link to the questionnaire via Facebook or Line, and the questionnaire itself was created using an online survey. It was necessary for the targeted responders to testify to their usage of Thailand's facial skin care products. To move on to the main section of the questions, only individuals who selected "Yes" were permitted. Two hundred data were gathered from all relationships between variables because it is a potent technique for determining how latent variables in research models relate to one another. It is frequently used in the social sciences, management, and marketing. Instead of population parameter estimates, it is particularly helpful for predictive modeling (Zhang et al., 2013).

Validity and Reliability Test

Before the main data collection phase, a pilot test with 30 respondents evaluated the measurement tool's content validity and reliability (Lowe, 2019). Based on the outcomes of the pilot test, adjustments were made to improve content validity, taking into account participant concerns and offering clarification as necessary. The reliability study entailed gathering information from 30 respondents who had purchase experience. By measuring the internal consistency and reliability of survey items assessing the same underlying construct, Cronbach's Alpha analysis was used to evaluate the results.

According to the attached table, Cronbach's Alpha values for the eight variables ranged from 0.85 to 0.97 demonstrating the outcome of outstanding data that were approved as a result of (*Cronbach's Alpha: A Tool for Assessing the Reliability of Scales*).

Table 1 Validity and Reliability

No.	Variable	No. of Item	Cronbach Alpha (n=30)	Composite Reliability	Average Variance Extracted (AVE)
1	As	3	0.95	0.96	0.91
2	SN	3	0.90	0.92	0.83
3	PB	3	0.88	0.89	0.81
4	PVQ	3	0.97	0.97	0.94
5	PCVB	3	0.90	0.91	0.83
6	PVP	3	0.94	0.94	0.90
7	PI	3	0.96	0.96	0.93
8	e-WOM	3	0.85	0.87	0.77

Source*:* Attitudes (AS), Subjective Norms (SN), Perceived Behavior (PB), Perceived Value of Quality (PVQ), Perceived Cultural Values and Beliefs (PCVB), Perceived Value of Price (PVP), Purchase Intention (PI), and E-Word of Mouth (e-WOM), AVE in diagonal (SmartPLS's calculation)

Research Results

Table 2 displays the demographic data of the 200 participants in the survey. The gender distribution of the study's respondents indicates that 73.50% were women. For age-wise, 69.50% of the population was between the ages of 19 and 29.

Regarding marital status, 54.50% were single, and 45% were married. In terms of occupation, 38% worked in the private sector, 22% were business owners, followed by 17.50% were students. The education background showed 56.50% with graduate degrees and 35% with undergraduate degrees. For monthly income data, the majority 23.50% earned between 301 and 500 USD dollars monthly, followed by 18% with incomes under 300 USD dollars monthly, 18% with incomes over 1,100 USD dollars monthly, 17.50% with incomes between 501 and 700 USD dollars monthly, 14% with incomes between 701 and 900 USD dollars monthly, and 9% with incomes between 901 and 1,100 USD dollars monthly

Table 2 Descriptive Analysis of Respondent Demographic

Demographics	Frequency	Percentage (%)
Gender		
Female	147	73.50%
Male	53	26.50%
Total	**200**	**100%**
Age		
19 years	16	8%
19-29 years	139	69.50%
30-40 years	44	22%
41-50 years	1	0.50%
Total	**200**	**100%**
Marital Status		
Married	90	45%
Single	109	54.50%
Divorced	1	0.50%
Total	**200**	**100%**
Occupation		
Private Sector	76	38%
Student	35	17.50%
Business Owner	44	22%
Government Sector	37	18.50%
Unemployed	7	3.50%
Others	1	0.50%
Total	**200**	**100%**

Table 2 Descriptive Analysis of Respondent Demographic (Con.)

Demographics	Frequency	Percentage (%)
Education Background		
Under Graduate	70	35%
Postgraduate	17	8.50%
Graduate	113	56.50%
Total	**200**	**100%**
Income		
Under 300$	35	18%
301-500	47	23.50%
501-700	36	17.50%
701-900	28	14%
901$-1,100$	18	9%
Above 1,100$	36	18%
Total	**200**	**100%**

Measurement Instrument Assessment

According to (Chin, 1998), a minimum threshold of 0.5 is required in the Average Value Extracted (AVE). Meanwhile, the rest of the variables in this study were greater than 0.5, ranging from 0.604 to 0.811. The Composite Reliability (CR) approach was used to examine the construct's reliability. the acceptable Composite Reliability (CR) level should be more than 0.7 (Taber, 2018). The achieved value of Composite Reliability (CR) in this study ranged from 0.817 to 0.928, as shown in Table 3.

In addition, the value of Cronbach's alpha coefficient in each construct has to be greater than 0.7, then it would count as reliable. Consequently, the tested values in this study were above 0.7 which means that they range from 0.688 to 0.883 as demonstrated, however, E-Word of Mouth has a Cronbach's alpha value of 0.688 which is less than 0.7, it also indicated an acceptable level of reliability (Hulin, Netemeyer, & Cudeck, 2001).

Both discriminant and convergent validity (Factor Loading) were tested to assess the measurement instrument's validity. According to Carlson and Herdman (2012), factor loadings should ideally reach 0.7 for a robust result. Factor loadings in this study ranged from 0.761 to 0.923, strongly showing convergent validity.

Table 3 The Measurement Model (n = 200)

Constructs	Items	Factor Loading	AVE	CR	Cronbach's Alpha
Attitudes	AS1	0.854	0.811	0.928	0.883
	AS2	0.922	-	-	-
	AS3	0.923	-	-	-
Subjective Norms	SN1	0.831	0.700	0.875	0.786
	SN2	0.827	-	-	-
	SN3	0.851	-	-	-
Perceived Behavior	PB1	0.874	0.775	0.912	0.855
	PB2	0.887	-	-	-
	PB3	0.880	-	-	-
Perceived Value of Quality	PVQ1	0.900	0.800	0.923	0.876
	PVQ2	0.885	-	-	-
	PVQ3	0.899	-	-	-
Perceived Cultural Values and Beliefs	PCVB1	0.761	0.682	0.865	0.765
	PCVB2	0.885	-	-	-
	PCVB3	0.827	-	-	-
Perceived Value of Price	PVP1	0.845	0.736	0.893	0.820
	PVP2	0.900	-	-	-
	PVP3	0.827	-	-	-
Purchase Intention	PI1	0.868	0.783	0.915	0.861
	PI2	0.898	-	-	-
	PI3	0.887	-	-	-
E-word of mouth	eWOM1	0.852	0.604	0.817	0.688
	eWOM2	0.853	-	-	-
	eWOM3	0.899	-	-	-

Summary of the Measurement Model

Correlations in latent variables must be less than the square root of the corresponding AVE, according to (Fornell & Larcker, 1981). Simultaneously, the square root of the AVE which is placed in the diagonal cells can be seen on the Table 4 and following by the correlations that exist below it. As a result, the top numbers in each of the factor columns are greater than its correlations and it means that the outcome of the measurement model in this study has reached the discriminant validity.

Table 4 Fornell-Larcker Criterion: Correlation Constructs and the AVE of Square Root

Constructs	AS	PB	PCVB	PI	PVP	PVQ	SN	e-WOM
AS	**0.900**	-	-	-	-	-	-	-
PB	0.727	**0.880**	-	-	-	-	-	-
PCVB	0.564	0.663	**0.826**	-	-	-	-	-
PI	0.605	0.7	0.717	**0.885**	-	-	-	-
PVP	0.611	0.692	0.669	0.78	**0.858**	-	-	-
PVQ	0.288	0.367	0.475	0.534	0.558	**0.895**	-	-
SN	0.523	0.538	0.545	0.652	0.681	0.623	**0.837**	-
eWOM	0.463	0.533	0.579	0.647	0.65	0.649	0.707	**0.777**

Source*:* Attitudes (AS), Subjective Norms (SN), Perceived Behavior (PB), Perceived Value of Quality (PVQ), Perceived Cultural Values and Beliefs (PCVB), Perceived Value of Price (PVP), Purchase Intention (PI), and E-Word of Mouth (e-WOM), AVE in diagonal (Author's calculation)

Summary of Fornell-Larcker Criterion

The Fornell-Larcker criteria show significant discriminant validity between the constructs when applied to the correlation matrix. The vertical parts, which reflect the square root of the Average Variance Extracted (AVE) for each construct, are consistently smaller than the correlations between each construct and the others. This demonstrates how each concept is different from the others and effectively represents individual variance. These findings demonstrate that the measurement model is suitable for additional structural modeling and hypothesis testing in the study and increases confidence in its ability to differentiate between the underlying constructs, a crucial aspect of model validity.

Structural Model

The study investigated into a variety of hypothesis addressing the connections between different factors and purchase intentions.

Table 5 The summary results of the structural model

Hypothesis		Beta	T-Value	P-Value	Conclusion
H_1	AS →PI	0.044	0.705	0.481	Not Supported
H_2	SN →PI	0.121	1.925	0.054	Not Supported
H_3	PB →PI	0.176	2.540	0.011*	Supported
H_4	PVQ →PI	0.073	1.277	0.202	Not Supported
H_5	PCVB →PI	0.245	3.758	0.000**	Supported
H_6	PVP →PI	0.344	4.781	0.000**	Supported
H_7	PI→eWOM	0.647	12.994	0.000**	Supported

Source: *p < 0.05, **p > 0.001. Author's calculation with SmartPLS Bootstrap

For the first hypothesis, which examined the association between attitudes and purchase intention, β=0.044 and a matching p-value of 0.481 were achieved. Unfortunately, at the stated significance level ($p > 0.05$), the connection was not statistically significant, and hence H_1 was not supported.

The second hypothesis, which looked at how subjective norms influenced purchase intention, yielded β=0.121 and $p > 0.050$, indicating that the link was not statistically significant and that the p-value exceeded the significance level. Thus, H_2 was not valid.

For the third hypothesis, it was investigated the relationship between perceived behavior and purchase intention, has β=0.176 and $p < 0.05$. The association was statistically significant, meaning that as the perceived behavior improves, the purchase intention also tends to increase. In other words, when customers have a favorable perception of a product or brand's behavior, they are more likely to intend to purchase it. Thus, H_3 was confirmed.

The fourth hypothesis, which looked at how perceived quality value affected purchase intention, had β=0.73 and $p > 0.05$, though. Unfortunately, despite the p-value exceeding the required level of significance. Hence, H_4 was not supported.

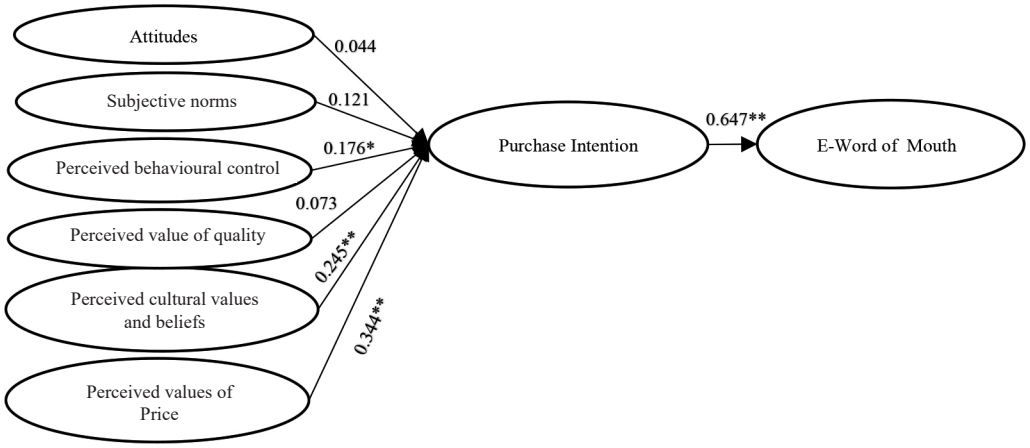
The fifth hypothesis had β=0.245 and $p > 0.001$ and examined how perceived cultural values and beliefs affected purchase intention. Given that the relationship was statistically significant, and that the p-value was below the established significane level, revealing as the perception of cultural values aligns with consumers' beliefs, there is a higher intention to purchase. Thus, H_5 was confirmed.

With regard to the sixth hypothesis, which examined the relationship between the perceived value of price and purchase intention, a sizable β=0.344 was observed along with $p < 0.001$, it can be seen that a positive relationship implies that as the perceived value of price increases, purchase intention decreases. Finally, H_6 was supported

The seventh hypothesis examined the association between purchase intention and E-Word of Mouth, yielding a significant β=0.647 and $p < 0.001$. Given the association's statistical signifi-cance, In the context of E-Word of Mouth and purchase intention, a positive relationship implies that as the extent or quality of E-Word of Mouth increases, purchase intention also increases. In other words, positive E-Word of Mouth encourages potential buyers, this finding indicated that H_7 was supported.

Hypothesized Paths Results

According to the PLS-SEM structural model shown in table 4. As a result, seven hypotheses in all were investigated including those related to attitudes, subjective norms, perceived behaviour, perceived value of quality, perceived cultural values and beliefs, perceived value of price, purchase intention, and E-Word of Mouth. Overall, the hypothesized path result reveals that H_1, H_2, and H_4 were not supported, while H_3, H_5, H6, and H7 were supported.



Remark: **p < 0.05 and ***p > 0.00

Figure 2 An Extended Theory of Planned Behaviours (ETPB)
The Structural Model Result, Smartpls Calculation

Discussion

According to the findings, the theory was in conflict with attitude, subjective norms, and perceived value of quality. In this study, four out of seven hypotheses that were based on a survey of 200 participants were found to be true. Women were greater than men in the 19 to 29 age group of respondents. Only 50% of participants had monthly wages between 300 USD monthly and 500 USD monthly, even though the majority worked in the private sector and had graduate degrees.

The study found that, in contrast to the hypothesized assumption Ajzen & Madden (1986), attitudes and subjective norms had a negative impact on purchase intention for Thailand's facial skin care products. In contrast to earlier produced an unexpectedly poor outcome (Cahyani et al., 2017). This could be brought on by respondents' confusion or changing attitudes.

Positively, perceived behavioral control had a positive impact on purchase intention for Thailand's facial skin care products, as found in earlier research (Ajzen, 2002). This result is consistent with previous studies which indicated the perceived behavioral control has tended to create uncertainties and to impede progress. As a result, when their conduct matches the items, Cambodian consumers tend to have a more positive outlook regarding making purchases.

The third finding of the research study was the perceived cultural values and belief which had a positive effect on the purchase intention of Thailand's facial skin care products. This result is consistent with previous studies which indicated a favorable impact on purchase intention (Li et al., 2008). As well as the perceived values of price which also consistent with the previous research study (Kortge & Okonkwo, 1993).

However, if Cambodian consumers believe that prices are reasonable, they may be more likely to make a purchase. This confirms with other studies (Arif & Siregar, 2021), which highlighted on the influence of perceived cultural values and belief and perceived value of price on purchase intention.

Fourth, it was discovered that the likelihood of making a purchase was associated with E-Word of Mouth, in which customers who had already made a purchase went on to promote the item to others. This finding suggests that satisfied consumers are more likely to purchase Thailand's facial care products again. These results are consistent with previous studies (Arif & Siregar, 2021).

In conclusion, this study's validation of four of its seven hypotheses. Particularly, attitude, subjective norms, and perceived value of quality have a negative effect on the purchase intention of Thailand's facial skin care products. Simultaneously, perceived behavior, perceived cultural values and belief, perceived value of price, and purchase intention had a significant influence to E-Word of Mouth variable. These findings are consistent with the extended theory of planned behavior, which claims that behavioral intention is driven by attitudes.

Theoretical Contributions

Within the context of the Extended Theory of Planned Behavior (ETPB), The research's conclusions are moderately supported, and from a theoretical standpoint, it produced multiple additions to the academic literature.

First, it is widely recognized that a personal component is applied when analyzing the purchase intentions of Thailand's facial skin care product using a well-established theory of planned behavior.

Secondly, the application of a well-established perceived behavior model in the theory of planned behavior is recognized as a personal aspect to analyzing the purchase intention of Thailand's facial skin care products.

Thirdly, this study's integration of perceived cultural values and beliefs, and perceived value of price had a significant influence on purchase intention. Meanwhile, the purchase intention has a significant effect on E-Word of Mouth since customers continuously posting positive reviews that help them trust Thailand's facial skin care products.

Managerial Implications

Several significant findings came from research analysis regarding the purchase intention of Cambodian consumers for Thailand's facial skin care products. Thus, some managerial implications would be implied accordingly:

Perceived Behaviuor and Purchase Intention

Understanding this significant relationship is valuable for businesses and marketers. It means that improving or maintaining a positive perception of specific behaviors or attributes can positively impact purchase intention. Therefore, cosmetics businesses can focus on enhancing these perceived behaviors through marketing, customer service, product development, or other strategies.

Perceived Cultural Values and Beliefs And Purchase Intention

Given the significant influence of cultural values and beliefs on purchase intention, businesses should consider tailoring their marketing strategies to align with the cultural context of their target audience. For example, advertisements, product positioning, and messaging should align with the cultural preferences and sensitivities of the market.

