ISSN 2630-0818 Volume 8

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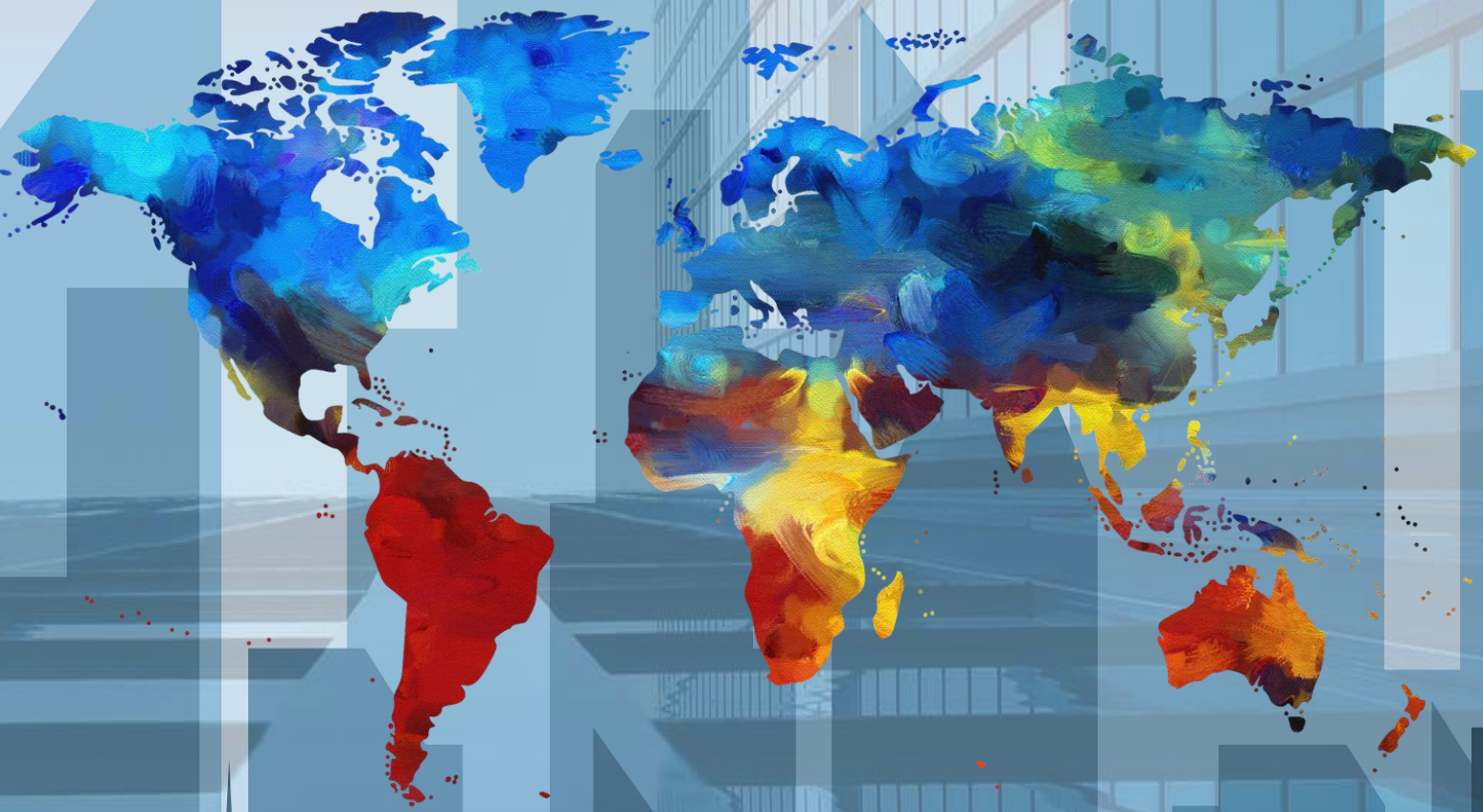
RISK RIGHT RESEARCH TBEC2024

Proceedings of
The 8th RMUTT Global Business and Economics International Conference 2024



February 2 – 3 , 2024
Faculty of Business Administration
Rajamangala University of Technology Thanyaburi

Preface

RMUTT Global Business and Economics International Conference 2024 (RTBEC 2024) aims to be an academic stage to publicize international researches in business administration and economics field for students, professors, scholars, and researchers as well as the general public who are interested in these researches. The scope of this conference covers all fields of business administration such as business management, logistics and supply chain management, business engineering management, international business administration, human resources development, marketing, accounting, finance, information technology, business economics, and other related fields.

This international conference has been held for consecutive years according to the standard and regulations in hosting international academic conference. The theme of this year conference is " Driving Sustainable Business Features: Managing Risk, Ethics, and Innovation" which would be held on February 2-3, 2024 at the Faculty of Business Administration, Rajamangala University of Technology Thanyaburi (RMUTT), Thailand. This year conference was well-received with numerous academic and research papers from many countries including People's Republic of China, India, the Kingdom of Cambodia, Australia, and Thailand.

Moreover, this international conference is also a strategic implementation of our university in raising the standard of research to build up knowledge and innovation with appropriate procedure in order to reach out to people and the wider society. It is a way to add new and important channel in spreading the knowledge from the researches and become the medium for exchanging the experience in order to improve the researches and better serve the needs from business and industrial sector. In addition, it also helps increase the capability of researchers within business administration field in conducting the researches and contribute to the sustainable development of the country's economy.

Furthermore, this conference was highly successful due to the great collaboration received from various relevant parties, in which the conference committee would like to sincerely thank all the attendants, experts, supporters, staff, management, lecturers from the Faculty of Business Administration, and the management from Rajamangala University of Technology Thanyaburi which have given us the great support to this event.

Editors and Committee of Academic Conference (RTBEC 2024)
The Faculty of Business Administration,
Rajamangala University of Technology Thanyaburi
February 2024

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Remark from the Dean
RMUTT Global Business and Economics Conference (RTBEC)
"Driving Sustainable Business Features: Managing Risk, Ethics, and Innovation."
by Associate Professor Dr. Khahan Na-Nan
Dean of Faculty of Business Administration
Rajamangala University of Technology Thanyaburi
2 February 2024

International experts,
Distinguished guests and participants,

Faculty of Business Administration offers education at both the bachelor's and graduate levels, including master's and doctoral degrees. A key university policy is to foster research development and establish research networks, both domestically and internationally.

In alignment with this policy, the RMUTT Global Business and Economics National and International Conference (RTBEC2024) was organized, an annual event with this year's theme, "Driving Sustainable Business Features: Managing Risk, Ethics, and Innovation." The primary objective of this academic conference is to provide a platform for faculty members, academic staff, researchers, and students to share their work in business administration and economics. The conference seeks to facilitate knowledge exchange and its practical application among educators, scholars, researchers, administrators, business professionals, students, and all those with a keen interest. This collective effort contributes significantly to the nation's overall development.

The conference program includes oral presentations, which have garnered significant interest from participants. This year, we featured 101 academic articles from 20 educational institutions at the national level. On the international stage, there were 32 articles representing 11 educational institutions across five countries: the People's Republic of China, India, the Kingdom of Cambodia, Australia, and Thailand.

On behalf of the organizing committee, we cordially invite Dr. Sommai Phewsaard, the President of Rajamangala University of Technology Thanyaburi, to deliver the opening remarks at the upcoming RMUTT Global Business and Economics National and International Conference (RTBEC2024). Your presence would be an honor and greatly appreciated.

Thank You.

An Opening Remark of
RMUTT Global Business and Economics Conference (RTBEC)
" Driving Sustainable Business Futures: Managing Risk, Ethics, and Innovation"
by Associate Professor Dr.Sommai Pivsa-Art
The Vice President of Rajamangala University of Technology Thanyaburi
Friday, 2 February 2024

International experts,
RMUTT Executives,
Distinguished guests and participants,

It is with immense pleasure and a profound sense of honor that I stand before you as the Chairman of the Opening Ceremony for the RTBEC 2024 National and International Academic Conference. This gathering represents a splendid and highly anticipated opportunity for all of us to engage in a rich tapestry of academic discourse and knowledge exchange.

The Faculty of Business Administration, together with our academic community, is deeply committed to the pursuit of research that not only advances our understanding but also brings tangible value to society and our nation. Under the guiding theme of "Driving Sustainable Business Futures: Managing Risk, Ethics, and Innovation," we embark on a journey that is both intellectually stimulating and practically transformative.

As we embark on this exciting academic journey, I extend my sincere wishes for the conference's success. May it meet and exceed all its objectives, whether they involve knowledge dissemination, fostering meaningful connections, or advancing sustainable business practices. Together, we commence a voyage of exploration and enlightenment.

Ladies and gentlemen, colleagues and friends, the time has arrived. With great enthusiasm and anticipation, I hereby declare the official opening of the RMUTT Global Business and Economics National and International Conference (RTBEC 2024).

Thank you.

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RMUTT Global Business and Economics
National and International Conference 2024
(RTBEC 2024)

February 2-3, 2024

2 February 2024

08.00 – 9.30 a.m.	Register at Rajamangala Hall,
09.30 - 10.00 a.m.	Opening Ceremony A Speech for the Report by Associate Professor Dr. Khahan Na-Nan Dean, Faculty of Business Administration Rajamangala University of Technology Thanyaburi An Opening Remark by Associate Professor Dr. Sommai Pivsa-Art President, Rajamangala University of Technology Thanyaburi
10.00 - 12.00 a.m.	Panel Discussion "**Driving Sustainable Business Futures: Managing Risk, Ethics, and Innovation**" Delivered by 1) Assoc. Prof. Dr.Aleš Kocourek, Technical University of Liberec, Czec Republic 2) Assoc. Prof. Dr. Maria Estela Varua, Western Sydney University 3) Asst. Prof. Dr. Nipa Ouppara, Western Sydney University 4) Assoc. Prof Dr. Khahan Nanan, Rajamangala University of Technology Thanyaburi Moderator: Assoc. Prof. Dr. Sureerut Inmor, Rajamangala University of Technology Thanyaburi
12.00 - 1.00 p.m.	**Lunch**
	International Conference
1.00 - 4.00 p.m.	TECH-SESSION A (BA3402) **Chair** Associate Professor Dr. Maria Estela Varua **Co-Chair** Associate Professor Dr. Aleš Kocourek **Co-Chair** Assistant Professor Dr. Nipa Ouppara **Co-Chair** Associate Professor Dr. Sureerat Inmor **Co-Chair** Assistant Professor Dr. Napaporn Nilapornkul
4.30 p.m.	**Refreshment**

3 February 2024

	International Conference
09.00 - 12.00 a.m.	TECH-SESSION A (BA4609) **Chair** Associate Professor Dr. Sureerat Inmor **Co-Chair** Assistant Professor Dr. Kanokporn Chaiprasit **Co-Chair** Dr.Guntpishcha Gongkhonkwa Brathall
12.00 - 1.00 p.m.	**Lunch**
1.00 - 4.00 p.m.	TECH-SESSION A (BA4609) **Chair** Associate Professor Dr. Sureerat Inmor **Co-Chair** Assistant Professor Dr. Kanokporn Chaiprasit **Co-Chair** Dr.Guntpishcha Gongkhonkwa Brathall
4.30 p.m.	**Refreshment**

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Co-Chair	**Associate Professor Dr. Aleš Kocourek**	
Co-Chair	**Assistant Professor Dr. Nipa Ouppara**	
Co-Chair	**Associate Professor Dr. Sureerut Inmor**	
Co-Chair	**Assistant Professor Dr. Napaporn Nilapornkul**	
1.00 - 1.15 p.m.	RTBEC2024_paper_38 Digital Transformation in SMES and Economic Growth: A systematic review By: Nipa Ouppara* and Maria Estela Varua Western Sydney University, Australia	1
1.15 - 1.30 p.m.	RTBEC2024_paper_09 Thai Exporters' Perceptions on Factors Leading to Intention to Recommend Single Rail Transfer Operator Service to Other Customers, Laem Chabang, Thailand: A Proposed Conceptual Framework By: Surapol Svetsomboon* and Jibon Kumar Sharma Manipur Institute of Management Studies (MIMS), Manipur University, Imphal, Manipur, India	2
1.30 - 1.45 p.m.	RTBEC2024_paper_13 The Effectiveness of Digital Signage Advertising Media on Marketing Communication Responses among Consumers Living in Condominium By: Bija Chotchuang* and Nottakrit Vantamay Faculty of Humanities, Kasetsart University, Bangkok, Thailand	12
1.45 - 2.00 p.m.	RTBEC2024_paper_26 The influence of supportive organizational climate on employees' innovation behavior in software and information technology services industry By: Liping Song, Sureerut Inmor, and Nachayapat Cuijten* Faculty of Business Administration, Rajamangala University of Technology Thanyaburi, Pathum Thani, Thailand	31
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Co-Chair	Assistant Professor Dr. Napaporn Nilapornkul	
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3.45 – 4.00 p.m.	RTBEC2024_paper_27 Relationship between ESG and Financial Performance: A Study of Listed Companies on the Stock Exchange of Thailand in SET ESG Index By: Chatchawat Kriengsuntikul* and Wanrapee Banchuenvijit Business School, University of the Thai Chamber of Commerce, Bangkok, Thailand	129
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Co-Chair	**Assistant Professor Dr. Kanokporn Chaiprasit**	
Co-Chair	**Dr.Guntpishcha Gongkhonkwa Brathall**	
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9.30 - 9.45 a.m.	ThaiRTBEC2024_paper_37 The Influence of Fear of Failure on Thai Female Entrepreneurs Throughout the Entrepreneurial Journey By: Saithan Chaipornkaew* and Nattavud Pimpa College of Management, Mahidol University, Bangkok, Thailand	183
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10.00 - 10.15 a.m.	RTBEC2024_paper_03 Project Operations Management in China's Real Estate Industry: A Case Study of the B Real Estate Company By: Keqi Liu*, Noppawan Wisedsind, and Jirapong Ruanggoon Faculty of Management Science, Dhonburi Rajabhat University, Thailand	241
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11.30 - 11.45 a.m.	RTBEC2024_paper_18 The mediating role of the brand between perceived ESG and intention to invest among Thai high-net-worth-individual (HNWI) clients By: Pooncharas Papasureechote* and Phusit Wonglorsaichon Business School, University of Thai Chamber of Commerce, Bangkok, Thailand	282
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3.00 - 3.15 p.m.	RTBEC2024_paper_33 Factors Influencing Employee's Job Performance in Chinese State-Owned Telecommunication Enterprises By: Wanying Yin and Daranee Pimchangthong * Institute of Science Innovation and Culture (ISIC), Rajamangala University of Technology Krungthep, Thailand	409
3.15 - 3.30 p.m.	RTBEC2024_paper_34 Perceived Quality and Perceived Value Influence on Brand Loyalty Toward Luxury Hotel in Kunming, Yunnan, China By: Zhishen Wang and Surachai Traiwannakij* Institute of Science Innovation and Culture (ISIC), Rajamangala University of Technology Krungthep, Thailand	421
3.30 - 3.45 p.m.	RTBEC2024_paper_35 The Factors Impacting on Customer Loyalty in Cosmetic Products in China By: Yirui Yao and Surachai Traiwannakij* Institute of Science Innovation and Culture (ISIC), Rajamangala University of Technology Krungthep, Thailand	440
3.45 - 4.00 p.m.	RTBEC2024_paper_01 Forecast the Use of Travel Websites using the Theory of Planned Behavior By: Kritiya Rangsom* and Wasun Khan-Am Faculty of Business Administration, Rajamangala University of Technology Thanyaburi, Pathum Thani, Thailand	462
4.30 p.m.	**Refreshment**	

DIGITAL TRANSFORMATION IN SMES AND ECONOMIC GROWTH: A SYSTEMATIC REVIEW

Nipa Ouppara[1*]
Maria Estela Varua[1]

Abstract

Small and Medium-sized enterprises (SMEs) play a significant role in the economy and social life. According to The World Bank (2022), they are the most common type of enterprise worldwide, accounting for around 90% of all enterprises, especially in emerging economies, and have more than 50% of the labor market. Despite their economic significance, the progress of digital transformation (DT) in SMEs has been relatively slow, particularly in emerging economies. This can be attributed to significant resource, expert, and budget barriers that hinder the adoption of digital transformation initiatives (OECD, 2021). While the academic literature has analyzed SMEs' performance under digital transformation, there is a need to examine the research on the digital transformation process in SMEs and provide an integrative picture of the literature on digital transformation in SMEs as an enabler of economic growth. This study aims to address this gap by conducting a comprehensive review of existing research on the digital transformation process in SMEs. By synthesizing the literature, the study seeks to identify the key barriers, challenges, and opportunities that SMEs encounter in their digital transformation journey. Furthermore, the study aims to explore how digital transformation can contribute to the economic growth of SMEs. The findings of this study will provide valuable insights into the strategies, best practices, and potential benefits of digital transformation for SMEs. By understanding the factors that influence the adoption and success of digital transformation initiatives, policymakers, business leaders, and other stakeholders can develop targeted interventions and support mechanisms to facilitate the digital transformation of SMEs. Ultimately, this can contribute to the economic growth and competitiveness of SMEs in the global market.

Keywords: Digital Transformation, Economic Growth, Systematic Review

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THAI EXPORTERS' PERCEPTIONS ON FACTORS LEADING TO INTENTION TO RECOMMEND SINGLE RAIL TRANSFER OPERATOR SERVICE TO OTHER CUSTOMERS, LAEM CHABANG, THAILAND: A PROPOSED CONCEPTUAL FRAMEWORK

Surapol Svetsomboon[1*]
Jibon Kumar Sharma[1]

Abstract

Single Rail Transfer Operator (SRTO) has been established in Thailand for almost a decade at Laem Chabang Port. The primary maritime hub for Thailand is Laem Chabang Port. It has supported the local and regional economy for more than thirty years, and as of 2020—excluding China's gateway ports. LCP was ranked as the third-largest gateway port in the world. SRTO is a major project that supports the logistics and supply chain infrastructure of Thailand. In 2015, the Thai Cabinet approved the SRTO construction project. It was expected to be opened in 2018. Now, the SRTO is in operation. However, we do not know whether existing customers would recommend the SRTO services to other customers, or not. Thus, this can be viewed as a research gap. Thus, this paper is interested in proposing a model to measure the phenomenon of interest, what factors lead to the intention to recommend? However, there is not a conceptual framework to measure the phenomenon of interest at hand. This is certainly problematic. Thus, this paper proposes a conceptual framework focusing on factors leading to the intention to recommend SRTO services to other customers based on Thai exporters' perceptions. The independent variables include port service quality, rail efficiency, cost, staff service, and facilities. The mediating variable is satisfaction. The dependent variable is the intention to recommend. The contribution of this paper is to propose a new conceptual framework to measure the phenomenon of interest at hand: factors leading to the intention to recommend SRTO services to other customers. Furthermore, the proposed conceptual framework can serve as a base for future empirical research. The empirical research would certainly benefit the SRTO managerial practice because managers can learn from a proposed (conceptual) model after it is empirically tested, which factors truly lead to the intention to recommend other customers to use the SRTO service at Laem Chabang Port, Thailand.

Keywords: SRTO, Thai Exporters, Customer Loyalty, Intention to Recommend, Conceptual Framework

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Introduction

Single Rail Transfer Operator (SRTO) in Thailand was in operation after the year 2018 at Laem Chabang Port. The primary maritime hub for Thailand is Laem Chabang Port. It has supported the local and regional economy for more than thirty years, and as of 2020—excluding China's gateway ports. LCP was ranked as the third-largest gateway port in the world. SRTO is a major project that supports the logistics and supply chain infrastructure of Thailand. However, we do not know whether Thai exporters would recommend the SRTO services to other customers. Thus, this can be viewed as a research gap. However, there is not a conceptual framework to measure the phenomenon of interest. This is certainly problematic. Thus, this article proposes a conceptual framework focusing on factors leading to the intention to recommend SRTO services to other customers based on Thai exporters' perceptions. The independent variables include port service quality, rail efficiency, cost, staff service, and facilities. The mediating variable is satisfaction. Finally, the dependent variable is the intention to recommend. The contribution of this paper is to offer a new conceptual framework to measure the phenomenon of interest at hand: factors leading to the intention to recommend SRTO services to other customers at Laem Chabang Port, Thailand. Furthermore, the proposed conceptual framework can serve as a base for future empirical research.

Literature review

This literature review section includes four major parts. The first part briefly describes SRTO in the context of Thailand. The second part describes the critical variables of interest. These variables are classified into three related parts in tandem: independent variables (IVs), mediating variable (MV), and dependent variables (DVs). The third part presents a conceptual framework developed by the critical variables of interest. Finally, the literature review section ends with hypothesis development based on the proposed conceptual framework.

SRTO in the context of Thailand

Single Rail Transfer Operator (SRTO) is a project developed at Laem Chabang (Sea) Port in Thailand. Its main goal is to improve rail transport efficiency at the port. This involves building a dedicated rail yard and facilities for transferring containers between ships and trains. The project aims to increase the port's rail handling capacity from 500,000 to 1-2 million TEUs (twenty-foot equivalent units) per year. It's expected to shift some cargo from road to rail, reducing traffic congestion and environmental impact. SRTO is a new mode (see Figure 1 left side). On the other hand, trucking is a traditional (old) mode but still being used (Port Authority of Thailand, 2018).

Figure 1. Single Rail Transfer Operator

Independent, mediating, and dependent variables

The primary theory underlying the conceptual framework (see Figure 2) is borrowed from the work of Hult et al. (2019). According to Hult et al. (2019), there are antecedents and consequences of satisfaction. Thus, the conceptual framework (see Figure 2) is divided into three columns: independent variables (IV), mediating variable (MV), and dependent variables (DVs). IVs can be viewed as antecedents. MV can be viewed as satisfaction. Finally, DVs can be viewed as consequences.

The relationship between port service quality and overall satisfaction

Before proposing the relationship between port service quality and overall satisfaction, let's start with the basic definition of service quality and overall satisfaction. Service quality refers to the degree of excellence in the service provided by a business or organization (Kumasey, 2014). He further states that several factors contribute to service quality, and businesses often strive to meet or exceed customer expectations in these areas. Now, let's turn to the basic definition of overall satisfaction. Overall satisfaction is a comprehensive measure of how content and pleased customers are with a product, service, or experience provided by a business or organization (Razak et al., 2016).

Now, let's examine the relationship between port service quality and overall satisfaction. To achieve this, we apply the work of Zygiaris et al. (2022) to our research context. Zygiaris et al. (2022) conducted a study to investigate the relationship between service quality and customer satisfaction in the Saudi Arabian auto care industry during the post-pandemic era. They utilize the SERVQUAL framework to assess five key dimensions of service quality: tangibility, reliability, responsiveness, assurance, and empathy. Their study's findings highlight the significant positive correlation between all five dimensions of service quality and customer satisfaction. In short, they concluded that the relationship between service quality and satisfaction existed. Given that conclusion, we hypothesize that port service quality has a positive effect on overall satisfaction in our research context.

The relationship between rail efficiency and overall satisfaction

Before proposing the relationship between rail efficiency and overall satisfaction, let's start with the basic definition of efficiency. Efficiency generally refers to the ability to accomplish a task or goal with minimal waste of resources, including time, energy, and materials. Overall satisfaction will not be defined here because it is already defined in the previous section.

Now, let's examine the relationship between rail efficiency and overall satisfaction. Chang et al. (2017) studied the relationship between efficiency, service quality, and customer satisfaction for state-owned commercial banks in China. They found that banks' efficiency has a positive relationship with customer satisfaction. Given that conclusion, we hypothesize that rail efficiency has a positive effect on overall satisfaction in our research context.

The relationship between cost and overall satisfaction

Before proposing the relationship between cost and overall satisfaction, let's define the basic definition of cost first. When prompted with "cost" the Bard-generated text indicated that the term "cost" generally refers to the cost paid by a customer for a service (Google AI, 2024) (e.g. SRTO service). The term satisfaction is already defined earlier. Thus, it will not be defined here again.

Now, let's examine the relationship between cost and overall satisfaction. Salim et al. (2017) investigate the factors influencing customers' intention to stay with their health insurance provider. It specifically examines the impact of perceived cost, service quality, and customer satisfaction on service continuance (renewing or switching providers). Perceived cost: While cost does matter, its impact on continuance is complex and interacts with service quality. When customers perceive high service quality, they are more willing to tolerate higher costs. Conversely, low-quality service makes customers more sensitive to cost and increases the likelihood of switching providers. They found that cost has a positive relationship with customer satisfaction. Given that conclusion, we hypothesize that cost has a positive effect on overall satisfaction in our research context.

The relationship between employee service quality and overall satisfaction

Before proposing the relationship between staff service quality and overall satisfaction, let's define the basic definition of staff service quality. When prompted with "staff service quality" the Bard-generated text indicated employee service quality, a crucial concept in service-oriented businesses, refers to the competence, attitude, and behavior of employees in their interactions with customers. It encompasses multiple dimensions that, when combined, deliver a positive and efficient service experience. Here are some key aspects of employee service quality (Google AI, 2024). Overall satisfaction is already defined. Thus, it will not be defined again here.

Now, let's examine the relationship between employee service quality and overall satisfaction. Koay et al. (2020) explore the link between employee service quality and customer satisfaction in the Chinese banking industry. It uses the SERVQUAL model, modified for the banking

context, to analyze four key dimensions of employee service quality: reliability, assurance, responsiveness, and empathy. Through a survey of customers in a Chinese commercial bank. Their study confirmed that employee service quality has a positive relationship with customer satisfaction. Given that conclusion, we hypothesize that employee service quality has a positive effect on overall satisfaction.

The relationship between facilities and overall satisfaction

Before proposing the relationship between facilities and overall satisfaction, let's define the basic definition of facilities first. When prompted with "facilities" the ChatGPT-generated text indicated that the term "facilities" generally refers to physical or non-physical structures, spaces, or amenities that are provided for a specific purpose or function. Facilities can encompass a wide range of entities, such as buildings, equipment, services, and infrastructure designed to support various activities or operations (OpenAI, 2023). This definition is in line with our study. Thus, we adopted this definition. On the other hand, the basic definition of overall satisfaction is already provided earlier. Thus, it will not be provided again here.

Now, let's examine the relationship between facilities and overall satisfaction. To do this, we apply two pieces of work. The first one belongs to Novaliana et al. (2023). The second one belongs to Manik (2022). Novaliana et al. (2023) stated that their research provides valuable insights into factors influencing patient satisfaction during challenging times like the COVID-19 pandemic at Berbek Public Health Center in Indonesia. They concluded that a more positive patient experience and potentially attract and retain users amidst ongoing public health concerns by focusing on service quality and facilities. According to Manik (2022), facilities are important infrastructure to increase satisfaction. Both works (Novaliana et al., 2023; Manik, 2022) confirmed that facilities have a positive relationship with customer satisfaction. Given those conclusions, we hypothesize that facilities have a positive on overall satisfaction in our research context.

The relationship between overall satisfaction and intention to recommend

Before proposing the relationship between overall satisfaction and intention to recommend, let's define their basic definition first. Razak et al. (2016) define overall satisfaction as a comprehensive measure of how content and pleased customers are with a product, service, or experience provided by a business or organization. Again, this definition of overall satisfaction is already an earlier section.

Now, let's examine the relationship between overall satisfaction and intention to recommend. First, Sun (2023) investigates the relationship between satisfaction and intention to recommend. They investigated how satisfied customers are with live-streaming shopping and how likely they are to recommend it to others. Their study builds on the "Unified Theory of Acceptance and Use of Technology 2" (UTAUT2) model and adds the idea of "customer innovativeness" to explain customer behavior. The study found that customer satisfaction plays a key role in whether someone recommends

live-streaming shopping. In short, they concluded that the more satisfied someone is, the more likely they are to tell others about it.

Kang and Choi (2018) focus on how the communication style of service providers in the food industry affects customer satisfaction and their likelihood to recommend the service. It finds that the type of communication has a positive impact on both factors. Specifically, reliable and professional communication styles contribute most to customer satisfaction. In contrast, extreme expressions and authoritative attitudes can negatively impact customers' willingness to recommend the service. The study also highlights the positive correlation between satisfaction and recommendation intention. In simpler terms, when customers are happy with the service, they are more likely to tell others about it. Overall, this research suggests that food service providers should prioritize clear, helpful, and courteous communication with their customers to boost satisfaction and drive positive recommendations.

Both studies (Sun, 2023; Kang and Choi, 2018) concluded that customer satisfaction has a positive relationship with intention to recommend. Given those conclusions, we hypothesize that overall satisfaction has a positive on the intention to recommend in our research context.

A proposed conceptual framework

A proposed conceptual framework presented in this paper is developed based on the literature review from the previous section. The conceptual framework is divided into three related columns (see Figure 2). The first column includes independent variables (IVs). The second column includes the mediating variable (MV). Finally, the third column includes the dependent variables (DVs).