Perceived Value of Price and Purchase Intention

Cosmetic companies should strategically price their products to reflect perceived value. For instance, offering premium pricing for skincare products implies higher quality and efficacy,

influencing purchase intention. Luxury cosmetics brands can employ this strategy to target consumers who value prestige and luxurious ingredients in their skincare routines.

Purchase Intention And E-Word of Mouth

Recognizing the profound link between purchase intention and Electronic Word-of-Mouth (e-WOM) is vital for cosmetics businesses. To harness this relationship, cosmetics companies should prioritize e-WOM strategies, such as online reviews and influencer collaborations. Encouraging satisfied customers to share their experiences and results online can significantly influence potential buyers. For example, by collaborating with popular beauty vloggers, the Company can boost e-WOM to customers by sharing positive reviews and tutorials to increas consumer trust and purchase intention for their new face care line.

Research Limitation

Considering the fact that these findings offer useful information, it is important to be aware of the study's limitations. The study's concentration on the local context of Thailand's face care products and Cambodian consumers restricted its capacity to be extended. Additionally, because most of the respondents chose the same scale, the respondent may have misread the direction of the direction. This could have caused an incorrect standard deviation in the calculating procedure. More significantly, some respondents were questioned regarding a particular category of Thailand's face care products.

Recommendation for Future Research

Future research should expand on consumer situations and improve assessment techniques. Exploring new factors, such as brand loyalty, may help the researcher understand consumer behaviour more thoroughly. Moreover, future research should also apply qualitative investigation in order to have in-depth interviews or focus groups. Last but not least, it is crucial for academics to keep up with technical developments, especially in the areas of social media and digital marketing, as these developments can be useful tools for informing and improving marketing strategies.

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Enhancing University Education Business: Motivations of Chinese Students Studying in Thailand

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Abstract

This qualitative study investigates the motivations driving Chinese students to pursue higher education in Thailand, focusing on both undergraduates and doctoral students during the academic years 2021 and 2022. This research comprises 15 Chinese doctoral students enrolled at a public university in Bangkok and 43 Chinese undergraduates in bachelor's programs at a private university. Data collection occurred in two phases: the first during the second semester of 2021, targeting undergraduates, and the second in the first semester of 2022, focusing on doctoral students. Content Analysis was employed as the chosen methodology for data analysis, with the overarching aim of enhancing educational services for Chinese students in Thailand.

Chinese students are drawn to Thai universities for various compelling reasons. These institutions uphold rigorous educational standards and offer flexible teaching methods that accommodate in-person, onsite, and online learning preferences. Language barriers are adeptly addressed through Chinese translators, facilitating the seamless translation of academic content, while instructors proficiently switch between Thai and Chinese during lectures. An integrated approach encourages Chinese students to develop Thai language skills alongside their chosen fields of study, with some even engaging in teaching Chinese to Thai high school students, thus creating potential career opportunities in education. Doctoral programs offer more intensive and complex instruction, including in-depth examples and case studies. Graduate students express profound satisfaction with the quality of education and deeply value the unexpected insights gained during their studies. In summary, Chinese students are increasingly drawn to Thai universities due to their unwavering commitment to high educational standards, adaptable teaching methods, comprehensive language support, and the unique opportunities for language acquisition and teaching experience they offer. This enriching academic environment not only benefits Chinese students but also contributes positively to Thailand's educational landscape and internationalization efforts.

Keywords: Motivations, Chinese Students, Education Services, Thai university

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Introduction

The promotion of university education business between Thailand and China has evolved over time, driven by various factors such as diplomatic relations, economic opportunities, and cultural exchanges. Historical Overview: Early Relations: The diplomatic relations between Thailand and China have a long history dating back centuries. These relations have often included cultural and educational exchanges. Modern Diplomacy: In the modern era, diplomatic relations between Thailand and China were officially established in 1975. Both countries have since worked to strengthen their ties through various initiatives, including educational collaborations. Economic Ties: The growing economic cooperation between Thailand and China, especially through trade and investment, has created a conducive environment for educational partnerships. As economic relations expanded, so did opportunities for educational exchanges. Cultural and Educational Exchanges: Over the years, both countries have engaged in cultural events, student exchanges, and academic collaborations. These activities have fostered a mutual understanding and appreciation of each other's cultures and educational systems. Joint Programs and Scholarships: Universities in Thailand and China have established joint academic programs, research collaborations, and student exchange programs. Scholarships have often been provided to encourage Thai students to study in China and vice versa. Language and Cultural Studies: Institutes and departments dedicated to the study of the Chinese language and culture have been established in Thai universities, promoting cross-cultural understanding and communication. Bilateral Agreements: A bilateral agreement and a Memorandum of Understanding (MOU) between the government and an educational institution have facilitated the exchange of students, faculty, and academic resources. Thailand 4.0 and China's Belt and Road Initiative (BRI): Thailand's economic development strategy, known as "Thailand 4.0," focuses on transforming the country into a value-based economy driven by innovation and technology. China's Belt and Road Initiative, which aims to enhance connectivity and cooperation across regions, has also created opportunities for educational collaborations between the two countries. Challenges and Opportunities: While there have been successful initiatives and collaborations, challenges such as differences in educational systems, language barriers, and administrative complexities may have posed obstacles. However, these challenges have also presented opportunities for innovation and creative solutions. Recent Developments: Beyond September 2021, it's likely that the promotion of university education business between Thailand and China will continue to evolve, influenced by changing geopolitical dynamics, technological advancements, and global trends in higher education.

In 2019, the Chinese State Council introduced two transformative educational reform plans aimed at propelling the nation's education sector in alignment with its broader modernization ambitions. (People's Republic of China, the State Council, 2018) The "China's Education Modernisation 2035 Plan" and the "Implementation Plan for Accelerating Education Modernisation (2018-2022)" both share a common vision to overhaul China's education system by 2035, a crucial milestone in the journey towards socialist modernization and educational excellence. President Xi Jinping's clarion call in September 2018 to shift the educational focus from 'capacity' to 'quality' underscores this shift towards modernization that actively supports national advancement. To concretize these aspirations, the plans underscore critical objectives such as enhancing teacher quality, upgrading educational infrastructure, mitigating educational disparities, fostering a culture of lifelong learning, and modernizing all tiers of education.

The blueprints encompass strategies to elevate higher education through disciplined development, undergraduate entrepreneurship and employment opportunities, and the stimulation of postgraduate research and academic expansion. Notably, the plans prioritize the efficient management of Sino-foreign collaborations, optimize the distribution of Confucius Institutes to promote Chinese language acquisition, and underscore international collaboration, particularly within the framework of the Belt and Road Initiative.

The increasing trend of Chinese students choosing to study in Thailand can be attributed to various factors, including both the policies of the Chinese government and the personal motivations of the students themselves. This phenomenon has consequently led to a growing number of researchers engaging in teaching at various academic levels. This includes undergraduate, master's, and doctoral courses, as these researchers are encouraged to delve into the underlying reasons driving this interest and to gain insights into the post-graduation plans of these students. Thailand has emerged as a significant higher education destination for Chinese students in comparison to other Southeast Asian countries. This trend has been amplified in the post-COVID-19 era, with a noticeable increase in both new and returning Chinese students choosing to study at Thai universities. (Thai PBS, 2023)

To the point of "Enhancing University Education Business: Motivations of Chinese Students Studying in Thailand", it is essential to understand that this trend is significantly impacting the landscape of university education in Thailand. It's not just about the increasing numbers of Chinese students enrolling in Thai universities, but also the implications for the educational institutions and the broader business of university education in Thailand. Chinese students' motivations for studying in Thailand play a vital role in shaping university education in the region. These motivations can range from the pursuit of high-quality education, exposure to international experiences, and the allure of specific programs or fields of study offered by Thai universities. Additionally, factors like the Chinese government's policies encouraging overseas education and Thailand's attractiveness as a study destination come into play. As we explore these motivations and understand the driving forces behind this trend, we gain valuable insights into how universities in Thailand can tailor their programs, services, and support systems to accommodate the needs and expectations of Chinese students. This not only enhances the educational experience but also has a direct impact on the business of university education in Thailand, including enrollment numbers, revenue generation, and international collaborations. In conclusion, the motivations of Chinese students studying in Thailand are not only of academic interest but also of strategic importance to the growth and enhancement of university education businesses in Thailand. By comprehensively understanding these motivations, universities can better position themselves to attract and retain Chinese students, ultimately contributing to the overarching modernization objectives of both China and Thailand in the field of education.

Research Objectives

1. To study the factors that motivate Chinese students' interest in choosing to study at the university level in Thailand.
2. To gather information about Chinese students' post-graduation plans, whether to continue working in Thailand or return to work in China.
3. To survey the opinions of Chinese students regarding the trends over the next 10 years and the potential phenomena that may occur in the education business between Thailand and China.

Literature Review

Successful international business education interactions between Thailand and China require a comprehensive understanding of trade dynamics, cultural nuances, regulatory environments, and strategic considerations. Adapting business strategies to the unique characteristics of each country can contribute to successful cross-border collaborations and ventures. The Belt and Road Initiative (BRI), introduced by Chinese President Xi Jinping in 2013, has garnered substantial attention and analysis from scholars across various fields, including economics and geopolitics (Lim, 2022). The core objective of the BRI is to foster global "peace and cooperation, openness and inclusiveness, mutual learning and mutual benefit" by facilitating collaboration among nations across diverse regions such as Southeast Asia, Africa, and Europe. Since its inception, more than 140 countries have expressed their interest in participating by signing Memorandums of Understanding (MOUs). One noteworthy aspect of the BRI is the bilateral educational cooperation between China and Thailand. This partnership encompasses higher education institutions and the establishment of vocational institutions, with Thailand emerging as a key player in this endeavor. The establishment of Confucius Institutes (CIs) exemplifies Thailand's commitment to this collaboration, as it has become the preferred destination in Southeast Asia for setting up these non-profit institutions aimed at promoting the Chinese language and culture globally. An example is the CI of the Maritime Silk Road, an initiative aligned with the BRI's vision. This initiative underscores Thailand's dedication to comprehensive strategic bilateral cooperation.

A significant milestone in China-Thailand educational cooperation occurred on September 24-25, 2021, during the 3rd Forum on China-Thailand Higher Education Cooperation and the 2021 Alliance of China-Thailand Universities (ACTU) Assembly. This event brought together over 360 representatives from more than 140 universities in both nations. ACTU, established in 2020, is a pivotal driving force behind higher education exchanges and collaboration between China and Thailand within the BRI framework and Thailand's national development strategy. The 2021 assembly yielded crucial outcomes, including the signing of several MOUs between Chinese and Thai universities. For instance, Jiangsu University and Chiang Mai University inked an MOU to collaboratively establish an international laboratory. Similarly, Beijing Language and Culture University and Siam University joined hands to create a Chinese language international college. Additionally, the China-Thailand University Presidents Forum facilitated in-depth discussions, paving the way for expanded bilateral educational cooperation concerning the BRI.

The ACTU's encouragement has led to deepened exchanges between higher education institutions in both countries, particularly in research and the training of international talents to bolster the BRI's implementation. This collaboration has been instrumental in preparing students from both nations for roles in the China-Thailand railway project. Notably, the Lu Ban Workshop, established by Tianjin Bohai Vocational Technical College at Ayutthaya Technical College in Thailand, is a prime illustration of such collaboration. Named after the legendary Chinese architect and builder, Lu Ban, this workshop has provided vocational training to over 2,000 students between 2016 and 2018. The partnership extends beyond training, as mutual recognition of academic qualifications enables students trained in Thailand to seek employment in China and vice versa, further enhancing cross-border mobility.

In conclusion, the bilateral educational cooperation between China and Thailand under the BRI framework exemplifies the initiative's multifaceted approach. Through collaborations

between higher education and vocational institutions, these countries are not only fostering cultural and academic exchanges but also preparing a skilled workforce to contribute to the success of BRI projects. This cooperation serves as a testament to the vision of shared prosperity and mutual learning that underpins the Belt and Road Initiative (Suwannatthachote, 2015; Priemsamorn, 2016; Premsmit, 2018; Wei, 2018; Gu, 2019; Kanchanopast, 2020).

One such example is Yang Yaohong, also known as Win, an exchange student from China majoring in the Thai language at Dhurakij Pundit University. Win's passion for Thai drama, culture, and cuisine motivated them to independently study the Thai language since the age of 16. Over the span of 7 years, Win has become proficient in speaking, listening, reading, and writing Thai, comparable to native Thai speakers. Win mentioned that numerous universities in China have started offering Thai language courses due to the growing interest among Chinese students. This interest is partly driven by the strong business and tourism connections between China and Thailand, creating a demand for individuals proficient in the Thai language. Moreover, the experience of studying in Thailand enhances the prospects of securing better employment opportunities and higher income for Chinese students, considering the intense competition associated with the Chinese university entrance examination system, known as "Gaokao".

Another example is Li Yi, also known as Rainy, a fourth-year international business student at China International College Dhurakij Pundit University. Rainy's decision to study in Thailand follows her parents, who have been residing and working in Thailand for over 15 years. In contrast to the rigorous and highly competitive educational environment in Chinese universities, Thai universities offer a more relaxed and balanced approach to learning, allowing students like Rainy ample time for extracurricular activities. Upon completing her bachelor's degree, Rainy aspires to undertake an internship with a Thai company and pursue a career in Thailand. Despite the potentially lower salary compared to China, Rainy is drawn to the simplicity of living, cost of living, and the unique business dynamics between Thailand and China.

The influx of Chinese students has contributed to the growth of the "education business" in Thailand. Although not as substantial as other industries, this sector exhibits promising potential for expansion. The Chinese International College at Dhurakij Pundit University, for instance, presently enrolls nearly 3,000 Chinese students across bachelor's, master's, and doctoral programs. In addition, there are Huachiew Chalermprakiet University and Krirk University, etc. Most of these students are enrolled in fields such as international business, tourism, and hotel management. This popularity can be attributed in part to the recognition of the university's curriculum by Chinese education authorities, making it a favored choice among Chinese students.

Related Theoretical Concepts

The application and emphasis of these management theory concepts can vary based on the unique cultural, economic, and social contexts of Thailand and China. Management Theory Concepts in University Education (Thailand and China), such as:

1. Cultural Context: Both Thailand and China have distinct cultural norms and values that influence management practices in educational institutions. Concepts like Hofstede's Cultural Dimensions or the GLOBE framework could be applied to understand and adapt management practices to the cultural context of each country. Cultural Context in Educational Management Practices: A Comparative Study of Thailand and China. The management of educational institutions is significantly influenced by the cultural norms and values of the society in which

they operate. This paper aims to explore and compare the cultural dimensions of Thailand and China, utilizing Hofstede's Cultural Dimensions and the GLOBE framework, and their impact on educational management practices in each country. By understanding these cultural contexts, educational leaders can adapt their management strategies to ensure effective and harmonious operations.

Hofstede's Cultural Dimensions: Hofstede's framework provides insights into cultural differences across various dimensions (Hofstede, 1980). This may influence decision-making processes and communication within educational institutions. In contrast, China also exhibits a significant power distance, emphasizing respect for authority and seniority. Thailand leans towards collectivism, emphasizing group harmony and interdependence. Educational institutions may prioritize group cohesion and collaboration. China also tends towards collectivism, emphasizing family and societal relationships.

GLOBE Framework: The GLOBE framework further examines cultural dimensions, including Assertiveness, Future Orientation, Gender Egalitarianism, Performance Orientation, Humane Orientation, and Institutional Collectivism (House et al., 2004). Both Thailand and China exhibit relatively high assertiveness, valuing competitiveness and ambition. Educational management may encourage students to express their opinions and strive for success. China places a strong emphasis on future orientation, which may manifest in educational institutions' focus on preparing students for upcoming challenges. Thailand also demonstrates a future-oriented perspective. Both countries emphasize performance and success. Educational institutions may focus on academic excellence and rigorous standards. Thailand exhibits a highly humane orientation, emphasizing compassion and community. This may influence a supportive and nurturing educational environment. China also demonstrates a humane orientation, focusing on benevolence and social responsibility. Both countries display institutional collectivism, emphasizing group loyalty and teamwork. This may impact decision-making processes and collaboration in educational management.

Conclusion: The cultural dimensions identified through Hofstede's Cultural Dimensions and the GLOBE framework highlight the distinct norms and values that influence educational management practices in Thailand and China. By recognizing these cultural differences, educational leaders can tailor their management strategies to effectively navigate and adapt to the unique cultural contexts of each country. This adaptation will contribute to the successful operation of educational institutions and the development of students in both Thailand and China.

2. Quality Assurance and Accreditation in Higher Education. Total Quality Management (TQM) is a comprehensive management approach that focuses on continuous improvement, customer satisfaction, and involvement of all members of an organization (Yusof & Bajuri, 2017). In the context of higher education, TQM emphasizes a holistic view of quality, aiming to enhance processes, curricula, and overall student experience. Challenges and Outcomes of TQM Implementation: Both countries face challenges in implementing TQM, including resistance to change, resource allocation, and maintaining a balance between standardization and academic freedom. However, the outcomes are promising, as universities in both countries have seen improvements in graduation rates, student satisfaction, and employability. TQM has contributed to a culture of accountability, innovation, and adaptability in higher education institutions (Kaymakci & Akyuz, 2018).