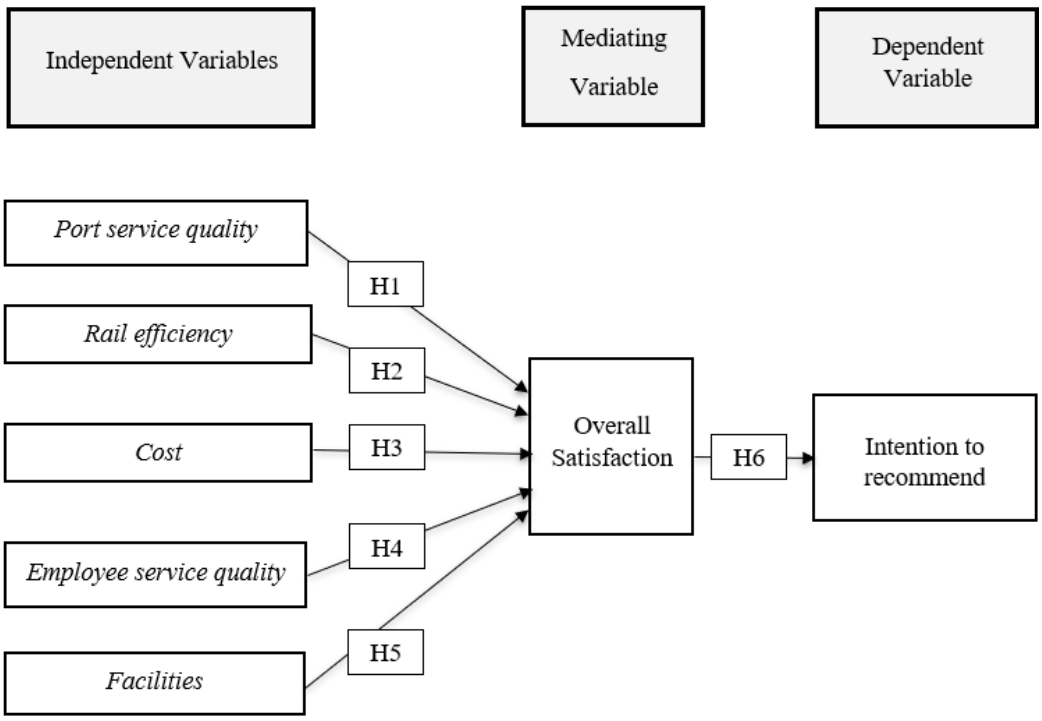

Figure 2. A proposed conceptual framework

Proposed research hypotheses

Based on Figure 2, eight research hypotheses are proposed as follows:

H1: Port service quality has a significant effect on overall satisfaction.

H2: Rail efficiency has a significant effect on overall satisfaction.

H3: Cost has a significant effect on overall satisfaction.

H4: Employee service quality has a significant effect on overall satisfaction.

H5: Facilities has a significant effect on overall satisfaction.

H6: Overall satisfaction has a significant effect on intention to recommend.

Proposed methodology

Given the conceptual framework (see Figure 2) and its proposed hypotheses, a research methodology is needed to carry out the proposed research presented in this paper. Figure 3 captures the proposed methodology. There are four related categories of the proposed methodology: population and sample, sample size, data collection, and data analysis.

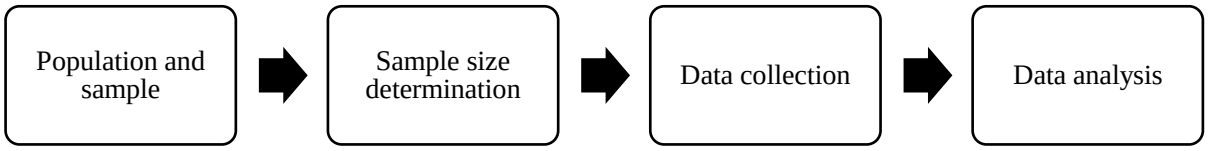

Figure 3. Proposed methodology

Population and sample. Here, the population of the proposed study includes those customers who have used the SRTO service at Laem Chabang (Sea) Port at least one time since the start of the SRTO operation. The population of the study is known because all customers must provide their names or the names of their companies to use the SRTO service. Sample refers to part of the population. Thus, a prospective researcher must obtain the names of existing customers from the Laem Chabang Port, or the number of existing customers at the time of the data collection.

Sample size determination. This can be done in two ways. First, a researcher can use, for example, the Krejcie & Morgan Table (Kenpro, 2016) to determine the required sample size. The table is designed to determine the sample size given the research population is known. Another option is to use a sample size determination formula for a known population (Qualtrics, 2023).

Data collection. The data can be collected at least in two ways: onsite and online questionnaires (QNs). For onsite, paper questionnaires need to be distributed. The paper questionnaires can be distributed at Laem Chabang Port. Permission to distribute the questionnaires must be sought. This is a traditional QN distribution. The second option is to distribute the QN online. This may not require permission to distribute the QNs because the QNs are distributed to the respondents directly.

Importantly, the QN items development must follow the definitions of critical variables of the study already presented in an earlier section.

Data analysis. There are at least two main options to carry out the data analyses. several options can be applied to the proposed conceptual framework (see Figure 2).

Regression analysis. This method examines the relationship between one or more independent variables and a dependent variable. It helps you quantify the extent to which the independent variables explain the variation in the dependent variable. It's used for both explanation (understanding relationships) and prediction (making forecasts). Interpreting results needs to examine three items: R-squared, coefficients, and p-values. R-squared measures the proportion of variance in the dependent variable explained by the independent variables (ranges from 0 to 1, higher is better). Coefficients indicate the direction and strength of the relationship between each independent variable and the dependent variable. P-values assess the statistical significance of the coefficients (values below 0.05 typically suggest a significant relationship) (Frost, 2016).

Structural equation modeling (SEM). The overall purpose of SEM is to test whether the model (proposed conceptual framework) fits the empirical data. There are five steps in SEM testing. The first step is model specification. This step involves defining the theoretical relationships between variables and their respective constructs to derive a path diagram representing the model. The second step is model identification. This step involves identifying whether the model is under-, over-, or just-identified. The third step involves model estimation. This step involves model estimation. This implies measuring model parameters (coefficients, variances, covariances). The fourth step involves model evaluation or model fit assessment: Evaluate how well the model's implied covariance matrix matches the observed covariance matrix using various fit indices. In addition, it also involves hypothesis testing. The purpose is to test the statistical significance of individual model parameters using p-values. Common fit indices include Chi-Square, and RMSEA (Root Mean Square Error of Approximation). The RMSEA values less than 0.05 generally indicate a good fit. CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) values close to 1 indicate a good fit. SRMR (Standardized Root Mean Square Residual) values less than 0.08 generally indicate a good fit. Finally, the fifth step is model modification (if necessary). There are additional considerations/assumptions. If model modification is required, this should be done based on fit indices and modification indices to improve fit. SEM relies on assumptions like multivariate normality and linearity. In terms of statistical software packages, a researcher has several options to choose from, for example, AMOS, STATA, LISREL, Mplus, EQS, and lavaan (R package) (Kline, 2023).

Conclusions

The phenomenon of interest is identifying factors leading to customer loyalty and intention to recommend SRTO services to other customers. Based on our literature review, existing studies do not offer a conceptual framework to study the phenomenon of our interest. This is certainly problematic.

This can be viewed as a research (literature) gap. Thus, this paper is designed to fill such a gap by proposing a new conceptual framework that can be used as a base for hypothesis and questionnaire developments for further empirical research.

Thus, this paper offers both academic (theoretical) and managerial contributions. Let's focus on the theoretical contribution first. This paper offers a new conceptual framework that can serve as a base for hypothesis and questionnaire developments for further empirical research. When our proposed conceptual framework is tested, a managerial contribution could follow. The management of SRTO could learn from future empirical research what factors truly affect overall satisfaction; in turn, affecting customer loyalty and intention to recommend other customers to use SRTO.

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THE EFFECTIVENESS OF DIGITAL SIGNAGE ADVERTISING MEDIA ON MARKETING COMMUNICATION RESPONSE AMONG CONSUMERS LIVING IN CONDOMINIUM

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Abstract

The objectives of this research were: 1) to examine the effectiveness of digital signage advertising media in condominiums on brand image, attitude towards brand, brand purchase intention, and brand loyalty, and 2) to compare differences in media exposure based on demographic characteristics including gender, age, marital status, and income. Survey research was used with a sample size of 450 respondents aged 25-59 years old. They resided in condominiums with digital signage installations in Bangkok. Data were collected through self-administered questionnaires. Descriptive statistics analysis including frequency, percentages, means, and standard deviations were employed and inferential statistics analysis including One-way ANOVA and simple regression analysis were used for hypothesis testing with a significant level of 0.05. The research findings revealed that 1) the media exposure to digital signage advertising media affected brand image (Beta= .501), attitude towards brands (Beta= .343), brand purchase intention (Beta= .256), and brand loyalty (Beta= .164) significantly, and 2) gender was just a significant demographic variable affecting media exposure differently; LGBTQ+ and male respondents exhibited higher media exposure compared to female respondents. These findings provide valuable insights for brand owners, marketers, and advertisers to develop and strengthen their marketing communication strategies effectively.

Keywords: Digital Signage Advertising Media, Marketing Communication Response, Digital Out of Home Media

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Introduction

To successfully communicate a brand's message to its target audience, the integrated marketing communication, or IMC, is a comprehensive marketing approach. It enhances the effect of brand communication by fusing together a variety of marketing tools in a holistic way, from building brand recognition to generating brand loyalty. IMC's core strategy is building a consumer's experiences which combines multi-channel both of online and offline for more effectiveness than a single medium. As a result, to effectively communicate with target consumers, a business or marketing communicator must learn and understand the effectiveness of new communication tools as a new touch point with target consumers. The most significant and widely utilized marketing communication method for promoting businesses is advertising, in particular. A business may become successful through advertising and it is also a potential marketing communication tool to drive sales by persuading customers to purchase that brand or product (Shimp, 2000).

According to media spending of advertising industry in Thailand, Out-of-Home media (OOH) has resumed a rise, spurred by COVID-19 post-pandemic increase in outdoor activities, detailed in table 1 (Nielsen Advertising Information Service, 2023). In addition, the display technology of OOH has significant growth. Digital Out-of-Home (DOOH) media can use digital display to offers a more dynamic and engaging format than traditional platform. The brand's message including digital content, animation, video, audio, and multimedia content generates more curiosity and intention than traditional forms. Using DOOH in terms of marketing communication tool is effective by enhancing brand image, attitude towards brand, brand purchase intention, and brand loyalty as well (Belch & Belch, 2004).

Table 1. Thailand's media spending of May 2023 (Million Baht)

Media	2021	2022	Growth (%)	2022 MAY	2023 MAY	Growth (%)
TV	63,661	62,680	-1.5%	5,631	5,654	+0.4%
Internet	24,766	25,729	+4%	2,168	2,290	+6%
Outdoor	9,701	14,253	+47%	1,039	1,350	+30%
Radio	3,294	3,458	+5%	288	310	+8%
Print	3,117	3,050	-2%	261	228	-13%
Cinema	3,555	7,730	+117%	182	189	+4%
In-Store	682	902	+32%	79	67	-15%
Total	108,776	117,802	+8%	9,648	10,088	+5%

Source: Nielsen Advertising Information Service (2023) *

Recently, The DOOH has been utilized in the common areas of condominiums in Bangkok, specifically at elevator waiting area, and inside passenger elevators. It marks a significant shift in

advertising strategies. These DOOH are specifically targeting consumers who are condominium residents. The digital signage advertising media in condominiums is a new touch point since the target audience must invariably pass through the installation area when entering and leaving the building, bringing them closer to customers than other OOH media (Jae-Yung, 2019). However, studies on DOOH are still lacking (Roux, 2018), and it is necessary to review the significant characteristics and understanding of DOOH in some environments (Mposi et al., 2020). Additionally, prior studies on digital signage advertising media located in condominium have not found any studies, particularly in Thailand. Therefore, this research was aimed to investigate the effectiveness of digital signage advertising media on marketing communication response among consumers living in condominium in Thailand. The study employs a comprehensive approach, drawing on a theoretical framework to assess consumer response to marketing communications. This approach is grounded in the model of the consumer response process (Belch & Belch, 2004), which delineates three interconnected stages: 1) Cognitive Stage, examining on the brand image; 2) Affective Stage, examining the attitudes toward brand; and 3) Behavioral Stage, examining the brand purchase intention and the brand loyalty. This methodology aligns with the work of several scholars, including Wood (1997), Burton et al. (1998), Schultz and Barnes (1999), Kotler (2003), and Nottakrit Vantamay (2014). The findings of this research are anticipated to provide valuable insights for product brand owners, marketers, and advertisers for development of strategic marketing communication plans and the integration of digital signage advertising with other communication media. The objective is to enhance the efficiency and effectiveness of brand communication, particularly among target consumers residing in Bangkok's condominiums.

Review of Literature

DOOH and Digital Signage Advertising Media

The concept of digital signage advertising media is an intriguing technological development worth attention with people as unlockable advertising source (Inside Network, 2020). It represents a fusion of traditional outdoor advertising with modern digital technology, leading to the emergence of a new phenomenon. Originally just conventional billboards, these have evolved into a more captivating medium through digital display screens or digital signage, thereby enhancing the appeal and impact of outdoor advertising. The key dimensions of traditional out-of-home advertising media and digital out-of-home advertising compared in Table 2 below (Roux, 2018). Additionally, it allows advertisers to remotely control content via software and internet networks for real-time content modification. Moreover, recent advancements have integrated digital signage with motion sensors, creating interactive advertising that can automatically adjust messages and details in response to consumer interaction. This innovation, termed Realtime Programmatic DOOH (pOOH), represents a new wave in digital signage technology (The Standdard Wealth, 2023). Digital signage advertising media thus offers a versatile new medium for businesses to effectively use both outdoors and indoors

as an innovative contact point in advertising strategies. Furthermore, it contributes to reduce the use of paper and chemicals typically associated with traditional outdoor advertising printing methods.

Table 2. Comparing traditional OOH advertising media with DOOH advertising media.

Dimensions	Traditional OOH Advertising Media	DOOH Advertising Media
Reach	Mass communication	Targeted communication
Content	Static content	Digital location-based content
Communication	Monologue one-way communication targeting consumers with predominantly branding messages	Two-way communication with customers allowing communication and brand engagement
User interaction	No possible	Possible
Measurement	Basic measurement of traffic numbers	Advance technology

Source: Roux (2018)

Concept of the consumer behavior response process

Marketing communication strategies significantly rely on data for analyzing and assessing effectiveness in various aspects. These include evaluating the tools used to communicate the brand to the target consumer group, determining how effectively they meet the set objectives. Analyzing consumer behavior is crucial in evaluating the effectiveness of marketing communication. In this context, marketing communicators often utilize a three-step of consumer behavior response process or traditional response hierarchy models which serves as a framework or guideline for setting objectives and evaluating marketing communication effectiveness (Belch and Belch, 2004). These stages are: 1) The Cognitive Stage: This involves the consumer's awareness and knowledge about the brand or product. It focuses on how consumers process information and how this leads to awareness of the brand; 2) The Affective Stage: This stage relates to the consumer's emotions and feelings towards the brand. It looks at how consumers develop attitudes and feelings about the brand, which can influence their decision-making process; and 3) The Behavioral Stage: This stage is about the consumer's actions in response to their attitudes and knowledge. It covers how the cognitive and affective stages influence the consumer's actual behavior, including their intention to purchase and brand loyalty. These stages provide a comprehensive approach to understanding consumer behavior and assessing the impact of marketing communications. The effectiveness of marketing strategies can be evaluated based on how well they guide the consumer through these stages.

This model is designed to explain the sequential stages through which receivers of messages and consumers respond to content or advertising messages. The details of the three behavioral response stages are as follows:

1. The Cognitive Stage: In this initial stage, the receiver becomes aware of a brand's existence in the market and understands the product's benefits. During this stage, the marketing communicator's objective is to present information or messages about the brand to the consumers, with the goal of making them aware of the brand and understanding its existence. Therefore, in assessing the effectiveness at this stage, researchers often use 'Brand Image' as a variable of study (Belch & Belch, 2004). This involves how well the brand is being communicated and perceived in terms of its presence and value in the market. Understanding and effectively managing the cognitive stage is crucial for laying the foundation for subsequent stages of consumer engagement and response.

2. The Affective Stage: In the second stage, the receiver develops feelings of either liking or disliking towards the brand that has been communicated or advertised. The objective of this stage is to foster positive feelings and perceptions towards the brand or product, developing a liking for the brand and its products. Marketing communicators, therefore, need to differentiate their brand and strive to make it more appealing and satisfactory to consumers than competing brands. As a result, researchers often use 'Attitude Towards Brand' as a variable to study the effectiveness at this affective stage. This involves evaluating how well the brand can positively influence the consumer's emotions and attitudes, leading to a favorable view of the brand. The affective stage is crucial as it sets the tone for how consumers feel about the brand.

3. The Behavioral Stage: In this final stage, the consumer exhibits behaviors related to the decision to purchase the product. The primary goal at this stage is to instill confidence in the brand among consumers, leading to purchase behavior. This includes creating positive experiences that encourage repeat purchases. Thus, researchers often focus on 'Brand Purchase Intention' and 'Brand Loyalty' as key variables to study the effectiveness in the behavioral stage. Brand Purchase Intention refers to the likelihood that the consumer will buy the brand's product, while Brand Loyalty reflects the consumer's commitment to repeatedly purchase the brand over time. This stage is critical as it translates the cognitive and affective responses into actual consumer actions, reflecting the ultimate success of marketing efforts in influencing consumer behavior. The effectiveness at this stage is measured by how well the marketing communication has moved the consumer from awareness and positive feelings to actual purchase and loyalty towards the brand.

This approach to setting objectives in marketing communication aligns with the ideas presented by Duncan (2008), who discussed the structuring of marketing communication objectives in alignment with the three levels of consumer response. These levels are: 1) Cognitive Stage: At this level, the objective can be set to create brand awareness and recognition. This involves ensuring that the target audience is aware of the brand's existence and can recall it when needed. The key impact aimed for here is knowledge and understanding of the brand, its products, and services. 2) Affective Stage: The objective at this level can involve shaping attitudes and building confidence in the purchase of products. This stage is about influencing how consumers feel about the brand, with the aim of creating a positive emotional connection and preference for the brand over competitors.

The impact sought is an emotional bond and trust in the brand. And 3) Behavioral Stage: Here, the objective can range from creating an intention to purchase to actual buying behavior and developing brand loyalty. This stage is focused on translating the awareness and positive feelings developed in the previous stages into actual consumer actions, such as purchasing the product and becoming a loyal customer. The impact at this stage is observed in consumer purchasing patterns and long-term loyalty to the brand. These stages, as outlined by Duncan (2008), emphasize the importance of a structured approach in marketing communication, where each stage targets specific aspects of consumer interaction with the brand, as shown in Table 3.

Table 3. Samples of marketing communication objective based on model of the consumer response process.

Stages	Samples of marketing communication objectives
1.Cognitive Stage	- To ensure that the target recognizes the brand. - To communicate the brand image to the target.
2.Affective Stage	- To generate a good feeling for the brand among consumers. - To create a positive attitude towards the brand.
3. Behavioral Stage	- To increase brand purchase intention to buy the product. - To foster brand loyalty among consumers.

Source: Duncan (2008)

Related studies

Bauer et al. (2018) conducted a study on research directions for digital signage systems in retail. The study found that current advancements in technology are driving the development of digital signage advertising. This ongoing integration of new technologies in digital signage is also being utilized in marketing and retail sectors. However, there is still a limited amount of research on the impacts of applying these technologies, particularly studies demonstrating how digital signage advertising contributes to creating emotional experiences and influencing purchase intentions. Moreover, it has been observed that digital signage also positively affects consumer behavior.

Andrew et al. (2019) conducted a study on the use of neuroscience to understand the impact of premium digital out-of-home (DOOH) media advertising. The researchers explained that modern brain imaging technologies can be applied to measure the emotional and subconscious responses of consumers to out-of-home (OOH) advertising. This is done by analyzing eye movements and changes in emotions, desires, and recall. The research findings on brain responses to the placement of digital out-of-home advertising clearly indicated that digital outdoor advertising is more effective than traditional outdoor advertising. This conclusion was drawn from the significantly higher levels of brain engagement observed in response to the number of brand exposures in digital advertising.

Lee and Cho (2019) conducted a study titled "An Empirical Investigation on The Antecedents of Consumers' Cognitions of And Attitudes Towards Digital Signage Advertising." This research explored the factors influencing consumers' perceptions and attitudes towards digital signage advertising. The study identified four key factors: the utility of providing information, engagement, entertainment, and targeting, which affect consumer interest and perceived value of advertising in digital signage. The findings revealed that attitudes towards digital signage advertising and perceived engagement significantly influence consumers' attitudes towards the medium itself. This, in turn, leads to a positive influence on brand attitudes and purchase intentions.

Study Purpose

1. To study the effectiveness of digital signage advertising media on marketing communication response among consumers living in condominium.

2. To study the difference in media exposure of digital signage advertising media among consumers living in condominium categorized by demographic variables.

Conceptual Framework

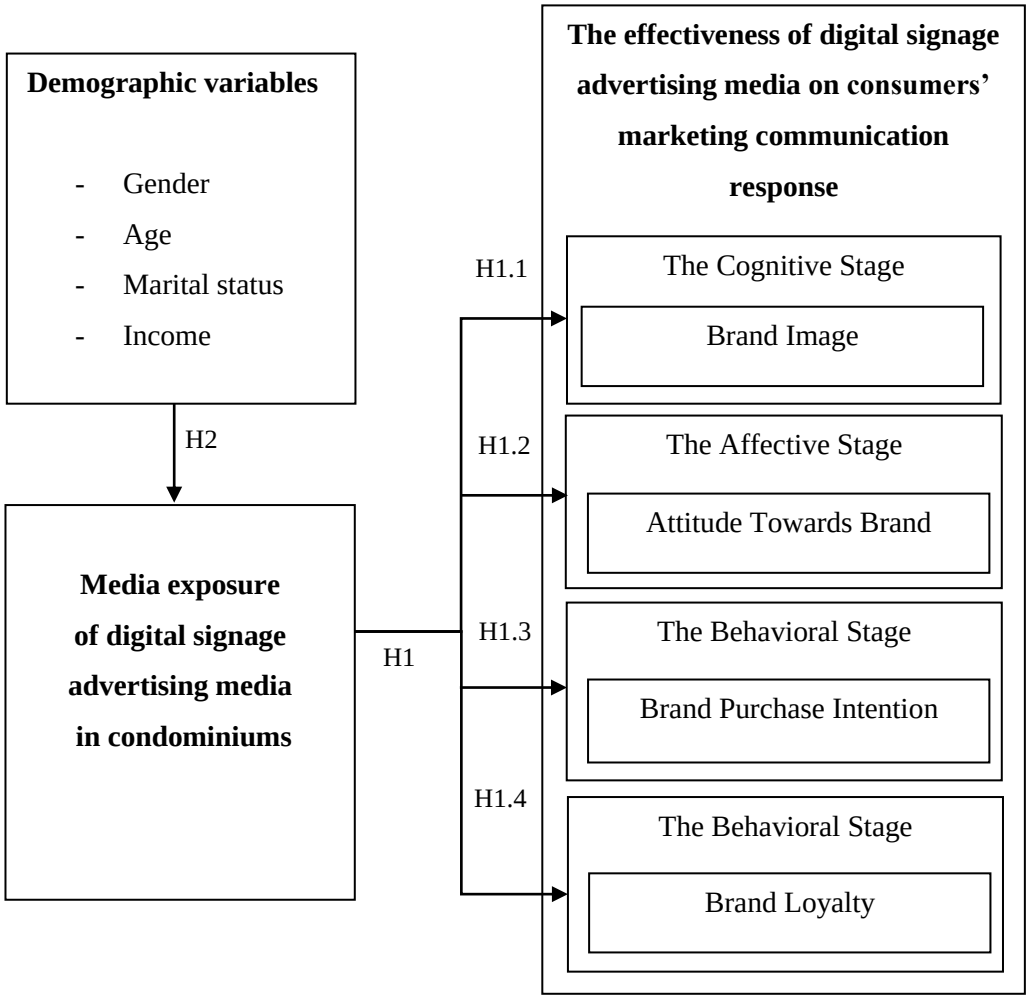

Figure 1. Proposed conceptual framework

Hypothesis

H1. The media exposure of digital signage advertising media affects the marketing communication responses of consumers living in condominiums.

H1.1 The media exposure of digital signage advertising media affects brand image.

H1.2 The media exposure of digital signage advertising media affects attitude towards brand.

H1.3 The media exposure of digital signage advertising media affects brand purchase intention.

H1.4 The media exposure of digital signage advertising media affects brand loyalty.

H2. The difference of demographic characteristics leads to different levels of media exposure of digital signage advertising media in condominiums.

H2.1 The difference of gender leads to different levels of media exposure of digital signage advertising media in condominiums.

H2.2 The difference of age leads to different levels of media exposure of digital signage advertising media in condominiums.

H2.3 The difference of marital status leads to different levels of media exposure of digital signage advertising media in condominiums.

H2.4 The difference of income leads to different levels of media exposure of digital signage advertising media in condominiums.

Research Methodology

This research conducted survey research using self-administered questionnaires as a tool to collect data from the sample group. The collected data were then statistically analyzed to test hypotheses and perform data analysis on the sample group.

Study Population

The population utilized in this research consists of working-age between 25 to 59 years old, residing in condominium in Bangkok where digital signage advertisement are installs. The selection of this age group is due to significant purchasing power and financial readiness. Individuals in this age group have stable incomes, qualifying them for financial loans (CondoNewb, 2021).

Sample Size

This research utilized Cochran's formula (Cochran, 1997) to calculate the infinite of total population. A 95% confidence level and a 5% margin of error were set. The formula used for calculating the sample size was as follows:

$$n = \frac{P(1-P)Z^2}{e^2}$$

$$n = \frac{(0.5)(1-0.5)(1.96)^2}{0.05^2}$$

$$n = \frac{0.25(3.8416)}{0.0025}$$

$$n = 384$$

n = Sample Size

P = The population proportion (0.5)

Z = The Z-Score - Based on a 5% margin of error. (1.96)

e = The margin of error (0.05)

To enhance the credibility of the study, the sample size was increased to 450 samples.

Sampling Method

A multi-stage sampling method was employed, randomly selecting 18 condominium projects with digital signage advertising media installed, with each condominium project contributing 25 samples as 3 stages follows:

Stage 1: Stratified Sampling of district areas - The administrative areas of Bangkok were divided into three levels of areas: inner district areas, middle district areas, and outer district areas (Bangkok City Hall, 2013) The researcher conducted a random draw of the district names in each area, selecting an equal number of three districts from each level. As a result, each of the three administrative areas were allocated 150 samples each. Subsequently, within each administrative area, the researcher allocated 50 samples to each district, as detailed in table 4.

Table 4. Randomly selected districts list in each area.

Districts Area	Randomly Selected District	No. of sample
Inner District Areas	1.Din Daeng	150
	2.Chatuchak	
	3.Khlong Toei	
Middle District Areas	4.Wang Thonglang	150
	5.Suan Luang	
	6.Phra Khanong	
Outer District Areas	7.Tawee Wattana	150
	8.Lat Krabang	
	9.Lak Si	
Total		450

Stage 2: Simple Random Sampling of Condominium in each district – The researcher conducted a random draw to select condominium projects within each of the districts chosen in the first stage. In each selected district, two condominiums were randomly chosen, resulting in a total of 18 condominiums as detailed in table 5.

Table 5. Randomly selected condominium list in each district.

District	Randomly selected condominium	No. of sample
Din Daeng	1.Aspire Asoke-Ratchada	50
	2.A Space ID Asok-Ratchada	
Chatuchak	3.The Room Ratchada - Ladprao	50
	4.Lumpini Place Ratchayothin	
Khlong Toei	5.Lumpini Place Rama 4-Kluaynamthai	50
	6.Rhythm Sukhumvit 36 - 38	
Wang Thonglang	7.Atmoz Ratchada-Huaikwang	50
	8.Wynn Condo Ladprao - Chokchai 4	
Suan Luang	9.The Privacy Rama 9	50
	10.Fuse Mobius Ramkhamhaeng	
Phra Khanong	11.Hi Sukhumvit 93	50
	12.Regent Home Sukhumvit 97/1	
Tawee Wattana	13.The Room Sukhumvit 69	50
	14.The Trendy Condominium	
Lat Krabang	15.V Condo Ladkrabang	50
	16.iCondo Green Space Sukhumvit 77	
Lak Si	17.Lumpini Ville Chaengwattana 10	50
	18.The Cube Chaengwattana	
Total		450

Stage 3: Random Sampling of individuals in each condominium – In this stage, the researcher employed Simple Random Sampling to selected 25 samples from each 18 condominiums identified in stage 2. This approach will result in a total of 450 samples, aligning with the sample size determined in the stage of defining the sample size.

Questionnaire Design

The research tool used in this study is a structured questionnaire with closed-ended questions for data collection, divided into six parts: 1) Demographic Variables - Questions about gender, age, marital status, and income, 2) Media Exposure - Questions about the respondents'

exposure to these advertisements, 3) Brand Image - Questions related to the perception of brand image as presented in the digital signage advertisements, 4) Attitudes Toward Brands - Questions that assess attitudes towards brands featured in the digital signage advertisements, 5) Purchase Intention - Questions about the intention to purchase the brands advertised in the digital signage, and 6) Brand Loyalty - Questions regarding loyalty to the brands shown in the digital signage advertisements. For parts 2 to 6 consist of closed-ended questions using a 5-point rating scale (Likert Scale).

Quality Assessment

This study validated the questionnaire by using an Index of Item-Objective Congruence (IOC) to ensure content consistency with the research objectives. The IOC resulted values ranged from 0.75 to 1.00. Additionally, to assess reliability, the researcher conducted a test with 30 consumers and calculated the Cronbach's Alpha (α - Coefficient). This coefficient indicates the consistency of the questionnaire. The obtained alpha values for each part were as follows in table 6.

Table 6. Coefficient values for questions

Parts	Coefficient
Questions about media exposure of digital signage advertising media	α = .877
Questions about brand image in the advertisements	α = .874
Questions about attitudes towards brands in the advertisements	α = .907
Questions about intention to purchase brands in the advertisements	α = .911
Questions about brand loyalty in the advertisements	α = .942

These values indicate a high level of reliability for the questionnaire, suggesting that it is a consistent and dependable tool for measuring the variables in question.

Data collection

This study collected data from the sample group by having the participants fill out the entire questionnaire themselves by a self-administered questionnaire. The total number of questionnaires to be completed is 450. The researcher visited the 18 randomly selected condominium projects that have digital signage advertising installed, as previously determined for the study. This approach allows for direct engagement with the participants and ensures that the data were collected from the specific environment where the digital signage is present, providing contextual relevance to the study.

Data Analysis

The research encoded all 450 questionnaires using statistical methods for data analysis. This coding process involves assigning numerical or symbolic values to the responses, making it easier to handle and analyze the data statistically. The coded data will then be processed using statistical

software, which facilitates efficient and accurate analysis. The analysis will employ both descriptive and inferential statistics. Descriptive statistics analysis including frequency, percentages, means, and standard deviations were employed to explain the studied variables. Inferential statistics analysis including simple regression analysis (SRA) and One-way ANOVA were used for hypothesis testing with a significant level of 0.05.

Research Results

1. Demographic variables analysis

Gender: Most of the respondents were female (46.2%), followed by male (39.3%), and LGBTQ+ (14.4%).

Age: The largest age group was 35-44 years (40.4%), followed by 25-34 years (34.2%), and 45-59 years (25.3%).

Marital Status: The majority were single (73.3%), followed by married/living together (23.8%), and divorced/separated/widowed (2.9%).

Income: Most respondents earned between 15,000 – 30,000 THB per month (36.9%), followed by over 45,000 THB (32.9%), 30,001 – 45,000 THB (20.4%), and less than 15,000 THB (9.8%).

2. Studied variables analysis

The overall media exposure to digital signage advertising media has a mean score of 3.84, a standard deviation (S.D.) of 0.90. The overall brand image in the advertisement has a mean score of 3.74, a standard deviation (S.D.) of 0.75. The overall attitude towards brand in the advertisement has a mean score of 3.64, a standard deviation (S.D.) of 0.73. The overall brand purchase intention in the advertisement has a mean score of 3.23, a standard deviation (S.D.) of 0.89. And the overall brand loyalty in the advertisement has mean score of 2.85, a standard deviation (S.D.) of 1.08, as shown in Table 7.

Table 7. Mean scores and standard deviation value results of variables.

Variables	$\overline{X}$	S.D.
The media exposure to digital signage advertising media	3.84	0.90
The brand image in the advertisement	3.74	0.75
The attitude towards brand in the advertisement	3.64	0.73
The brand purchase intention in the advertisement	3.23	0.89
The brand loyalty in the advertisement	2.85	1.08

3. Hypotheses Testing

For the next part of the research, hypothesis testing for H1.1 - H1.4 was conducted using simple regression analysis (SRA) on a significant level at 0.05.

H1.1 The media exposure of digital signage advertising media affect brand image.

The research hypothesis has been statistically supported. The analysis showed that the media exposure to digital signage advertising media in condominiums positively affects consumers' perceptions of brand image in the advertisement significantly at the .05 level of statistical significance and the Beta value is .501, as detailed in Table 8.

Table 8. The result of simple regression analysis testing for H 1.1

Hypothesis	*B*	*t*	*Beta* (β)	Sig.	Result
The media exposure of digital signage advertising affect brand image	.415	12.26	.501	.00*	✓
R^2 = .251, F = 150.296, Sig. F = .00*					

* Significant at 0.05 level.

H1.2 The media exposure of digital signage advertising affect attitudes towards brand.

The research hypothesis has been statistically supported. The analysis indicated that the consumers' media exposure of digital signage advertising in condominiums positively affect their attitudes towards brands in the advertisement significantly at the .05 level of statistical significance and the Beta value is .343, as detailed in Table 9.

Table 9. The result of simple regression analysis testing for H 1.2

Hypothesis	*B*	*t*	*Beta* (β)	Sig.	Result
The media exposure of digital signage advertising affect attitudes towards brand	.275	7.718	.343	.00*	✓
R^2 = .117, F = 59.569, Sig. F = .00*					

* Significant at 0.05 level.

H1.3 The media exposure of digital signage advertising media affect brand purchase intention.

The research hypothesis has been statistically supported. The analysis indicated that the consumers' media exposure with digital signage advertising media positively affect on their brand purchase intention in the advertisement significantly at the .05 level of statistical significance and the Beta value is .256, as detailed in Table 10.

Table 10. The result of simple regression analysis testing for H 1.3

Hypothesis	*B*	*t*	*Beta* (β)	Sig.	Result
The media exposure of digital signage advertising affect brand purchase intention	.252	5.616	.256	.00*	✓
R^2 = .066, F = 31.535, Sig. F = .00*					

* Significant at 0.05 level.

H1.4 The media exposure of digital signage advertising affect brand loyalty.

The research hypothesis has been statistically supported. The analysis showed that consumers' media exposure with digital signage advertising in condominiums has a significantly positive impact on their brand loyalty in the advertisement with a statistical significant at the .05 level and the Beta value is .164, as detailed in Table 11.

Table 11. The result of simple regression analysis testing for H 1.4

Hypothesis	*B*	*t*	*Beta* (β)	Sig.	Result
The media exposure of digital signage advertising affect brand loyalty	.197	3.527	.164	.00*	✓
R^2 = .027, F = 12.441, Sig. F = .00*					

* Significant at 0.05 level.

For the second hypothesis of the research, One-way ANOVA was utilized. This statistical method is used to compare the means to test statistically significant differences between them. In this case, it appears that the hypothesis involves comparing differences in media exposure to digital signage advertising media among different demographic variables; gender, age, marital status, and income.

H2 The difference of demographic characteristics leads to different levels of media exposure of digital signage advertising media in condominiums.

H2.1 The difference of gender leads to different levels of media exposure of digital signage advertising media in condominiums. The finding showed that gender was a significant demographic variable affecting media exposure differently; LGBTQ+ and male respondents exhibited higher media exposure compared to female respondents, as detailed in Table 12.

Table 12. The result of One-Way ANOVA testing, segmented by gender.

Gender	Mean	S.D.	F (2,447)	*P*	Post-Hoc Test
Male	3.95	0.92	7.07	.00*	Male > Female
Female	3.68	0.90			LGBTQ+ > Female
LGBTQ+	4.08	0.76			

* Significant at 0.05 level.

H2.2 The difference of age leads to different levels of media exposure of digital signage advertising media in condominiums. The finding showed that the difference of age didn't lead to difference level of media exposure of digital signage, as detailed in Table 13.

Table 13. The result of One-Way ANOVA testing, segmented by age.

Age	Mean	S.D.	F (2,447)	*P*
25-34 years old	3.86	0.92	1.27	.283
35-44 years old	3.90	0.84		
45-59 years old	3.73	0.97		

H2.3 The difference of marital status leads to different levels of media exposure of digital signage advertising media in condominiums. The finding showed that the difference of marital status didn't lead to difference level of media exposure of digital signage, as detailed in Table 14.

Table 14 The result of One-Way ANOVA testing, segmented by marital status.

Marital statuses	Mean	S.D.	F (2,447)	*P*
Single	3.87	0.85	0.64	.530
Married/Couple	3.80	1.04		
Divorced/Widowed	3.63	1.04		

H2.4 The difference of income leads to different levels of media exposure of digital signage advertising media in condominiums. The finding showed that the difference of income didn't lead to difference level of media exposure of digital signage, as detailed in Table 15.

Table 15. The result of One-Way ANOVA testing, segmented by income.

Income (baht)	Mean	S.D.	F (2,447)	*P*
Under 15,000	3.86	0.95	0.18	.909
15,000 - 30,000	3.81	0.96		
30,001 - 45,000	3.83	0.88		
Over 45,000	3.89	0.84		

Conclusions and discussion

1. The research findings indicate that the media exposure of digital signage advertising in condominiums significantly influences consumer behavior responses in four key marketing communication variables across three stages of consumer response. The results are as follows:

1.1 The media exposure of digital signage advertising significantly influences the brand image, with a statistical significance at the .05 level and an influence value of .501. This impact explains 25.1% of the correct perception of brand image. This finding aligns with the first stage of marketing communication objectives, which focuses on raising awareness among the target consumer group about the brand or communicating its image. Higher levels of advertisement receptiveness can lead to a stronger impact on brand image communication. This is consistent with the research of Andrew et al. (2019), who used neuroscience technology to measure consumer sensory response. Their finding showed that the brain's response to brand recognition is significantly heightened when exposed to outdoor digital advertising. Additionally, this result aligns with Kotler and Keller (2012), who described brand image as the perception within a consumer's mind based on beliefs, thoughts, and impressions unique to a specific brand. This image differentiates one brand from another and is formed through brand associations, perceptions, and consumer experiences.

1.2 The media exposure of digital signage advertising significantly influences attitudes towards brands with a statistical significance at the .05 level and an influence value of .343. This can accurately explain 11.7% of the attitude towards brand, aligning with the second stage of marketing communication objectives aimed at creating positive attitudes towards brands, or generating a liking for the brand among consumers. Increased media exposure of digital signage advertising can enhance the level of positive attitudes towards brands. This is in line with the research by Lee and Cho (2019), who stated that factors influencing attitudes towards digital signage advertising include the usefulness of information, engagement, entertainment, and the target audience. Moreover, this result aligns with Kotler and Armstrong (2015), who described attitudes as arising from involvement and learning, influencing purchasing behavior and being resistant to change. Additionally, Lutz (1991) described attitudes as unidimensional view of attitude, where beliefs in the perception stage can lead to attitude formation. Understanding consumer attitudes towards brands is crucial for marketers. These attitudes are key to influencing subsequent consumer behaviors.

1.3 The media exposure of digital signage advertising significantly affects the brand purchase intention, with a statistical significance at the .05 level and an influence value of .256. This accounts for 6.6% of the accurate explanation of brand purchase intentions. This result aligns with the third stage of marketing communication objectives, which focuses on influencing the decision to purchase products. Increased consumer exposure to digital signage advertising can enhance the level of brand purchase intention. This is also consistent with the findings of Bauer et al. (2018), who observed that digital signage contributes to creating emotional experiences during shopping, positively affecting consumer behavior. This study aligns with research done on digital signage

located at points of sale within stores. It also corresponds with the research by Jae-Yung (2019), who found that interactive content in digital signage advertising positively influences shoppers' buying behaviors.

1.4 The media exposure of digital signage advertising significantly affects brand loyalty, with a statistical significance at the .05 level and an influence value of .164. This accounts for 2.7% of the accurate explanation of brand loyalty. This result aligns with the third stage of marketing communication objectives, which focuses on creating brand loyalty. Increased consumer exposure of digital signage advertising can enhance brand loyalty. Brand loyalty is crucial for business and marketing communication as it involves maintaining existing customers to continuously repurchase and develop loyalty. This is consistent with Assael (1998), who described brand loyalty as a result of consumer learning that meets their needs, leading to positive attitudes towards the brand, and repeated purchases, even when other brands offer superior characteristics such as lower prices or convenience. Brand loyalty also reflects the bond that consumers have with the brand.

The media exposure of digital signage advertising influences all various variables to different extents according to the stages of consumer behavior response in communication. The level of influence varies from the highest to the lowest in the following order: brand image (Beta = .501), attitudes towards brand (Beta = .343), brand purchase intention (Beta = .256), and brand loyalty (Beta = .164). This indicates that the influence of digital signage advertising varies across different stages of consumer communication response, with each stage showing a distinct level of influence. These results align with Duncan (2008)**,** Belch and Belch (2004).

2. The study of demographic characteristics and their differences with the media exposure of digital signage advertising in condominiums revealed that gender was just a significant demographic variable affecting media exposure differently; LGBTQ+ and male respondents exhibited higher media exposure compared to female respondents. This result aligns with Vantamay (2014), who explained that gender can affect media exposure, especially in digital advertising media. This difference in receptiveness might be influenced by the observation that women tend to use their phones more frequently while waiting for and riding in elevators, potentially diverting their attention from digital signage. Consequently, females showed the less receptiveness to digital signage advertising. However, the study found no significant differences in media exposure when classified by age, marital status, or income.

Recommendations from the study

1. Brand owners, entrepreneurs, or marketing communicators should select appropriate communication tools that align with their strategies and marketing communication objectives. Considering that digital signage advertising in condominiums influences brand perception at every level, but with varying degrees of impact, it's essential to supplement or reinforce marketing communications to consumers with an integrated communication strategy for maximum effectiveness.

2. It is advisable for brand owners, entrepreneurs, or marketing communicators to opt for large digital signage displays or to emphasize the size of the product or brand in digital signage advertisements for clear visibility. This is a primary factor that influences consumer engagement with digital signage advertising in condominium settings.

3. Products suitable for advertising through digital signage in condominiums should target male or LGBTQ+ genders, as these groups show higher receptiveness to digital signage advertising compared to females.

4. To maximize the benefits for the target consumer, it's important to use the unique features of digital signage advertising to create brand awareness. This can include using animated images or accompanying sounds to attract attention in a short duration. Therefore, content that is static or contains lengthy and complex advertising messages is not suitable for this medium, as it may be harder to engage consumers in a brief exposure.

5. It is beneficial for brand owners, entrepreneurs, and marketing communicator in taking the four studied variables (brand image, attitude towards brand, brand purchase intention, and brand loyalty) to evaluate the effectiveness of digital signage advertising media in condominiums for Thai consumers efficiently.

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THE INFLUENCE OF SUPPORTIVE ORGANIZATIONAL CLIMATE ON EMPLOYEES' INNOVATION BEHAVIOR IN SOFTWARE AND INFORMATION TECHNOLOGY SERVICES INDUSTRY

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Abstract

The research purpose is to explore in the software and information technology services industry, whether a supportive organizational climate affect employees' innovative behavior, and different factors within the supportive organizational climate have varying impacts on it. The study collected data from 613 employees in the software and information technology services industry across six provinces and cities in China through a questionnaire survey. The data were analyzed using software APSS 26.0 and AMOS 23.0. In Chinese software and information technology industry, a supportive organizational climate has a positive impact on employees' innovative behavior, and the six factors within the positive organizational climate have different effects on it. This paper is a rare study on the impact of a supportive organizational climate on employees' innovative behavior in Chinese software and information technology industry. The research findings hold significant reference value for Chinese software and information technology service enterprises seeking to promote employees' innovative behavior. This study confirms that a supportive organizational climate in Chinese software and information technology service enterprises positively influences employees' innovative behavior. It further validates the impact effects of various factors within the supportive organizational climate, providing theoretical support and practical references for enterprises aiming to enhance employee innovative behavior. This study only selected the six provinces and cities with the highest number of practitioners in the industry as the sample range. Although they account for 65.5% of the total national workforce, further research is needed to determine whether they are representative of the remaining provinces in China.

Keywords: Organizational Climate, Innovation Behavior, Leadership and Support, Incentive and Remuneration

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THE INFLUENCE OF EMOTIONAL MARKETING ON CHINESE LOCAL COSMETIC BRAND LOYALTY AMONG CHINESE CUSTOMERS

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Abstract

In the era of social media, brands are increasingly adopting emotional marketing strategies to enhance their competitiveness in the market. In brand marketing, incorporating emotional elements allows for better satisfaction of consumers' psychological and emotional needs. People always find it hard to forget emotions that touch their hearts or the feelings evoked by someone. Emotional marketing, as a non-traditional marketing strategy, can assist businesses in engaging in deeper communication with customers and establishing meaningful relationships, thereby enhancing their loyalty. Enhancing customer loyalty to the brand is crucial for the long-term development of a enterprise. This article seeks to provide an in-depth understanding of how emotional marketing affects brand loyalty for Chinese local cosmetics brands. Employing a quantitative approach, this study sampled 468 participants from online consumers of Chinese local cosmetics. Structural Equation Modeling (SEM) was utilized as the data analysis technique. The results of the study indicated that emotional marketing had a positive and significant impact on customer brand loyalty.

Keywords: Emotional Marketing, Chinese Local Cosmetics, Brand Loyalty

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THE IMPACT OF BRAND IMAGE AND GREEN TRUST ON TOURISTS' BEHAVIORAL INTENTION IN SUSTAINABLE HOTELS: A CONCEPTUAL FRAMEWORK

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Abstract

This conference paper presents a comprehensive conceptual model designed to explore the intricate relationships between Green Brand Image, Brand Trust, Willingness to Pay a Premium, Subjective Norm, Attitude, Environmental Concern, and Behavioral Intention, specifically in the context of sustainable hotels in Thailand. The proposed model posits that Green Brand Image is a critical precursor to developing Brand Trust among consumers, which in turn can significantly influence their Willingness to Pay a Premium for sustainable lodging options. It also examines how Subjective Norm and Attitude towards environmental practices interplay in shaping consumer preferences and choices. Furthermore, the model integrates Environmental Concern as a pivotal factor driving the overall Behavioral Intention towards choosing and endorsing sustainable hotels. This research contributes to the growing body of literature on green marketing and consumer behavior in the hospitality industry and sets the groundwork for future empirical studies to validate and expand upon the proposed relationships.

Keywords: Green Brand Image, Brand Trust, Willingness to Pay A Premium, Subjective Norm, Attitude, Environmental Concern and Behavioral Intention

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Introduction

The past few decades have seen a significant shift in consumer preferences and behaviors, particularly in the hospitality industry, with a growing demand for green hotels reflecting a broader societal trend towards environmental consciousness (Kalafatis et al., 1999; Laroche et al., 2001). This shift has prompted businesses to adopt green marketing strategies and emphasize eco-responsibility, understanding that while green branding and clear communication of environmentally sound practices offer both functional and emotional benefits, there remains a notable discrepancy between positive attitudes towards green attributes and actual purchase behaviors (Awan, 2011; Amoako et al., 2020; Chen & Chang, 2013). The advent of COVID-19 has further altered consumer perceptions of eco-friendly hotels, making it imperative to reassess green brand image formation, particularly in emerging markets like Thailand, where tourism is a key economic driver. This study, grounded in the Theory of Planned Behavior, aims to dissect the intricate relationships between green brand image, brand trust, environmental concern, and consumer behavioral intentions in the post-pandemic Thai hotel industry, offering insights into the complex interplay of consumer psychology and green marketing in shaping sustainable tourism trends (Ajzen, 1991; Zameer et al., 2020).

Research Background

Recent shifts in consumer behavior have markedly increased preferences for green hotels post-pandemic, signaling a substantial pivot in the hospitality sector (Dwivedi et al., 2022). Historical academic inquiries have consistently explored the nexus between green hotels and consumer preferences (Acampora et al., 2022; TM et al., 2021), particularly examining the interplay of green brand image, trust, and behavioral intention through the Theory of Planned Behavior (Ajzen, 1991; Tan et al., 2022). The pandemic has catalyzed significant changes in consumer attitudes, intensifying concerns over health, hygiene, and environmental impact, thereby rejuvenating interest in green hotels (Jian et al., 2020; Liew, 2020). This renewed focus, coupled with heightened environmental awareness, has altered consumer decision-making processes, emphasizing the importance of authentic environmentally supportive actions by hotels (Sharma & Chen, 2023). However, as consumers grow more vigilant against greenwashing, the effectiveness of green marketing is challenged, especially among the environmentally conscious. Despite previous research, the post-pandemic world presents a unique landscape with amplified environmental concerns, suggesting that prior findings might not fully capture the current consumer-hotel dynamics, indicating a need for updated, context-specific studies (Dwivedi et al., 2022).

Research questions

The Research questions for a conceptual model

1. How does the green brand image of hotels influence consumer perceptions of brand trust?

2. How do the components of the Theory of Planned Behavior influence the link between green trust and behavioral intentions towards green hotels?

3. How does environmental concern impact the relationship between consumers' perceptions of a brand and their subsequent behavioral intentions?

Furthermore, the research questions for implications of the study's outcomes on the operational processes and growth strategies of business enterprises. These research questions are designed to delve into the practical aspects of the conceptual model, focusing on how each element influences the operations, growth, and market dynamics of sustainable hotels in Thailand. By exploring these questions, the study can offer valuable insights and recommendations for businesses looking to integrate sustainability into their core practices effectively.

1. How does the development of a Green Brand Image influence customer retention and acquisition in Thai sustainable hotels?

2. How can sustainable hotels in Thailand measure the impact of Brand Trust on their market share and growth?

3. What factors most significantly influence the Willingness to Pay a Premium for sustainable practices in Thai hotels?

4. How do Subjective Norms in Thailand influence the adoption of sustainable practices in the hotel industry?

5. How does the Attitude of guesses towards sustainability affect the implementation of green practices in Thai hotels?

6. What are the long-term effects of increased Environmental Concerns on the operational models of Thai sustainable hotels?

7. How can sustainable hotels in Thailand align their marketing strategies to capitalize on the Behavioral Intentions of eco-conscious travelers?

Objectives of the Study

The objective of this study is to develop and validate a causal model that investigates the impact and relationships among green brand image, green brand trust, willingness to pay, attitude, subjective norm, and environmental concern on consumers' behavioral intention when choosing hotels in Thailand, particularly in the context of the post-pandemic era.

Scope of the study

To address the research questions, this study reviews literature associated with green brand image, green brand trust, willingness to pay premium, attitude, subjective norm, environmental concern, and behavioral intention associated with green hotel context.

Expected benefits of the study

This study's offers substantial benefits across various domains. Academically, it enriches the theoretical landscape of sustainable consumer behavior, providing a comprehensive framework for future research and cross-disciplinary insights. Practically, it equips businesses, especially in the hospitality sector, with strategic insights to enhance brand trust, tailor marketing strategies, and balance profitability with eco-responsibility. For policymakers and industry stakeholders, it offers a deeper understanding of consumer motivations, aiding in the formulation of effective sustainability policies and standards. Ultimately, by shedding light on the pathways driving eco-friendly consumer choices, this study promotes a broader societal shift towards more sustainable living and supports the global push for environmental sustainability.

Literature review

Green brand image

In contemporary market dynamics, Green Brand Image is increasingly recognized as a pivotal determinant of consumer perceptions and behaviors toward environmental responsibility (Chen, 2010). Scholars have expanded this concept beyond the mere distribution of eco-friendly products to a broader identity of environmental sustainability, encompassing every facet of corporate strategy from ethical sourcing to waste management (Chen et al., 2020; Lavuri et al., 2022; Bashir et al., 2020). Originating from the rise of the green consumer in the 1990s, this concept has evolved to represent a brand's comprehensive commitment to the planet's health, significantly influencing purchasing decisions and consumer loyalty, particularly in sectors like hospitality (Roberts, 1995; Robert & Bacon, 1997; Balaji et al., 2019). Operationalizing Green Brand Image involves a spectrum of practices, from adhering to international environmental standards to effective communication of eco-friendly endeavors (Mukonza & Swarts, 2020; Alamsyah & Othman, 2020). The implications of a strong Green Brand Image are profound, serving as a market differentiator, enhancing customer satisfaction and loyalty, and providing a competitive edge in the face of escalating environmental crises (Solekah, 2019; Yusof et al., 2012; Salehzadeh et al., 2023). As global awareness and concern grow, a persuasive Green Brand Image transitions from a marketing tool to a manifestation of a brand's broader societal responsibility, necessitating companies to align with the increasing environmental consciousness and adopt pro-environmental leadership (Grubor & Milovanov, 2017; Kamalanon et al., 2022; Kim et al., 2020).

In the realm of modern consumerism, the interplay between Green Brand Image and Green Brand Trust emerges as a critical focus, significantly shaping consumer decisions amidst the surging trends of sustainability and environmental consciousness. Prior research establishes a robust, positive linkage between these constructs, suggesting that a genuine Green Brand Image fosters greater trust among eco-conscious consumers, particularly in contexts where environmental preservation is highly valued (Deheshti et al., 2016; Alamsyah et al., 2020). Studies reveal that innovative green production techniques and authentic environmental practices amplify a firm's trustworthiness and competitive

edge, green brands are those brands that obtain attributes and benefits related to the reduction of the brands' environmental impact (Zameer et al., 2020). The purpose of the paper is to evaluate the effect of green brand image, trust and attitude on green brand love among Muslim consumers. In this study, a cross-sectional survey is conducted based on the questionnaire method to collect data from a sample of 201 consumers of various automobile brands in Isfahan, Iran. Structural equation modeling is used to test the research hypotheses. The findings show that green brand image has a significant direct effect on green brand attitude, love and trust. In addition, the results indicate that green brand attitude and trust have a significant direct effect on green brand love. (Salehzadeh et al., 2023). Alhaddad (2015) and Wu and Liu (2020) further support this narrative, indicating that a positive green brand image is crucial for cultivating brand trust and loyalty. However, the fragility of consumer trust is highlighted by the adverse impacts of greenwashing, where overstated environmental claims can significantly erode trust and damage brand image (Guo et al., 2018; Akturan, 2018). These insights collectively emphasize the imperative of sincerity in green marketing efforts, suggesting that perceived authenticity in a brand's environmental initiatives is vital for maintaining a strong brand image and fostering enduring trust among consumers. This synthesis of empirical and theoretical perspectives culminates in a hypothesis underscoring the paramount importance of genuine environmental stewardship in establishing and sustaining brand trust in an increasingly green-aware consumer landscape.

Hypothesis 1: Green brand image positively associated with green brand trust.

Brand trust

In the intricate web of consumer behavior, trust forms a fundamental pillar, shaping individuals' attitudes and guiding their crucial purchasing decisions (Hanaysha, 2022). Within this domain, Brand Trust emerges as a nuanced notion, signifying customers' confidence in a brand's ability to deliver on its promises, encompassing product quality, reliability, and honesty (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Alemán, 2003). This specific facet of trust is vital in fostering brand loyalty and steering purchase intentions. In the realm of environmental sustainability, Green Trust delves into the consumers' belief in a brand's ecological commitment, influencing their willingness to pay premiums for green products and guiding their sustainable behavioral intentions (Amin & Tarun, 2021; Wang et al., 2019). Green Trust, a reflection of consumer confidence in a brand's environmental claims, plays a crucial role in sustainable consumer behaviors, impacting attitudes and green purchase intentions (Chen, 2010; Chuah et al., 2020). However, practices like greenwashing can erode this trust, causing confusion and skepticism (Tarabieh, 2021). Conversely, a solid Green Trust can alleviate performance and quality concerns, thus bolstering consumer loyalty and readiness to pay more for environmentally sustainable offerings (Sultana et al., 2022; Yadav et al., 2019). For businesses targeting sustainable consumption, cultivating Green Trust is imperative. It acts as a mediator between a brand's green image and consumer behavior, providing valuable insights into consumer perceptions and attitudes towards green products in the context of environmental sustainability (Wasaya et al., 2021).

Scholars have consistently identified environmental concerns as a crucial component of green brand studies, this study is the first to examine a serial mediation model that includes environmental concern, self-green image congruence, green brand trust, and green purchase intention. Based on data from a sample that included 349 Saudi individuals, the analyses supported most mechanisms flowing from environmental concern to self-image congruence and green brand trust in serial. The direct relationship of environmental concern to green purchase intention was also statistically significant. This study provides an interesting perspective on the antecedents of green purchase intention. From a managerial perspective, the results show that cognitive, psychological and motivational mechanisms could enhance green markets in an Arab and Islamic country. (Klabi & Binzafrah, 2022; Jian et al., 2020; Chuah et al., 2020). Studies have indicated that as consumers trust a brand's environmentally friendly practices, they are more likely to be willing to accept a higher price point for the brand's offerings, which subsequently influences their behavioral intentions (Jian et al., 2020). However, Laroche et al. (2001) proposed that environmental concern can function as a significant moderating variable within this pathway. They observed that when consumers exhibit elevated levels of environmental concern, their sensitivity toward the authenticity of a brand's green initiatives increases. This heightened awareness leads them to be more discerning in evaluating whether a brand's eco-friendly practices are genuine or merely 'greenwashing'. Consequently, when they place trust in a green brand, their willingness to pay a premium is therefore strengthened. The purpose of the study is to develop an original framework to explore the effects of brand crisis on green purchase intentions and willingness to pay more. This study composes of seven original concepts, which are perceived brand crisis, green brand image, green trust, green brand equity, green perceived value, green purchase intentions and willingness to pay more to develop an integrated model. For this reason, an online survey was carried out in testing the model that includes questions measuring the effects of these variables. Smart PLS structural equation modelling is applied to verify the research framework. A total of 504 questionnaires were collected from Turkish consumers living in Turkey. According to the findings acquired from the structural equation modelling, there is an impact of the perceived brand crisis on green brand image, green trust, green brand equity and green perceived value. Consequently, green brand equity and green perceived value except for green brand image and green trust influence the green purchase intention. Moreover, green purchase intention affects willing ness to pay more. Existing studies have shown that perceived brand crisis affects the brand equity, brand trust, brand image, perceived value and purchase intentions. However, there is not any research to shed light on the impact of perceived brand crisis on green brand equity, green brand image, green trust, green perceived value, green purchase intention and willingness to pay more (Toklu et al., 2017). The following hypothesis is developed:

Hypothesis 5: Environmental concern moderates the relationship between green brand trust and willingness to pay premium.