Six Sigma is a data-driven methodology that aims to minimize defects and variations in processes, thus enhancing efficiency and quality (Deng & Dart, 2009). It involves defining,

measuring, analyzing, improving, and controlling processes to achieve optimal performance. Challenges and Outcomes of Six Sigma Implementation: Both countries encounter challenges with Six Sigma implementation, including data availability, training, and alignment with traditional academic structures. Nevertheless, the outcomes demonstrate a measurable impact on educational quality. Reduced administrative redundancies, improved resource allocation, and enhanced student outcomes are notable achievements in the universities of both countries (Long, 2012).

Conclusions: Quality assurance and accreditation play crucial roles in ensuring the quality of higher education. The adoption of Total Quality Management and Six Sigma models in Country A and Country B has led to significant improvements in educational processes, student experiences, and overall quality. While challenges persist, the commitment to continuous improvement and data-driven decision-making has shaped a culture of excellence in both higher education systems. To explore the theoretical concepts of study abroad and internationalization in higher education and understand how these concepts can support the analysis of the motivations of Chinese students studying in Thailand, this review will provide a foundation for comprehending the broader context of international education and its relevance to the specific case of Chinese students in Thailand.

1. Study Abroad in Higher Education: Study abroad is a phenomenon wherein students pursue educational opportunities in foreign countries. This concept is rooted in several theoretical frameworks:

Cross-Cultural Adaptation Theory: Developed by Berry (1980), this theory emphasizes the acculturation process students undergo when studying in a foreign culture. It involves phases like culture shock and adjustment, which impact students' motivations and experiences.

Global Perspective Development: The theory posits that studying abroad enhances Students' global perspectives. Exposure to diverse cultures, languages, and worldviews fosters a broader understanding of global issues.

Social Identity Theory: This framework by Henri Tajfel explores how individuals identify with various social groups. Studying abroad can influence one's social identity, as students may adapt or develop new identities in the host country.

2. Internationalization in Higher Education: Internationalization refers to the process of integrating an international, intercultural, or global dimension into the goals, functions, and delivery of higher education. Several key concepts and models underpin internationalization efforts:

Knight's Paradigm: Knight's framework outlines four aspects of internationalization: recruitment of international students, development of international curricula, faculty exchange, and establishment of overseas campuses. It underscores the multifaceted nature of internationalization. Cultural Exchange: Internationalization aims to facilitate cultural exchange among students, faculty, and institutions. This fosters mutual understanding and cross-cultural competencies. Global Citizenship: Internationalization often seeks to cultivate global citizenship among students, encouraging them to engage with global challenges and adopt a sense of responsibility toward global issues.

3. "Enhancing University Education Business: Motivations of Chinese Students Studying in Thailand": Understanding the motivations of Chinese students studying in Thailand in the context of these theoretical concepts can shed light on their decision-making processes. Chinese students' motivations may be influenced by factors such as Academic Quality: The perceived quality of education in Thailand's universities and the availability of programs of interest.

Cultural and Language Factors: The desire to experience Thai culture, and learn the Thai language, and interact with locals.

Cost Considerations: The relative affordability of studying in Thailand compared to other countries.

Global Perspective: The aspiration to gain a global perspective and enhance cross-cultural competencies.

Networking Opportunities: The potential to build international networks and connections for future career prospects.

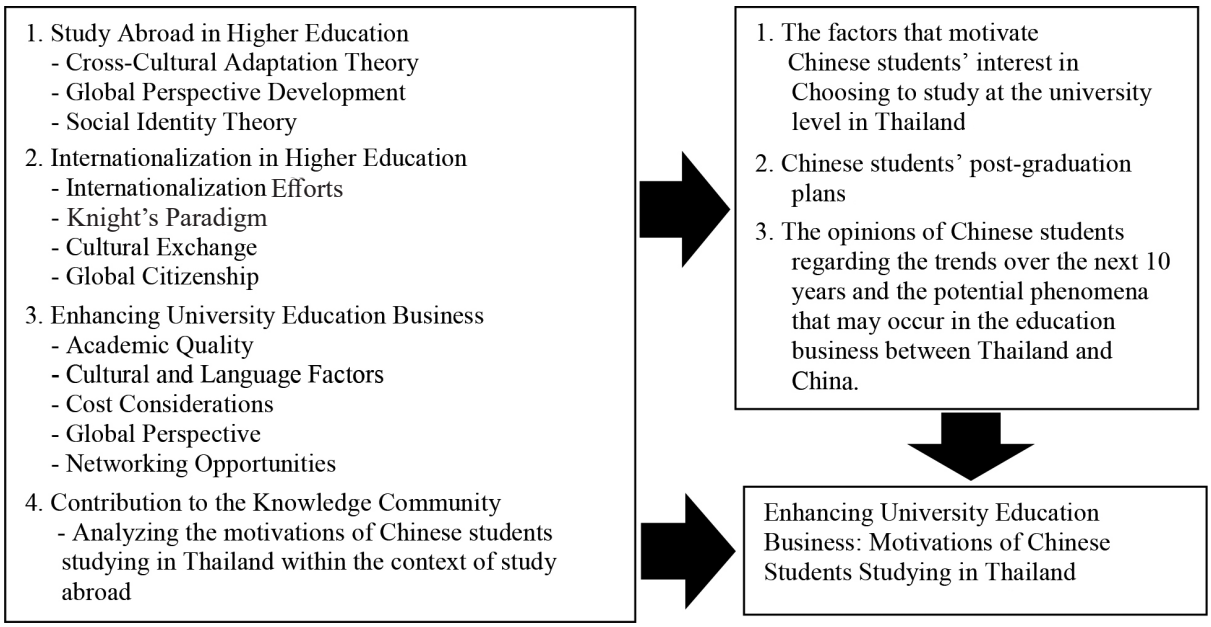
Political and Economic Factors: Geopolitical relations between China and Thailand, and economic opportunities in Thailand.

4. Contribution to the Knowledge Community: Analyzing the motivations of Chinese students studying in Thailand within the context of study abroad and internationalization theories can provide valuable insights. It contributes to the knowledge community by helping educators, policymakers, and researchers understand the dynamics of international student mobility and the factors that influence destination choices. This knowledge can inform strategies for enhancing the attractiveness of higher education institutions and programs to international students, ultimately contributing to the internationalization goals of universities and countries.

Motivation theories such as Push-Pull, Expectancy-Value, Self-Determination, and others play a pivotal role in comprehending why students choose to study abroad and how institutions can foster internationalization (Altbach & Knight, 2007; Dwyer & Peters, 2004). Push factors, driven by limitations in their home country, and pull factors, driven by attractive aspects of the host country or institution, influence students' decisions. Additionally, theories like Cultural Learning and Adaptation, Social Cognitive Career, and Goal-Setting highlight the importance of factors like intercultural competence, self-efficacy, and goal alignment in motivating students to pursue international experiences. Tailoring support services and programs based on these theories can greatly enhance the effectiveness of study abroad and internationalization initiatives.

In conclusion, the theoretical concepts of study abroad and internationalization in higher education provide a robust framework for understanding the motivations of Chinese students studying in Thailand. Analyzing their motivations in this context can contribute significantly to our understanding of international education and its impact on individuals and institutions.

Table 1 Conceptual Framework



Source: Applied by Natthanan Siricharoen

Methodology

Methodology: Enhancing University Education Business: Motivations of Chinese students studying in Thailand

Data Collection Methods: This research adopts a qualitative approach to explore the motivations of Chinese students studying in Thailand. Data collection primarily involved in-depth interviews with individual participants, as well as small group discussions. These discussions, commonly referred to as focus group discussions, were conducted to complement the insights gained from one-on-one interviews.

Participant Demographics: The study's participants consisted of two distinct groups:

Undergraduate Students: A total of 43 Chinese students who had recently enrolled in bachelor's degree programs in Intercultural Communication at a private university.

Doctoral Students: A cohort of 15 Chinese students pursuing doctoral studies in the field of Information and Communication Technology (ICT) at a Public University in Bangkok.

Data Collection Phases: The data collection process was divided into two distinct phases to capture the perspectives of both undergraduate and doctoral students:

Phase One (Undergraduate Students): Data collection occurred during the second semester of the academic year 2021, spanning from January to May 2022.

Phase Two (Doctoral Students): Data collection for this phase took place during the first semester of the academic year 2022, spanning from August to December 2022.

The research process for data collection in Phase 1 and Phase 2 follows a structured approach:

Phase 1: Undergraduate Students

Data Collection Process:

Group Interviews: Initially, the researcher conducts group interviews with 8-10 undergraduate students to gain broad insights into their experiences and emotions regarding their decision to study in Thailand.

Individual Interviews: Following the group interviews, the researcher conducts one-on-one semi-structured interviews with undergraduate students. These individual interviews allow the researcher to delve deeper into their emotions and gather more detailed information. Researchers select individuals known for their willingness to express their opinions and feelings across various areas that influence their decision to study in Thailand.

Research Instruments for Interviews: To guide these interviews, researchers develop semi-structured interview guides with open-ended questions covering topics such as academic challenges, personal well-being, and overall university satisfaction.

Phase 2: Doctoral Students

Data Collection Process:

Group Discussion Interviews: The research begins with group discussion interviews involving 5-8 doctoral students to identify common themes and trends in their experiences related to studying in Thailand.

Individual Interviews: Subsequently, researchers conduct individual interviews with doctoral students to obtain in-depth insights into their unique perspectives. Similar to Phase 1, these interviews use a semi-structured format, and participants are carefully selected for their willingness to express their opinions and feelings regarding various factors influencing their choice to study in Thailand.

Research Instruments for Interviews: For doctoral students, specific semi-structured interview guides are employed. These guides contain questions related to their research, career goals, challenges faced, and overall satisfaction with the doctoral program.

This structured research process ensures a comprehensive understanding of the experiences and emotions of both undergraduate and doctoral students, facilitating the extraction of meaningful insights from their respective educational journeys.

Quality Assurance in Qualitative Research:

Ensuring the rigor and credibility of qualitative research is essential. To maintain the quality of this study, several strategies were employed:

Triangulation: Multiple data sources were used, combining individual interviews and group discussions, to provide a comprehensive understanding of the motivations of Chinese students.

Member Checking: After conducting interviews and discussions, participants were given the opportunity to review and validate the findings, ensuring the accuracy of the interpretations. Peer Review: An external peer review process was undertaken to gain additional perspectives and insights, enhancing the study's credibility.

Researcher Reflexivity: The researcher maintained a reflexive journal to document their thoughts, biases, and assumptions throughout the research process, enhancing transparency and reducing researcher bias.

Data Analysis:

To analyze and synthesize the collected data, the study employed a 'Content Analysis' approach. This method allowed for the systematic examination of interview transcripts and

discussion notes to identify key themes and patterns. The resulting summary aimed to optimize business education services for Chinese students studying in Thailand, with the goal of benefiting both Thailand and China.

In summary, this qualitative research utilized a combination of interviews and discussions (including focus group discussions) to explore the motivations of Chinese students studying in Thailand. Rigorous quality assurance measures, such as triangulation, member checking, peer review, and researcher reflexivity, were employed to ensure the trustworthiness and validity of the findings. The analysis of data followed a content analysis approach to uncover valuable insights for enhancing university education business in the context of Chinese students in Thailand.

Figure 1 Shows the Atmosphere in the Researcher's Classroom
Source: Applied by Natthanan Siricharoen
Group of informants who were undergraduate students in private universities.

Research Results

The information was gathered through a combination of qualitative data collected from both group and individual interviews. Among the findings, several key points stand out as particularly important:

Objective 1: Factors Motivating Chinese Students to Study in Thailand

The data gathered from Chinese undergraduate and doctoral students studying in Thailand revealed several motivations for choosing Thailand for their university education. Notably, both groups expressed a sense of comfort and understanding from Thai teachers, emphasizing the importance of this factor.

"Undergraduate students cited 'the kindness and considerate nature of Thai people' as a key motivator. They felt that Thai teachers were supportive and ready to help with any study-related problems or misunderstandings. This emotional support contributed to a sense of peace of mind while studying in Thailand."

"Similarly, doctoral students also mentioned Thai teachers' understanding of the difficulties Chinese students may face in adapting to a new educational environment. They appreciated the ample time provided for research and information gathering for their assignments, which eased their academic journey. This understanding and accommodation by Thai teachers contributed to their confidence in graduating according to their study plans."

These findings align with the Cross-Cultural Adaptation Theory, as Chinese students' positive experiences with Thai teachers and the cultural adjustment process played a significant role in their choice to study in Thailand. The Social Identity Theory also highlights how these students perceived themselves as welcomed and supported in Thailand, potentially impacting their decision to assimilate or acculturate.

Objective 2: Post-Graduation Plans of Chinese Students

When considering the post-graduation plans of Chinese students in Thailand, it is essential to examine their academic experience and networking opportunities. Both undergraduate and doctoral students shared their perspectives. "Undergraduate students, particularly females, emphasized the manageable workload and flexibility provided by Thai universities. This suggests that many might be inclined to pursue further education or careers in Thailand or other international destinations. The positive experience of studying in Thailand could shape their global perspectives and career aspirations, aligning with the Global Perspective Development theory. Similarly, doctoral students appreciated the academic environment in Thailand, which allowed them ample time for research and assignments. This could lead to a desire to continue their academic careers or engage in research, possibly in an international context, aligning with the idea of enhancing university education and business".

Objective 3: Chinese Students' Opinions on Future Education Trends

Chinese students studying in Thailand also shared their views on the future of education business between the two countries. Both undergraduate and doctoral students expressed a sense of satisfaction with their educational experience in Thailand, largely attributed to the kindness and supportiveness of Thai teachers.

Their comments indicate a potential trend of increased Chinese enrollment in Thai universities in the future, provided that the universities maintain their current standards of understanding and accommodation. This aligns with Knight's Paradigm of Cultural Exchange and Global Citizenship, suggesting that Chinese students see themselves as contributing to cultural exchange and global citizenship through their educational experience in Thailand.

Contribution to the Knowledge Community:

The findings from this research indicate that Chinese students' motivations for studying in Thailand are closely tied to the understanding and support they receive from Thai teachers. This positive experience may lead to increased cooperation between Thailand and China in the field of education, fostering cultural exchange and global citizenship. As Chinese students perceive themselves as bridge builders, universities in both countries could benefit from further collaboration and internationalization efforts.

In conclusion, the motivations, post-graduation plans, and opinions of Chinese students studying in Thailand revolve around the comfort and support they receive from Thai teachers, as well as the academic environment provided. These findings highlight the potential for continued collaboration and growth in the education business between Thailand and China, with Chinese students playing a vital role as cultural ambassadors and future leaders in various fields.

The majority of Chinese students have expressed strong interest in pursuing their studies at Thai universities due to several compelling factors. One key aspect is the availability of high educational standards, which ensures a quality learning experience. Additionally, the universities offer a comprehensive teaching system that accommodates both in-person, onsite, and online learning preferences. A notable feature that appeals to Chinese students is the presence of Chinese translators who aid in translating academic content from Chinese to Thai. This facilitation extends to classroom settings, where instructors provide lectures in Thai and promptly translate the content into Chinese, ensuring a seamless understanding of the subject matter.

This comprehensive support system contributes to a smooth and hassle-free learning process, fostering the students' ability to comprehend and advance in accordance with their individual goals and the established curriculum. Notably, Chinese students studying in Thai-

land are given the opportunity to concurrently learn the Thai language alongside their chosen subjects. This integrated approach allows for the practical development of listening, speaking, reading, and writing skills in Thai.

Furthermore, certain faculties and fields of study impose requirements for Chinese students to engage in teaching Chinese to Thai high school students. This initiative not only enriches the Chinese students' learning experience but also provides them with a potential career trajectory. Graduates can opt to pursue teaching roles at both secondary and university levels, thus offering a multifaceted career path for those interested in education.

In the case of opinions from undergraduate and graduate students, there are noticeable differences in the intensity of teaching. This disparity arises because doctoral-level studies involve professors incorporating greater complexity into the subject matter, utilizing more in-depth examples and case studies. Furthermore, doctoral students are tasked with preparing reports and engaging in various creative projects that entail more intricate subject matter.

Graduate students are expected to generate works encompassing heightened complexity, necessitating the application of relevant concepts and theories to engage in thorough analysis, synthesis, and innovation. As a result, the group of graduate students exhibited high levels of satisfaction with the instructors' quality and expressed that they gained unexpected insights. They also found themselves capable of applying their newfound knowledge to expand their academic achievements.