Willingness to pay premium

Willingness to pay a premium stand as a pivotal construct within marketing disciplines, reflecting the maximum price consumers are willing to expend for products or services, particularly relevant in evaluating demand and price elasticity for environmentally friendly goods (Gomes et al., 2023; Katt & Meixner, 2020). Its importance escalates in the hospitality sector, where escalating environmental concerns drive demand for sustainable options (Nelson et al., 2021). This willingness acts as a barometer of consumer commitment to environmental sustainability, often paralleling internalized moral norms (Berger, 2019; Nicolau et al., 2020). Research indicates a direct correlation between strong personal environmental norms and a higher propensity to pay more for green products, such as eco-friendly hotels or organic food (Chaudhary, 2018; Han, 2015; Katt & Meixner, 2020). Factors like income, perceived value, and personal environmental beliefs crucially influence this readiness (Biswas & Roy, 2016). Companies can leverage this insight to foster environmentally friendly behavior and align their branding with consumer values for strategic market positioning (Kang et al., 2012; Higgins, 2020). Understanding willingness to pay thus provides a nuanced glimpse into the financial sacrifices' consumers are willing to make for sustainability, encapsulating the intricate relationship between personal norms, consumer behavior, and environmental ethics, and offering businesses a roadmap to balance profitability with sustainable practices (Konuk, 2019).

The increasing consumer demand for environmental responsibility has highlighted the crucial role of green trust in influencing economic choices. A high level of green trust significantly boosts consumers' willingness to pay a premium for eco-friendly options, especially in the hospitality sector (Jian et al., 2020). The COVID-19 pandemic further heightened this trend, with increased environmental concerns driving hotel guests towards financially supporting green accommodations, indicating a shift towards sustainability (Dwivedi et al., 2022; Tang & Lam, 2017). Additionally, green certifications, as indicators of green trust, have been found to positively impact consumer satisfaction and willingness to pay a premium, further affecting sustainable purchasing behaviors, customers are becoming more concerned about the use of green practices in the hotel industry. Managers are therefore starting to recognize the significance of green practices for clients' purchasing decisions and levels of satisfaction. This study aims to investigate how customers' decisions to book green hotels online and make purchases are impacted by green certificates. Two variables, namely the intentions to return and to pay a premium price, are used to measure customer satisfaction and purchasing behavior towards green hotels. SmartPLS has been employed to analyses data gathered from 161 individuals from two hotels in Saudi Arabia. The results suggest that green certifications, environmental considerations, and green brand perception have a significant impact on online customers' satisfaction and purchase choices in the hotel sector. This paper provides a comprehensive framework that illustrates the connection between hotels' aspirations towards environmental concerns and customers' willingness to revisit and pay a premium price. (Qubbaj et al., 2023). These insights reveal the complex interplay between green trust, environmental concern, and willingness to pay a premium, emphasizing the importance of fostering

trust and aligning marketing strategies with consumer values for environmental sustainability. Based on the empirical literature, this study posits that the relationship between green trust and behavioral intention is mediated by a customer's willingness to pay a premium. As green trust towards a brand strengthens, consumers become more inclined to pay a premium for the brand's products or services, which, in turn, influences their behavioral intentions. Hence, fostering green trust potentially led to positive behavioral intentions, through the critical pathway of a customer's willingness to pay a premium for environmentally friendly offerings. Collectively, the following hypothesizes are developed:

Hypothesis 2: Willingness to pay premium mediates the relationship green brand trust and behavioral intention.

Attitude

Attitudes, as psychological predispositions, play a pivotal role in shaping consumer behavior and decision-making processes, with their roots in social psychology and key theories of persuasion and influence (Ajzen, 1991; Schiffman et al., 2013). These cognitive evaluations, integral to models like the theory of reasoned action and the theory of planned behavior, evolve over time and can shift with new insights or psychological drives (Fishbein & Ajzen, 1977; Ajzen, 1985). Research highlights that attitude, particularly towards environmental issues, significantly influence behaviors, such as green product purchases and sustainable consumption (Trudel, 2019; Rahman & Reynolds, 2016). Consumers' favorable attitudes, fueled by emotional responses and positive associations with eco-friendly products, increase the likelihood of executing sustainable behaviors (Costa et al., 2021; Liao et al., 2020). In the realm of green marketing, fostering positive consumer attitudes towards sustainability can significantly enhance eco-friendly purchase intentions (Chen et al., 2020). Understanding and strategically influencing these attitudes is crucial for promoting green consumerism and environmental sustainability, as a positive disposition towards green practices correlates strongly with increased sustainable consumer behavior, offering valuable insights for advancing effective strategies in sustainable marketing and consumption (Riskos et al., 2021; Rahman & Reynolds, 2016).

Research consistently affirms that attitudes play a crucial role in driving behavioral intentions, with brand trust emerging as a significant precursor to these attitudes (Dhir et al., 2021; Iftikhar et al., 2017). Studies in the context of green hotels demonstrate that green brand trust significantly shapes consumers' attitudes, which subsequently influences their behavioral intentions towards such establishments (Yadav et al., 2019). This relationship indicates that higher trust in a hotel's environmental responsibility fosters more favorable consumer attitudes and, thus, a greater likelihood of choosing green accommodations. Similarly, research on eco-friendly products highlights the impact of positive attitudes on purchase intentions, suggesting that fostering favorable consumer perceptions is key to promoting the adoption of environmentally conscious products, the purpose of this paper is to examine the influence of codesigned packaging on consumers' response. The theory of reasoned action

(TRA) served as a framework for identifying major antecedents of codesigned packaging behavior and for determining their relative importance. Structural equation modeling was used to analyze the data of 204 young Indian consumers and test the proposed conceptual model. The finding of the study confirmed that purchase intention towards ecofriendly packaging is significantly influenced by personal norms, attitude, environmental concern and willingness to pay. The paper also provides interesting insights about young consumers towards eco-designed packaging. These useful insights will helpful to marketers in developing the focused strategies towards young consumers and encourage them to reduce the global ecological footprint of packaging. (Prakash & Pathak, 2017). The COVID-19 pandemic has further intensified consumer focus on green products due to rising environmental awareness, pressuring businesses to authentically integrate environmental considerations into their offerings (Han et al., 2020; Chen et al., 2022). However, the pandemic has also spotlighted sustainability practices, leading to a decline in trust and purchasing intentions for businesses perceived as inauthentic in their green efforts (Zhang et al., 2022). Studies elucidate that a loss of trust leads to negative attitudes and reduced purchase intentions, while trust fosters positive emotions and attitudes, enhancing behavioral intention (Han et al., 2020) Thus, attitudes emerge as a mediating factor between brand trust and behavioral intention, shaping the consumer decision-making process. These findings emphasize the need for brands to establish trust and positive attitudes to drive favorable behavioral intentions, highlighting the intricate dynamics that warrant continued exploration to fully understand the influence of attitudes in varying contexts. Therefore, a hypothesis is formulated as follows:

Hypothesis 3: Attitude mediates the relationship between green brand trust and behavioral intention.

Subjective norm

Subjective norm, originating from sociopsychological theories like the Theory of Planned Behavior, encapsulates the perceived social pressure individuals experience to perform certain behaviors, significantly shaping their actions (Ajzen, 1991). Developed from the theory of reasoned action, this concept has been applied to diverse fields, including green consumer behavior, illustrating the profound influence of social groups and societal expectations on personal choices (Madden et al., 1992). Particularly relevant in the context of environmental sustainability, subjective norms guide individuals towards sustainable actions, often dictated by the perceived expectations of friends, family, and broader society (Yadav et al., 2019; Roh et al., 2022). Different from personal norms, which are based on individual moral codes, subjective norms focus on the behaviors others expect or prefer the individual to exhibit, especially in situations like eco-friendly purchases where social guidance is sought (Ham et al., 2015). Research highlights the positive correlation between subjective norms and green behaviors, from purchasing decisions to waste sorting and advocacy, emphasizing its role in fostering green consumerism (Chan & Lau, 2002; Setiawan et al., 2021). Businesses can leverage these insights, utilizing marketing strategies that underscore social acceptance and expectations, to encourage

sustainable practices and green product adoption (Patwary et al., 2022). Overall, understanding and harnessing subjective norms is critical in shaping sustainable behaviors and promoting environmental sustainability, playing an essential role in driving the collective shift towards more eco-conscious consumerism.

Numerous studies have elucidated the intricate relationship between brand trust, subjective norms, and behavioral intention, revealing the profound impact of trust and societal pressures on consumer purchasing decisions. The paper aims to investigate organic food consumption based on the perspectives of an extended research model by integrating the theory of consumption value (TCV) and the theory of reasoned action (TRA), this study included trust and perceived knowledge in the research model in addition to the subjective norm, attitude, and behavioral intention. A partial least square structural equation method (PLS-SEM) was adopted to examine our research model with 251 samples. Our results revealed that GPV significantly affects consumer attitudes. Consumer attitudes and subjective norms also have a significantly positive effect on purchase intention. As an extended TRA, GPV has a significantly positive effect on trust while trust significantly impacts purchase intention. Further, perceived knowledge positively influences attitude and trust. By jointly considering TCV and TRA, this study proposes several implications emphasizing how GPV and perceived knowledge affects consumers' organic food consumption choice based on the role of increased trust (Roh et al., 2022). Research indicates that subjective norms positively influence purchase intentions, with trust in a brand fostering a psychological contract within social groups, leading to similar purchasing behaviors (Roh et al., 2022). In the realm of ethical fashion, the intersection of trust and societal pressures significantly guides consumer behavior, with brand trust enhancing willingness to support the brand and encouraging similar behaviors within social circles (Liu et al., 2021). Studies in luxury brand preferences also highlight subjective norms as a mediator between brand trust and behavioral intentions, emphasizing that perceived peer opinions can bolster or undermine brand trust and subsequently influence purchasing decisions (Choi et al., 2014). Within environmental contexts, the relationship between trust in green brands and purchase intentions is mediated by subjective norms, with environmental perspectives motivating individuals to align with environmentally friendly brands (Klabi & Binzafrah, 2022). Additionally, increased environmental knowledge can lead to heightened subjective norms and intentions to engage in green purchases (Yoon & Joung, 2019). Furthermore, a sense of environmental responsibility, when mediated by subjective norms, significantly increases the likelihood of consumers making green purchases and recommending environmentally conscious brands (Kabadayi et al., 2015). These findings collectively affirm the role of subjective norms as a critical mediator between brand trust and behavioral intention, highlighting the need for brands to understand and leverage societal influences to foster trust and encourage desirable consumer behaviors in various contexts, including ethical and green consumption. The following hypothesis is developed accordingly:

Hypothesis 4: Subjective norm mediates the relationship between green brand trust and behavioral intention

Behavioral intention

Behavioral intention, particularly within the green hotel sector, signifies a consumer's resolve to choose environmentally friendly lodging, rooted in the Theory of Planned Behavior which posits that such intentions drive actual actions based on attitudes, perceived control, and societal norms (Ajzen, 1985; Teng et al., 2018). This construct is instrumental in predicting various behaviors, including eco-conscious lodging decisions. Factors influencing behavioral intention toward green hotels include environmental consciousness, with a positive link established between concern for the environment and the intention to opt for green accommodations (Saari et al., 2021). Additionally, consumer values like generativity, self-enhancement, and collectivism, along with individual attributes such as confidence and perceived behavioral control, significantly shape these intentions, suggesting that a positive attitude and self-efficacy regarding sustainable choices enhance the likelihood of preferring green hotels (Lui et al., 2021; Kim, 2013). Moreover, well-informed consumers about green brand advantages show a higher tendency to select eco-friendly lodging (Lee et al., 2019). However, practical barriers like cost and accessibility can impact the translation of intention into action, highlighting the importance of considering factors like willingness to pay a premium in understanding consumer behavior towards green hotels (Gao et al., 2016). Understanding these multifaceted influences on behavioral intention is crucial for effectively promoting sustainable consumer behaviors and advancing green hospitality practices.

Consumers who hold strong environmental concerns are more inclined to pay extra for eco-friendly products, as these purchases align with their personal values (Laroche et al., 2001). This willingness transcends a simple monetary decision and reflects a deeper commitment to both the brand and its environmental values (Schwartz, 1977). From a psychological perspective, this commitment can be understood through the principle of consistency; once individuals make a commitment, they tend to align subsequent actions with that initial choice (Cialdini, 2009), solidifying their behavioral intention to support the brand. This emphasizes the significance of recognizing and addressing the needs and values of environmentally conscious consumers in the promotion of green consumption. In essence, the degree of environmental concern potentially amplifies both the direct impact of trust in a green brand on the willingness to pay a premium and the subsequent influence of this willingness on behavioral intention. The concerns related to the environment are evident in the increasingly ecologically conscious marketplace. Using various statistical analyses, investigates the demographic, psychological and behavioral profiles of consumers who are willing to pay more for environmentally friendly products. Finds that this segment of consumers was more likely to be females, married and with at least one child living at home. They reported that today’s ecological problems are severe, that corporations do not act responsibly toward the environment and that behaving in an ecologically favorable fashion is important and not inconvenient. They place a high importance on security and warm relationships with others, and they often consider ecological issues when making a purchase (Laroche et al, 2001).

Hypothesis 6: Environmental concern moderates the relationship between willingness to pay premium and behavioral intention.

Environmental concern

Environmental concern, originating from the heightened public awareness of the 1970s environmental movement, encapsulates an individual's level of disturbance or interest regarding environmental degradation and its implications (Fransson & Gärling, 1999; Dunlap & Mertig, 1991). It is a multifaceted construct that encompasses awareness, attitudes, beliefs, and a willingness to engage in actions mitigating environmental threats (Cruz & Manata, 2020). This concern has been identified as a significant driver of pro-environmental behaviors, including recycling, energy conservation, and the purchase of green products, as demonstrated in various cultural contexts (Mostafa, 2007; Wang, 2022; Wang et al., 2019). Beyond individual actions, environmental concern influences public opinion and policy preferences, with higher levels of concern correlating with increased support for environmental policies and conservation efforts (Wan et al., 2017; Pierce et al., 2019). In marketing, recognizing consumers with high environmental concern allows firms to tailor strategies and highlight product benefits that resonate with this segment, effectively tapping into a market driven by ecological values (Kumar & Ghodeswar, 2015). However, the pathway from concern to action is complex, influenced by variables like perceived effectiveness, knowledge, and social norms (Rusyani et al., 2021). Understanding these nuances is vital for effectively leveraging environmental concern to promote sustainable behaviors and policy support, ultimately contributing to broader goals of environmental sustainability (Song et al., 2021). As such, environmental concern stands as a critical component in understanding and fostering a more ecologically conscious society.

When consumers believe in a brand's environmental commitments, they tend to develop a favorable attitude towards it, subsequently, this positive attitude drives behavioral intention (Fujii, 2006). Previous studies have suggested that high levels of environmental concern can enhance the relationship between green brand trust and attitude (Laroche et al., 2001). As consumers perceive a brand as reliable and consistent in their environmental practices and initiatives, their inclination towards a pro-environmental attitude grows, fostering brand loyalty and a behavioral intention to continuously purchase products and services from the brand (Ifitkhar et al., 2017). Furthermore, More (2019) found that consumers can be highly sensitive to greenwashing practices, especially those who have a high level of environmental concern. In other words, consumers might develop a negative attitude toward a brand or lose trust in a brand that is not sincere in preserving the environment. Similarly, Salehzadeh et al. (2023) also discovered that while brand image and trust have a direct effect on attitude, companies must consistently and sincerely commit to preserving the environment in their daily practices by bridging the attitude-behavior gap (Young et al., 2010). as follows:

Hypothesis 7: Environmental concern moderates the relationship between green brand trust and attitude.

In addition, Cachero-Martinez (2020) found that environmental concern also has a positive direct effect on the relationship between attitude and purchase intention. In COVID-19 has further accelerated this process and motivated more people to assume this responsibility. Thus, the health crisis could trigger the consumption of organic foods, which are foods produced through environmentally friendly agricultural methods and that have not been artificially altered. In this context, the objective of this research is to analyze the relationship between attitude, satisfaction, trust, purchase and word-of-mouth (WOM) intentions towards organic products. The results of a survey administered a survey to a sample of 195 consumers show that trust is influenced by satisfaction and attitude. In relation to the behavioral variables, satisfaction is the variable that has the greatest influence on purchase intentions and WOM intentions. In addition, a moderating effect of environmental concern is observed on the proposed relationships. This means that when the attitude about environmental sustainability is positive and there is a significant concern for the environment, consumers are likely to make greater efforts to reduce their environmental impact by preferring to purchase products and services from a brand that they perceive as environmentally friendly (Hoang et al., 2020). Clearly, the relationship between brand trust, attitude, and behavioral intention can be moderated by environmental concern since this moderation intensifies the impact of attitudes on behavioral intention by increasing consumer commitment to green consumption (Rondoni & Grasso, 2021). Given the complexity of these relationships, it can be hypothesized that environmental concern moderates the relationship between green brand trust, attitude, and behavioral intention as follows:

Hypothesis 8: Environmental concern moderates the relationship between attitude and behavioral intention.

Subjective norm, along with willingness to pay a premium and attitude, significantly influences behavioral intentions for pro-environmental products (Yadav et al., 2019). scholarly research suggests a comparatively low volume of its consumption in the market. This has resulted in an urgent need to study the motivations which enhance consumers' proclivity to purchase food items produced organically. The current research attempts to understand potential associations between motivations (intrinsic and extrinsic), attitude, and buying behavior towards organic food. Self-determination theory (SDT) was applied to develop a theoretically grounded framework which was evaluated with 378 organic food consumers. The hypotheses were tested by analyzing the data through structural equation modelling (SEM), wherein environmental concerns and trust were the moderating variables. The study results demonstrate the significant influence of intrinsic motivation, integrated and external regulation on consumer attitude, and buying behavior. But attitude had no significant association with buying behavior. The findings indicate consumers' motivation may be stimulated to encourage higher frequencies of purchasing organic food by emphasizing values that reflect motivations arising from ethical or green consumerism, health, and social benefits. Furthermore, policymakers should focus on avenues to integrate organic food as permanent parts of individual lives and a socially exalting

behavioral action (Tandon et al., 2020). The impact of brand trust on subjective norm is particularly strong among consumers with high environmental concern, intensifying their sensitivity to societal expectations for supporting environmentally responsible brands (Izquierdo-Yusta et al., 2022). This relationship was notably evident during the COVID-19 pandemic, where heightened societal environmental concerns influenced consumer perceptions and purchase decisions, with environmental concern acting as a critical moderating factor (Bouarar et al., 2021), the below hypothesizes are derived based on the above review:

Hypothesis 9: Environmental concern moderates the relationship between green brand trust and subjective norm.

Chen and Tung (2014) study to develop an extended Theory of Planned Behavior (TPB) research model which includes environmental concern and perceived moral obligation to predict consumers' intention to visit green hotels. A total of 559 respondents collected in Taiwan as data input. The empirical results of structural equation modeling (SEM) indicate that consumers' environmental concern indeed exert a positive influence on their attitude toward green hotels, subjective norms, and perceived behavioral control (i.e., the antecedents of the TPB model) as well as their perceived moral obligation, which in turn influence their intention to visit green hotels as expected. The results obtained from this empirical study verify that the extended TPB model has a good explanatory power. The implications of the research findings and suggestions for the Taiwan Environmental Protection Administration and the hotel accommodation industry to increase the popularity of green hotels choice are included in the study. (Cialdini & Goldstein, 2004). This alignment emphasizes the effect of subjective norm on behavioral intention, especially when consumers hold strong environmental convictions. the paper is to investigate the applicability of theory of planned behavior (TPB) with special emphasis on measuring the direct and moderating effects of subjective norms on attitude, perceived behavioral control and buying intention in context of buying organic food. Structured questionnaires were randomly distributed among academic staffs and students of two universities in southern Punjab, Pakistan. Structural equation modeling was employed to test the proposed model fit. Results of the study showed that subjective norms significantly moderate the relationship between attitudes and buying intention as well as between perceived behavior control and buying intention. Furthermore, subjective norms significantly influence attitude toward buying intention (Al-Swidi et al., 2014). Collectively, the below hypothesizes are derived based on the above review:

Hypothesis 10: Environmental concern moderates the relationship between subjective norm and behavioral intention.

Methodology

In the methodology section of our study, we built upon a foundation laid by an extensive review of literature that scrutinized the intersection of environmental concerns, attitudes towards sustainability,

and consumer behavior within the tourism industry. This scholarly examination not only informed the underlying assumptions of our research but also guided the construction of a conceptual model to delineate the potential relationships among the identified variables. The model encapsulates the presumed influence of green brand image, green brand trust, willingness to pay premium, attitude, subjective norms, and environmental concern on the behavioral intentions of tourists considering sustainable hotels.

Research Results

Research model

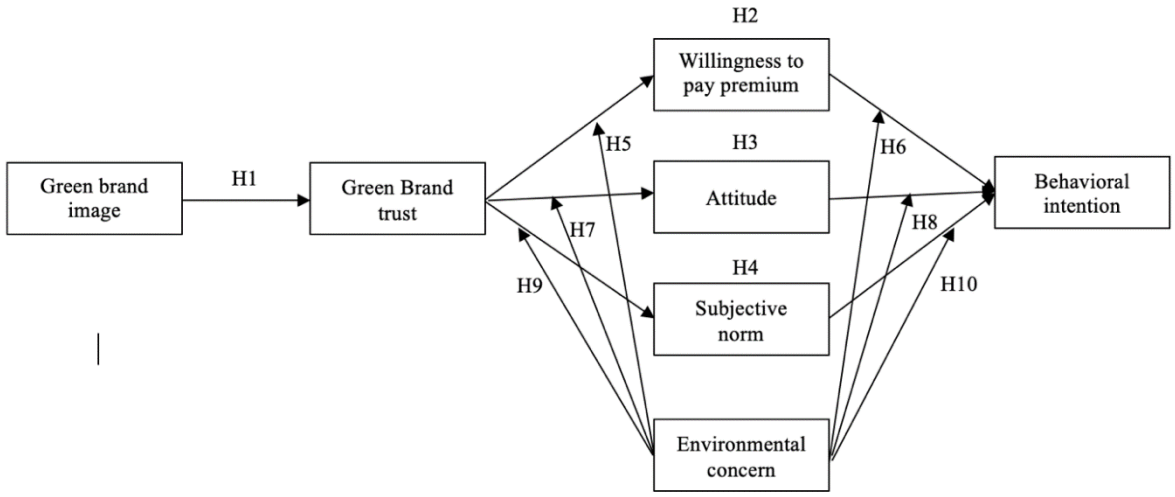

Figure 1. Proposed research framework.

This research structure combines the factors and proposed ideas from the study's literature analysis. This framework focus on the importance of a green brand image and its nexus with brand trust emerges as a central theme. This relationship forms the foundation, with the hypotheses suggesting a positive association between them (H1). Building on this, the research anticipates mediating effects, with willingness to pay a premium (H2), attitude (H3), and subjective norms (H4) potentially acting as intermediaries in the relationship between green brand trust and behavioral intention. Equally crucial is the recurrent theme of environmental concern, which is postulated to act as a moderator across various associations, highlighting its pivotal role in shaping and influencing the dynamics between green brand trust, willingness to pay premium, attitude, subjective norms, and behavioral intention (H5-H10). In essence, the following hypotheses aims to provide a holistic understanding of the multifaceted interplay between green branding, trust, and the nuanced factors that influence consumer behaviors in an environmentally conscious market. The hypotheses for the models are summarized as follows:

Hypothesis 1: Green brand image positively associated with green brand trust.

Hypothesis 2: Willingness to pay premium mediates the relationship green brand trust and behavioral intention.

Hypothesis 3: Attitude mediates the relationship between green brand trust and behavioral intention.

Hypothesis 4: Subjective norm mediates the relationship between green brand trust and behavioral intention.

Hypothesis 5: Environmental concern moderates the relationship between green brand trust and willingness to pay premium.

Hypothesis 6: Environmental concern moderates the relationship between willingness to pay premium and behavioral intention.

Hypothesis 7: Environmental concern moderates the relationship between green brand trust and attitude.

Hypothesis 8: Environmental concern moderates the relationship between attitude and behavioral intention.

Hypothesis 9: Environmental concern moderates the relationship between green brand trust and subjective norm.

Hypothesis 10: Environmental concern moderates the relationship between subjective norm and behavioral intention.

Discussion and Conclusions

Originality

The originality of this study lies in its comprehensive exploration and synthesis of the interrelationships between Green Brand Image, Brand Trust, Willingness to Pay a Premium, Subjective Norm, Attitude, Environmental Concern, and Behavioral Intention, specifically within the context of an evolving consumer market. While previous research has individually examined these elements, this study uniquely integrates them into a singular conceptual framework, providing a holistic view of the consumer decision-making process in the realm of sustainable purchasing. Additionally, this study distinguishes itself by focusing on the post-pandemic era, a period marked by rapidly shifting consumer values and heightened environmental awareness, offering fresh insights into how these dynamics are reshaping brand and consumer interactions. The originality also stems from its practical implications, which are directly informed by a nuanced understanding of the psychological and social underpinnings of green consumer behavior, providing actionable strategies for businesses looking to align with contemporary eco-conscious trends. This study not only contributes a novel perspective to the academic discourse on sustainability and consumer behavior but also offers a timely guide for businesses navigating the complex landscape of green marketing in a post-pandemic world.

The benefit from research

This study employs a qualitative research methodology, incorporating a systematic literature review, with journals serving as the primary data source. The outcome of this research is the development of a theoretical model that identifies existing gaps yet to be empirically validated. The primary benefit of this study is the identification of unexplored areas within the relationships among various variables, laying the groundwork for future empirical research to test these relationships in real-world settings. This section will detail the knowledge gaps identified and the research questions formulated for this study.

While prior research has examined consumer behavioral intentions towards green brands, touching upon aspects like brand loyalty, brand image, and green marketing strategies (Kalafatis et al., 1999; Laroche et al., 2001; Amoako et al., 2020), others have probed deeper into the origins and outcomes of a solid green brand image (Deshwal, 2012; Chen, 2010). Particularly, the complex relationship between a brand's green positioning and its actual impact on consumer purchase behaviors, a landscape that has drastically evolved in the wake of the COVID-19 pandemic (Sun et al., 2021). With the pandemic amplifying environmental concerns, the traditional perception of green hotels has seen a marked shift, prompting consumers to prioritize environmentally friendly hotel choices more than ever before (Jian et al., 2020; Sharma & Chen, 2023).

This emerging landscape necessitates a closer examination of the dynamics between green brand image, brand trust, and other related constructs, especially in rapidly evolving markets like Thailand. Recognizing this, this study aims to delve into how these factors, anchored by the Theory of Planned Behavior, drive behavioral intention in the context of hotel selection, especially in post-pandemic era. Furthermore, environmental concern's role as a moderating factor adds an additional layer of complexity, potentially mediating the relationship between consumers' attitudes and their ultimate intentions.

Hence, to unravel these complexities and contribute to the existing body of knowledge, this research seeks to provide understanding of how these variables influence consumer’s behavioral intention. Such insights can aid hotel strategy in their green branding efforts, ensuring alignment with evolving consumer preferences. Consequently, the following research questions are proposed:

RQ1: How does the green brand image of hotels influence consumer perceptions of brand trust?

RQ2: How do the components of the Theory of Planned Behavior influence the link between green trust and behavioral intentions towards green hotels?

RQ3: How does environmental concern impact the relationship between consumers' perceptions of a brand and their subsequent behavioral intentions?

These research questions offer a valuable framework for future studies, as they delve into the intricate dynamics between green branding in the hospitality industry, consumer trust, and behavioral intentions. By exploring these aspects, future research can significantly contribute to understanding how environmental concerns shape consumer behavior and decision-making processes in the context of

sustainable tourism. This can aid in developing more effective green marketing strategies and promoting sustainable practices within the hotel industry, ultimately contributing to broader environmental conservation efforts.

Practical implication

The literature review on the relationship between Green Brand Image, Brand Trust, Willingness to Pay a Premium, Subjective Norm, Attitude, Environmental Concern, and Behavioral Intention offers practical implications for businesses aiming to navigate the growing eco-conscious market. Companies should invest in authentic sustainable practices and transparent communication to build a credible Green Brand Image and Brand Trust, potentially increasing consumers' Willingness to Pay a Premium. Understanding the impact of Subjective Norms and Attitude is crucial; therefore, leveraging social influence through media and community-building can shape consumer behavior favorably. Businesses must also address specific environmental concerns with tailored marketing strategies, emphasizing the personal and societal benefits of green choices. Staying informed and adaptable to evolving consumer expectations and research will be key to maintaining relevance and competitive edge in an increasingly environmentally aware marketplace.

Conclusion

In conclusion, this conference paper has systematically reviewed the literature surrounding Green Brand Image, Brand Trust, Willingness to Pay a Premium, Subjective Norm, Attitude, Environmental Concern, and Behavioral Intention to construct a comprehensive conceptual model. the exploration reveals the intricate web of relationships between these factors, particularly highlighting how a robust Green Brand Image and Brand Trust can significantly influence consumers' Willingness to Pay a Premium for green offerings. The paper underscores the pivotal role of Subjective Norms and Attitude in shaping Environmental Concerns and Behavioral Intentions, suggesting that societal influences and personal beliefs are critical in steering consumer decisions towards sustainable choices.

The resulting conceptual model is not just an academic exercise; it provides a strategic lens for businesses, especially in the hospitality sector, to understand and harness these dynamics to foster a stronger connection with environmentally conscious consumers. For researchers, this model lays a solid foundation for empirical testing and further exploration, encouraging a multidisciplinary approach to unravel the complexities of green consumer behavior.

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OPTIMIZATION OF STRATEGIC MANAGEMENT DECISIONS FOR SMALL AND MEDIUM-SIZED ENTERPRISES SUPPORTED BY BIG DATA

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Abstract

In recent years, with the rapid development of the country's economy and technology, the level of information technology has also become higher and has begun to penetrate into every aspect of enterprise strategic management. Through big data support to optimize strategic management decisions for small and medium-sized enterprises, this study is committed to providing practical and feasible solutions to help enterprises cope with market competition, improve decision-making accuracy, and achieve sustainable development.Big data (BD) technology is closely related to the strategic management of enterprises, and it is a new approach to enterprise management. The use of BD technology for enterprise innovation and development has become a major trend in today's society. Fully utilizing BD can help enterprises more effectively carry out strategic management. This article provides a detailed discussion on the basic theory of BD, the necessity of applying BD technology in enterprises, the decision-making process under BD, and the application of BD technology in enterprise strategic management. The traditional annual financial accounting report takes 4 months, and 2-3 weeks after the introduction of BD. The traditional method of quarterly reporting takes 2 months, and 1 week after the introduction of BD. BD is more conducive to saving time and costs.

Keywords: Strategic Management, Small and Medium-Sized Enterprises, Decision Optimization, Big Data, Business Development

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Introduction

Today's society is rapidly developing and growing, and the gradual application of information technology and advanced technology has had a huge promoting effect on economic development. In this era of networking and digitization, various types of digital information are gradually infiltrating various industries, providing important basis for the operational development and strategic decision-making of companies. Nowadays, the world has entered the era of big data (BD), and every aspect of enterprise management can be analyzed and understood in a digital way. By utilizing BD for strategic management, enterprises can quickly and accurately obtain management data, and based on this, formulate business management strategies, saving manpower and material costs. Aiming at the current situation where small and medium-sized enterprises often lack effective processing capabilities and abilities when facing massive amounts of data, a set of easy-to-use tools and methods is proposed to enable enterprises to better utilize big data for decision-making.

Before the popularization of BD, enterprise managers usually used traditional questionnaire survey methods to understand customer needs, which only targeted a small group of people and could not guarantee the accuracy of the data. Moreover, such data collection methods required a long time to collect, and the collected data was not the most timely, which could mislead the enterprise, lead to errors in the company's marketing strategy, and even cause significant economic losses. The collection accuracy of BD is very high, and the speed of data collection is also very fast, which not only saves time and costs for enterprises, but also ensures the correctness of using data for marketing decisions. The main content of this article is as follows:

The first part is the background and significance of research and practice on optimizing strategic management decisions for small and medium-sized enterprises supported by BD.

The second part is related work.

The third part is the research and practical exploration methods for optimizing strategic management decisions in small and medium-sized enterprises.

The fourth part is the results and discussion.

The fifth part is the conclusion.

Review of Literature

With the development of technology, humanity has entered the era of "big data", which plays a crucial role in promoting the transformation and upgrading of social, economic, and ecological systems. Humanity has entered the intelligent and automated information age, which has brought a lot of convenience to people's production and life. The era of BD has prompted a large number of excellent modern enterprises to rapidly develop, with a wider range of technological applications. Compared with other enterprises, modern enterprises have higher requirements for research and development in their daily operations and related technological products. Many modern enterprises bear the responsibility of technological innovation. The management of the company must focus on the transformation of enterprise management strategies, strengthen attention to the company's financial management work, strengthen technological innovation, and

determine the direction of transformation of enterprise financial management. Enterprise leaders should have a concept of BD management, change the financial management function of the enterprise, strengthen financial informatization, improve the financial management and management quality of the enterprise, accelerate the transformation of enterprise financial management, and establish financial management talents in the era of BD. Through in-depth exploration of these issues, we can make up for the shortcomings of existing research and provide practical and feasible methods for the strategic management of small and medium-sized enterprises in China. Our aim is to assist enterprises in enhancing their market competitiveness, enhancing their long-term development potential, and thereby promoting the prosperity and sustainable development of China's social economy.

In order to explore the application value of BD in enterprise strategic management, Yue and Deng (2023) analyzed the value of BD at three levels: overall strategy, business strategy, and functional strategy, starting from the connotation of BD and enterprise strategic management. He suggested that enterprises should fully utilize BD in strategic management and develop a practical and feasible strategic development plan.

Li (2023) first introduced the meaning and characteristics of the BD era, and then discussed in detail the impact of BD on modern enterprise financial management, existing problems, and specific innovative measures. On the basis of sorting out the theories related to BD and strategic management accounting, Liu (2010) sorted out the development trajectory of strategic management accounting and reconstructed its business process. He adopted the development direction of strategic management accounting in the BD environment and combined it with BD applications to build a network value flow decision support system that integrates both internal and external information.

Chen et al. (2020) sorted out the core theories of strategic management, explored the basic characteristics of the digital environment, and sorted out the existing research results, attempting to summarize the challenges that digitalization brings to existing strategic management theories, explore the extension of digitalization to strategic management theories, and adopt further research ideas. Lu (2019) believed that in the process of formulating corporate strategy, it is necessary to establish correct ideological concepts and have effective analytical methods. Liu et al. (2022) used qualitative and quantitative research methods to clarify the rationality of the benefits of strategic cost management research for new energy vehicle enterprises based on the value chain through case studies, and solved problems such as benefit sharing and industry integration.

However, their research has not appropriately optimized the strategic management plans of small and medium-sized enterprises, and further exploration is needed. This project aims to address the shortcomings of existing research and optimize the strategic management of small and medium-sized enterprises with the support of big data. At present, in the fierce market competition, small and medium-sized enterprises generally face problems of insufficient information and high decision-making risks. When making strategic management decisions, smes often face challenges such as limited information and insufficient resources, which leads to limited accuracy and efficiency of decisions. With the help of big data technology, massive data resources can be obtained, and data analysis and mining technology can be applied, so as to improve the accuracy and efficiency of decision-making.

Methods

Impact of Big Data Era on Enterprise Strategic Management

The arrival of the BD era has brought tremendous impact to the strategic management of enterprises. Firstly, it is reflected in the shift from a traditional result centered approach to a process centered approach (Bulturbayevich, 2021), transforming the strengths of enterprises into supplementing their deficiencies, in order to achieve overall improvement and strategic balance (Wang &Wang ,2020). Secondly, it is the environment for the company's development. With the development of BD, the company has moved from a previously narrow environment to a broader and unpredictable one, changing the traditional competitive approach and strategic management approach of prioritizing decision-making, placing market demand in a more important position (Maroufkhani et al., 2020). Thirdly, traditional enterprise strategic management typically starts from the enterprise itself and then combines market and demand. However, in the era of BD, the importance of analyzing changes in market and consumer demand has surpassed the analysis of companies themselves (Li & Zhang ,2021). Enterprises need to pay more attention to insights into the environment and the analysis and understanding of changes in demand, in order to accelerate their transformation and improve their adaptability to the market and demand (Shan et al.,2021).

Enterprise Decision-Making under Big Data

1. Impact of BD on the decision-making environment of enterprises

2. BD has become an important basis for enterprise decision-making today (Zhang,2021). At present, the BD systems and storage networks of over 16 billion computers worldwide are becoming an important basis for enterprises to make business decisions (Duan,2023). Using cloud computing technology to predict the future development trends of enterprises and find suitable and effective development paths has become an inevitable choice (Zraqat,2020). This requires enterprises to maintain their data information during the development process, providing a basis for their development decisions by maintaining data information. The role of BD in enterprise decision-making is also reflected in its provision of scientific decision-making support for enterprises. Compared to past decision-making processes, it is a completely new way and process of decision-making. Its scientific nature can maximize the avoidance of errors caused by human factors, which is an innovation (Hassani et al.,2021).

3. Impact of BD on decision-making culture

4. Whether for individuals or businesses, the characteristics of decision-makers are closely related to the content they formulate. In the BD environment, enterprises can utilize various data information to make scientific decisions (Savoska et al.,2020). However, when making decisions, enterprises cannot completely deny the role of corporate culture in the decision-making process. In the era of BD, it is important to make reasonable use of data information, fully perform the advantages of data system platforms, and improve the decision-making and management methods of enterprises from multiple perspectives according to their own development needs, in order to establish ideas for enterprise development (Ouiddad et al.,2021).

5. Decision support system for BD

There are significant differences between enterprise decision-making in the BD environment and traditional enterprise decision-making. Enterprise managers must rely on corresponding decision support systems to cope with changes in the external environment. Traditional decision-making methods only make decisions based on the company's own data, which has certain limitations and cannot fully reflect market information (Gonçalves et al., 2019), Wang et al. (2019) agree with that. Moreover, traditional decisions are also made by a few people. In the era of BD, enterprise decision-making has openness, and the decision-making system of enterprises is also a part of it (Darby et al., 2022). Therefore, it is necessary to improve the existing enterprise decision-making system to make it applicable to decision-making systems in BD environments. In addition, it is necessary to establish a company's own database based on BD platforms and decision support systems, classify various types of data information in the company's own database system, and design a suitable data conflict system to avoid complex decision-making caused by conflicting data at different levels during enterprise decision-making.

Application of Big Data Technology in Enterprise Strategic Management

1. Transformation of enterprise marketing strategies under BD technology

The traditional marketing strategy is completed manually, which greatly increases the cost of the enterprise and is detrimental to its long-term development. Driven by BD technology, the company's marketing strategy is becoming increasingly scientific, stable, and diversified, implementing the people-centered concept to the extreme, prioritizing customer interests, seeking customer benefits, developing the company's market, and striving for a leading position in the market to quickly increase sales. In the era of BD, enterprises can not only learn about the sales status of products from data, but also receive timely feedback from users. After sorting and analyzing this information, a transparent network has been formed, enabling enterprises to clearly understand what customers need the most, thereby better combining supply and demand and continuously improving the economic benefits of the enterprise.

The decision tree algorithm is a supervised learning algorithm used for classification and regression tasks. In strategic management decision-making, decision tree algorithms can be used to predict and evaluate the consequences of different decision optionsC_S :

$$C_s = N![n!(N-n)!] \quad (1)$$

N is the total number of samples, and n is the number of sub samples divided.

Cluster analysis is an unsupervised learning algorithm used to group similar objects together. In strategic management decision-making, cluster analysis can be used to identify customer groups or market segments with similar characteristics and behaviors$S_{k\text{-}means}$:

$$S_{k\text{-}means} = (x\ i + Si) \parallel x - ci \parallel \quad (2)$$

Si is the sample set of the i-th cluster, and ci is the center point of the i-th cluster.

Association rule mining is a technique for discovering interesting associations in large datasets. In strategic management decision-making, association rule mining can be used to discover potential relationships between different factors (A and B) and provide support for decision-making.

$$Z_{support} = \sum_{k=0}^{n} \binom{n}{k} A^k B^{n-k} \quad (3)$$

In Formula (3), Zsupport is the support of association rules.

2. Changes in marketing models of small and medium-sized enterprises under BD technology

In the absence of widespread BD technology, most enterprises adopt face-to-face marketing methods, which not only hinders product sales but also increases corresponding costs, thereby reducing enterprise profits. Using BD technology can effectively solve this problem. For example, selling products globally through online sales platforms has promoted the growth of product sales and led to a qualitative change in the marketing methods of enterprises. Under this sales approach, consumers can quickly meet their needs through online marketing platforms, while businesses can quickly promote their products, making more customers aware of the company's products and engaging in face-to-face communication with customers, thereby attracting more customers.

3. Market prediction under BD technology

The market is always undergoing changes, and it is also difficult to predict. However, driven by BD technology, the company's ability to predict the market has been significantly improved. The company can use massive amounts of data to analyze the market situation and develop production plans that meet market needs, thereby increasing sales. BD is an effective method that can help businesses better predict the market, thereby enabling them to better manage their organizational structure.

4. Corporate image effect in the BD environment

Driven by BD, the advertising industry has rapidly emerged, and consumers have more options to choose from. To stand out from the multitude of items, in addition to having a good brand awareness, it is also necessary to ensure product quality. Many consumers not only pay attention to brands, but also pay attention to factors such as price, quality, and quantity. Therefore, enterprises should have a comprehensive understanding of customer needs and analyze their consumer psychology in order to enable customers to make the right choices about the company's products.

5. Reduction of enterprise costs under BD technology

When conducting strategic management, in order to achieve maximum profits, enterprises must increase product revenue while minimizing production costs as much as possible. Therefore, how to efficiently and efficiently utilize BD is an important issue that enterprises are currently facing. Enterprises should fully utilize BD to analyze costs in order to achieve the goal of continuous cost reduction. The cost structure of the product should form a product cost analysis table that can reduce costs. In addition, enterprises should also develop new products to replace traditional ones, optimize product performance, and continuously reduce product consumption to achieve full utilization.

6. Realization of the full potential of people under BD technology

The labor force of an enterprise is an indispensable element, and it should have a reasonable way of division of labor. In the division of labor of an enterprise, from management to managers, and then to execution, professional talents are indispensable at every stage. Talent training should be conducted at all stages, which

requires the human resources department of the enterprise to use BD technology to comprehensively understand the talent needs of various positions in the enterprise. Based on these data, the work status of each employee can also be evaluated, and appropriate rewards and punishments can be given to each employee. Employees who have made significant contributions to the company can be rewarded, and those who are unfavorable to the company can be punished, fully leveraging the role of talent.

Results and Discussion

Report Time

The comparison of report time between traditional methods and the introduction of BD is shown in Table 1. The traditional annual financial accounting report takes 4 months, and 2-3 weeks after the introduction of BD. The traditional method of quarterly reporting takes 2 months, and 1 week after the introduction of BD.

Table 1. Comparison of report time between traditional methods and the introduction of BD

Comparison item	Traditional methods	After introducing big data
Annual financial accounting report time	4 months	2-3 weeks
Quarterly report time	2 months	1 week
Monthly report time	10-15 days	2-3 days

Accuracy of Data Analysis

The comparison of data analysis accuracy between traditional methods and the introduction of BD is shown in Table 2. The accuracy of traditional data analysis is 84.2%, and after introducing BD, the accuracy of data analysis is 94%.

Table 2. Comparison of data analysis accuracy between traditional methods and the introduction of BD

Test times	Traditional methods (%)	After introducing big data (%)
1	80	92
2	86	96
3	82	94
4	85	93
5	88	95

Marketing Costs

The comparison of marketing costs between traditional and BD methods is shown in Figure 1. The cost of advertising placement is 10000 yuan for traditional marketing methods and 2000 yuan for BD marketing. The cost of marketing personnel is 5000 yuan for traditional marketing methods and

4000 yuan for BD marketing. The cost of data analysis is 2000 yuan for traditional marketing methods and 600 yuan for BD marketing.

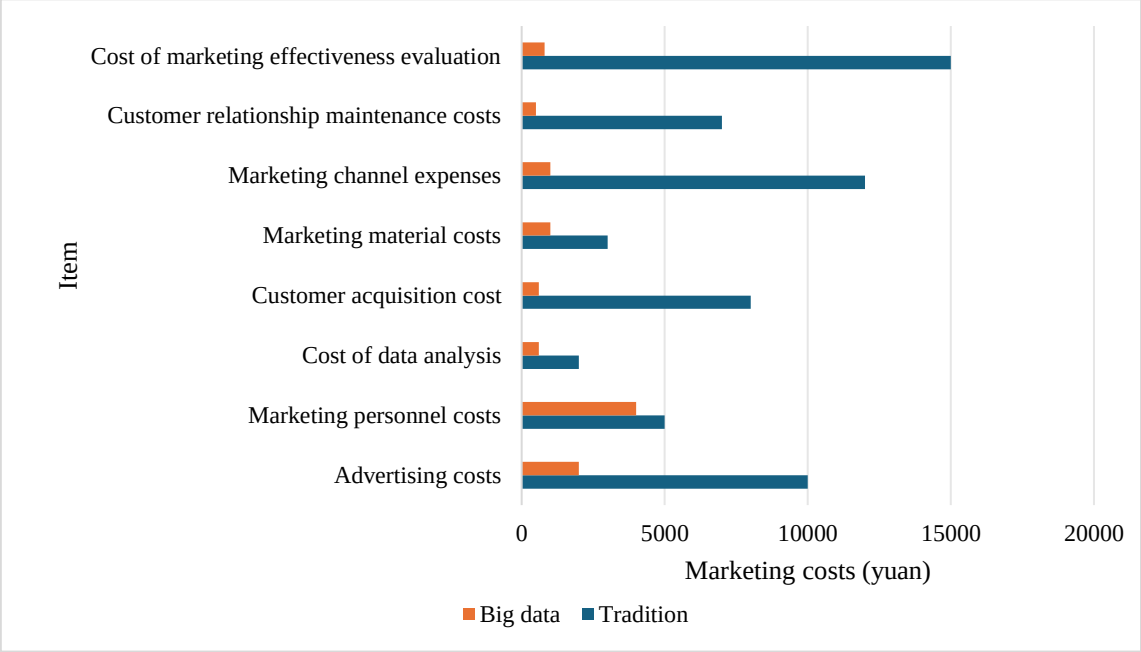

Figure 1. Comparison of marketing costs between traditional and BD methods

Satisfaction

The comparison of satisfaction levels for different categories of products is shown in Figure 2. The satisfaction rate of traditional home appliance products is 70%, while the satisfaction rate of BD home appliance products is 90%. The satisfaction rate of traditional education products is 60%, while the satisfaction rate of BD education products is 80%.

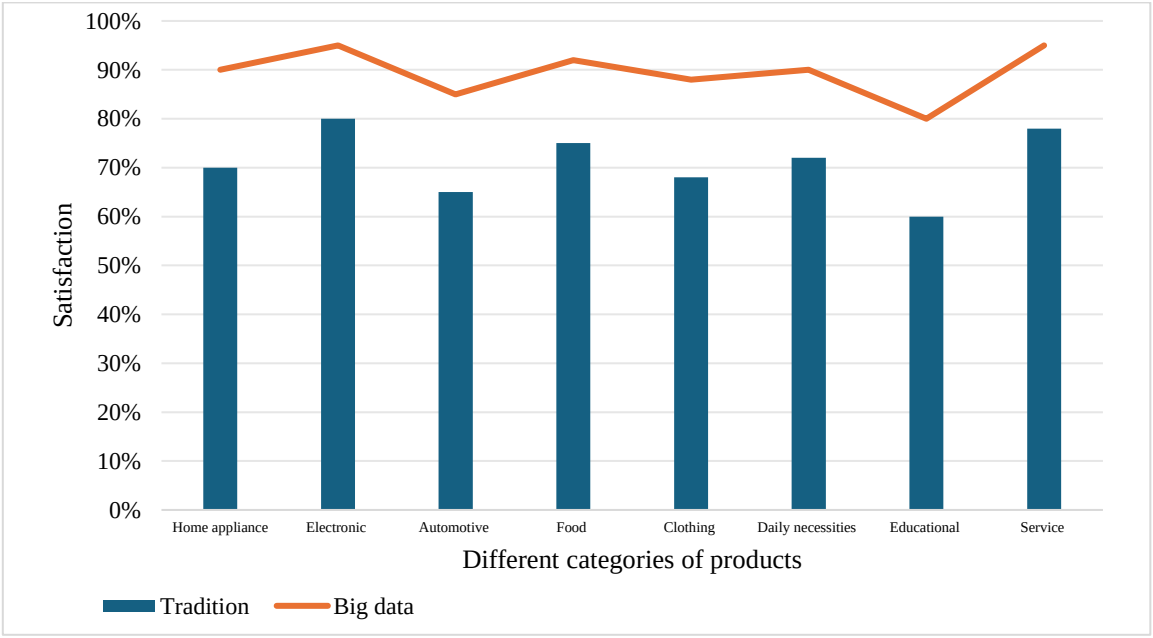

Figure 2. Comparison of satisfaction levels for different categories of products

Comparison of Advantages

The comparison of advantages between BD technology and traditional methods in enterprise operation is shown in Figure 3. The cost estimation error of traditional methods is 30%, while the cost estimation error of BD methods is 5%. The production cost of traditional methods is reduced by 5%, while the production cost of BD methods is reduced by 20%.

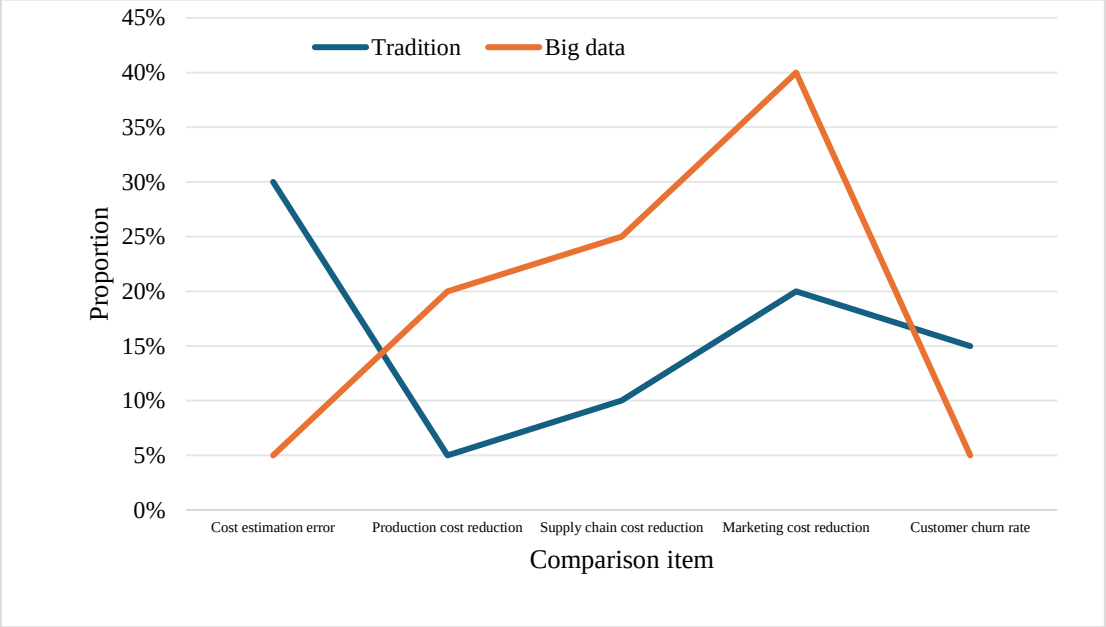

Figure 3. Comparison of advantages between BD technology and traditional methods in enterprise operation

Conclusion

With the emergence of BD, traditional enterprise strategic management has undergone changes, and traditional business operations have also undergone changes. The traditional business model is no longer able to meet the requirements of the market economy. Therefore, enterprises urgently need to use BD to establish a new management approach. This article finds that BD technology has more advantages in enterprise operations than traditional methods. Internally, enterprises can use BD to accurately grasp market demand and update it, and can also use BD to improve their decision-making accuracy. From an external perspective, enterprises can obtain more information about competitors from BD, thereby optimizing the enterprise and consolidating their market position through internal and external integration. This can not only ensure the normal operation of enterprises, but also provide more possibilities for their development. Therefore, in the future, it is still necessary to promote the application of BD in enterprise strategic management. The suggestion for future research is that the importance of big data in enterprise strategic management and business operations cannot be ignored. In order to gain a deeper understanding of its impact, researchers can consider conducting empirical research targeting specific companies or industry target survey subjects. These surveys will produce compelling research results and empirical findings.

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RESEARCH ON THE INFLUENCE MECHANISM OF DIGITAL LEADERSHIP ON THE DIGITAL CREATIVITY OF EMPLOYEES OF SMES IN GUANGXI

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Abstract

This study explores how digital leadership influences creative self-efficacy and digital creativity, emphasizing the mediating role of creative self-efficacy. Surveying employees in Guangxi's digital enterprises, it organizes the definition, measurement methods, and current research on digital leadership's impact on innovation. The findings indicate that digital leadership positively affects digital creativity through creative self-efficacy. Increased creative self-efficacy aligns with enhanced digital creativity, underlining its pivotal role in personal and organizational innovation. The study highlights two mediating mechanisms: digital exploration and utilization. It suggests leaders foster an innovative work environment and encourage digital learning for improved innovation self-efficacy. For traditional enterprises, active digital transformation is crucial. Supported by digital technology and a positive atmosphere, employees are more likely to explore new technologies, fostering innovation. The transformative impact of digital technologies enables creative problem-solving, benefiting both individuals and organizations. The SEM analysis reveals that digital thinking, adaptability, talent development, transformation capability, and communication positively predict creative self-efficacy. Creative self-efficacy significantly predicts digital exploration and utilization, which, in turn, positively predict digital creativity. Ultimately, creative self-efficacy plays a crucial role in predicting digital creativity.

Keywords: Digital Leadership, Creative Self-efficacy, Digital Creativity, Digital Exploration, Digital Utilization, Employee Innovation Performance

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Introduction

Guangxi have 15100 digital companies and 6648 digital employees (Junsheng & Long, 2023), digital economy enterprises increase momentum for Guangxi's economic recovery, and the regional development layout of digital economy enterprises is further optimized. Digital leadership helps promote the innovation and development of enterprises in the digital economy era, better utilize digital technology and international cooperation opportunities, and promote the success and sustainable development of enterprises in the field of digital economy. (li & Yunxi, 2021).

This study is to organize and consolidate the definitions, measurement approaches, and current research status about digital leadership and employee innovation performance and to investigate the influence of digital leadership on employee innovation performance.

Research Method

Data collection involves snowball and convenience sampling through online questionnaires. Collected data is analyzed using SPSS26.0, AMOS24.0.

Review of Literature

Prior research has investigated the influence of both exploratory and exploitative learning activities on innovation and creativity across different levels. For example, He and Wong (2004) demonstrated that both exploratory and exploitative innovation strategies can enhance organizational innovation. Engaging in the practice of utilizing established skills while simultaneously exploring new knowledge contributes to fostering individual creativity, ultimately leading to improved employee performance (Lee & Choi, 2010). Schmitz et al. (2016) also ascertained a positive connection between individual performance and the adaptation of exploration and exploitation tasks, grounded in the principles of adaptive structure theory. In summary, the following assumptions are made: The ensuing hypotheses represented in the illustrative figure are outlined as follows:

H_1 : Digital leadership may have a significant positive effect on employee creative self-efficacy.

H_2 : Creative self-efficacy may have a significant positive effect on employees' digital creativity.

H_3 : Creative self-efficacy may play a positive mediating role between digital leadership and digital creativity.

H_4 : Creative self-efficacy may have a significant positive effect on digital exploration.

H_5 : Creative self-efficacy may have a significant positive effect on digital utilization.

H_6 : Digital exploration may have a significant positive effect on employees' digital creativity.

H_7 : Digital utilization may have a significant positive effect on employee digital creativity.

H_8 : Digital exploration may play a positive mediating role between creative self-efficacy and digital creativity.

H_9 : Digital utilization may play a positive mediating role between creative self-efficacy and digital creativity.

Methodology

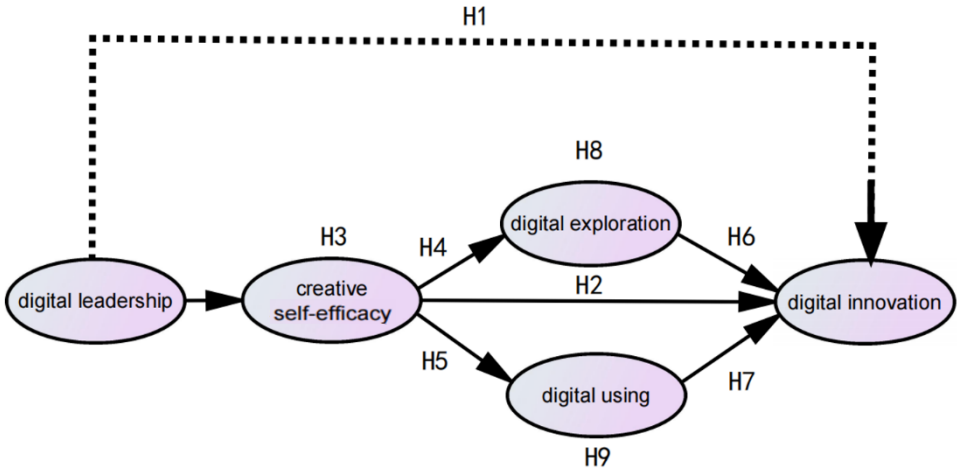

Figure 1. Research Model

Population

The study focuses on 390 surveying middle-level normal full-time employees who possess work experience exceeding one year within digital technology-related enterprises from 14 cities in Guangxi region (Nanning, Liuzhou, Guilin, Qinzhou, Yulin, Beihai, Fangchenggang, Baise, Hezhou, Guigang, Wuzhou, Hechi, Chongzuo, Laibin). The tool used for making and collecting the questionnaires is the Questionnaire Star website.

Research Results

Demographic Characteristics

In the formal survey, 450 questionnaires were distributed, and 427 were collected from various sources. After removing missing data, incomplete responses, and questionnaires with unusually short completion times, 401 valid datasets remained for analysis. Descriptive statistical analysis was performed on individual characteristics, including gender, age, education, and working years, to assess the questionnaire's data validity.