In summation, the allure of Thai universities for Chinese students lies in their commitment to high educational standards, versatile teaching methodologies, language support, and opportunities for language development and teaching experience. These elements combine to create an enriching academic environment that equips Chinese students with valuable skills and diverse career prospects. These institutions offer a holistic and enriching educational experience that equips Chinese students with the tools and knowledge to thrive in an interconnected global landscape. In addition, most Chinese students also express their appreciation for the character of Thai people, who are good-hearted and generous ─ exemplifying kindness and often seen with smiles. These impressions reflect the general perception Chinese students have of Thai people, making their university trips to Thailand enjoyable, comfortable, delicious, and affordable. Consequently, there is a sense of desire to pursue opportunities for employment after graduation.

There may be some problems and obstacles in studying in Thailand. One of them is communication, as most Thai people do not understand and cannot speak Chinese. Even some Chinese students struggle with speaking Thai fluently. Therefore, there can be misunderstandings between Thai professors and Chinese students. However, this is not a very significant issue, as Chinese undergraduate students are prepared to listen and can speak Thai well enough to understand. I believe that with time and practice, they can overcome this challenge. Another aspect of the issue is making Thai friends. Sometimes, Thai people are shy and hesitant to communicate with each other. This means that it takes time to get to know each other well enough to become comfortable and have open conversations about various topics.

Overall, both groups of informants at different educational levels expressed positive opinions and attitudes toward studying at universities in Thailand. They would be likely to recommend to their friends or younger acquaintances to consider studying at a university in Thailand as an alternative option for pursuing education and eventually entering the workforce.

Discussion

From the research objectives, it can be inferred that the study aims to explore and understand the motivations and intentions of Chinese students who choose to pursue university-level education in Thailand.

The first objective implies that the research seeks to identify and analyze the factors influencing Chinese students' decisions to pursue higher education in Thailand. These factors could include academic reputation, program offerings, cultural exchange opportunities, cost of education, potential career prospects, and any distinctive advantages that studying in Thailand might provide to Chinese students.

The second objective aims to collect information about the post-graduation plans of Chinese students after completing their studies in Thailand. This could involve investigating students' perceptions of job opportunities, quality of life, and other factors influencing their decisions after graduation. This research aims to provide insights into the motivations, preferences, and intentions of Chinese students pursuing university-level education in Thailand. The third objective aims to survey Chinese students' opinions, revealing a collective anticipation of increased collaboration, technological integration, and flexible learning approaches in the education sector between Thailand and China over the next decade. These perspectives underscore the significance of cultural exchange, policy support, and maintaining academic standards in shaping the evolving educational landscape.

For opinions on the future forecast for the next 10 years in the education business between Thailand and China, two groups of respondents provided their respective responses on 10 topics chosen by the researcher. The item with the highest score was 'Increased Collaboration and Partnerships', while the item with the lowest score was 'Mobility and Visa Regulations. Here are some potential trends and considerations for the university education business between Thailand and China over the next 10 years.

Table 2 The Trends Over the Next 10 Years and the Potential Phenomena that May Occur in the Education Business Between Thailand and China

No.	Potential Trends and Considerations for the University Education Business between Thailand and China over the Next 10 Years	Period Occurring Over the Next 10 Years (n = 58)
		Number of People Selected & Percent
1.	Increased Collaboration and Partnerships	50 (86 %)
2.	Growing Chinese Student Enrollment in Thailand	46 (79 %)
3	Technological Advancements	45 (78 %)
4.	Online and Hybrid Learning	44 (76 %)
5.	Research and Innovation	42 (72 %)
6.	Cultural and Language Exchange	40 (69 %)
7.	Government Policies and Bilateral Agreements	39 (67 %)
8.	Quality Assurance and Accreditation	37 (64 %)
9.	Economic and Geopolitical Factors	30 (52 %)
10.	Mobility and Visa Regulations	23 (40 %)

Source: Applied by Natthanan Siricharoen
This data is sourced from questionnaires distributed to undergraduate and doctoral students, who were provided with a selection of topics to choose from.

Some general trends and considerations that might influence the future of university education business between Thailand and China over the next 10 years. However, please note that these are speculative and should not be considered definite predictions. The actual outcomes may vary based on a wide range of factors, such as:

Increased Collaboration and Partnerships: There could be a rise in collaborative initiatives between universities in Thailand and China. Joint academic programs, research collaborations, and student exchanges might become more common as institutions seek to leverage each other's strengths and resources.

Growing Chinese Student Enrollment in Thailand: Thailand's higher education institutions might see an increase in the enrollment of Chinese students. This could be driven by factors such as Thailand's strategic location, lower tuition costs compared to Western countries, and the opportunity for cultural exposure and language learning.

Technological Advancements: Technological advancements, such as advancements in virtual reality, artificial intelligence, and other educational technologies, could reshape the way education is delivered and experienced, potentially enhancing cross-border collaborations.

Online and Hybrid Learning: The adoption of online and hybrid learning models might accelerate, especially in the wake of the COVID-19 pandemic. Universities could offer more online courses and degree programs to cater to both domestic and international students, potentially leading to greater cross-border collaboration.

Research and Innovation: Both Thailand and China have been investing in research and innovation. Over the next decade, collaborations in cutting-edge research areas such as technology, healthcare, renewable energy, and environmental studies could strengthen the ties between the two countries' universities.

Cultural and Language Exchange: Universities might emphasize cultural and language exchange programs to foster mutual understanding and collaboration. This could involve initiatives like language courses, cultural immersion programs, and joint cultural events.

Government Policies and Bilateral Agreements: The education sectors of both countries could be influenced by changes in government policies and bilateral agreements. Trade and diplomatic relations between Thailand and China may shape the direction and extent of educational cooperation.

Quality Assurance and Accreditation: Ensuring consistent and high-quality education will be crucial. Efforts to align accreditation standards and quality assurance mechanisms between the two countries might lead to smoother recognition of degrees and qualifications.

Economic and Geopolitical Factors: Economic developments, geopolitical shifts, and global trends could influence the demand for higher education in both countries. Economic growth and changing trade dynamics might impact students' ability to afford international education.

Mobility and Visa Regulations: Changes in visa regulations and mobility agreements could impact the ease with which students and faculty members can travel between Thailand and China for educational purposes.

It's important to note that the actual future of the university education business between Thailand and China will depend on a complex interplay of these and many other factors. Adaptation to changing circumstances, strategic planning, and a focus on quality and innovation will likely be key to success in this evolving landscape. In assessing the future forecast for the next 10 years in the education business between Thailand and China, two distinct groups of informants were consulted. These groups provided their respective responses on ten different topics selected by the researcher. Among these topics, "Increased Collaboration and Partnerships" emerged as the highest-scoring item, signifying its perceived significance in shaping the future of educational interactions between the two nations. Conversely, "Mobility and Visa Regulations" garnered the lowest score, suggesting that challenges related to mobility and visa regulations might pose obstacles to the anticipated growth and development of the education business between Thailand and China.

The increasing number of Chinese students opting to study in Thailand's universities has led to the growth of the education sector. The unique appeal of Thailand's culture, language, and relaxed learning environment, along with economic and business opportunities, has attracted Chinese students to pursue higher education in the country. This trend is expected to continue to evolve and presents opportunities for further expansion and development in the education sector.

The trend of studying abroad for higher education has gained immense popularity among students seeking broader career opportunities and personal growth. Studying in Thailand offers a unique pathway towards a promising career, both within the country and beyond, as opposed to returning to their home country, such as China.

Studying in Thailand: A Gateway to Prosperity: The allure of pursuing a bachelor's degree in Thailand lies in the perception that it can open doors to a diverse range of career opportunities.

Many students believe that upon graduation, they will have enhanced prospects for employment and income generation. This aspiration resonates with the idea of gaining a competitive edge in the job market through an internationally recognized education. The diverse academic offerings, language exposure, and cultural experiences in Thailand contribute to a well-rounded education that is seen as advantageous for future professional endeavors.

Private Business Ventures: A Symbol of Autonomy and Success: Another prevailing notion among these undergraduate informants is the appeal of launching private businesses in Thailand. Students perceive that starting and growing a business in the Thai environment can be a transformative experience, enabling them to test their entrepreneurial acumen and potentially achieve financial success. The allure of this entrepreneurial path is rooted in the belief that through hard work and innovation, individuals can establish profitable enterprises that not only secure their financial well-being but also contribute to the broader economy.

A Choice of Hopeful Opportunities: The decision to study in Thailand represents a conscious choice made by these students, driven by a desire for promising opportunities. The multifaceted nature of Thailand's educational system, which combines academic excellence with experiential learning, resonates with their aspirations. This resonates with their aspiration to not only gain knowledge but also develop practical skills that can be applied in real-world scenarios. This aligns with the student's pursuit of meaningful career paths that offer stability and growth potential.

Contrasting Perspectives: Graduating and Returning to China: While the allure of studying in Thailand is undeniable, some students contemplate the option of returning to China after graduation. However, this alternative is often perceived as less enticing due to the prevailing notion that studying abroad offers a wider range of professional avenues. The prospect of experiencing different cultures, languages, and academic systems contributes to a more holistic skill set, which is often perceived as a valuable asset in the global job market.

Conclusions

In conclusion, the perspectives of undergraduate and Ph.D. students considering studying in Thailand illustrate a shared aspiration for a prosperous future filled with promising career opportunities and entrepreneurial ventures. These students are motivated by the belief that pursuing education and business endeavors abroad, particularly in Thailand, can lead to a stable and fulfilling life. For undergraduate students, the appeal of Thailand lies in the multifaceted education and practical experiences it offers, which are seen as valuable assets in shaping dynamic and successful careers. While returning to China remains an option, the advantages of studying in Thailand make it an attractive choice for those looking to broaden their horizons. For Ph.D. candidates from China, Thailand presents a compelling option due to several key factors: the cost-efficiency and lump sum system, flexible learning opportunities, high-quality teaching, and exposure to diverse cultures. These elements combine to create an environment conducive to personal and academic growth, positioning students for success in their chosen fields. Overall, the allure of pursuing education in Thailand for Chinese students is multifaceted and compelling, driven by factors such as cost-effectiveness, flexibility, support for familial responsibilities, quality teaching, and cultural exposure. This decision represents a strategic investment in a brighter future in an increasingly interconnected world. The information provided about the implementation of Total Quality Management (TQM) in higher education institutions, while

valuable, may not directly relate to the subject research on "Enhancing University Education Business: Motivations of Chinese Students Studying in Thailand". However, it is possible to draw some indirect connections and potential implications: Quality Assurance: The implementation of TQM in higher education institutions emphasizes the importance of maintaining and improving the quality of education. In the context of Chinese students studying in Thailand, this could be relevant in ensuring that collaborative programs between Thai and Chinese universities meet high academic standards. Quality assurance could be a key factor in attracting Chinese students to study in Thailand. Student Satisfaction: TQM often includes a focus on student satisfaction. Understanding the motivations of Chinese students to study in Thailand includes considering their satisfaction with the educational experience. The positive outcomes mentioned in the TQM context, such as elevated levels of student satisfaction, may align with the goals of universities in Thailand to attract and retain Chinese students. Innovation and Adaptability: TQM promotes innovation and adaptability within academic institutions. This could be relevant to the discussion of why Chinese students choose Thailand for their education. If Thai universities can demonstrate a commitment to innovation and adaptability in their programs, it may be appealing to Chinese students seeking dynamic and fulfilling educational experiences. Data-Driven Approaches: The mention of the Six Sigma methodology being used in TQM highlights the importance of data-driven decision-making. In the context of the research on Chinese students studying in Thailand, universities and education businesses could benefit from data-driven insights to understand and meet the needs of their Chinese student population. Overall, while the information about TQM may not directly address the motivations of Chinese students, it does emphasize the importance of quality, satisfaction, innovation, and data-driven approaches in higher education. These factors could indirectly impact the success of education businesses and collaborations between Thailand and China in attracting and retaining Chinese students.

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Motivations and Segmentation of Young Wellness Tourists in Chengdu: A Case Study in the Post-COVID-19 Era

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Abstract

This study explores the push and pull motivations and preferences of young wellness tourists in Chengdu, focusing on their travel motivations, satisfaction levels, and future intentions. The research collected data through a questionnaire survey, with a sample size of 445 respondents. Quantitative research methods, including factor analysis, cluster analysis, and t-test were employed to analyze the data. The findings reveal that the motivations of young wellness tourists can be categorized into four key factors: "Social, Cultural, and Environmental Wellness", "Personal Well-being and Fitness", "Service and Facility-Related Wellness", and "Escape". Cluster analysis identified two distinct clusters within the sample. Significant differences were observed between the two clusters in terms of overall satisfaction and future intentions. The results of this study provide valuable insights into the motivations and preferences of young wellness tourists in Chengdu.

Keywords: Wellness Tourism, Youth Tourists, Motivation, Market Segmentation, Satisfaction and Future Intention

Introduction

Wellness tourism, defined as travel aimed at enhancing personal well-being, has been experiencing rapid growth in recent years, becoming a popular trend among travelers seeking relaxation, rejuvenation, and overall well-being. However, the outbreak of the COVID-19 pandemic had a profound impact on the industry, disrupting travel plans and leading to the closure of wellness hotels, resorts, and destinations due to the high risk of virus transmission during wellness treatments and activities (GWI, 2021). The consequences were far-reaching, resulting in a significant decline in the wellness economy, plummeting from $720 billion in 2019 to $436 billion in 2020, along with a sharp decrease in wellness trips from 936 million to 601 million (GWI, 2021).

The pandemic did not only affect the industry's economic aspects but also significantly influenced tourists' travel psychology and preferences. With travel restrictions and safety concerns, travelers' intentions and needs underwent shifts during the pandemic. Tourists started prioritizing destinations that offered a sense of safety and seclusion, leading to an increased interest in non-mass regions and a preference for unique experiences that were not overcrowded (Rogerson & Rogerson, 2021). Almeida and Silva (2020) pointed out that in the post-COVID-19 era, tourists may increasingly

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seek places with a focus on social and environmental sustainability, closer proximity to nature, and accommodations provided by small hotel units and resorts that offer a more personalized and familiar approach.

The stringent lockdown measures and movement restrictions implemented during the pandemic, particularly in China, exerted unparalleled strain on economic activities, public well-being, and commercial enterprises (Lu et al., 2020). Prolonged periods of residing in high-stress, constrained settings led to heightened physical and mental fatigue, fostering a heightened recognition of the significance of both physical and psychological health. Consequently, a discernible inclination has emerged toward practices centered on relaxation, revitalization, and the holistic preservation of overall well-being (Tran & Silverstri-Elmore, 2021).

As the industry looks towards recovery, there is an opportunity for businesses in wellness tourism to adapt their offerings to meet the changing demands and preferences of tourists. Ensuring health and safety measures are in place to provide a secure environment for guests remains paramount (Lu et al., 2020). Additionally, emphasizing the benefits of natural and secluded locations, and promoting sustainable practices, will likely attract more travelers seeking rejuvenation and unique experiences in the post-pandemic era.

In this context, youth travelers play a significant role in the wellness tourism segment, driven by various factors such as changing socio-economic conditions and increased leisure time (Khoshpakyants & Vidishcheva, 2010; Saikia, 2018). Young tourists are known to travel more frequently, explore off-the-beaten-path destinations, and stay for longer durations (UNWTO & WYSE Travel Confederation, 2011). As they transition from youth to adulthood, they become an emerging market segment for wellness services (Hosker et al., 2019). In recent years, the spa industry, in particular, has witnessed a rise in young individuals seeking wellness experiences (Hanks & Mattila, 2011). Moreover, young people are actively interested in weight management, seeking information on healthy eating and weight loss strategies (Razak et al., 2020). However, there is a lack of differentiation between young tourists and the general tourist population, limiting our understanding of their specific needs and preferences within the wellness tourism context (Saikia, 2018).

Wellness tourism, being a niche market within special interest tourism, faces challenges in identifying consistent travel motivators due to its relatively short research history (Lee & Kim, 2023). Market segmentation, a crucial marketing tool, is underutilized in wellness tourism research, limiting the understanding of customer motivations and behaviors (Pesonen et al., 2011; Lee & Kim, 2023). Therefore, further research is imperative to explore the motivations and segment of young wellness tourists, particularly in the post-COVID-19 era, to develop targeted strategies that contribute to the industry's recovery and growth.

Chengdu, the capital of Sichuan province, offers a wealth of resources, a thriving economy, and a healthy natural ecosystem. With its rich historical and cultural heritage, Chengdu presents a unique setting for wellness activities suitable for individuals of all ages (Liu et al., 2017; Wang et al., 2022). The city is particularly known for its geothermal heat, hot springs, and traditional Chinese medicine, making it an ideal destination for wellness tourism. Given Chengdu's favorable wellness preservation environment, well-established market, and diverse range of wellness projects, it serves as an appropriate case study destination to explore young wellness tourists.

Despite the growing significance of young tourists in the wellness tourism industry, research specifically focusing on their motivations and behaviors, especially in the post-COVID-19 context, remains limited (Saikia & Goswami, 2019). Understanding the diverse

motivations of young wellness tourists is crucial for developing effective strategies that cater to their specific motivations and enhance their overall satisfaction and their interactions with wellness offerings.