SEM Model Path Relationship Hypothesis Test Results

In the path hypothesis relationship test results, digital thinking ability positively predicts creative self-efficacy (β = 0.148, p < 0.05), and digital adaptability significantly predicts creative self-efficacy (β = 0.275, p < 0.001). Moreover, digital talent development capability positively predicts creative self-efficacy (β = 0.275, p < 0.05), digital transformation capability positively predicts creative self-efficacy (β = 0.154, p < 0.05), and digital communication ability also positively predicts creative self-efficacy (β = 0.216, p < 0.05). Therefore, hypothesis H_1 is confirmed. Creative self-efficacy significantly predicts both digital exploration (β=0.599, p < 0.001) and digital utilization (β = 0.612, p<0.001), confirming hypotheses $H_4$and H_5. Additionally, digital exploration positively predicts digital creativity (β = 0.203, p < 0.05), supporting hypothesis H_6. Digital utilization also positively predicts digital creativity (β = 0.210, p < 0.05), validating hypothesis H_7.Lastly, creative self-efficacy exhibits a positive predictive effect on digital creativity (β = 0.270, p < 0.05), substantiating hypothesis H_2.

Mediating effect analysis

To analyze the mediating effect of creative self-efficacy, digital exploration, and utilization in the model, this study utilizes the Bootstrap method as proposed by Peng et al. (2010) to test the mediating effects through SPSS 26.

Table 1. Mediation test of Creative self-efficacy

Items	Symbol	Sig.	Effect	95% CI		z / t	p	Conclusion
				LLCI	ULCI			
DL=>CS=>DI	a*b	Indirect effect	0.019	0.009	0.127	0.618	0.537	partial intermediary
DL=>CS	a	X=>M	0.16	0.137	0.182	13.674	0	
CS=>DI	b	M=>Y	0.116	0.017	0.216	2.287	0.023	
DL=>DI	c'	direct effect	0.111	0.083	0.139	7.724	0	
DL=>DI	c	total effect	0.13	0.106	0.153	10.869	0	

In Table 1, the final value of $a * b * c'$ is positive, affirming the established and complementary mediating role of creative self−efficacy. Hypothesis H_3 is upheld.

Table 2. The intermediary effect of digital exploration and digital utilization

Items	Symbol	Sig.	Effect	95% CI		Z(t)	p	Conclusion
				LLCI	ULCI			
CS=>DE=>DI	a*b	indirect effect	0.086	0.048	0.133	3.964	0	partial intermediary
CS=>DE	a	X=>M	0.415	0.321	0.51	8.623	0	
DE=>DI	b	M=>Y	0.207	0.117	0.297	4.504	0	
CS=>DI	c'	direct effect	0.166	0.072	0.261	3.444	0.001	
CS=>DI	c	total effect	0.338	0.250	0.427	7.525	0	

Table 2. The intermediary effect of digital exploration and digital utilization

Items	Symbol	Sig.	Effect	95% CI		Z(t)	p	Conclusion
				LLCI	ULCI			
CS=>DU=>DI	a*b	indirect effect	0.086	0.048	0.136	3.888	0	partial intermediary
CS=>DU	a	X=>M	0.402	0.315	0.489	9.04	0	
DU=>DI	b	M=>Y	0.215	0.117	0.313	4.321	0	
CS=>DI	c'	direct effect	0.166	0.072	0.261	3.444	0.001	
CS=>DI	c	direct effect	0.338	0.25	0.427	7.525	0	

Table 2. deduces that digital exploration and digital utilization play substantial mediating roles in the influence of creative self-efficacy on employees' digital creativity. Among them, the mediating effect of digital exploration (LLCI=0.133, ULCI=0.048) is significant, the effect size is 0.086, and the mediating effect size of digital utilization (LLCI=0.048, ULCI=0.136) is 0.086, the values of $a * b * c'$ of both variables are positive, indicating that digital exploration and digital utilization both have a significant and complementary mediating effect on the relationship between creative self-efficacy and digital creativity. Therefore, it is assumed that H_8 and H_9 hold.

Discussion and Conclusions

Discussions

Digital leaders communicate their digital leadership through five dimensions, adapting to digital changes, offering followers digital technology support in the work environment, valuing digital communication, and focusing on employee development. This contributes to bolstering employees' self-confidence, empowering them to demonstrate increased innovation and creatively solve problems. The findings of this study align with those obtained by Kazım and YILDIRIM (2023), indicating that digital leadership enhances creative self-efficacy, influencing employee digital creativity.

After conducting the test in this study, it can be deduced that creative self-efficacy exerts a significantly positive influence on both digital exploration and digital utilization. The path coefficients are 0.599 and 0.612, respectively, and both are statistically significant at the p-level of 0.05. Furthermore, both digital exploration and digital utilization significantly contribute to digital creativity, with path coefficients of 0.203 and 0.210, respectively, and both impacts are statistically significant at the p-level of 0.05. Digital exploration and utilization act as complementary mediating factors between creative self-efficacy and digital creativity, supporting hypotheses H4, H5, H6, H7, H8, and H9. When employees possess higher creative self-efficacy, they tend to evaluate their innovation capabilities more positively, making them more inclined to explore and leverage new technologies, and apply them to enhance work efficiency. Consequently, employees' digital creativity also flourishes in this process which align with the conclusions drawn by Schmitz et al. (2016). Exploratory learning mainly expresses the search and acquisition of new knowledge, to promote the routinization of new knowledge within

the organization; while utilization learning emphasizes the adoption and adoption of good practice results by employees in the business process. Standard processes further apply and continuously modify the knowledge currently available within the organization(Zhen, Yuqiang, & Tienan, 2015). The two complement each other and are consistent with the complementary mediating effects that have been confirmed in this study. From the standpoint of adaptive structure theory, individuals exhibiting elevated levels of creative self-efficacy demonstrate enhanced adaptability in technology utilization and a greater inclination towards engaging in exploratory behaviors.

Conclusion

This study highlights that digital leadership positively influences employees' digital creativity through the mediating role of creative self-efficacy. Leader support enhances employee confidence in undertaking innovative work and encourages a greater willingness to experiment and learn from mistakes. Higher levels of creative self-efficacy among employees are correlated with an increase in digital creativity.

The findings underscore the decisive impact of employees' digital creativity on both personal development and organizational innovation. Therefore, enterprise leaders should be attentive to their leadership behaviors, provide ample care, support, and incentives to employees, and simultaneously cultivate a positive image to enhance employees' digital creativity.

This study reveals the mediating role of two learning mechanisms, digital exploration and digital utilization. When employees have a higher assessment of their innovation ability, they are more confident that they can solve problems innovatively and are therefore more willing to engage in exploratory behavior, explore and learn new technologies, and deepen their use to improve work efficiency. In the process, its digital creativity has also been continuously improved. Therefore, leadership should consider improving employees' innovative self-efficacy through multiple channels.

Suggestions

To promote the development of digital leadership in Guangxi, we recommend that digital enterprises achieve this through the following comprehensive strategies. First, encourage more women to participate in digital leadership and create adversarial environment teams. Secondly, the enterprise may launch a training program for young people aged 20-29 to improve their practical digital leadership skills. At the same time, we provide continuing education opportunities for practitioners with bachelor's degrees and below to improve the overall education level. Third, establish an experience-sharing platform, encourage people with 4-6 years of experience to share their practices, and promote the establishment of digital leadership training centers in more areas where digital leadership practitioners are positioned to provide localized training services. Fourth, design a digital leadership innovation incentive plan to reward employees for proposing and implementing innovative digital solutions. Finally, digital skills improvement plans at different levels are launched to meet the professional needs

of various working years. Through these measures, digital leadership can be more comprehensively exerted, creativity can be improved, and the widespread application of digital thinking among employees in Guangxi organizations can be promoted.

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THE INFLUENCE OF BRAND EQUITY ON CONSUMERS' GREEN PRODUCTS PURCHASING INTENTION IN CHINA

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Abstract

Green consumption is a consumption mode that starts from the consumption link and builds a resource-saving and environment-friendly society, which is conducive to solving the problem of green development from the source and forming a sustainable and ecological economic growth model. The products which are highly engaged with the customers are the products with high brand equity. The purpose of this study is to explore the direct influence of brand equity on consumers' green purchasing intention in China. This article adopts quantitative analysis methods to test the research hypotheses proposed in this article. This article collected 500 first-hand data in the form of a survey questionnaire, and processed and analyzed the data using AMOS and SPSS statistical software. The empirical analysis in this article confirms that the hypothesis is valid. Brand equity promotes consumers' green products purchasing intention in China.

Keywords: Brand Equity, Purchasing Intention of Green Products, Empirical Analysis

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Introduction

A series of problems have emerged in the world, such as soil pollution, sharp reduction of forests, serious soil and water loss, serious air and water pollution, land desertification and reduction, climate warming, serious ozone layer destruction, species extinction, marine environmental problems, ecosystem degradation and so on. Green products are a kind of recyclable and remanufactured product that can minimize environmental pollution and alleviate the crisis caused by environmental problems. Therefore, consumers are gradually realizing the importance of green consumption. Some consumers believe that COVID-19 reinforces the idea that as long as we continue to ignore the environment, pandemics and disasters will recur, thus supporting participation in environmentally friendly behavior (Lucarelli et al., 2020). Green consumption is a consumption mode that starts from the consumption link and builds a resource-saving and environment-friendly society, which is conducive to solving the problem of green development from the source and forming a sustainable and ecological economic growth model (Jin & Lu, 2019).

The products which are highly engaged with the customers are the products with high brand equity. It might be affected by the marketing actions of the brand itself (Yoo et al., 2000). Applying green marketing claimed as an alternative way for raising the intangible brand equity product brand and obtain competitive advantage product brand (Arseculeratne & Yazdanifard, 2014). When the brand equity is achieved, the consumers are willing to pay the premium price and loyal to the brand (Yoo et al., 2000).

Previous studies have been expressed the green practices in different statements. Although consumers decided to purchase green products, environmental motive is not the main reason. It might be influenced by personal motive, social motive, and economic motive (Ottman et al., 2006). Based on the aforementioned studies, this study focuses on describing the green products in China related with its brand equity and green purchasing decision of its customers. This study focuses on the impact of brand equity on consumers' green purchasing behavior in China, and attempts to explain whether and how brand equity affects consumers' green purchasing behavior in China. The research objective of this study is as followed:

Objective 1: To explore the direct influence of brand equity on consumers' green purchasing intention in China.

Review of Literature

The Influence of Brand Equity on Consumers' Purchasing Intention of Green Products

The way brand equity benefits the company has been subject to extensive debate, just as the discussion of what comprises brand equity and how it can be built with distinct marketing actions (Christodoulides & De Chernatony, 2010). Despite disagreement regarding their relative importance

and measurement, most scholars agree that stronger brand equity contributes to increased brand preference, willingness to pay a premium price, and customer purchase intention (Ahmad et al., 2016). Kim and Ko (2012) reveal that in social media settings brand equity that social media marketing activities create is positively related to future purchase behavior/responses. This study therefore expects the brand equity has a positive impact on consumers' purchasing intention of green products. This article further speculates that Brand equity plays a mediation effect between social media marketing and consumers' purchasing intention of green products. Based on the above analysis, this article proposes the following hypothesis:

H1: Brand equity has an impact on consumers' purchasing intention of green products.

Conceptual Framework

Figure 1. Conceptual Framework

Methodology

Population and Sampling

The target population of this study is Chinese Internet users who have accounts in these Weibo, WeChat and QQ applications et al. and live in Jiangxi Province, China. Due to the fact that the overall size of this article is large and identifiable, the probability sampling method is adopted in this article. Specifically, due to the similarity in overall characteristics and lack of categorization, this article adopts a simple random sampling method.

Considering recommendations for the N:p ratio (N= the minimum necessary sample size, p= the number of measurement items), Cattell and Cattell (1978) believed this ratio should be in the range of 3 to 6. Gorsuch and Ortberg (1983) argued for a minimum ratio of 5. Everitt (1975) recommended that the N:p ratio should be at least 10. In this study, 10 times the ratio was selected. The survey questionnaire designed for this study includes a total of 24 measurement items, so the minimum sample size is 240, and this research plan to have 500 questionnaires.

Instrumentation

This article draws on the scale developed by Yoo and Donthu (2001) for the measurement of brand equity, which contains a total of 6 measurement items. This article draws inspiration from the scale developed by Shin and Hancer (2016) for the measurement of purchasing intention of green products, which contains a total of 3 measurement items. All the scales in this study are ranged from 0 to 5: 0 (strongly disagree), 2 (disagree), 3 (not clear), 4 (agree) and 5 (strongly agree).

Data Analysis Techniques

This study first conducted reliability and validity tests on the questionnaire data. This study uses the AMOS software to conduct a structural equation model to validate the research hypotheses.

Research Results

Data Preparation

Table 1. Variable Abbreviation

Variable Type	Variable Name	Abbreviation
Independent variable	Brand Equity	BE
Dependent variable	Purchasing Intention of Green Products	PIOGP

Reliability Test

It can be seen from Table 2 that the BE scale contains 4 items, and its Cronbach's alpha is 0.881 (>0.7), indicating that the BE scale has good reliability. Similarly, the PIOGP scale also has good reliability and meet the requirements of questionnaire analysis.

Table 2. Reliability Test Results of Pilot Study

Scale	Number of Items	Cronbach's Alpha
BE	4	0.881
PIOGP	3	0.888

Confirmatory Factor Analysis of the Five Variables

This article uses confirmatory factor analysis (CFA) to verify whether the convergent validity and discriminant validity of the questionnaire scale meet the standards. Table 3 shows the results of confirmatory factor analysis. From Table 3, it can be seen that the model fit indicators of the confirmatory factor analysis measurement model have all reached an acceptable level.

Table 3. Model Fit Indicators of CFA Measurement Model

Model Fit Indicators	Threshold	Estimate
χ^2/ DF	[1,5]	1.064
NFI	>0.9	0.972
IFI	>0.9	0.998
TLI	>0.9	0.998
CFI	>0.9	0.998
GFI	>0.9	0.969
RMSEA	<0.08	0.011

Convergent Validity Analysis

Table 4. presents the convergent validity test results of this study. From Table 4, it can be seen that the standardized factor loadings, CR, and AVE of each variable measurement item in this article meet the requirements. Therefore, the 2 variable scales used in this article has good convergent validity.

Table 4. Convergent Validity Analysis

Latent variable	Observation variable	Standardized factor loading	S.E.	C.R.	P	CR	AVE
BE	S1	0.814				0.881	0.649
	S2	0.795	0.050	19.212	0.000		
	S3	0.803	0.050	19.337	0.000		
	S4	0.811	0.052	19.794	0.000		
PIOGP	S5	0.863				0.889	0.727
	S6	0.846	0.043	22.806	0.000		
	S7	0.848	0.044	23.100	0.000		

Discriminant Validity Analysis

According to Table 5, the square roots of AVE values for each variable are greater than the correlation coefficients between variables. From this, it can be concluded that the discriminant validity of the questionnaire in this article meets the standard.

Table 5. Discriminant Validity Analysis

	BE	PIOGP
BE	0.806	
PIOGP	0.492	0.852

Note: The bold numbers on the diagonal represent the square root of the AVE values of each variable, while the remaining numbers represent the correlation coefficients between variables.

Model Fit Indicators of the SEM

In order to verify hypothesis H1, this article constructs a structural equation model (SEM) and analyzes the impact relationships among the two variables of BE and PIOGP.

Table 6. shows model fit indicators of the SEM. From Table 6, it can be seen that the model fit indicators of the SEM have all reached an acceptable level.

Table 6. Model Fit Indicators of the SEM

Model Fit Indicators	Threshold	Estimate
χ^2/ DF	[1,5]	1.471
NFI	>0.9	0.968
IFI	>0.9	0.990
TLI	>0.9	0.987
CFI	>0.9	0.990
GFI	>0.9	0.965
RMSEA	<0.08	0.031

Direct Effect Analysis

From Table 7, it can be seen that BE has a significant positive impact on PIOGP ($r=0.377$, $p<0.01$), therefore, hypothesis H1 is supported.

Table 7. Direct Effect Analysis

Direct effects	Standardized Estimate	S.E.	C.R.	P	Unstandardized Estimate	Hypothesis
PIOGP ← BE	0.377	0.043	7.773	0.000	0.333	H1

Discussion and Conclusions

Discussion

The empirical research results of this article indicate that brand equity plays a positive effect on consumers' purchasing intention of green products. Brand equity was regarded as consumers' cognition and familiarity with a brand. It was found that consumer-level brand equity increased the likelihood of consumers' choosing the brand, and consumers' purchasing intention (Tasci, 2021). Similarly, Jaiswal and Kant (2018) found that consumers with higher environmental consciousness are likelier to exhibit loyalty toward green brands, resulting in increased repurchase intention. Keller (1993) proposed a brand equity knowledge model based on Aaker. In his view, brand equity is the "knowledge" formed within consumers and the different reactions they make to marketing activities carried out by enterprises. Enterprises change their brand image by changing brand packaging, logos,

etc., and then use brand associations to influence the "knowledge" in consumers' minds, ultimately forming brand loyalty and bringing sustained profits to the enterprise.

Conclusion

This study systematically analyzed the impact of brand equity on consumers' purchasing intention of green products. This article adopts quantitative analysis methods to test the research hypotheses proposed in this article. This article collected 500 first-hand data in the form of a survey questionnaire, and processed and analyzed the data using AMOS and SPSS statistical software. The empirical analysis in this article confirms that all hypothesis is valid.

Implications of The Study

Theoretical Implications

There is little previous research on the relationship between brand equity and consumers' purchasing intention of green products, especially quantitative research. This study quantifies the relationship between brand equity and consumers' purchasing intention of green products, which has certain theoretical implications.

Managerial Implications

Actively building high-quality green brands and developing marketing strategies based on different consumer groups. Enterprises need to enhance their brand identity, especially those related to creating green products. They should actively participate in green brand certification in domestic and foreign markets, create their own high-quality green brands, and improve their visibility; Secondly, enterprises can develop corresponding marketing and promotion strategies for different consumer groups by analyzing their needs and product preferences.

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THE INFLUENCE OF SOCIALLY RESPONSIBLE HUMAN RESOURCE MANAGEMENT ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR: EVIDENCE FROM CHINESE MEDICAL MANUFACTURING ENTERPRISES

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Abstract

This research aimed to assess the congruence of the model with empirical data and investigate the impact of strategic human resource management (SRHRM) on organizational citizenship behavior (OCB) within Chinese medical manufacturing enterprises. A survey questionnaire was administered to a sample of 384 employees from these enterprises to collect data for the study. The study utilized SPSS and AMOS software to validate the research hypotheses through a structural equation model. The findings indicated that the model exhibited a satisfactory fit with empirical data, as evidenced by $\chi^2/df = 1.461$, NFI = 0.900, IFI = 0.966, TLI = 0.963, CFI = 0.966, and RMSEA = 0.035. Furthermore, the research results revealed a statistically significant positive impact of SRHRM on OCB at a significant level of 0.001.

Keywords: Human Resource Management, Organizational Citizenship Behaviour, Structural Equation Model

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Introduction

With the promotion of a harmonious society, while developing the economy, Chinese medical manufacturing enterprises need to meet the expectations of the public for improving people's livelihood, cultural prosperity and good ecology. Only when medical manufacturing enterprises take the initiative to assume their social responsibilities and ensure the healthy development of the social environment can they achieve their own sustainable development (Ge, 2018). As a human resource management practice that organically combines employees and CSR, socially responsible human resource management (SRHRM) meets the needs of society and enterprises to pay attention to CSR and employees. Socially responsibility human resource management (SRHRM) is the deep integration of corporate human resource management practice and social responsibility. It embeds all processes related to corporate social responsibility activities into all links of human resource management, affects employees' attitudes and behaviors towards social responsibility, and promotes the implementation of corporate social responsibility (Shen & Zhang, 2019).

Many researchers have realized that human resource management practices will not directly affect employees' work attitudes and behaviors, but will pass this influence to employees through specific social and psychological processes (Zutshi & Sohal, 2003). Previous studies have shown that the combination of corporate social responsibility behavior and human resources management will significantly improve the social recognition of employees, and thus improve the commitment and satisfaction of employees to the organization and OCB (Guest, 2011).

This study focuses on the impact of SRHRM on OCB, and attempts to explain whether and how SRHRM affects OCB of Chinese medical manufacturing enterprises. There are two research objectives of this study as followed:

Objective 1: To evaluate the model fit with empirical data.

Objective 2: To study the effect of SRHRM on OCB in Chinese medical manufacturing enterprises.

Literature Review

SRHRM is a new type of human resource management practice that integrates social responsibility into all aspects of human resource management. SRHRM guides employees to participate in the implementation of corporate social responsibility that is crucial to the long-term development of the country and society (Qiang & Xin, 2019). Organ (1988) proposed that OCB is a voluntary behavior of individual employees that is not directly recognized in the formal system of the organization and is not clearly defined in the organization, but can promote organizational development as a whole.

Shao et al. (2019) believe that SRHRM not only helps employees exhibit helpful or out of role behaviors in their work, but also helps to enhance their willingness to volunteer for society. Therefore, SRHRM is an important means to achieve a win-win situation for organizations and society.

Feng et al. (2017) conducted a survey on service-oriented enterprises and found that actively undertaking CSR related to employees and valuing their CSR recipient status can effectively promote employees to exhibit more organizational citizenship behavior in their work.

The research of Lu et al. (2021) confirmed that in the context of the COVID-19, employees' perception of internal and external CSR has a positive impact on employees' organizational citizenship behavior, which also directly indicates that under special circumstances, enterprises' responsibilities and responsibilities to employees and external stakeholders help employees to show more helping behaviors in their work. Based on the above analysis, this article believes that SRHRM has a positive impact on employees OCB. Therefore, the following hypotheses are proposed:

H1: SRHRM influences employees OCB.

Figure 1. Conceptual Framework

Research Methodology

Population and Sampling

Employees from Chinese medical manufacturing enterprises are the target population of this study. As of the end of 2021, there were a total of 34,639 medical manufacturing enterprises in China (China Statistical Yearbook, 2022). The target population in this article can be subdivided into 31 subpopulation (layers) based to geographical distribution (see Table 1). This article selects 384 employees from Chinese medical manufacturing enterprises to be given the survey questionnaire for data collection purposes. In a proportionate stratified method, the sample size of each stratum is proportionate to the population size of the stratum.

Table 1. Stratified Sampling

N	Category of Medical Manufacturing Enterprises	Number of Enterprises (L_i)	% of Total ($p_i=L_i/T$)	Number of Samples ($n_i=p_i\times$ Target Sample Size)
1	Guangdong Province	6158	17.78%	68
2	Jiangsu Province	4193	12.10%	46
3	Shandong Province	3976	11.48%	44
4	Zhejiang Province	2666	7.70%	30

Table 1. Stratified Sampling (Cont.)

N	Category of Medical Manufacturing Enterprises	Number of Enterprises (L_i)	% of Total ($p_i=L_i/T$)	Number of Samples ($n_i=p_i\times$ Target Sample Size)
5	Hebei Province	2009	5.80%	22
6	Henan Province	1653	4.77%	18
7	Hubei province	1557	4.49%	17
8	Hunan Province	1242	3.59%	14
9	Shanghai City	1238	3.57%	14
10	Beijing	1124	3.24%	12
11	Anhui Province	1107	3.20%	12
12	Jiangxi Province	1091	3.15%	12
13	Liaoning Province	981	2.83%	11
14	Tianjin City	716	2.07%	8
15	Fujian Province	661	1.91%	7
16	Sichuan Province	650	1.88%	7
17	Shaanxi Province	640	1.85%	7
18	Jilin Province	558	1.61%	6
19	Guangxi Zhuang Autonomous Region	433	1.25%	5
20	Chongqing City	419	1.21%	5
21	Heilongjiang Province	366	1.06%	4
22	Shanxi Province	318	0.92%	4
23	Guizhou Province	215	0.62%	2
24	Yunnan Province	166	0.48%	2
25	Xinjiang Uygur Autonomous Region	127	0.37%	1
26	Gansu Province	116	0.33%	1
27	Hainan	84	0.24%	1
28	Inner Mongolia Autonomous Region	83	0.24%	1
29	Ningxia Hui Autonomous Region	46	0.13%	1
30	Qinghai Province	27	0.08%	0
31	Xizang Autonomous Region	19	0.05%	0
	Total	34,639	100.00%	384

Instrumentation

The SRHRM is measured based on the scale which was created by Shen and Zhu (2011), which contains 7 items. The OCB is measured based on the scale which was developed by Williams and Anderson (1991), which contains 5 items. All the scales in this study are ranged from 0 to 5: 0 (strongly disagree), 2 (disagree), 3 (not clear), 4 (agree) and 5 (strongly agree).

Data Analysis Techniques

This study uses SPSS and AMOS software to conduct a structural equation model hierarchical regression models to validate the research hypotheses.

Research Results

Profile of Respondents

The demographic characteristics of the sample in this questionnaire survey are shown in Table 2.

Table 2. Demographic Characteristics of the Sample

Demographic	Category	Frequency	Percentage (%)
Gender	Male	175	45.6
	Female	209	54.4
Age	18-25	37	9.6
	26-35	109	28.4
	36-45	103	26.8
	46-55	100	26.0
	Over 55	35	9.1
Educational Background	Below bachelor degree	82	21.4
	Bachelor degree	159	41.4
	Master degree	113	29.4
	Above master degree	30	7.8
Work Experience	Less than 1 year	48	12.5
	1-5 years	76	19.8
	6-10 years	174	45.3
	More than 10 years	86	22.4
Total		**384**	**100.0**

Reliability and Validity Tests

1. Reliability Test

According to Table 3, the Cronbach's Alpha coefficient of the SRHRM scale is 0.920, which is higher than 0.70, indicating that the scale has good reliability. The Cronbach's Alpha coefficients of the OCB scale is also above 0.70.

Table 3. Reliability Test

Variable Scale	Abbreviation Symbol	Number of Items	Cronbach's Alpha
SRHRM	SRHRM	7	0.920
OCB	OCB	5	0.902

2. Convergence Validity Test

The confirmation factor analysis results for the seven variable scales mentioned above are shown in Table 4 and Table 5. From Table 4, it can be seen that the standardized factor loading of all observed variables is greater than 0.7; The CR of all latent variables is greater than 0.7, and the AVE is greater than 0.5. Therefore, it can be concluded that all 2 latent variable scales in this article have good convergent validity. As shown in Table 5, the fitting indicators of the 2 variables all meet the standards, and the structural validity is verified again to be good.

Table 4. Confirmatory Factor Analysis

Latent Variable	Observation Variable	Standardized Factor Loading	S.E.	C.R.	P	CR	AVE
SRHRM	E1	0.774				0.920	0.621
	E2	0.803	0.059	16.760	0.000		
	E3	0.799	0.061	16.562	0.000		
	E4	0.793	0.058	16.595	0.000		
	E5	0.771	0.059	15.975	0.000		
	E6	0.770	0.059	15.951	0.000		
	E7	0.805	0.061	16.846	0.000		
OCB	E8	0.802				0.903	0.650
	E9	0.836	0.057	17.999	0.000		
	E10	0.825	0.058	18.017	0.000		
	E11	0.801	0.057	17.183	0.000		
	E12	0.765	0.056	16.205	0.000		

Table 5. Fitting Indicators

Variable	χ^2/ df	NFI	IFI	TLI	CFI	GFI	RMSEA
SRHRM	1.692	0.986	0.994	0.991	0.983	0.966	0.043
OCB	1.809	0.992	0.996	0.993	0.991	0.972	0.046
Threshold	<5	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08
Interpretation	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified

3. Discriminant Validity Test

Table 6 show the discriminant validity results. From Table 6, it can be seen that the square root of AVE for each latent variable is greater than the absolute value of the correlation coefficient between latent variables, indicating that the 2 variable scales of SRHRM and OCB have good discriminative validity.

Table 6. Discriminant Validity

	SRHRM	**OCB**
SRHRM	**0.788**	-
OCB	0.342	**0.806**

Note: The bold value in the upper right corner is the square root of AVE, and other values are the correlation coefficients between latent variables.

Structural Equation Model and Path Analysis

1. Model Fitting

This article constructs a structural equation model using AMOS statistical software. Firstly, it is necessary to verify the adaptability of the structural equation model. According to Table 7, it can be seen that the model fitness of the structural equation model constructed in this article meets the standard.

Table 7. Fitting Indicators of the Structural Equation Model

	χ^2/ df	**NFI**	**IFI**	**TLI**	**CFI**	**RMSEA**
Estimate	1.461	0.900	0.966	0.963	0.966	0.035
Threshold	<5	>0.9	>0.9	>0.9	>0.9	<0.08
Interpretation	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified

2. The Direct Effect Test Results

From Table 8, it can be seen that the standardized path coefficient of the impact of SRHRM on OCB is 0.385, and the significance probability (P value) of direct effect hypothesis of H1 is 0.000. The above results show that SRHRM has a significant positive impact on OCB, which supports the hypothesis H1.

Table 8. The Direct Effect Test Results

Direct Effects	**Standardized Estimate**	**S.E.**	**C.R.**	**P**	**Unstandardized Estimate**	**Hypothesis**
OCB ← SRHRM	0.385	0.056	6.766	0.000	0.379	H1

Discussion and Conclusions

Discussion

The empirical research in this article validates hypothesis H1. The implementation of SRHRM in enterprises can promote employee OCB, which is consistent with the results of Shao et al. (2019), Feng et al. (2017), and Lu et al. (2021). Wang et al. (2020) proposed that employees have two motivations in maintaining high self-esteem and positive self-concept: the motivation to reduce identity uncertainty and the motivation to improve status. On the one hand, implementing social responsibility oriented human resource management practices in enterprises will enable employees to develop high self-esteem and positive self-concept. Employees are willing to maintain self-esteem and positive self-concept to reduce the uncertainty of their identity, which is a protection of their own identity. Employees will strengthen their perception of group membership by establishing more connections with the company, such as enhancing organizational self-esteem and implementing organizational citizenship behavior. These attitudes or behaviors will increase their "presence" in the company, thereby reducing the uncertainty of group membership perceived by employees. On the other hand, employees have a motivation to improve their status and tend to become members of a high-ranking group. In the subjective judgment of employees, the implementation of social responsibility oriented human resource management by enterprises is a positive feature. Enterprises have shown a high position in legal and moral characteristics, which precisely meets the expectations of employees for the enterprise. The motivation of employees to become high-ranking group members is satisfied, which will generate positive emotions, and positive emotions will trigger more positive organizational citizenship behavior (Roseman, 2013).