Research Objectives

The primary objectives of the study are delineated as follows:

1. To identify the travel behavior and motivational patterns exhibited by young wellness tourists in Chengdu.
2. To methodically segment the cohort of young wellness tourists in accordance with their distinct motivational dimensions.
3. To compare the overall satisfaction levels and future intentions between the discerned clusters of young wellness tourists.

Literature Review

Wellness Tourism

Wellness tourism is driven by the desire of health-conscious individuals to achieve a state of overall well-being and longevity (Koncul, 2012). According to Voigt et al. (2011), wellness tourism refers to the pursuit of physical and mental well-being by individuals who travel from their place of residence to wellness-related leisure destinations during their free time. This concept encompasses various dimensions of wellness, including social, psychological, emotional, spiritual, and physical health. The process of engaging in wellness tourism begins with an individual's aspiration to enhance their physical, spiritual, or mental health. Specific wellness programs and treatments are designed to address and eliminate negative physical factors such as toxins and stress, while promoting a healthy lifestyle through activities such as exercise and a nutritious diet (Chen, 2007).

One of the key objectives of wellness tourism is to improve individuals' health within a natural environment (Dunets et al., 2020). This includes the intention to establish wellness centers surrounded by nature, as well as the utilization of eco-friendly products and alternative procedures. By integrating nature and eco-conscious practices, wellness tourism not only benefits the well-being of individuals but also contributes to the preservation of natural resources such as forests, natural hot springs, and wildlife.

Push and Pull Travel Motivation

In the tourism field, motivation has been widely demonstrated to play a crucial role in guiding the dynamic process of tourist behavior, enhancing the understanding of how and why people make travel decisions (Baloglu & Uysal, 1996). They have highlighted the significance of travel motivation research based on the push-pull motivation theory. The push factors focus on the internal desires and lack of fulfillment that drive individuals to travel, while the pull factors pertain to the attractions and appealing aspects of tourist destinations. Studies exploring travelers' attitudes towards healthy living have indicated that push motivation is linked to emotional factors that enhance individuals' inclination to travel.

Among wellness tourists, the primary motivations identified are social engagement and self-centeredness (Dimitrovski & Todorovi, 2015). Kim et al. (2017) have identified four dimensions of motivation for wellness tourists, namely prestige and luxury, novelty and knowledge, self-

development, relaxation and escape. Adam and Amuquandoh (2019) have recognized push motivation factors such as knowledge enhancement, seeking self-realization, social interaction, and escape. Rančić, Pavić, and Mijatov (2014) have identified diverse push and pull motivations, including recreation, relaxation, improved quality of life, health consciousness, social activity, curiosity, nature experiences, multi-activity pursuits, meditation, and effortless activity. Recently, Gan et al. (2023) categorized health and wellness tourists' motivation into push and pull factors. In their study, push motivation includes escape and consumption motivation, while pull motivation consists of attractive, natural environments and interpersonal motivation. The study revealed that push motivation has a stronger direct influence on overall satisfaction and tourists' behavioral intention in health and wellness tourism compared to pull motivation.

For young travelers, exploration is a fundamental aspect of their identity and a means of learning, meeting new people, and experiencing different cultures. They view travel as an opportunity for personal and career development (Saikia & Goswami, 2019). Richards and Wilson (2003) have identified the primary motivations of young travelers as the desire to explore new cultures, seek excitement, and enhance knowledge. Youth and student travelers are typically seeking unique experiences, aiming to create memorable moments, build a travel-related career, and broaden their horizons by venturing into challenging destinations. Furthermore, a study on the motivation of Generation Y healthy travelers revealed that key motivations for this group include healthy menus, clean accommodations, and access to quality natural resources (Hritz et al., 2014). Young tourists are highly motivated to improve their overall well-being through wellness education, esthetic experiences, and escape activities. They actively engage in learning about wellness through workshops and classes, show interest in beauty treatments and spa services, and seek out escape experiences to temporarily disconnect and relax. These preferences indicate their prioritization of personal growth, relaxation, and a desire for experiences that contribute to their well-being (Liu et al., 2023).

Existing literature reveals a lack of consensus among scholars regarding a universally applicable set of motivations to measure tourists' intentions to visit destinations or attractions. This suggests that motivations are specific to each destination. Additionally, it is important to acknowledge that motivations and preferences can vary among different target groups and may also change over time.

Segmentation of the Wellness Travelers

Segmentation of wellness travelers plays a crucial role in the wellness tourism industry as it allows for a better understanding of diverse market segments and enables wellness service providers to deliver tailored experiences that satisfy customer needs (Lee and Kim, 2023). Researchers have identified distinct segments within the wellness travel market based on socio-demographic, behavioral, and psychological factors. For example, Dryglas and Salamaga (2018) identified segments such as wellness and treatment seekers, as well as tourism, treatment, and wellness seekers in spa resort settings. Huh et al. (2019) proposed sub-segments including pleasure pursuers, healing pursuers, and relaxation pursuers. Damijanic (2020) clustered wellness tourists into high wellness, immaterial wellness, and low wellness clusters based on their motivations. Additionally, Lee and Kim (2023) categorized the wellness market into four segments: novelty-seekers, comprehensive motivation-seekers, neutral wellness-seekers, and exploratory wellness-seekers.

Insufficient research exists on the segmentation of young wellness tourists, thereby emphasizing the importance of effectively identifying and categorizing diverse market segments. Undertaking the segmentation of young wellness travelers is of utmost importance as it enables service providers to comprehensively comprehend the distinct characteristics and motivations prevalent among various segments. Such understanding facilitates the provision of tailored services, resulting in heightened customer satisfaction and a significant competitive edge within the market.

Satisfaction and Behavioral Intention

The nexus between satisfaction and behavioral intention in tourism is a pivotal aspect of understanding the dynamics of travelers' experiences. Tourism satisfaction, capturing the emotional or cognitive responses of tourists to their travel encounters, signifies the extent of contentment derived from travel-related products or services (Bigne et al., 2001). In consumer behavior studies, satisfaction is frequently scrutinized independently, often in tandem with behavioral intention and influence (Bayih and Singh, 2020). Behavioral intention, predicting consumers' future actions, holds paramount importance in tourism studies, encompassing loyalty, revisit intention, and positive word of mouth as integral components (Kim et al., 2010; Bayih & Singh, 2020).

Practitioners and academics underscore the significance of investigating satisfaction and behavioral intention in tourism studies (Acharya et al., 2023). Research within the tourism domain focuses on cultivating positive behaviors, as evident in studies like those conducted by Bayih and Singh (2020), seeking to validate influential relationships associated with motivational factors impacting behavioral intentions. A noteworthy contribution from Lee and Kim (2023) sheds light on substantial differences in satisfaction and behavioral intention within various segments of the wellness tourism industry.

In conclusion, the literature highlights the destination-specific nature of motivations and the significant influence of nuanced variations among diverse target groups on satisfaction and behavioral intentions. Our study contributes by focusing on the segmentation of young wellness tourists based on their travel motivations, aiming to compare overall satisfaction levels and behavioral intentions across distinct clusters.

Methodology

Quantitative research methods are employed in this study to gather and analyze data on wellness travel motivation among youth tourists visiting wellness destinations in Chengdu. The research objectives are achieved through a questionnaire survey conducted online. The study focuses on youth tourists, defined as individuals between the ages of 18 and 40 (Saikia, 2018). The online questionnaire was designed to measure various variables related to the research framework, including demographics, travel motivation, satisfaction, and future intention. The measurement of young Chinese wellness travel motivation consists of two categories with a total of 21 items, comprising 12 push motivation items and 9 pull motivation items, benchmarked from Aleksijevits (2019). The measurement scale used is a five-point rating scale ranging from 1 (Not at all important) to 5 (Extremely important). Overall satisfaction and future intention, including the likelihood of revisiting and recommending Chengdu as a wellness destination to others, are measured on a five-point Likert scale ranging from 1 (Very satisfied/Likely) to 5 (Very dissatisfied/Unlikely).

To ensure the questionnaire's validity, IOC was conducted by asking three experienced professors from Prince of Songkhla University. Their valuable feedback and suggestions were incorporated into the questionnaire after careful consideration. Subsequently, a pilot test was conducted, involving 30 wellness travelers who were asked to complete the questionnaire. The analysis revealed that the attribute score for push motivation in wellness tourism was 0.876, and the attribute score for pull motivation in wellness tourism was 0.847, indicating a strong consensus among respondents regarding factors that attract them to wellness tourism and met the required acceptance level.

The questionnaire was created using an online platform, and the link to the questionnaire was distributed to the target respondents via WeChat or QQ during the period of January - February 2023. The targeted respondents were required to confirm that they were within the age range of 18-40 and had visited wellness destinations in Chengdu within the past two years. Only those who answered "Yes" to both questions were allowed to proceed with the main part of the questionnaire. A total of 445 usable questionnaires were collected. The collected data were analyzed using SPSS (20th Edition) to calculate and analyze the valid data.

Research Results

Based on the data presented in Table 1, several key characteristics of the 445 respondents have been outlined. The majority of the respondents were female, comprising 71% of the sample. In terms of age distribution, 63% of the respondents were in the age range of 21-30, 30% were 20 years or younger, and only 6% were in the age range of 31-40. The majority of the respondents, 90%, were single. In regards to educational background, 42% had a bachelor's degree, 39% had a technical school diploma, and 13% had a postgraduate degree.

Table 1 Demographic Characteristics

List		Frequency	Percentage
Gender			
	Male	128	29
	Female	317	71
Age			
	18-20	134	30
	21-30	280	63
	31-40	31	7
Marital Status			
	Single	400	90
	Married	21	5
	Divorced/Widow	24	5
Education			
	High school or lower	24	6
	Technical school	175	39
	Bachelor Degree	187	42
	Higher than Bachelor Degree	59	13

Table 2 Travel Behaviors

List	Frequency	Percentage
Travel Time		
Winter and summer	229	52
vacations	108	24
Public holidays	47	11
Workday	61	14
Weekends		
Transportation		
High-speed rail	177	40
Airplane	103	23
Self-driving	75	17
Train	46	10
Bus	44	10
Length of stay in Chengdu		
2-3days	224	52
4-5days	88	21
6-7 days	73	17
More than a week	44	10
Travel party		
Friend	193	43
Alone	89	20
Spouse/partner	80	18
Family	65	15
Others	18	4

According to the data in Table 2, a significant proportion of the respondents exhibited distinct preferences regarding their travel behavior. A majority, comprising 52% of the participants, favored embarking on journeys during winter and summer vacations. In contrast, 24% opted for traveling during public holidays. Only a small fraction, approximately 10%, displayed a preference for undertaking trips on weekdays, whereas 14% indicated a propensity for weekend travel.

Regarding domestic travel to Chengdu, the preferred mode of transportation varied among the respondents. Notably, 40% of the participants favored utilizing the high-speed rail service, while 23% opted for air travel. A notable proportion, approximately 17%, indicated a preference for self-driving, whereas 10% each selected the train and public bus as their preferred means of travel to Chengdu.

The study brought attention to the diverse lengths of stay among the respondents, with 429 out of 445 addressing this question. Half of the participants, representing 52% of the sample, reported spending 2-3 days per trip, while 38% opted for a duration ranging from 4 days to a week. Furthermore, 10% of the respondents indicated extending their stays beyond a week during their visits.

Furthermore, the data revealed diverse travel companions among the participants. A significant proportion, accounting for 43% of the respondents, preferred traveling with friends.

A considerable number, comprising 20% of the participants, embarked on their travels alone. In contrast, 18% of the respondents chose to travel with a spouse or partner, while 15% indicated that they traveled with family members. A small fraction, approximately 4%, opted for other companions, such as business partners or tour groups.

To identify the underlying motivation dimensions for young wellness tourists, an exploratory factor analysis was conducted using the 12 push and 9 pull motivational items. Prior to the analysis, the Measure of Sampling Adequacy (MSA) was calculated, yielding a Kaiser-Meyer-Olkin (KMO) measure of 0.935, indicating the interrelatedness and common underlying dimensions of the 21 push and pull motivations. Bartlett's Test of Sphericity further confirmed the suitability of factor analysis, with a test statistic value of 6091.333 and a significance level of 0.000, indicating significant correlations between the variables.

Table 3 Descriptive Statistics and Results of Explanatory Factor Analysis of Young Wellness Tourists' Push and Pull Travel Motivation to Chengdu

Variables	Mean	S.D.	Factor 1	Factor 2	Factor 3	Factor 4
Push 2: Reward yourself	4.05	.903	.625	-	-	-
Push 4: physical rest and relaxation	4.20	.875	.780	-	-	-
Push 5: Accompany friends and family	4.10	.912	.600	-	-	-
Push 10: Cleaned physically and spiritually	4.03	.856	.651	-	-	-
Pull1: Local cuisine	3.92	.913	.521	-	-	-
Pull2: Cultural heritage and cultural activities	3.98	.858	.693	-	-	-
Pull4: Sights of tourist destinations	4.05	.833	.795	-	-	-
Pull8: Hygiene and cleanliness	4.11	.882	.802	-	-	-
Pull9: Safe and easy access	4.18	.884	.794	-	-	-
Push 6: Meet new people	3.53	1.012	-	.740	-	-
Push 8: Improve fitness levels	3.94	.938	-	.586	-	-
Push 9: Lose weight and improve appearance	3.50	1.034	-	.682	-	-
Push 11: Learn something new	3.91	.945	-	.740	-	-
Push 12: Show a higher life style	3.56	1.026	-	.727	-	-
Pull3: Affordability	3.63	.924	-	-	.657	-
Pull5: Brand of spa/hotel/resort	3.45	.973	-	-	.780	-
Pull6: TCM physiotherapy wellness services	3.38	.989	-	-	.771	-
Pull7: Wellness facilities at the destination	3.59	1.000	-	-	.727	-
Push 1: Escape from daily routine	3.48	1.054	-	-	-	.785
Push 3: Being pampered	3.34	.991	-	-	-	.539
Push 7: Find thrills and excitement	3.55	1.004	-	-	-	.544

Table 3 Descriptive Statistics and Results of Explanatory Factor Analysis of Young Wellness Tourists' Push and Pull Travel Motivation to Chengdu (Con.)

Variables	Mean	S.D.	Factor 1	Factor 2	Factor 3	Factor 4
Eigenvalues	-	-	46.589	9.228	6.259	5.158
Percentage of variance	-	-	25.455	17.076	15.664	9.039
Percentage of cumulative variance	-	-	25.455	42.530	58.194	67.233
Cronbach'sα	-	-	.923	.850	.878	.654

Remark: n = 445

The results presented in Table 3 indicate that the 21 motivational items were successfully grouped into four distinct factors, each with eigenvalues greater than one, suggesting their significance in explaining the underlying motivations of young wellness tourists in Chengdu. Collectively, these four factors accounted for a substantial portion (67.233%) of the variance, indicating that they captured a significant portion of the diverse motivations driving wellness travel in this context. Most of the factor loadings, which measure the strength of the relationship between each variable and its corresponding factor, were greater than 0.60, further supporting the robustness of the factor structure. This suggests that the variables within each factor shared a common underlying dimension and contributed significantly to the interpretation of that factor.

The first factor, termed "Social, Cultural, and Environmental Wellness", emerged as the most significant factor, explaining 25.45% of the variance. This factor encompasses experiences such as engaging with local cuisine, immersing in cultural heritage, and visiting tourist destinations. The second factor, labeled "Personal Well-being and Fitness", accounted for 17.08% of the variance. It includes motivations such as improving fitness levels, weight loss, and enhancing appearance. The third factor, "Service and Facility-Related Wellness", explained 15.66% of the variance. This factor represents motivations related to the availability of wellness facilities and services, including hygiene, cleanliness, and safe and convenient access. Lastly, the "Escape" factor accounted for 9.04% of the variance and captures motivations associated with the desire to escape from daily routines, indulge in pampering experiences, and seek thrills and excitement.

Table 4 Comparison of the Cluster Motivations

Factors	Clusters		t-ratio	p-value
	1	2		
Factor 1: Social, Cultural and Environmental Wellness	-.39590	.73342	14.369**	0.000
Factor 2: Personal Well-being and Fitness	.03477	-.06442	.925	.356
Factor 3: Service and Facility-Related Wellness	.21993	-.40743	6.147**	0.000
Factor 4: Escape	.38402	-.71142	12.924**	0.000
n	**289**	**156**	-	-
%	**65**	**35**		

** p-value <0.001

The results of the cluster analysis, as summarized in Table 4, revealed the presence of two distinct clusters among young wellness tourists. Cluster I consisted of 289 cases, representing 65% of the respondents, while Cluster 2 comprised 156 cases, accounting for 35% of the respondents. The statistical significance of the cluster analysis was confirmed ($p < 0.001$). The analysis identified three significant motivational factors that differentiated the two clusters. These factors were "Social, Cultural, and Environmental Wellness", "Service and Facility-Related Wellness", and "Escape".

Figure 1 compares the important level of travel motivators between 2 clusters. The respondents in cluster 1 prioritize factors related to "Escape", and "Service and Facility-Related Wellness" in their travel motivations. These factors hold greater significance for the respondents in this cluster, suggesting that they are more motivated by the desire to escape from their daily routine and seek wellness experiences that offer quality services and facilities. This cluster was labeled "Escape and Service-Driven Wellness Seekers".

On the other hand, in Cluster 2, the respondents place the greatest value on the "Social, Cultural, and Environmental Wellness" factor. This indicates that they are primarily motivated by the opportunity to explore and engage in cultural experiences, as well as to connect with the natural environment during their wellness travels. This cluster was named "Social, Cultural, and Environmental Wellness Explorer".

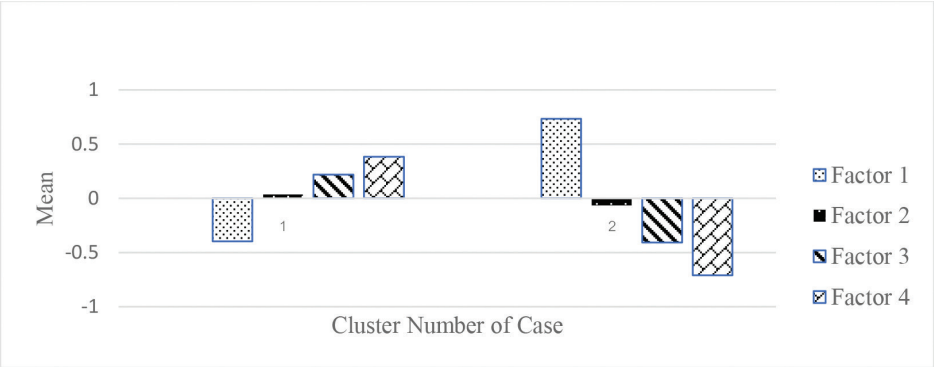

Figure 1 Comparing Motivation Mean Scores among Clusters

Table 5 shows that there were significant differences in overall satisfaction and future intention between Cluster 1 (Escape and Service-Driven Wellness Seekers) and Cluster 2 (Social, Cultural, and Environmental Wellness Explorers). Young wellness tourists in Cluster 2 reported higher levels of satisfaction towards their wellness trip to Chengdu compared to those in Cluster 1 (3.61 vs 3.40). Additionally, Cluster 2 had higher intentions to revisit Chengdu (3.85 vs 3.59) and a greater likelihood to recommend Chengdu as a potential wellness tourism destination to their friends and family (3.81 vs 3.55).

Table 5 Independent Sample T-test for Overall Satisfaction and Future Intention

Variables	Mean		t-value	p-value
	Cluster 1	Cluster 2		
Overall Satisfaction	3.40	3.61	-2.382*	.018
Revisit Intention	3.59	3.85	-3.025**	.003
Likelihood to Recommendation	3.55	3.81	-3.032**	.003

** p-value < .01, * p-value < .05

Discussion

Based on the research findings, the study sheds light on the distinct characteristics and motivations of young wellness tourists visiting Chengdu. The demographic analysis revealed a predominantly female sample, primarily aged between 20 to 30 years, with a significant proportion holding a bachelor's degree or a technical school diploma. Notably, the majority of respondents preferred to travel during winter and summer vacations, utilizing high-speed rail as the most favored mode of transportation. These demographic patterns align with the broader understanding of the typical profile of young wellness tourists, as outlined in previous research (Saikia, 2018; Liu et al., 2023).

Furthermore, this study explored the motivational factors for young wellness tourists in Chengdu, China. Through factor analysis and cluster analysis, four distinct motivational factors were identified: "Social, Cultural, and Environmental Wellness", "Personal Well-being and Fitness", "Service and Facility-Related Wellness", and "Escape". This finding is consistent with the push and pull motivation theory, emphasizing the importance of social engagement, cultural experiences, and environmental well-being as significant drivers for young wellness tourists (Kim et al., 2017; Saikia & Goswami, 2019; Razak et al., 2020), emphasizes the role of service quality and convenience in shaping tourists' decisions (Hosker et al., 2019), and identified the desire for adventure, thrill-seeking, and a sense of freedom among young travelers (Hanks & Mattila, 2012).

Moreover, the findings align with previous literature in the field and contribute to a deeper understanding of this specific tourist segment. The segmentation analysis revealed two distinct clusters. Cluster 1, labeled "Escape and Service-Driven Wellness Seekers", prioritized factors related to escape and the quality of services and facilities. This finding is consistent with previous studies that highlight the desire for relaxation and pampering experiences among wellness travelers (Dryglas & Salamaga, 2018). On the other hand, Cluster 2, named "Social, Cultural, and Environmental Wellness Explorers", placed greater importance on social, cultural, and environmental factors. This finding supports the notion that young wellness tourists seek opportunities to engage in cultural experiences and connect with the natural environment (Saikia & Goswami, 2019; Dryglas & Salamaga, 2018; Richards and Wilson, 2003).

The analysis of overall satisfaction and future intentions demonstrated that young wellness tourists in the "Social, Cultural, and Environmental Wellness Explorers" cluster exhibited higher levels of satisfaction, stronger intentions to revisit Chengdu, and a greater likelihood to recommend the city as a wellness tourism destination compared to the "Escape and Service-Driven Wellness Seekers" cluster. This finding supported Gan et al. (2023) which highlights the positive impact

of cultural and environmental experiences on tourist satisfaction and behavioral intention. These findings underscore the critical role of social, cultural, and environmental experiences in shaping the overall satisfaction and future intentions of young wellness tourists in Chengdu.

Overall, the study's findings underscore the importance of understanding and catering to the specific motivations and preferences of young wellness tourists in Chengdu. The results provide valuable insights for businesses and stakeholders in the wellness tourism industry to develop targeted marketing strategies and customized services that align with the distinct clusters identified. By emphasizing cultural immersion and environmental experiences, businesses can enhance the appeal of Chengdu as a wellness tourism destination for young travelers, contributing to the sustainable growth and development of the industry in the region (Liu et al., 2017; Wang et al., 2022).

Suggestions

Through the identification and delineation of distinct clusters based on prioritized motivational factors, this study significantly contributes to the theoretical framework, demonstrating the application of segmentation theory in discerning and addressing diverse needs and preferences within wellness tourism. The recognition of specific motivational factors, including "Social, Cultural, and Environmental Wellness", "Personal Well-being and Fitness", "Service and Facility-Related Wellness", and "Escape", enriches motivational theory within the wellness tourism domain. By categorizing respondents into meaningful clusters based on their motivational profiles, the research yields valuable insights into different market segments, their unique characteristics, and preferences. The identification of clusters such as "Social, Cultural, and Environmental Wellness" and "Escape and Service-Driven Wellness Seekers" not only enhances our understanding of young wellness tourists' motivations but also contributes theoretical insights into their distinct preferences. This, in turn, fosters a more comprehensive understanding of the factors influencing satisfaction, repeat visitation, and positive word-of-mouth recommendations within these segments.

The practical implications derived from this study are pivotal for stakeholders in the wellness tourism sector, particularly those operating within Chengdu. By recognizing the distinct motivational factors of young wellness tourists, businesses can strategically tailor their marketing efforts and product development to align with the emphasis on social, cultural, and environmental wellness experiences. This targeted approach enables businesses to effectively engage the "Social, Cultural, and Environmental Wellness Explorers" cluster, fostering increased visitor engagement and satisfaction.

Furthermore, the emphasis on superior service and facility offerings, as highlighted by the "Escape and Service-Driven Wellness Seekers" cluster, underscores the importance of investing in service quality and facility enhancement. By prioritizing top-tier hospitality, advanced wellness facilities, and comprehensive service provision, businesses can elevate visitor satisfaction, thereby cultivating a loyal customer base and fostering repeat visitation.

Additionally, the recognition of the significance of cultural and environmental wellness experiences accentuates the need for destination management authorities to prioritize the preservation and promotion of local heritage, cultural activities, and natural landscapes. By integrating sustainable practices and offering authentic cultural experiences, Chengdu can establish itself as a leading wellness tourism destination, catering to the preferences of young wellness tourists seeking immersive and culturally enriching experiences.

Moreover, the implementation of educational and training initiatives for hospitality and wellness professionals can further enhance the visitor experience. By focusing on cultural awareness, service excellence, and sustainable practices, these initiatives can elevate the standard of service delivery, ensuring an authentic and enriching wellness tourism experience for visitors.

Overall, these implications emphasize the necessity of a comprehensive approach that integrates cultural, environmental, and service-oriented elements to meet the diverse motivational factors of young wellness tourists. Leveraging these insights can contribute to the development of a thriving and sustainable wellness tourism landscape in Chengdu, promoting visitor satisfaction, fostering repeat visitation, and stimulating the long-term growth and development of the region's wellness tourism industry.

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Factors Affecting Intention to Use Hormonal Contraception among Female Undergraduate Students at XYZ University in Chiang Mai Province, Thailand

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Abstract

This research aims to study the influence of attitude and self-regarding preference, subjective norm, and perceived behavior control on the intention to use hormonal contraception among female undergraduate students in Chiang Mai province, Thailand. The sample population consists of 213 respondents, and the data was analyzed using regression analysis. The results of the study show that 74.1% of female undergraduate students at XYZ University in Chiang Mai currently use contraception pills. The intention to use is measured with a five-level Likert scale in five aspects with the following results: belief in the benefits of using (M = 4.03, S.D. = 0.841), continuing to use (M = 4.01, S.D. = 0.924), plan to use (M = 4.98, S.D. = 0.939), intend to use (M = 3.94, S.D. = 0.904), and expect to use (M = 3.89, S.D. = 0.970). For the factors determining the intention to use, the results are consistent with previous studies and confirm the hypotheses that attitude and self-regarding preference, subjective norm, and perceived behavior control have positive and significant relationships with the intention to use hormonal contraception. The demographic variables, which include relationship status, the field of study, income, and current usage, have no significant relationship to the intention to use hormonal contraception.

Keywords: Hormonal Contraception, Intention, Theory of Planned Behavior, the Rational Choice Theory, Female Undergraduate Students

Introduction

According to World Contraceptive Use, United Nation, Intrauterine devices (IUDs) are the most commonly used contraceptive method in Eastern and Southeast Asia (18.6%), followed closely by male condoms (17.0 %). Female sterilization is the most common method in Central and Southern Asia (21.8 %). Overall, short-acting methods, such as pills, injectables, and male condoms, constitute more than half of all contraceptive methods used in 125 countries. For

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Thailand, the most common contraceptive methods used are the pill, female sterilization, and injection, respectively.

According to the Bureau of Reproductive Health, Department of Health, the adolescent birth rate (aged 10-14 years) in 2019 was 1.1 per 1,000 persons, and the adolescent birth rate (aged 15-19 years) in 2019 was 31.3 per 1,000 persons. The adolescent birth rate (aged 10-14 years) and adolescent birth rate (aged 15-19 years) decreased from 2018 to 1.2 and 35 per 1,000 populations. The fertility rate is expected to decline while the understanding and use of contraception increases (Bureau of Reproductive Health, Department of Health, 2020; Bureau of Reproductive Health, Department of Health, 2021).

The Department of Health reported using three key indicators to represent teenage pregnancy: Adolescent birth rate (aged 10-14 years), Adolescent birth rate (aged 15-19 years), and percentage of recurrent pregnancies among low-aged females over 20 years. Pregnancy at a young age leads to problems of misunderstanding in contraception, unwanted pregnancy, and teenage pregnancy (Bureau of Reproductive Health, Department of Health, 2020). Also, the government pushes forward to solve problems by supporting unwanted teenage pregnancy control and sexually transmitted diseases, such as free condoms at public hospitals and subdistrict health promotion hospitals. Moreover, young people under 20 years old can get contraception implants and IUDs with progestogen. The adolescent birth rate (aged 10-14 years) in 2019 was 1.1 per 1,000 persons, and the adolescent birth rate (aged 15- 19 years) in 2019 was 31.3 per 1,000 persons. Moreover, the adolescent birth rate (aged 10-14 years) and adolescent birth rate (aged 15-19 years) decreased from 2018 to 1.2 and 35 per 1,000 populations, respectively. Expect that the fertility rate will decline while the understanding and use of contraception increases (Bureau of Reproductive Health, Department of Health, 2019a; Bureau of Reproductive Health, Department of Health, 2021)

Research Objectives

1. To examine current usage behavior and future intention to use hormonal contraception of female undergraduate students at XYZ University in Chiang Mai. (For confidentiality reasons, university information in this research cannot be disclosed. Therefore, the researcher named it as XYZ University).
2. To determine demographic factors affecting female undergraduate students' behavior on hormonal contraception at XYZ University in Chiang Mai.
3. To study the influence of attitude and self-regarding preference, subjective norm, and perceived behavior control on intention to use hormonal contraception.

Literature Review

Introduction of Related Theories and Related Variables

This study will apply the framework of the theory of planned behavior (TPB). However, this study would like to expand the attitude element of the theory of planned behavior by adopting some concepts of the rational choice theory (RCT), which is self-regarding preference.

The Theory of Planned Behavior (TPB)

The theory of planned behavior is behaviors influenced by intentions, which are determined by attitudes, subjective norms, and perceived behavioral control. External factors can also

directly drive or inhibit various behaviors, regardless of the intention, depending on the degree to which the individual controls behavior and the degree to which perceived behavioral control is an accurate measure of actual behavioral control (Bosnjak et al., 2020; Sansom, 2021). Additionally, the theory of planned behavior is the influential model for predicting human social behavior (Ajzen, 2011). From the early research of the theory of planned behavior and smoking cessation, Norman et al. (1999) offered the theory of planned behavior to explain why smokers intend to attend health promotion clinics to quit smoking, resulting in reducing their risk for adverse health outcomes.

The Rational Choice Theory (RCT)

Rational choice theory is that Individuals use rational calculations to make rational choices and attain outcomes that match their goals. According to rational choice theory, these outcomes also optimize a self-regarding preference. Rational choice theory is often associated with the concepts of rational actors, self-regarding preference, and the invisible hand. Given the limited options, the rational choice theory is considered to generate results that offer people the most benefit and happiness (Ganti & Anderson, 2021). It is essential to comprehend its intended consequences or results to explain the intent of an action (Rabušic & Kepáková, 2003).

According to early research on Beliefs and attitudes towards lifestyle change and risks in primary care, Mäntyselkä et al. (2019). The information is the cause of self-regarding preferences and beliefs about possible active opportunities, which are related to attitude variables from the theory of planned behavior (TPB) (Ajzen, 2011). People who underestimate risks and resist health promotion because they have negative beliefs about health behavior change, have the unhealthiest life, and have the least capacity to modify it. These findings imply that diverse groups of people with different needs, readiness, and ability to modify their health behavior can be identified (Mäntyselkä et al., 2019).

There is a similarity between self-regarding preference and attitude because this study would like to see it from the point of view of economics. Moreover, instead of attitudes that define reflection, a person's key behavior beliefs indicate the behavior's perceived likely consequences (Godin & Kok, 1996; Fishbeing & Ajzen, 1975). In addition, this study added self-regarding preference, which is more related to economic perspectives that define guideline decision-making, with (all) actors attempting to maximize their self-interest (Hardin, 1968; Heinz & Koessler, 2021). Therefore, this study adopted a self-regarding preference from the rational choice theory (RCT) into the attitude of the theory of planned behavior (TPB).

Introduction of Related Variables and Research Hypothesis

Attitude and Self-Regarding Preference

Attitude reflects a person's key behavioral beliefs, which indicate the behavior's perceived likely consequences. Additionally, attitude is an expression of one's positive or negative evaluation of performing a given behavior, such as exercising to reduce the risk of heart disease (Godin & Kok, 1996; Fishbein & Ajzen, 1975).

Self-regarding preference or self-interest comes from an invisible hand that guides self-interested competition within a free-market economy Adam Smith (Paternoster et al., 2017). The self-regarding Interest assumption states that the actions of the individual (Ogu, 2013) and Abell (2003) noted that the fundamental assumption in the rational choice approaches is less critical than the assumption of optimality, which is concerned with self-preference.

In summary, this study would like to see it from the view of economics. Therefore, this study adopted self-regarding preference from the Rational Choice Theory (RCT) into the attitude of the Theory of Planned Behavior (TPB).

Subjective Norm

Subjective norm is a social factor that refers to the perceived social pressure to perform or not to perform the behavior (Ajzen, 1991). Subjective norms are the belief that an important person or group will approve and support a particular behavior. In research from Ham et al. (2015), subjective norms are determined by the perceived social pressure from others for an individual to behave in a particular manner and their motivation to comply with those people's views.

Perceived Behavior Control

Perceived behavior control refers to a person's perception of his or her capacity to perform the desired behavior. Therefore, a person may believe that, in general, her or his outcomes are determined by her behavior (Ajzen, 1991).

Relationship of Related Variables and the Research Hypothesis

Attitude and Self-regarding preference and intention to use hormonal contraception

According to the theory of planned behavior (Ajzen, 1991), the attitude toward the behavior refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. Attitude is an essential factor in physical activity intentions and behavior, and the results indicated that the attitude-intention relationship was stable over time (Chatzisarantis et al., 2005). Research from Seddig et al. (2022) concludes that attitude and intention have a direct relationship. The positive attitude led to the positive intention to use hormonal contraception; conversely, the negative attitude led to negative intention. This study applied the Fishbein and Ajzen model of attitude and intention to use hormonal contraception evaluations. The model advocated a positive relationship between respondents' attitudes and intention to use hormonal contraception (Hooper, 2010; Stewart, 1982).