Conclusion

This study explores the impact and mechanism of SRHRM on OCB in China. This article explores the question of whether SRHRM can achieve a win-win situation for enterprises and society in the Chinese context, which has theoretical and practical significance for enterprises to carry out mutually beneficial social responsibility, win sustainable development, promote social welfare for the general public, and establish a harmonious society. This article concludes through empirical analysis that SRHRM has a direct positive promoting effect on OCB.

Implications of The Study

1. Theoretical Implications

Firstly, this article delves into the impact effects and underlying mechanisms of SRHRM. This article extends the impact of SRHRM. As a human resource management practice that carries out social responsibility, whether enterprise SRHRM can promote the effective implementation of corporate social responsibility and bring positive effects to organizations and society is of key significance in determining its value and adoption by enterprises. Secondly, this article chooses the

perspective of employee efficacy to explain the impact of SRHRM, providing a new explanatory perspective for subsequent research.

2. Practical Implications

Firstly, enterprises should incorporate their emphasis and consideration of social responsibility into the work module of human resource management. In the recruitment process, it is important to focus on selecting and hiring employees with a strong sense of social responsibility; In the training phase, strengthen social responsibility training for employees and encourage them to participate in corporate social responsibility research work; Taking into account the social contribution of employees in performance evaluation and career promotion.

Secondly, companies can actively assume general social responsibility and encourage employee participation, such as promoting community harmony, organizing employee participation in charitable and public welfare activities, and arranging volunteer service weeks for employees; Improving environmental performance, advocating green office in business operations, encouraging employees to use environmentally friendly materials, improving the efficiency of office resource utilization, responding to energy conservation and consumption reduction, and so on.

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RELATIONSHIP BETWEEN ESG AND FINANCIAL PERFORMANCE: A STUDY OF LISTED COMPANIES ON THE STOCK EXCHANGE OF THAILAND IN SET ESG INDEX

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Abstract

This paper presents the conceptual framework to investigate the relationship between Environment, Social and Governance (ESG) score (both total ESG score and each pillar of environment (E), social (S) and governance (G) scores) and the financial performance of the listed companies on the stock exchange of Thailand in SET ESG Index. The outcome of this study can be used to support the consideration and decision making of companies on the investment and expenditure planning for ESG related activities as a whole and trade off the importance and priority of its investment in each ESG pillar in order to design more precise investment and expenditures plans with proper weighting on each ESG pillar. This information also helps the investors who would like to invest in the companies focusing in ESG activities to determine and choose the companies to be invested by considering and foreseeing the firm's financial performance from the level of ESG investments and expenditures of the companies in total and each pillar of E, S and G.

Keywords: ESG, Sustainability, Firm Value, Firm Performance

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Introduction

The manager of the company seeks to maximize profits, maximize the value of the shareholders through the company's financial performance, and also take into account the other stakeholders, including the employees, the suppliers, the customers, and the local community (Freeman, 2001, 2004, 2010; Freeman et al., 2010; Freeman & Reed, 1983; Freeman & Phillips, 2001).

The ESG model focuses on 3 main aspects i.e. the Environment aspect which will consider all environmental impacts from the company operation; the Social aspect which will manage the relationship and communication with the employees, the suppliers and other stakeholders in order to create the mutual benefits to every parties; and the Governance aspect which will assure that the companies have a proper system to monitor and supervise its operation to be transparent, traceable and take all stakeholders into account of consideration. The company with ESG investment can benefit from attaining good corporate reputation and attracting and retaining talent (Zumente & Bistrova, 2021).

From the investor's side, investors increasingly evaluate the opportunities and risks associated with environmental, social, and governance (ESG), which can have a significant impact on business operations and on all interested parties, as the primary determinants for their investment decisions. This is due to the fact that the corporation responsible for ESG will be sustainable. A company with ESG strategies responds to market changes while reducing environmental and social risks. ESG companies could experience less uncertainty than non-ESG firms (Eccles et al., 2014). The investors use this data to analyze and identify the opportunities, obstacles and risks in the future before making the decision to make an investment (Loh et al., 2017).

Internationally, the Climate-related Disclosures requirements in IFRS S2 issued by the International Sustainability Standards Board (ISSB) are consistent with, the four core recommendations and 11 recommended disclosures published by the Task Force on Climate-related Financial Disclosures (TCFD). IFRS S2 are effective for annual reporting periods beginning on or after 1 January 2024 (meaning an entity would report its first sustainability related disclosures in 2025 (IFRS, 2023; Sireethorn, 2023). Furthermore, in many countries, sustainable organization is becoming a regulatory requirement, elevating its significance. Therefore, it is no longer merely a strategy for enhancing competitiveness and communication with stakeholders.

In Thailand, the listed companies are persuaded by the Stock Exchange of Thailand (SET) to apply ESG concepts through the voluntary disclosure of non-financial information on environmental, social, and governance (ESG) and the selection of sustainability companies in Thailand Sustainable Investment (THSI) commenced in 2015. Later SET changed this name from THSI to SET ESG assessment on 6 November 2023. Therefore, the terms, Thailand Sustainable Investment (THIS) and SET ESG assessment; or THSI Index and SET ESG Index will be changeably used in this paper. As shown in Table 1, both the number of companies participating in THSI and the number of companies passing the THSI assessment have increased each year.

Table 1. Number of the Listed companies in assessed by SET ESG rating during 2020 to 2022

Year	**2020**	**2021**	**2022**
Number of Companies under THSI	120	144	166

Source: https://www.setsustainability.com/download/s481bvf9ujgxr7c

Furthermore, from those companies that passed SET ESG assessment, SET has selected the companies which pass additional qualifications herebelow to be listed in THSI Index (SET ESG Index).

- Having market capital of not less than THB 5,000 million;
- Having free float percentage of not less than 20 percent; and
- The amount of stock trade in 9 out of 12 months is not less than .05 percent.

The number of the companies listed on THSI Index (SET ESG Index) from 2020 to 2022 is shown in Table 2 below.

Table 2. Number of the companies listed on SET ESG Index (formerly SET THSI Index) from 2020 to 2022

Year	2020		2021		2022	
Period	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Number	63	58	73	77	98	98

Source: https://www.set.or.th/th/market/information/securities-list/constituents-list-setesg

Furthermore, the Capital Market Commission, a regulator of the Stock Exchange of Thailand announced the Announcement of the Capital Market Commission No.TorJor.55/2563 in August 2020 requiring all listed companies to include the sustainability management report into its public disclosure report under the Form 56-1 One Report for the fiscal year ended on 31 December 2021 onward.

Despite the above requirement, many questions remain about whether ESG implementations will result in improved financial performance for the firm because ESG implementation results are solely based on a company's non-financial performance. The study's major goal is to show shareholders whether investing in companies that practice ESG will be profitable and result in financial gain as well as the environmental, social, and governance impacts.

Gap in Literatures and Research Questions

Since the 1970s, numerous studies on the relationship between the ESG profile and the financial performance of companies have yielded mixed results (positive, negative, and no correlations) due to various ESG data and methodologies (Moskowitz, 1972). For instance, Fulton's study (Fulton et al., 2012) shows that companies with a high ESG rating have a lower cost of capital, both in terms of debt and equity, and outperform the market. Clark et al. (Clark et al., 2014) who reviewed more than 200 academic studies, also concluded that 90% of studies demonstrate that high sustainability standards can reduce capital costs, 88% of the researches show that solid ESG practice result in better operational performance, and 80% of the studies show that stock price performance of the companies is positive influenced by good sustainability practices. The vast majority of studies found a positive relationship (Friede et al., 2015).

In Thailand, many studies were made on the relationship of financial performance or market value and various ESG related factors such as the good governance, corporate social responsibility (CSR), environment reporting, and ESG disclosure (Connelly & Limpaphayom, 2004; Detthamrong et al., 2017; Jitaree, 2015; Kantabutra & Avery, 2011; Lerskullawat & Prukumpai, 2017; Maga, 2018; Papangkorn et al., 2022; Suttipun,

2017; Suttipun et al., 2021; Suttipun & Yordudom, 2021; Van Brecht et al., 2018). There was also a study on effect of the corporate sustainability (considering the ESG and each pillar) on the stock value in Asian-Pacific emerging market (consisting of 9 countries including Thailand) in 2021 (Budsaratragoon & Jitmaneeroj, 2021) in 2021.

However, to the best of my knowledge, there is no study on the relationship between each ESG (environment, social, and governance) plllar and the financial performance of the listed company in SET ESG Index in Thailand specifically.

Based on the above research gap, this study will try to find the answer for the following research questions:

- Does ESG have a relationship with the company's financial performance?
- What are the effects of each Pillar of ESG on the company's financial performance?
-

Objectives of the Study

The purpose of this study is to determine whether companies that prioritize ESG initiatives can also achieve improved financial results.

Expected Benefits of the Study

The relationship between ESG and financial performance has captivated investors, financial experts, and businesses (Amel-Zadeh & Serafeim, 2018; Eccles et al., 2017; Kotsantonis et al., 2016; van Duuren et al., 2015). The following are the predicted benefits of a study:

- The study of ESG elements and their impact on a company's financial performance can provide significant insights for investors and organizations to make better decisions. Investors can use this data to make informed investment decisions, whereas businesses can use it to improve their sustainability and reputation.
- Investors and businesses can identify potential hazards that may have an impact on financial performance. Investors and businesses can manage these risks more effectively if they comprehend them, resulting in enhanced risk management.
- The companies can consider and make decision on the investment and expenditure planning for each ESG related activities by trading off the importance and priority of its investment in each ESG pillar in order to make more precise investment and expenditures plans with proper weighting on each ESG pillar.
- Companies that prioritize ESG factors are more likely to achieve sustainable long-term financial performance. This is because they have a greater comprehension of the risks and opportunities associated with sustainability, which can lead to improved decision-making and, ultimately, better financial outcomes.
- Environmental, social, and governance (ESG) factors can improve a company's reputation and brand perception. A favorable reputation can attract more customers, investors, and employees, which can result in improved financial performance.
- Companies that integrate ESG considerations into their business strategies may obtain a competitive advantage over their rivals. Investors and talents are becoming more interested in companies with a good ESG profile, which can lead to more capital availability, lower capital costs and staff attraction.

Overall, the study of ESG activities and financial performance can provide investors, businesses, and

society with valuable insights. This research will find out whether overall and each ESG factors performed by Thai listed companies under SET ESG Index will have a causal link to improve the company's financial performance.

Literature Review

The goal of this chapter is to give a literature overview on sustainable organizations. This covers study on the theoretical foundations of sustainability, corporate social responsibility (CSR), and environmental, social, and governance (ESG), as well as the relationship between financial performance and sustainability. According to Thailand's sustainable investment (THSI) assessment, ESG and CSR are related but not identical concepts. Environmental, social, and governance concerns are incorporated into the business models of investors and corporations. CSR, on the other hand, has typically been used to describe a company's attempts to become more socially responsible and perform better as a corporate citizen. In reality, however, the terms ESG and CSR are routinely used interchangeably (Gillan et al., 2021).

1. Stakeholder Theory

Stakeholder theory has emerged as a framework in organizational management, challenging the traditional shareholder-centric perspective. The traditional shareholder primacy model has faced growing scrutiny, prompting the rise of stakeholder theory. Freeman's work in 1984 (Freeman, 2010) laid the foundation for stakeholder theory. Mitchell, Agle, and Wood (Mitchell et al., 1997) explains the importance of stakeholders and their influence on organizational outcomes. Donaldson and Preston (Donaldson & Preston, 1995) are referenced to provide insights into the critiques and ongoing debates surrounding stakeholder theory. Practical strategies for engaging stakeholders are discussed, emphasizing the importance of communication, transparency, and responsiveness. Stakeholder theory has evolved into a pivotal framework reshaping organizational governance and strategic decision-making. By considering the historical development, key concepts, practical applications, critiques, and future directions of stakeholder theory, organizations can navigate the intricate web of stakeholder relationships, fostering sustainable and responsible business practices.

2. Three Bottom Line Theory

The Triple Bottom Line (TBL) theory, introduced by Elkington (Elkington & Rowlands, 1999) has become a cornerstone in discussions surrounding corporate social responsibility and sustainability. The TBL theory challenges the conventional notion that the primary objective of a business is solely to maximize financial returns. Instead, it advocates for a comprehensive evaluation of a company's success, incorporating not only economic metrics but also social and environmental impacts. Elkington marks the inception of the Triple Bottom Line theory which increases the recognition of environmental and social challenges that prompted the need for a more holistic approach to business performance assessment.

Triple Bottom Line comprises of 3 components i.e.

- Economic Bottom Line: The economic dimension emphasizes financial performance, drawing on traditional indicators such as revenue, profit margins, and return on investment. TBL challenges businesses to operate efficiently and sustainably for long-term economic viability.

- Social Bottom Line: This dimension focuses on a company's societal impact, including corporate social responsibility, employee well-being, diversity, and community engagement.
- Environmental Bottom Line: Addressing a company's impact on the planet, this dimension involves measuring and mitigating environmental risks, reducing carbon footprints, and adopting sustainable practices.

Implementing the TBL theory, such as measuring social and environmental impacts leads to successful strategies employed by businesses to overcome these challenges and emphasizes the long-term benefits, including enhanced reputation and stakeholder relationships. In conclusion, the Triple Bottom Line theory signifies a paradigm shift in business philosophy, promoting the integration of economic, social, and environmental considerations. By recognizing the interconnectedness of these dimensions, businesses can contribute to positive societal and environmental change while ensuring their own long-term sustainability and prosperity.

3. Quadruple Bottom Line Theory

Quadruple Bottom Line (QBL) theory provides a holistic approach to sustainable business. The emerging paradigm of the Quadruple Bottom Line (QBL) theory, extending the traditional Triple Bottom Line framework to include a fourth dimension, a cultural impact (Yun & Ülkü, 2023). The Four Dimensions of the Quadruple Bottom Line are as follows: -

- Economic Bottom Line: Retaining the economic dimension from the TBL, this aspect encompasses traditional financial metrics. Past studies emphasize the economic imperative in sustainable business (Hart & Milstein, 2003; Porter & Kramer, 2006).
- Social Bottom Line: Similar to the TBL, the social dimension considers a company's impact on people, including social responsibility and community engagement.
- Environmental Bottom Line: As in the TBL, the environmental dimension addresses a company's ecological impact, focusing on sustainable practices and responsible resource management.
- Cultural Bottom Line: Introducing the novel dimension, the cultural bottom line assesses a company's impact on cultural values, heritage, and diversity (Earley & Ang, 2003; Livermore, 2011).

The Quadruple Bottom Line theory offers a holistic approach to sustainable business by integrating economic, social, environmental, and cultural considerations. By recognizing the interconnectedness of these four dimensions, businesses can contribute positively to society while ensuring their long-term viability.

4. Theoretical Foundations of Underlying Research on Sustainable Organizations

Sustainable Organizations focus to drive on mission and purpose rather than profit maximization (Soyka, 2012). Sustainable organizations, according to Peter Soyka's description, they are aware of and attentive to social and stakeholder concerns; they are responsible and ethical; they are committed to excellence; they are driven to meet or surpass customer/client expectations; and they are disciplined, focused, and skilled. In addition to maximizing profits, sustainable organizational performance tries to protect and maintain society and the environment for future generations. Previously, the company's primary focus was on its shareholders; however, additional stakeholders are now being considered. The Sustainable Organization must be financially secure in order to create long-term value and capable of reducing environmental impact through product innovations and activities,

and it must incorporate a Triple Bottom Line (Economic, Environmental, and Social) into its strategy in order to generate a competitive advantage that meets society's expectations (Elkington & Rowlands, 1999).

In Thailand, there are numerous studies about sustainable organization and what sustainable organization means in the Thai context. A sustainable organization represents an organization that is capable of delivering robust performance, enduring social and economic crises, and providing public benefits. Identifies five predictors of corporate sustainability based on the sufficiency economy philosophy: tenacity, resiliency, moderation, geo-social development, and moral sharing. These predictors contribute to an organization's sustainability performance outcomes (Kantabutra, 2017). Sustainable organizations are those that incorporate environmental, social, and economic considerations into their leadership and management practices. The authors contend that such organizations are better suited to achieve superior financial performance and sustained success (Suriyankietkaew & Avery, 2016).

5. Theoretical Foundations of Underlying Research on ESG activity

ESG activity disclosed in the company's annual report submitted with the SET shall serve as the ESG activity's determining factor. Thailand's SET guideline, which was developed for eight different industries (Agro and Food, Consumer Products, Financials, Industrials, Property and Construction, Resources, Services, and Technology) and is based on the United Nations Sustainable Development Goals (UN-SDGs) and the Global Reporting Initiative Standard (GRI Standard), classifies ESG activity into three dimensions of ESG metrics (Environment, Social, and Governance).

Environmental activity to financial performance

The "E" in ESG stands for environmental factors. Environmental transparency, environmental performance, and economic performance are all linked. Economic performance is improved by both transparency and environmental performance. As a result, environmental practices have an impact on financial performance (Meng et al., 2014). Environmental activities that contribute to a healthy or verdant environment can have a positive impact on financial performance. Furthermore, the study found that businesses with outstanding environmental performance had a higher appreciation for the community. According to (Angelia & Suryaningsih, 2015), environmental performance is one of the factors influencing financial performance.

Past study discovered a link between the “E” (environment) efficacy and corporate financial performance that businesses with outstanding environmental performance, in particular, have a higher possibility of financial success. Xie (Xie et al., 2019) suggests that businesses seeking to enhance their financial performance may find environmental activities to be a beneficial investment.

Social activity to financial performance

The "S" in ESG represents social factors, which refer to a company's impact on society and its stakeholders. This includes product quality and safety as well as labor practices, human rights, community relations, diversity and inclusion (Eccles et al., 2020). Typically, a company's social activities include philanthropy as well as employee- and product-related initiatives. Philanthropy may enhance the reputation of a business and increase consumer satisfaction. Employee social activities serve to retain current employees, recruit new ones, and strengthen employee loyalty (Kabir & Thai, 2017).

The "S" (social) dimension of ESG activities is tied to financial performance. The study found a substantial association between corporate social performance (ESG), environment and social performance (ES), and return on assets, return on equity, and return on capital deployed. This shows that the "S" dimension of ESG engagement may be related to financial performance (Tyagi, 2012).

Governance activity to financial performance

The "G" stands for governance activities. Hedstrom (Hedstrom, 2019) described governance as the company DNA, the structure, processes, and culture in place in an organization that impact how key business decisions are made. These are the rules, processes, and practices that a firm has in place to guarantee that its board of directors and executive leadership make sound decisions. G activities include board composition and structure, executive compensation policies, risk management methods, and financial reporting transparency. The "G" factor in ESG is significant because it can influence the long-term financial performance and sustainability of an organization. Good governance practices can aid businesses in managing risks more effectively, making better decisions, and fostering stakeholder confidence (Huang, 2021). Good governance practices can help ensure that a company operates ethically and legally while maximizing shareholder value over the long term. Companies that prioritize sound governance are frequently viewed as more desirable by investors because they are viewed as less risky and more likely to generate sustainable returns (Jitaree, 2015).

6. Theoretical Foundations of Underlying Research on Financial Performance

The ability of a corporation to generate income and profits from its assets is referred to as financial performance. It assesses a firm's ability to generate long-term wealth for its shareholders. To analyze financial performance, many financial metrics such as return on investment (ROI), return on equity (ROE), earnings per share (EPS), and profit margin can be utilized. These metrics assist investors and analysts in evaluating a company's profitability, efficacy, liquidity, and overall financial health (Wernerfelt & Montgomery, 1988).

Most studies employ accounting-based metrics to assess a firm's financial success (for example, Return on Equity (ROE) and Return on Assets (ROA)) (McGuire et al., 1988). Accounting-based metrics are more successful in determining ESG relationships. ROA, ROE, and ROS are commonly used financial statistics to assess financial success. ROA compares profitability to total assets, whereas ROE compares profitability to shareholder equity. ROS determines a company's profitability as a proportion of sales revenue. These ratios may be used to track a company's financial health and performance over time, and they can be compared to industry standards or competitor ratios for further insight. These ratios do not provide a complete picture of a company's financial performance and should be used in conjunction with other indicators and research methods (Yang et al., 2010).

To explain a firm's financial performance, this study employs three accounting-based measurements, namely Return on Equity (ROE), Return on Assets (ROA), Return on Sales (ROS), and Tobin's Q, the mixed market-account performance measure that represents the firm's market value taking replacement cost into account.

Return on Assets (ROA)

Return on Assets (ROA) is a financial measure that assesses the profitability of a company's asset

usage to provide insight into its profitability. ROA is a popular statistic for assessing a company's performance, used by the investors, analysts, and management. ROA is computed by dividing a company's net income by its average total assets over a particular period. It indicates the proportion of earnings generated for every dollar invested in assets. The formula for ROA is:

ROA = (Net Income / Average Total Assets)

Where: - Net Income = Pre-Tax Income (EBT) – Taxes; and

- Average Total Assets = (Beginning + Ending Total Assets) ÷ 2

ROA measures the efficiency of how a company generates profits relative to its asset basis. A high return on assets (ROA) shows that a corporation generates a significant amount of profit for every dollar of assets it owns. ROA is a financial ratio that calculates a company's profitability by comparing its net income to its total assets. A higher ROA shows that a corporation is making better use of its assets to create profits. What defines a "high" ROA, in particular, varies by industry and other circumstances, therefore it's advisable to compare a company's ROA to that of others in the same industry or sector (Abdi et al., 2020; Huang, 2021).

Return of Equity (ROE)

Return on equity is abbreviated as ROE. It influences the rate of return on the ownership interest in common stock (shareholders' equity). ROE is determined by dividing fiscal year net income (after preferred stock dividends but before common stock distributions) by total equity (excluding preferred shares) and expressing the result as a percentage (Dragomir, 2010). ROE is a financial ratio that gauges a company's profitability by determining how much profit it generates with the money invested by shareholders. ROE is a prominent statistic for measuring a company's profitability in terms of its use of equity to generate profits (Alareeni & Hamdan, 2020; McGuire et al., 1988).

Return on Equity (ROE) is a financial term that measures a company's profitability and efficiency from the perspective of its shareholders. It assesses how effectively a company translates shareholder capital into earnings. ROE is computed as a percentage by dividing net income by shareholders' equity. The formula for calculating ROE is:

ROE = (Net Income / Average Shareholders' Equity)

Where: - Net income = Company's net earnings - all expenses; and

- Average shareholder equity = (Beginning + Ending Shareholders’ Equity) ÷ 2

ROE can be used to compare the performance of companies within the same industry or sector and to monitor the performance of a company over time. ROE should be considered alongside other financial ratios and metrics, such as ROA, profit margins, and debt-to-equity ratio, in order to obtain a more comprehensive understanding of a company's financial health and performance.

Return of Sale (ROS)

ROS is an abbreviation for Return on Sales. It is a financial ratio that evaluates the profitability of a business by determining how much profit it generates per dollar of sales revenue. It is determined by dividing net income by total sales revenue. ROS is frequently used as an indicator of a company's efficiency in generating profits

from sales (McGuire et al., 1988). Greater ROS indicates that a firm is benefiting more from its sales, which may indicate strong financial performance. The formula for calculating Return on Sale is:

ROS = (Operating Profit / Net Sales)

Where: - Operating Profit = Profit - All operating expenses (such as cost of goods sold, salaries, rent, utilities, and other operating costs); and

- Net Sales = Total Revenue from the sale of goods or services - any discounts, returns, or allowances.

A high ROS demonstrates that a company generates more money per dollar of revenue. This demonstrates that the business is successfully and efficiently operating, which is excellent news for investors and other stakeholders (Batchimeg, 2017). To assess a company's financial health, ROS should be considered alongside the other measures.

Tobin's Q

Tobin's Q is a financial ratio that measures the market value of a company relative to its replacement cost. It is determined by dividing the market value of a company's assets by the cost to replace them. Tobin's Q is used as an indicator of investment efficiency. It is a method for determining the worth of a company's investment opportunities and also provides a way to assess whether a company is overvalued or undervalued in the stock market. A Q ratio greater than one indicates that the market values the company's future growth prospects more than its current assets, and that the market values the firm's assets at a higher price than their replacement cost, indicating that the firm is investing efficiently and creating shareholder value. In contrast, a Q ratio below one indicates that the market values the firm's assets at less than their replacement cost, suggesting that the company may not be investing efficiently or creating as much shareholder value.

Companies with a high Tobin's Q ratio may have a competitive advantage because of economies of scale. In addition, they suggest that businesses with high Tobin's Q ratios may be able to maintain their market position due to entry barriers such as patents or regulations. Companies with high Tobin's Q ratios have greater profit margins and less competition than those with low ratios, which have lower profit margins and more competition (Lindenberg & Ross, 1981). The formula for Tobin's Q is as follows:

Q = (Market Value of Equity + Book Value of Debt) / Cost to Replace Assets

Where: - The market value of equity = Current stock price x number of outstanding shares; and

- The book value of debt = Total amount of debt recorded on the balance sheet.

Tobin's q can be used to compare the market value and replacement cost of a company over time, revealing competitive position or industry dynamics. Tobin's q measures the investment efficacy and value production potential of a company (Chung & Pruitt, 1994).

7. Control variables

Studies have revealed that variables like business size, industry, and age have an impact on the relationship between a firm's financial performance and ESG score (Clarkson et al., 2008; Jitaree, 2015; Jones et al., 2007; McWilliams & Siegel, 2000; Waddock & Graves, 1997). This study therefore takes the size, industries, leverage and age of the companies into account of consideration as the control variables.

Firm Size (SIZE)

Firm size is an internal component affecting financial performance where the effect varies. Many studies have indicated that company size is key control variables when testing the impact of ESG on financial performance since the large companies have bigger effects to the community, have bigger group of shareholders and could be more efficient since they can utilize economies of scale, employ more skilled managers, and formalize procedures to produce better results (Andersen & Dejoy, 2011; Knox et al., 2005; Margolis et al., 2009; Singh et al., 2017)

From the previous researches (Reverte, 2009), firm size describes the size of a company which is formulated based on the natural logarithm of the company's total assets or market capitalization.

Industry Type (INDUS)

Previous studies (Chang & Kuo, 2008; Cochran & Wood, 1984; Cottrill, 1990; Porter & Van der Linde, 1995; Waddock et al., 2000) apply industry factor as a control variable as different industry does cause variance of the sustainability performance and it may impact ESG and financial performance.

The variable pertaining to the industry in this research is operationalized as including both the manufacturing sector (including the Resources, Industrial, Transportation, and Logistics industries) as these industries are considered to be more risk of being criticized in ESG matters because of their activities involving higher risk of environmental impact and non-manufacturing sectors (encompassing the Financials, Property & Construction, Technology, Services, Agro & Food, and Consumer Products industries). In the case when a firm is classified as belonging to the manufacturing industries, the corresponding variable is assigned a value of "1". Conversely, if a company is not classified as belonging to the manufacturing industries, the variable is assigned a value of "0".

Age of Firm (AGE)

In firm life-cycle theory, organizations' life cycle stages starting from startup, growth, maturity, and stagnation, have different characteristics at each stage that affect its financial performance. The companies with a more mature age can do better in long-term and large-scale investments compared to new companies (Agustina & Usman).

Previous research used firm age as a variable to examine the correlation between ESG and financial performance. More ESG data gives more clarity and increases confidence. Therefore, freshly listed businesses are more likely to conduct the ESG activities and publish such data (Jitaree, 2015). Considering the impact of firm age on the correlation between ESG and financial performance, this research used the age of companies as a control variable. The age of a business, denoted as AGE, is quantified as the duration in years after the firm's first listing on the Stock Exchange of Thailand (SET).

Debt/Equity Ratio (LEV)

More highly leveraged firms disclose voluntary information in order to reduce their agency costs and, as a result, their cost of capital under concept of the agency theory (Reverte, 2009). However, some study (Brammer & Pavelin, 2008) posited that a low leverage firm has less pressure from creditors to constrain managers' discretion over CSR activities.

Leverage refers to a company's use of borrowed funds. It is measured by the ratio of total liabilities to the net worth of the company. In the research, leverage is included since financial institutions traditionally pay more attention to ESG information as leverage increases (Ghosh, 2017; Puri).

Research Model and Hypotheses

1. Research Model

The literature on the link between ESG actions and a company's financial success is examined in this chapter. The ESG and Sub-ESG scores are all considered. The four metrics used to gauge financial success are return on assets (ROA), return on equity (ROE), return on sales (ROS), and Tobin's Q (TBQ). The research framework of this study in measuring the relationship between ESG scores and financial performance is illustrated in Figure 1.