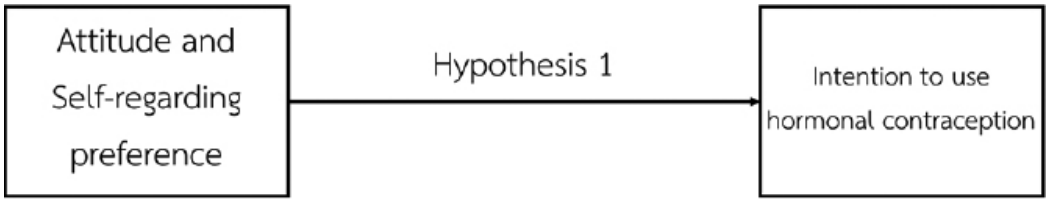

Figure 1 Relationship between Attitude and Self-Regarding Preference and Intention to Use Hormonal Contraception

Hypothesis 1: Attitude and Self-regarding preference have a positive and significant relationship influencing the intention to use hormonal contraception.

Subjective Norm and Intention to Use Hormonal Contraception

Subjective norm is the perceived pressure influenced by others, such as friends, who participate in the behavior of interest and impact the respondent's behavior directly or indirectly (Ajzen & Driver, 1992). Subjective norm was found to be a strong predictor of behavioral intention, and it was found to be positively and significantly connected to behavioral intention.

In addition, the study results are comparable with many other studies that have found that subjective norms impact behavioral intentions (Bindin et al., 2009; Chen, 2007; Chiou, 1998; Noor et al., 2020; Ravi et al., 2007). Such as public opinion and expectations from different groups will influence consumers. Hence, in this study, the subjective norm positively and directly affects the respondent's decision to use hormonal contraception.

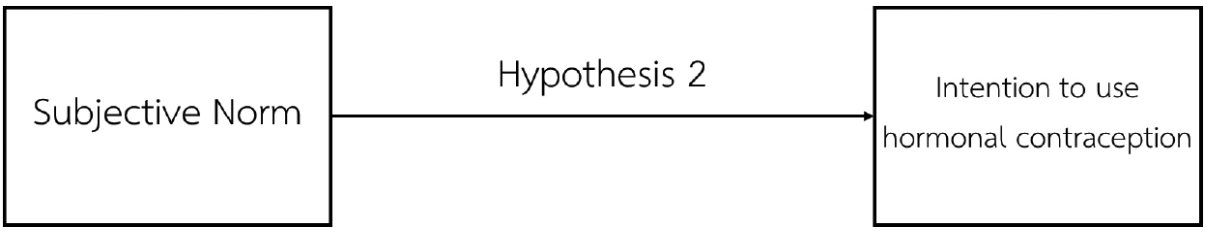

Figure 2 Relationship between Subjective Norm and Intention to Use Hormonal Contraception

Hypothesis 2: Subjective norm has a positive and significant relationship with the intention to use hormonal contraception.

Perceived behavior control (PBC) and intention to use hormonal contraception. Ajzen (1988) established 'perceived behavioral control' as a factor of both behavioral intention and behavior. Perceived behavior control predicts an individual's intention, which refers to their perception of the difficulty and simplicity with which they can carry out a behavior (Ajzen, 1991). Perceived behavioral control is conceptually related to self-efficacy. A person's behavior is under his or her control; however, in actuality, perceived behavioral control is often measured by the ease or difficulty of the behavior (Wallston, 2001). At the same time, self-efficacy is defined as an individual's belief in their ability to act in the face of difficulty (Wallston, 2001). Such as consumer-perceived benefits since an eco-friendly house usually has parks and plants, which will chill the room and can significantly reduce air conditioning usage. Also, it can reduce electricity consumption. So, perceived benefits lead consumers to have the intention to buy eco-friendly houses (Wijayaningtyas et al., 2019). Hence, this model shows a positive relationship between the respondents' perceived behavior control and intention to use hormonal contraception.

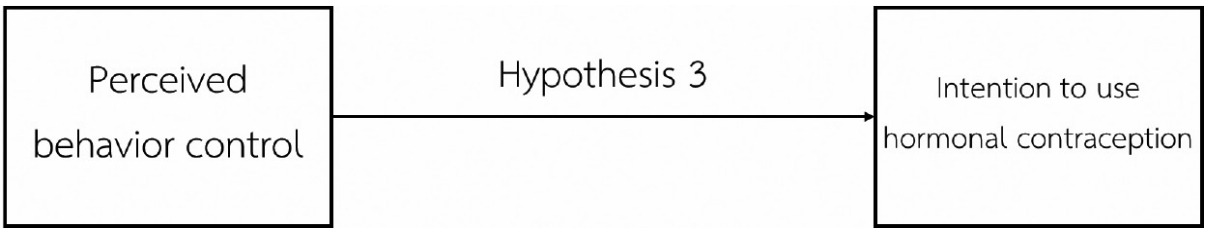

Figure 3 Relationship between Perceived Behavior Control (PBC) and Intention to Use Hormonal Contraception

Hypothesis 3: Perceived behavior control has a positive and significant influence on the intention to use hormonal contraception

Methodology

Conceptual Frameworks

This study investigates how attitude and self-regarding preference, subjective norms, and perceived behavior control influence female undergraduate students on hormonal contraception at XYZ University in Chiang Mai.

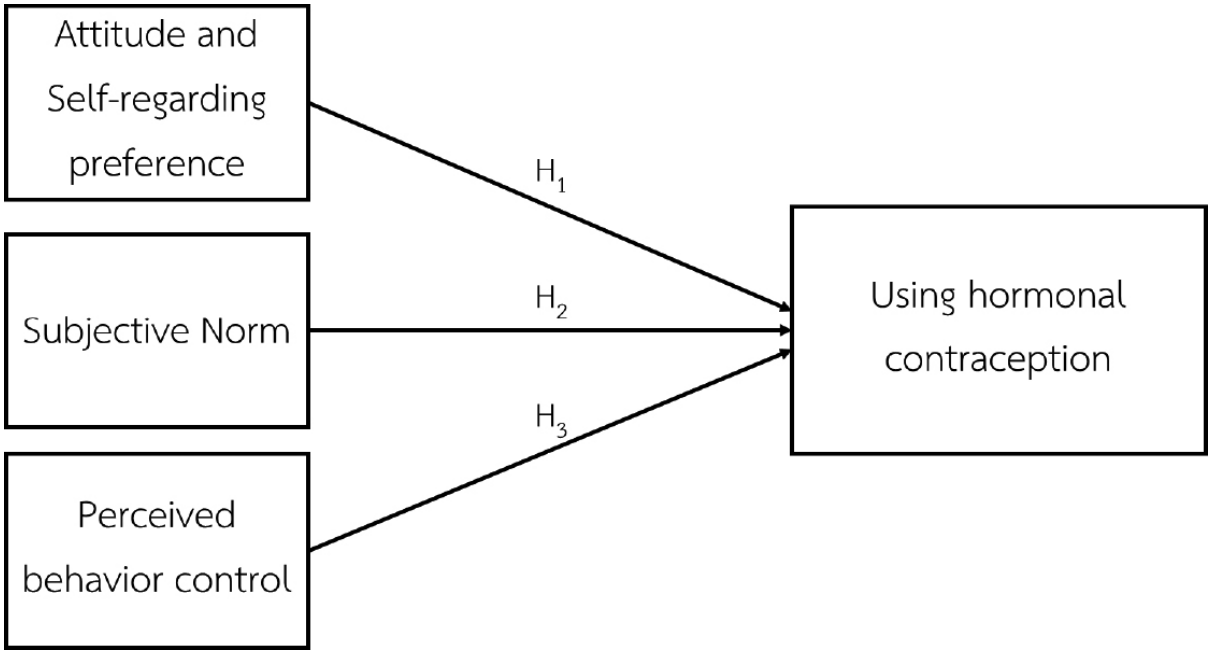

Figure 4 Conceptual Frameworks

Based on the literature review, a framework for the current study is shown in Figure 4. This framework describes the hypothesis relationships among attitude and self-regarding preference, subjective norm, perceived behavior control, and intention.

H_1: Attitude and Self-regarding preference have a positive and significant relationship influencing the intention to use hormonal contraception.

H_2: Subjective norm has a positive and significant relationship with the intention to use hormonal contraception.

H_3: Perceived behavior control has a *positive and significant relationship with the intention to use hormonal contraception.*

Population and Sample

The target population of this study was female students of XYZ University over 18 years old who have experience using hormonal contraception and using sample size calculation as $N \geq 50+8m$ (where m refers to the number of predictors in the model, eight predictors in this study). The minimum required for sample size was 114. Researchers collected the questionnaires from 213 respondents to satisfy the minimum sample size requirement.

Sampling Technique

This quantitative research used survey questionnaires to collect data from the samples. The method that we used to collect the data is random, convenient sampling. Elements in the survey questionnaires were derived from the literature review and accommodated questionnaires to suit the research.

Data Collection

According to early research, Data collection is how the information collected is used, and what explanations it can generate are determined by the methodology and analytical approach applied by the researcher (Paradis et al., 2016). This study performs a quantitative research method using survey questionnaires to collect sample data. The questionnaire survey was divided into two sections. The first section consists of five questions covering the respondents' personal information: age, status, education level, monthly income, and experience of using hormonal contraception. The second section, which has a five-point Likert scale, consists of twenty-one questions covering the attitude, subjective norm, perceived behavior control, and self-regarding preference for hormonal contraception. Elements in the questionnaire were acquired from the literature review, adjustments to be suitable for this research, and five-point Likert scales in which respondents specify their level of agreement to a statement typically in five points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree ("5-Point Likert Scale", 2010).

Data Analysis

The model used in this study is based on the surveyed cross-sectional data. The regression analysis is as follows:

$$IHC_i = \beta_0 + \beta_1 AS_i + \beta_2 SN_i + \beta_3 PBC_i + \gamma_1 InRelationship + \gamma_2 Field_i^{Tech} + \gamma_3 Field_i^{Med} + \gamma_4 HighIncome + \gamma_5 Usage + u_i \quad (1)$$

where IHC is the intention to use hormonal contraception, the behavior factors include attitude and self-regarding Preference (AS), subjective norm (SN), and perceived behavior control (PBC). The demographic factors include relationship status (InRelationship), the field of study ($Field^{Tech}$ and $Field^{Med}$), income (HighIncome), and current usage (Usage). See Table 2 for variable description and statistics.

Research Results

This study examines the factors affecting consuming behavior to hormonal contraception of female undergraduate students at XYZ University, including current usage behavior and future intention, demographic variables, and behavior variables. Two hundred thirteen respondents collected the data.

Current usage behavior and future intention to use hormonal contraception

According to the data collected, 135 respondents have used contraception. The majority of current usage of hormonal contraception by female undergraduate students in XYZ University is contraception pills, with 100 people representing 74.07%, followed by condoms, contraception implants, injectable contraception, and contraception patches, with 69 people representing 51.11%, 11 people representing 8.15%, nine people representing 6.67%, and three people 2.22%, respectively.

According to Table 1, which shows the levels of intention agreement in each question, an average of each aspect had an agreeable level of opinion, with an average of 3.97. Sort the averages from greatest to least as follows: the aspect of believing (M = 4.03, S.D. = 0.841) had the highest mean, followed by continuing using (M = 4.01, S.D. = 0.924), planning to use (M = 4.98, S.D. = 0.939), intention to use (M = 3.94, S.D. = 0.904), and the least was expectation (M= 3.89, S.D. = 0.970).

Table 1 Intention Behaviors

List	1	2	3	4	5	Mean	S.D.
I intend to use hormonal contraception.	5 (2.30%)	8 (3.80%)	39 (18.30%)	103 (48.40%)	58 (27.20%)	3.94	.904
I expected to use hormonal contraception regularly.	6 (2.80%)	12 (5.60%)	41 (19.20%)	95 (44.60%)	59 (27.70%)	3.89	.970
I believe it is worthwhile for me to use hormonal contraception.	3 (1.40%)	6 (2.80%)	36 (16.90%)	105 (49.30%)	63 (29.60%)	4.03	.841
I plan to use hormonal contraception.	7 (3.30%)	8 (3.80%)	30 (14.10%)	106 (49.80%)	62 (29.10%)	3.98	.939
I would continue to use hormonal contraception for my personal preference.	8 (3.80%)	2 (0.90%)	35 (16.40%)	102 (47.90%)	66 (31.00%)	4.01	.924

Source: Using a 5-Point Likert Scale, (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree

Factors Determining the Intention to Use

Factors determining the intention to use hormonal contraception examined in this study are shown in Table 2.

Table 2 Summary Statistics of Factors Determining the Intention to Use Hormonal Contraception

Variable	Mean	S.D.
Intention to use hormonal contraception (IHC) 1. I intend to use hormonal contraception. 2. I expected to use hormonal contraception regularly. 3. I believe it is worthwhile for me to use hormonal contraception. 4. I plan to use hormonal contraception. 5. I would continue to use hormonal contraception for my personal preference.	3.97	.778

Table 2 Summary Statistics of Factors Determining the Intention to Use Hormonal Contraception (Con.)

Variable		Mean	S.D.
Attitude and Self-Regarding Preference (AS) 1. It is likely to be challenging to get hormonal contraception (For example, you have to get a physical exam or drive to the pharmacy/doctor). 2. It is likely to be embarrassing for me to buy/use hormonal contraception. 3. I would consider using one of the most effective hormonal contraception methods, even if associated with menstrual cycle changes. 4. I would accept irregular bleeding initially if it meant fewer or no periods over time. 5. I have discussed hormonal contraception issues with the pharmacy/doctor. 6. It is hard to figure out how to use hormonal contraception.		3.99	.663
Subjective Norm (SN) 1. Most people who are important to me approve of using hormonal contraception. 2. I expected to use hormonal contraception to prevent unwanted pregnancy. 3. The administrators (pharmacy/doctor) would approve of using hormonal contraception. 4. I generally do what my administrators (pharmacy/doctor) expect me to do. 5. My parents agree with the effectiveness of hormonal contraception.		4.13	.572
Perceived Behavior Control (PBC) 1. I am confident that I will be able to take hormonal contraception as prescribed. 2. Using hormonal contraception is up to my considerable. 3. I have the knowledge and ability to use hormonal contraception. 4. If I wanted to, I could easily use hormonal contraception. 5. I have personal control over using hormonal contraception.		4.12	.631
Field Tech	= 1, if study in the Faculty of Engineering, Agriculture, Agro-industry, Architecture, and Communication Arts.	.21	.406
Field Med	= 1, if study in the Faculty of Medicine, Dentistry, Pharmacy, Associated Medical Sciences, Nursing, and Veterinary Medicine.	.21	.406
Field Soc	= 1, if study in the Faculty of Humanities, Education, Fine Arts, Business, Economics, Mass Communication, Political Science and Public.	.59	.494
In Relationship	= 1, if in relationship	.42	.494
HighIncome	=1, if the average income per month is greater than 8,000 Baht.	.68	.469
Usage	=1, if you have ever been using contraception.	.63	.483

Source: Author's Calculation

From the total of 213 respondents, the majority of respondents did not have a relationship, with 124 people representing 58.22%, and having a relationship, with 89 people representing 41.78%. Most respondents were from the Humanity and Social Science groups, with 125 people representing 58.68%, the science and technology group, and the health science group, with 44 people representing 20.66%. Average monthly income between 8,000 - 10,000 Baht, more than 10,000 Baht, between 6,000 - 8,000 Baht, between 4,000 - 6,000 Baht, and less than 4,000 Baht were 86 people representing 40.38%, 58 people representing 27.23%, 35 people representing 16.43%, 25 people representing 11.74%, and nine people representing 4.23%, respectively. Most of the respondents have been using contraception, with 135 people representing 63.38%, and never been using contraception, with 78 people representing 36.62%.

According to the data collected, 135 respondents have been using contraception, divided into hormonal contraception and non-hormonal contraception. Hormonal contraception was divided into contraception pills, with 121 people, representing 89.63%; injectable contraception with 22 people, representing 16.30%; contraception patches with eight people, representing 5.93%; contraception implants with 12 people, represent8.89%; and never used 11 people, representing 8.15% of usage. Non-hormonal contraception was divided into condoms and never been used, 104 and 31 respectively. Currently, most of the respondents have been using contraceptive pills, which means 100 people, representing 74.07%. The average monthly expense was 291.40 Baht. The reasons for using hormonal contraception were birth control, adjusting hormone levels, and a prescription by a doctor.

To examine the factors determining the intention to use hormonal contraception, this study estimates three specifications of regression as follows:

Table 3 Regression Results for Intention to Use Hormonal Contraception

Variables	Model 1	Model 2	Model 3
AS	.225*** (3.574)	-	.212*** (3.190)
SN	.279*** (4.189)	-	.283*** (4.181)
PBC	.370*** (5.772)	-	.345*** (5.099)
In Relationship	-	-.035 (-.506)	-.003 (-.072)
Field Tech	-	.002 (.034)	-.002 (-.049)
Field Med	-	.115* (1.728)	.018 (.394)
High Income	-	.364*** (5.054)	.000 (.001)
Usage	-	.078 (1.150)	.072 (1.336)

Source: t-statistics in parentheses (*** p<0.01, ** p<0.05, * p<0.1)

Model 1 was estimated using only the behavior variables, which are attitude and Self-regarding preference, subjective norm, and perceived behavior control, showing that all behavior variables have a positive and significant relationship influenced by the intention to use hormonal contraception.

Model 2 was estimated using only the demographic variables, having two variables (the Health Science group and the high-income group) that have positive and significant relationships that influenced the intention to use hormonal contraception and three variables (in a relationship, the Science and Technology group, and usage of hormonal contraception) that have no positive and significant relationship with intention to use hormonal contraception.

Model 3 was estimated using both demographic variables and behavior variables. The results show that behavior variables (attitude and self-regarding preference, subjective norm, and perceived behavior control) have positive and significant relationships influencing the intention to use hormonal contraception. On the other hand, the demographic variables are in relationship; the Science and Technology group, the Health Science group, the high-income group, and usage have no positive and significant relationship influencing the intention to use hormonal contraception.

Conclusion and Policy Recommendations

Conclusion and Discussion

According to the hypothesis testing, attitude and self-regarding preference have a positive and significant relationship influencing the intention to use hormonal contraception. The results are consistent with previous research from Seddig et al. (2022), which concludes that attitude and intention have a direct relationship. Subjective norm has a positive and significant relationship with the intention to use hormonal contraception. The results are consistent with previous research from Bindin et al. (2009), who noted that public opinion and expectations from different groups will influence intention. Perceived behavioral control is conceptually related to self-efficacy. A person's behavior is under his or her control related to a hypothesis: Perceived behavior control (PBC) and intention to use hormonal contraception (Wallston, 2001). Additionally, the most significant influences on the decision are attitude and self-regarding preferences, subjective norms, and perceived behavior control.

According to the data collected for demographic variables, the majority of the respondents who have been using hormonal contraception and the current usage of hormonal contraception is contraception pills, which is related to the research of Morakul et al. (2020) on the decision to choose hormonal contraception are contraception pills and emergency contraception pills.

Policy Recommendations

Many components need to be considered at any given point in their lifetimes when choosing the most appropriate contraceptive method. Experts, such as doctors, should provide advice and clear education about the use of contraception. According to the data collected, no one is using the UID. However, the government's measures to support free condoms include the contraception implant and the UID in adolescents under 18 years. Therefore, governments should survey to collect data to maximize the benefits for their citizens. Also, provide a curriculum for basic information on contraception to reduce the unwanted pregnancy rate and narrow the gap in access to contraception because the Thai population with an income lower than the poverty

line tends to increase (Poverty Headcount Ratio at National Poverty Lines (% of population) - Thailand which is why they are more unlikely to access contraception. In addition, in the case of the government's desire to reduce the abortion rate. So, the government should provide and improve access to consistent, effective, and affordable contraception.

Acknowledgment

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Introductions for Manuscript Preparation

Manuscript Printing

The submitted manuscript must have the following specifications:

1) It must be 10 – 15 pages in length, printed on one side of A4 paper, with the margins (top, bottom, left, and right) of 1 inch (2.54 cm.). Set to single columns.
2) Manuscript should be as concise and precise as possible.
3) Abstract printed in 1 column.
4) All contents and references are printed in 1 column with 1 cm of indentation.
5) The simplified font is Times New Roman, with details as specified below:

Format Requirements for Each Component of the Manuscript	Font Size	Labeling
Title	18 (CT)	bold
Author's Name (Name/Surname)	12 (CT)	bold
Author's Affiliation / E-mail	9 (LJ)	First-page footer
Abstract Title	14 (LJ)	bold
Abstract Content (Single column)	12 (LJ)	regular
Keywords Title	14 (LJ)	bold
Keywords	12 (LJ)	regular
Topics	14 (LJ)	bold
Content	12 (LJ)	regular
References Head	14 (LJ)	bold
References (Alphabetically (A – Z))	12 (LJ)	regular
Table Title (On top of the table)	12 (LJ)	bold
Table Content (On top of the table)	12 (LJ)	regular
Figure Title; Chart Title (Under the figure or chart)	12 (CT)	bold
Figure Content; Chart Content (Under the figure or chart,)	12 (CT)	regular
Source Head (Under the table/ the figure/ chart)	9 (LJ)	bold
Source Content (Under the table/ the figure/ chart)	9 (LJ)	regular

Components of the Article

1. Manuscript title
2. Name of every Author, with identification of affiliation office or university and country
3. Corresponding Author E-mail, identify only the e-mail of main author or the manuscript coordinator
4. Abstract must have the length of not more than 300 words, and must have Keywords of 3-5 words or phrases.
5. Content of manuscript
   5.1 Research article comprises: Introduction, Research Objective (s), Literature Review, Methodology, Results, Discussion, Conclusions, and Recommendations (If any)
   5.2 Academic article comprises: Introduction, Content, Conclusions, and Recommendations (If any)
6. References, using the format of APA (7th edition)
7. Figures, Charts, Tables, or other illustrations must be numbered, with correct reference of their sources. They must be clear, and distinctive, and not violate the copyright of the others.

The Examples of Presentation of Tables, Figures, and Charts

Table 1 Title of Table …
"Table 1" printed in Times New 12 point font face, bold letters, left alignment
"Title of Table…" printed in Times New 12 point font face, normal letters

List (Each topic printed in Times New 12 point font face, bold letters, in the center of the table and in the center of each line)	**Number**	**Percentage**
Content (Times New 12 point font face, normal letters, in the center of the table and in the center of each line)	1	70
Content (Times New 12 point font face, normal letters, in the center of the table and in the center of each line)	2	30
Total	**4**	**100**

Sources or Remarks: Details……..

"Sources or Remarks:" printed in Times New 9 point font face, bold letters, left alignment
"Details…" printed in Times New 9 point, normal letters

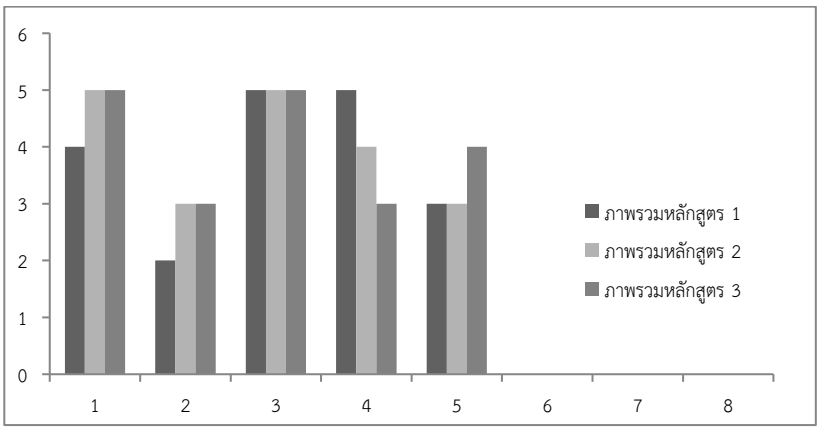

Figure 1 Name of Figure, Chart…

Sources or Remarks: Details……..

"Figure 1" printed in Times New 12 point font face, bold letters, center of the page
"Name of Figure, Chart..." printed in Times New 12 point font face, normal letters
"Sources or Remarks:" printed in Times New 9 point font face, bold letters, left alignment
"Details…" printed in Times New 9 point, normal letters

As such, Tables, Figures, Charts, and Equations can be printed in one column, depending on the size, clarity, and appropriateness.

Quotations

Printed in Times New 12 point font face.

1. Quotations in the Contents

Format	Quotation (In front of the sentence)	Quotation (At the end of the sentence)
One author	Coghlan (1993)	(Coghlan, 1993)
Two authors	Mohsen and Mohammad (2011)	(Mohsen & Mohammad, 2011)
Three or more authors	Burkart et al. (1997)	(Burkart et al., 1997)
Organization	Ministry of Education (2020)	(Ministry of Education, 2020)
Organization using abbreviation	First quotation: National Institute of Development Administration (NIDA, 2018) Next quotation: NIDA (2018)	First quotation: (National Institute of Development Administration [NIDA], 2018) Next quotation: (NIDA, 2018)
Quotation from the document (Specify page number)	Shaw (2017, p. 172) or Shaw (2017, pp. 172-180)	(Shaw, 2017, p. 172) or (Shaw, 2017, pp. 172-180)
Quotation from interviews	J. M. Sun (Personal communication, August 18, 2021)	(Sun, J. M., Personal communication, August 18, 2021)

2. References at the End of the Article

All documents that have been quoted must be listed in the References at the end of the article. The list must be alphabetically ordered based on the reference sources and surname of the author. The reference format should follow that of APA (7th edition).

2.1 Format of Reference Based on Number of Authors

Authors	Reference at the End of Article
One author	Surname,/ First alphabet of name being a capital letter.
Two authors	Surname,/First alphabet of name being a capital letter.,/&/Surname of second author,/First alphabet of name being a capital letter.
3-20 Authors	Surname,/First alphabet of name being a capital letter.,/Surname,/First alphabet of name being a capital letter.,/Surname,/First alphabet of name being a capital letter.,/(Number 1-19 authors),/&/Surname,/First alphabet of name being a capital letter. (Number 20 author)
21 Authors or more	Surname,/First alphabet of name being a capital letter.,/(Number 1-19 authors),/./././Surname,/First alphabet of name being a capital letter. (The last author)

2.2 Format of Reference Based on Documents

2.2.1 Journals

1) Journal (Printed)

Surname,/First alphabet of name being a capital letter./(A.D. year)./Article title./*Journal title*,/ ///////*Volume*(No.),/first page-last page of article in the journal.

Kraikunasai, J., Chongcharoen, K., Ngudgratoke, S., & Pukchanka, P. (2017). A causal model of administrative factors affecting educational quality in vocational school. *Panyapiwat Journal, 9*(2), 171-184.

2) Journal (Electronic)

Surname,/First alphabet of name being a capital letter./(A.D. year)./Article title./*Journal title*,/ ///////*Volume*(No.),/first page-last page of article in the journal./http://doi.org/xxxx or URL

Waehayee, N. (2014). Relationship between strategic performance based budgeting system and law on the budgetary procedures. *Jurisprudence Journal Naresuan University, 7*(2), 152-178. http://doi.org/10.14456/nulj.2014.9

Sittichai, O., & Silcharu, T. (2021). Guidelines for creating competitive advantage for processed food industry cluster. *Panyapiwat Journal, 13*(2), 12-26. https://so05.tci-thaijo.org/index.php/pimjournal/article/view/240994

2.2.2 Books

1) Book (Printed)

Surname,/First alphabet of name being a capital letter./(A.D. year)./*Book title*/(Edition)./Publisher. * In case of no publication date, put n.d. * In case of first edition, do not specify the edition. * In case of no specification of publisher, put n.p.

Ritcharoon, P. (2016). *Principles of measurement and evaluation.* House of Kermyst.

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.

2) Book (Electronic without DOI)

Surname,/First alphabet of name being a capital letter./(A.D. year)./*Book title*/(Edition)./URL * In case of no publication date, put n.d. * In case of first edition, do not specify the edition. * In case of no specification of publisher, put n.p.

Department of Primary Industries and Mines. (2017). *Benchmarking industrial logistics performance index supply chain performance index logistics scorecard.* https://dol.dip.go.th/files/article/attachments/dol/3e30ca4fc9f964feeb57fce3fc602c04.pdf

3) Chapter in a Book

Surname,/First alphabet of name being a capital letter./(A.D. year)./Title of chapter or article./ ///////In/First alphabet of editor's name being a capital letter/Surname/(Ed. or Eds.),/*Book* ///////*title*/(pp./page numbers)./Publisher.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295-336). Lawrence Erlbaum Associates.

2.2.3 Thesis

1) Thesis (Printed)

Surname,/First alphabet of name being a capital letter./(A.D. year)./*Title of thesis*/[Master's thesis ///////or Doctoral dissertation]./Name of educational institution.

Seangsri, W. (2009). *An analysis and development of school network administration model in northeastern rural area* [Doctoral dissertation]. Chulalongkorn University.

2) Thesis (Electronic)

First Format

Surname,/First alphabet of name being a capital letter./(A.D. year)./*Title of thesis*/[Master's thesis ///////or Doctoral dissertation]./Name of website./URL

Lin, Q. (2020). *the influence of music teachers' competence on job performance-moderator role of interactive behavior* [Doctoral dissertation]. Panyapiwat Institute of Management Library. http://elibrary.pim.ac.th/Record/833578

Second Format

Surname,/First alphabet of name being a capital letter./(A.D. year)./*Title of thesis*/(UMI number or ///////other numbers)/[Doctoral dissertation or Master's thesis,/Name of university]./Name of ///////database.

Lope, M. D. (2014). *Perceptions of global mindedness in the international baccalaureate middle years programme: The relationship to student academic performance and teacher characteristics* (Order No. 3682837) [Doctoral dissertation, University of Maryland]. ProQuest Dissertations and Theses Global.

2.2.4 Research Report

Surname,/First alphabet of name being a capital letter./(A.D. year)./*Title*/(Report No. if given)./ ///////Publisher./http://doi.org/xxxx or URL

National Cancer Institute. (2019). *Taking time: Support for people with cancer* (NIH Publication No. 18-2059). U.S. Department of Health and Human Services, National Institutes of Health. https://www.cancer.gov/ publications/patient-education/takingtime.pdf

2.2.5 Electronic Media

Surname,/First alphabet of name being a capital letter./(A.D. year,/month/date)./*Article title*./ ///////Name of website./URL * In case of no publication date, put n.d. * In case of only A.D. year appears, put only A.D. year * In case of the author's name and the website name being the same, cut the website name

Minister of Tourism and Sport. (2020, January 9). *Bangkok flea markets: Adventurous shopping experience.* Tourism Thailand. https://www.tourismthailand.org/Articles/bangkok-flea-markets-adventurous-shopping-experience

Millburn, J. F. (2021). *How to start a successful blog in 2021*. The minimalists. https://www.the minimalists.com/blog/

2.2.6 Articles/documents presented in academic conference (Proceedings)

Surname,/First alphabet of name being a capital letter./(A.D. year)./Title of article./In/First ///////alphabet of the editor's name being a capital letter./Surname/(Ed. or Eds.),/*Name of* ///////*conference topic./Name of conference*/(pp./page numbers)./Name of database./ ///////https://doi.org/xxxx or URL

Phinitchai, S., Nawaratana, N., & Tanthanuch, J. (2021). Distributional-based analysis for health care insurance claim data. In *Globalization revisited: Building organization resilience with digital transformation. The 4th PIM International Conference* (pp. 715-725). Panyapiwat Institute of Management. https://conference.pim.ac.th/zh/wp-content/ uploads/2021/03/I-Social-Sciences-and-Humanities-Part-1.pdf

2.2.7 Documents for the Conference

Surname,/First alphabet of name being a capital letter./(A.D. year,/month/date)./Topic of ///////conference./In/First alphabet of the Chair Person's name being a capital letter./Surname/ ///////(Chair),/*Name of conference*/[Symposium]./Name of conference organizer,/Place of ///////conference.

Wasi, N., Poonpolkul, P., & Thephasdin na Ayudhya, C. (2021, September 30). Policy design for coping with aging society. In N. Wasi (Chair), *Future world money: Developing Thai digital currency* [Symposium]. BOT Symposium 2021: Building a Resilient Thailand. Bank of Thailand. https://www.pier.or.th/conferences/2021/symposium/

2.2.8 Interview Documents

Surname,/First alphabet of name being a capital letter./(A.D. year,/month/date of the interview). ///////Interviewed by/First alphabet of the interviewer's name being a capital letter./Surname ///////[Tape recording]./Position of interviewee (If any),/Place of interview.

Chearavanont, S. (2021, September 30). Interviewed by N. Wanakijpaiboon [Tape recording]. Executive Chairman of Charoen Pokphand Group, Bangkok.

2.2.9 Newspapers

1) Newspaper (Printed)

Surname,/First alphabet of the author's name being a capital letter./(A.D. year,/month/date)./ ///////Topic or article title./*Name of newspaper*,/first page-last page.

Sriwattanachai, R. (2014, October 24). The prefabricated generation of seasoning sauce market. *POST TODAY*, B3-B4.

2) Newspaper (Electronic)

Surname,/First alphabet of the author's name being a capital letter./(A.D. year,/month/date)./ ///////Topic or article title./*Name of newspaper*./URL

Bangkok post and reuters. (2021, October 8). UK eases travel rules for countries including Thailand. *Bangkok Post*. https://www.bangkokpost.com/thailand/general/2194651/uk-eases-travel-rules-for-countries-including-thailand

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