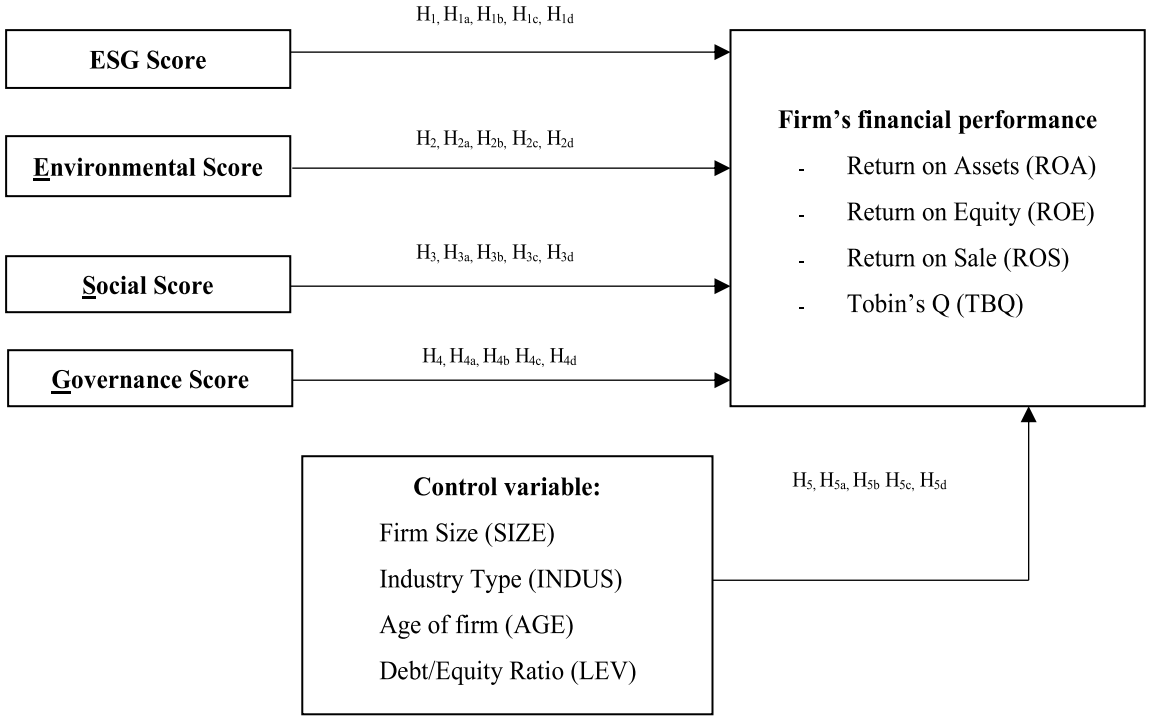

Figure 1 Relationship between ESG Conceptual Framework and the firm's financial performance

2. Hypotheses

The hypothesis defines ESG score as independent variable. The hypotheses are as follows:

H1: There is a significant relationship between ESG score and the firm's financial performance.

H1a: There is a significant relationship between ESG score and Return on Assets (ROA).

H1b: There is a significant relationship between ESG score and Return on Equity (ROE).

H1c: There is a significant relationship between ESG score and Return on Sale (ROS)

H1d: There is a significant relationship between ESG score and Tobin's Q (TBQ).

The hypothesis defines E score as independent variables. The hypotheses are as follows:

H2: There is a significant relationship between E score and the firm's financial performance.

H2a: There is a significant relationship between E score on Environment and Return on Assets (ROA).

H2b: There is a significant relationship between E score on Environment and Return on Equity (ROE).

H2c: There is a significant relationship between E score on Environment and Return on Sale (ROS)

H2d: There is a significant relationship between E score on Environment and Tobin's Q (TBQ).

The hypothesis defines S score as independent variables. The hypotheses are as follows:

H3: There is a significant relationship between S score and the firm's financial performance.

H3a: There is a significant relationship between S score on Social and Return on Assets (ROA).

H3b: There is a significant relationship between S score on Social and Return on Equity (ROE).

H3c: There is a significant relationship between S score on Social and Return on Sale (ROS)

H3d: There is a significant relationship between S score on Social and Tobin's Q (TBQ).

The hypothesis defines G score as independent variables. The hypotheses are as follows:

H4: There is a significant relationship between G score on Governance and the firm's financial performance.

H4a: There is a significant relationship between G score on Governance and Return on Assets (ROA).

H4b: There is a significant relationship between G score on Governance and Return on Equity (ROE).

H4c: There is a significant relationship between G score on Governance and Return on Sale (ROS)

H4d: There is a significant relationship between G score on Governance and Tobin's Q (TBQ).

The hypothesis defines control variables. The hypotheses are as follows:

H5: There is a significant relationship between control variables and the firm's financial performance.

H5a: There is a significant relationship between control variables and Return on Assets (ROA).

H5b: There is a significant relationship between control variables and Return on Equity (ROE).

H5c: There is a significant relationship between control variables and Return on Sale (ROS)

H5d: There is a significant relationship between control variables and Tobin's Q (TBQ).

3. Research Design

To conducts ESG activities and financial performance analysis of the companies, either accounting-based or market-based metrics shall be used to assess the financial performance (Reverte, 2009). The study's overall scope would include investigating the relationship between ESG activities carried out by Thai listed firms under SET ESG Index and their financial performance, which would include accounting-based metrics of Return on Equity (ROE), Return on Asset (ROA), and Return on Sales (ROS), which are widely utilized in financial performance evaluation and are regularly employed in related research (Margolis and Walsh 2001) and hybrid market-account metrics of performance, Tobin's Q, a combination of market-account performance indicators that indicates the firm's market worth after accounting for replacement cost (Brainard & Tobin, 1968; Chung & Pruitt,

1994; Hayashi, 1982; Lindenberg & Ross, 1981; Tobin, 1969; Tobin & Brainard, 1976). This would typically involve the following:

- Selection of companies: The study would select a sample of every company that reported their ESG activities to SET, being selected to be the companies in SET ESG Index and has been assessed by ESG Book (ESG Book GmbH), every year from the first year that the regulation requiring every listed company to prepare and disclose its ESG activities (2020) to present (2022) totaling 56 companies.
- ESG activity measurement: The study would assess the level of ESG activities carried out by the companies in the sample. ESG score and ESG sub-scores were assessed obtained from ESG Book (ESG Book GmbH) through a sector-specific analysis of public companies' performance on financial material sustainability issues in the Environment, Social, and Governance domains.
- Measurement of financial performance: Using ROE, ROA, ROS, and Tobin's Q, the study would measure the financial performance of the selected companies. Based on the previous discussion, this study will examine the results to see if there is a favorable relationship between ESG activities and ROE, ROA, ROS, and Tobin's Q.

4. Population and Samples

Based on (Stock Exchange of Thailand, 2023), there are 619 Companies listed in the Stock Exchange of Thailand (SET), and 289 companies are classified as ESG Investment. ESG rating agencies scrutinize businesses and evaluate corporate sustainability performance using their own research methodologies, strategies, assessment frameworks, and weighing systems (Escrig-Olmedo et al., 2019) because there is no regulation or clear guideline on how ESG raters will evaluate and rate the company. In some circumstances, businesses that obtain good ratings from one rater frequently earn average or poor ratings from another as each component of an ESG rating has a different weighting across agencies (Dimson et al., 2020). From (SETTrade.com Co., 2023), 289 companies under the ESG Investment use different ESG rating agencies and some of them use more than 1 agency to provide the ESG score.

Among 289 companies, only 114 companies were selected to be listed on the SET ESG Index and only 58 of them were listed in the SET ESG Index (formerly SET THSI Index) every year since 2020 (when the Announcement of the Capital Commission requiring the listed companies to disclose the non-financial data including the ESG activities in the annual report for public has announced).

Since the majority of the companies under SET ESG Index (formerly SET THSI Index) use ESG Book as their ESG rating agency, this research will use the ESG score assessed by ESG Book as independent variable. From the data obtained from ESG Book, there are 56 of out 58 companies under SET ESG Index (formerly SET THSI Index) that have been assessed by ESG Book over the past 3 consecutive years. The population used in this study were all companies listed in the Stock Exchange of Thailand Listed as sustainable companies under SET ESG Index (formerly SET THSI Index or Thailand Sustainability Investment Index) every year from year 2020 to year 2022 which using ESG Book as their sustainability data platform, totaling 56 companies as shown in Table 3.

Table 3. Companies listed on the Stock Exchange of Thailand in SET ESG Index (formerly SET THSI Index or Thailand Sustainability Investment Index) every year from year 2020 to year 2022 which using ESG Book as their sustainability data platform.

No	Symbol	Company Name
1	ADVANC	ADVANCED INFO SERVICE PCL
2	AMATA	AMATA CORPORATION PCL
3	AOT	AIRPORTS OF THAILAND PCL
4	BAFS	BANGKOK AVIATION FUEL SERVICES PCL
5	BANPU	BANPU PCL
6	BBL	BANGKOK BANK PCL
7	BCP	BANGCHAK CORPORATION PCL
8	BDMS	BANGKOK DUSIT MEDICAL SERVICES PCL
9	BEM	BANGKOK EXPRESSWAY AND METRO PCL
10	BGRIM	B.GRIMM POWER PCL
11	BJC	BERLI JUCKER PCL
12	BPP	BANPU POWER PCL
13	BTS	BTS GROUP HOLDINGS PCL
14	CENTEL	CENTRAL PLAZA HOTEL PCL
15	CPALL	CP ALL PCL
16	CPF	CHAROEN POKPHAND FOODS PCL
17	CPN	CENTRAL PATTANA PCL
18	EA	ENERGY ABSOLUTE PCL
19	EASTW	EASTERN WATER RESOURCES DEVELOPMENT AND MANAGEMENT PCL
20	EGCO	ELECTRICITY GENERATING PCL
21	GFPT	GFPT PCL
22	GPSC	GLOBAL POWER SYNERGY PCL
23	GULF	GULF ENERGY DEVELOPMENT PCL
24	HANA	HANA MICROELECTRONICS PCL
25	HMPRO	HOME PRODUCT CENTER PCL
26	INTUCH	INTOUCH HOLDINGS PCL
27	IRPC	IRPC PCL
28	IVL	INDORAMA VENTURES PCL
29	KBANK	KASIKORNBANK PCL
30	KKP	KIATNAKIN PHATRA BANK PCL
31	KTB	KRUNG THAI BANK PCL
32	KTC	KRUNGTHAI CARD PCL
33	MINT	MINOR INTERNATIONAL PCL
34	MTC	MUANGTHAI CAPITAL PCL
35	PM	PREMIER MARKETING PCL
36	PSH	PRUKSA HOLDING PCL
37	PTT	PTT PCL
38	PTTEP	PTT EXPLORATION AND PRODUCTION PCL
39	PTTGC	PTT GLOBAL CHEMICAL PCL
40	RATCH	RATCH GROUP PCL

Table 3. Companies listed on the Stock Exchange of Thailand in SET ESG Index (formerly SET THSI Index or Thailand Sustainability Investment Index) every year from year 2020 to year 2022 which using ESG Book as their sustainability data platform. (Cont.)

No	Symbol	Company Name
41	SAT	SOMBOON ADVANCE TECHNOLOGY PCL
42	SC	SC ASSET CORPORATION PCL
43	SCC	THE SIAM CEMENT PCL
44	SIRI	SANSIRI PCL
45	SJWD	SCGJWD LOGISTICS PCL
46	STA	SRI TRANG AGRO-INDUSTRY PCL
47	THCOM	THAICOM PCL
48	TISCO	TISCO FINANCIAL GROUP PCL
49	TOA	TOA PAINT (THAILAND) PCL
50	TOP	THAI OIL PCL
51	TSTH	TATA STEEL (THAILAND) PCL
52	TTB	TMBTHANACHART BANK PCL
53	TTW	TTW PCL
54	TVO	THAI VEGETABLE OIL PCL
55	WHA	WHA CORPORATION PCL
56	WHAUP	WHA UTILITIES AND POWER PCL

5. Data Collection

Data collection from secondary data by collecting the financial statements of companies and Form 56-1 One Report (Structured Data Report) from sustainable companies listed in THSI (Thailand Sustainable Investment) on the Stock Exchange of Thailand and recording data according to data categories in each variable, including financial statements, number of years joining SET ESG Index (formerly SET THSI Index). For ESG Score and Sub-Score on environmental activities, social activities, and corporate governance activities, this data is proprietary data of ESG Book which the researcher obtained from ESG Book GmbH[2].

From ESG Book User Guide (ESGBook, 2022), ESG Book constructs the ESG Scores through 3 layers processes; Input layer, Feature layer and Score Layer. The input layer collect data from report-based metrics, news-based controversies and NGO-based activity. The feature layer applies the long-term and short-term trend through its own internal taxonomy with the sustainability topics before combining features into easy-to-use ESG Book scores.

- Sustainability topics on Environmental, including emission, environmental stewardship, resource use, environmental solutions, waste, water and environmental management.
- Sustainability topics on Social, including diversity, training & development, community relations, product access, product quality & safety, human rights, labour rights, compensation, employment quality

[2] ESG Book GmbH is a limited liability company incorporated under the laws of Germany in Frankfurt in 2018. ESG Book offers a wide range of ESG-related data, scoring, and technology products that are used by many of the world's largest financial institutions covering over 100,000 companies.

and occupational health and safety.

- Sustainability topics on Governance, including business ethics, corporate governance, transparency, forensic accounting and capital structure.

ESG Book methodology considers the principle of financial materiality. That is, when computing the ESG scores of a company, ESG Book's algorithm will only use information that significantly helps explain future risk-adjusted performance. Materiality is also applied by more heavily weighting sustainability topics which have a stronger correlation with risk-adjusted performance. Since the financial materiality of different sustainability topics can vary over time, ESG Book rebalance the weights on a rolling quarterly basis.

The ESG score and associated sub-ESG score are calculated as a weighted sum of the Features scores using materiality-based weights. The E, S and G pillar sub-scores are calculated by considering only the Features within each of these themes. The three pillar scores and the total ESG score are scaled between 0 and 100 with higher scores indicating better performance. ESG Book's ESG scores are calculated daily. When new data is available, it is incorporated immediately into ESG Book platform and delivered to its client via direct data feed to secure file transfer protocol (SFTP), cloud service or application programing interface (API).

6. Research Tools

The study on Relationship of the Sustainable Organization and financial performance: A Study of Thai Listed Companies SET ESG Index used the following variables:

6.1 Independent variables

The independent variables were ESG Score and Sub-Score of the companies listed on the Stock Exchange of Thailand in the SET ESG Index (formerly SET THSI Index or Thailand Sustainability Investment Index) every year from year 2020 to year 2022 by using ESG Book database.

The independent variables were ESG Scores in 4 aspects:

6.1.1 Total ESG Score

6.1.2 Environmental Score accessed from emission, environmental stewardship, resource use, environmental solutions, waste, water and environmental management.

6.1.3 Social Score assessed from diversity, training & development, community relations, product access, product quality & safety, human rights, labour rights, compensation, employment quality and occupational health and safety.

6.1.4 Corporate Governance Score assessed from business ethics, corporate governance, transparency, forensic accounting and capital structure.

6.2 Dependent variables

The dependent variable is enterprise value in 4 aspects:

6.2.1 Return on Equity (ROE), which is an indicator for measuring the ability to make profit from the money invested by the shareholders by considering from (Net Income / Shareholders' Equity)

6.2.2 Return on Assets (ROA), which is a measurement of efficiency of the firm's profitability from its assets by considering from (Net Income / Average Total Assets)

6.2.3 Return on Sales (ROS), which is an indicator of the financial efficiency from the sale turnover by considering from Operating Profit / Net Sales x 100.

6.2.4 Tobin's Q, a financial ratio that measures performance in terms of market value based on information from financial statements. By measuring the market value of Tobin's Q ordinary shares, the calculation formula is (sum of market value of ordinary shares + market value of preferred shares + market value of liabilities)/book value of assets.

6.3 Control variables

The control variables are enterprise values in 4 aspects:

6.3.1 Firm Size (SIZE) describes the size of a company which is formulated based on the natural logarithm of the company's total assets or market capitalization.

6.3.2 Industry Type (INDUS) A dummy represents a firm classified as belonging to the manufacturing industries, the corresponding variable is assigned a value of "1". Conversely, if a company is not classified as belonging to the manufacturing industries, the variable is assigned a value of "0".

6.3.3 Age of Firm (AGE) is quantified as the duration in years after the firm's first listing on the Stock Exchange of Thailand (SET).

6.3.4 Debt/Equity Ratio (LEV) Leverage refers to a company's use of borrowed funds. It is measured by the ratio of total liabilities to the net worth of the company.

7. Analysis Techniques

A study of the relationship between ESG activities and the financial performance of listed companies on the Stock Exchange of Thailand listed as sustainable companies in SET ESG Index includes Descriptive Statistical Analysis. Data in the form of basic statistics to present preliminary data of all 56 companies listed on SET ESG Index consecutively from 2020-2022 which using ESG Book as their sustainability data platform.

This study divided the data analysis tools into 2 parts as follows:

3.7.1 Descriptive statistics Methods, including Maximum (Max), Mean , Minimum (Min) and Standard Deviation (SD) and Median in order to define the fundamental data of each company.

3.7.2 Inferential Statistical Analysis

In this study, after population data were used, the test results were referred to test whether the data collected from secondary data of the sample is in consistent with or inconsistent with the assumptions set out in this study by the following analysis.

3.7.2.1 Pearson Correlation Coefficient Analysis to find the relationship between each independent variable with the dependent variable in what direction and how much of a relationship as well as looking at the relationship between each independent variable.

3.7.2.2 Multiple Regression Analysis and Multiple Correlation are utilized to determine the relationship between multiple dependent and independent variables in order to assess the effect of sustainable business operations on Environmental, Social, and Governance activities on the company's financial performance.

3.7.2.3 Pooled OLS, Fixed effect and Random effect are utilized to choose the appropriate

model of regression to analyze panel data and to test as well as define the problems between the independence variable by using multicollinearity problem method.

This research used descriptive statistics and inferential statistics using regression analysis by software gretl 2023a to confirm the model and study the influence of the model dependent variable on the research hypotheses.

X The Model and Hypotheses Testing

To test the assumption relating to the relationship between ESG and firm's financial performance of the listed companies in THSI Index as prescribed above, this research uses regression models as follows.

Firm's financial performance$_{it}$ = $\beta 0 + \beta 1 ESG_{it} + \beta 2 ENV_{it} + \beta 3 SOCIAL_{it} + \beta 4 GOV_{it} + \beta 5 SIZE_{it} + \beta 6 INDUS_{it} + \beta 7 AGE_{it} + \beta 8 LEV_{it} + e_{it}$

ROA = $\beta 0 + \beta 1 ESG_{it} + \beta 2 ENV_{it} + \beta 3 SOCIAL_{it} + \beta 4 GOV_{it} + \beta 5 SIZE_{it} + \beta 6 INDUS_{it} + \beta 7 AGE_{it} + \beta 8 LEV_{it} + e_{it}$

ROE = $\beta 0 + \beta 1 ESG_{it} + \beta 2 ENV_{it} + \beta 3 SOCIAL_{it} + \beta 4 GOV_{it} + \beta 5 SIZE_{it} + \beta 6 INDUS_{it} + \beta 7 AGE_{it} + \beta 8 LEV_{it} + e_{it}$

ROS = $\beta 0 + \beta 1 ESG_{it} + \beta 2 ENV_{it} + \beta 3 SOCIAL_{it} + \beta 4 GOV_{it} + \beta 5 SIZE_{it} + \beta 6 INDUS_{it} + \beta 7 AGE_{it} + \beta 8 LEV_{it} + e_{it}$

TBQ = $\beta 0 + \beta 1 ESG_{it} + \beta 2 ENV_{it} + \beta 3 SOCIAL_{it} + \beta 4 GOV_{it} + \beta 5 SIZE_{it} + \beta 6 INDUS_{it} + \beta 7 AGE_{it} + \beta 8 LEV_{it} + e_{it}$

Where:

$\beta 0$	=	Intercept coefficient
$\beta 1 - \beta 8$	=	Coefficient for each of the independent variables
ESG_{it}	=	ESG score of Firm *i* at time *t*
ENV_{it}	=	environmental score of Firm *i* at time *t*
$Social_{it}$	=	social score of Firm *i* at time *t*
Gov_{it}	=	corporate governance score of Firm *i* at time *t*
ROA_{it}	=	Return on Assets of Firm *i* at time *t*
ROE_{it}	=	Return on Equity of Firm *i* at time *t*
ROS_{it}	=	Return on Sales of Firm *i* at time *t*
TBQ_{it}	=	Tobin's Q of Firm *i* at time *t*
$SIZE_{it}$	=	Logarithm of the company's total assets or market capitalization of Firm *i* at time *t*
$INDUS_{it}$	=	Dummy represents 0 for manufacturing sectors and 1 for non-manufacturing sectors of Firm *i* at time *t*
AGE_{it}	=	The age of a business of Firm *i* at time *t*
LEV_{it}	=	Debt to Equity Ratio of Firm *i* at time *t*

4. Limitations of the Study

There are several limitations of the study. Firstly, this study examined only 3 years period of the company annual reports after the Stock Exchange of Thailand required all listed companies to disclose the ESG activities in the annual report.

The number of the listed companies that were selected to be listed on the SET ESG Index every year since 2020 is very limited (among 289 companies, only 58 companies were qualified). Furthermore, as there is no regulation or clear guideline on how ESG raters will evaluate and rate the company, the listed companies under SET ESG Index use different ESG rating agencies and some of them use more than 1 agency to provide the ESG score. To find the correlation of the ESG Score and the company performance, the ESG Score should be obtained from the same rating agency. The researcher therefore uses ESG Score from ESG Book which is the ESG rating agency that most of the companies under SET ESG Index use as their ESG rating agency and from the data obtained from ESG Book GMBH, only 56 of out 58 companies has been evaluated by ESG Book over the past 3 consecutive years. Due to this lack of data availability, at the time of data collection, it was not possible to extend the previous years, number of listed companies in the sample and there are 56 companies in the sample.

Lastly, this study is limited to four financial performance indicators i.e. ROE, ROA, ROS and TBQ to measure firm financial performance and the effects of some control variables such as size, industry, age and leverage.

Conclusion and Implications

The assumption behind this research is that by implementing environmentally sustainable practices, social responsibility, and good corporate governance, companies can attract more customers, reduce costs, mitigate risks, and improve long-term financial stability. Furthermore, investors and other stakeholders are becoming more interested in organizations that adhere to an effective ESG framework.

Understanding the relationship between ESG actions and financial performance can thus help businesses decide how to deploy resources, explain their efforts to stakeholders, and even gain a competitive edge. Additionally, investors can use this information to assess a company's long-term financial prospects and make investment decisions depending on their ESG criteria.

ESG factors encompass a range of criteria that investors use to evaluate the sustainability and ethical impact of an investment in a company. Key implications of this studies are as follows: -

- Correlation with financial performance: Many studies suggest a positive correlation between strong ESG performance and financial outperformance. Companies that effectively manage ESG risks and opportunities may experience better long-term financial results. This positive relationship is often attributed to factors such as improved operational efficiency, better risk management, and enhanced reputation.
- Decisive data for companies' management: The companies can use the result of the study to make decisions on the investment and expenditure planning for each ESG activities by trading off the importance and priority of its investment in each ESG pillar.

- Risk mitigation: Effective management of ESG issues can help companies identify and mitigate various risks. For instance, addressing environmental concerns can lead to better resource efficiency, avoiding regulatory fines, and preparing for the impacts of climate change. Social and governance issues, such as labor practices and executive compensation, can also influence a company's risk profile.
- Access to capital: Companies with strong ESG performance may find it easier to attract capital. Investors increasingly consider ESG factors when making investment decisions, and companies with robust ESG practices may have access to a broader investor base. This can result in lower capital costs and increased liquidity for such companies.
- Reputation and brand value: ESG considerations can significantly impact a company's reputation and brand value. Positive ESG performance can enhance a company's image, leading to increased customer loyalty and trust. Conversely, poor ESG performance may result in reputational damage, customer backlash, and potential legal or regulatory challenges.
- Regulatory compliance and evolving standards: Many regions and industries are witnessing increased regulatory scrutiny regarding ESG matters. Companies that proactively address ESG concerns may be better positioned to comply with evolving regulations, reducing the risk of legal and financial penalties.
- Long-term sustainability: Companies focusing on ESG factors are often seen as more sustainable in the long term. This perspective is aligned with the growing awareness of the importance of sustainable business practices in the face of global challenges such as climate change, social inequality, and corporate governance issues.
- Impact on investment strategies: Investors, including institutional investors, are incorporating ESG considerations into their investment strategies. The growing demand for responsible and sustainable investments has led to the development of ESG-focused investment products. This trend can influence capital flows and reshape the investment landscape.

Future Research

The following are some examples of issues for future consideration.

This study examines the relationship between ESG and financial performance of 56 companies listed on the SET ESG Index between 2020 and 2022 which have been rated by the same ESG rating agency for 3 consecutive years. Future research could apply a longitudinal method by using more years' data, larger sample size or difference ESG Score as it would increase the reliability of the results.

This study focuses on Thai companies. Future research could be expanded to a larger geographical coverage e.g. ASEAN, South East Asia or Asia-Pacific to understand the extent of ESG activities in other countries.

Lastly, this study is limited to 4 control variables (i.e. size, age, industries, and leverage) and 4 finance performance indicators (i.e. ROE, ROA, ROS, and TBQ). Future research could include other control variables (e.g. free-float percentage, institutional investors, number of independence director, audit firm size) and employ more financial performance indicators (both accounting-based and market-based performance, e.g. price earnings

ratio, dividend payout ratio, dividend yield, market-to-book ratio) to examine the relationship between ESG and financial performance.

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THE IMPACT OF TAX AVOIDANCE ON FIRM'S VALUE OF LISTED COMPANIES IN THE STOCK EXCHANGE OF THAILAND

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Abstract

This study has purpose to investigate the impact of tax avoidance on firm value of listed companies in the Stock Exchange of Thailand (SET). The data collecting is carried out the secondary data from SETSMART database of the Stock Exchange of Thailand. The sampling is consisted of 7 industrial groups which are totally 331 listed companies in the Stock Exchange of Thailand. Those include Agro and Food Industry Group, Consumer Products Group, Industrials Group, Property and Construction Group, Resource Group and Services and Technology Group (except the Financial Group, Recovering Group and MAI). The period of study covers 4 years since 2016 – 2019 in order to avoid statistic error in the situation of economic instability during Covid-19 and its recovering periods. The analysis employs tax avoidance as proxy of independent variable and firm's value as proxy of dependent variable through the process of panel data regression through Fixed Effect Model (FEM) specification. The result states that At 95% of confidence interval which is set to predict the impact of tax avoidance on firm value of listed companies in the Stock Exchange of Thailand shows that tax avoidance has significant positive effect on the firm's value that is measured by Tobin's Q which is meant the investors prefer to the ways to reduce tax to protect themselves from high tax cost.

Keywords: Firm's Value, Listed Companies, Tax Avoidance, Tobin's Q

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Introduction

In the era of globalization, the investors who invest their assets in the Stock Exchange of Thailand are important dynamic to build Thai economic growth with stability from huge amount of investment. Once, Thailand as developing country would like to have robust economy, Thai government sector and business sector have to clarify on knowing the determinants that can affect the level of investment from both domestic and international investors. As the previous studies have been searching for these determinants and they finds that determinants such as firm size, leverage, liquidity, and one important that is "tax" can be significantly affected on attracting investor in order to increase firm's value of listed companies.

Since taxation becomes an important factor to investors, many executives of listed companies in the stock exchange heavily focus on the manners and techniques to reduce their tax burden such as seeking tax privilege under double taxation treaties, bilateral investment treaties and seeking the loopholes of tax laws for eliminate their tax cost as generally, called "tax avoidance" strategy (Graham, 2013). For, tax avoidance, it is tax relief which essentially aid to allow companies searching the information and regulations that tax provisions have no mentioning to manage their own tax system in achieving lower tax cost and increase firm's value. However, the use of tax avoidance can be seen in various aspects such as tax avoidance can help shareholders in increasing their return on investment as the listed companies are able to organize their tax burden to rise firm's value. This aspect has resulting to make the listed companies to have ability to cover their liability and perform reinvesting, effectively.

From the perspective of the benefits which are able to gain from tax avoidance route, there are still risks that the firm must face according to a study by Chen et al. (2014), tax avoidance affects firm's value. The authors mention that the use of tax avoidance by executives in listed companies in a case study in China has a negative effect. The negative effect is carried from tax avoidance leads to distrust in business operations between investors and executives, which is caused by distortion of information in management. In similar result to Desai and Dharmapala (2011) who study the results in impact of tax avoidance on the firm's value of listed in the stock exchange. Desai and Dharmapala (2006) find that negative effect happens which the similar reason to previous study of Chen et al. (2014). However, based on the study of Hoang et al. (2017), they divide executives into two groups which are a group of executives of listed companies in the stock exchange residing in the country and executives of listed companies in the stock exchange residing outside the country. This study mention that if the group of executives of listed companies in the stock exchange are residing in the country, the use of tax avoidance by these executives will have a negative impact on the firm's value. On the other hand, if the executives of listed companies in the stock exchange are residing outside the country, it will have a positive impact on the firm's value (Hoang et al, 2017).

Notwithstanding, previous case study of South Korea's tax reform which investigate whether shareholders prefer tax avoidance in order to get high return on investment or not and

whether the tax management has impact on income diversion or not. This case study uses the different case of firms that try to avoid taxes, the results allow researchers to gain the details that both tax avoidance is possibly effect on shareholder value which it can be incorporated into stock prices as good governance concern. Consequently, South Korea uses this tax reform in order to seek positive effect of tax avoidance on firm value. As investors remark the effect of corporate tax avoidance on firm value, so firms likely to experience higher levels of tax avoidance which from economic view, a change from the 10^{th} to the 90^{th} percentile in the level of tax avoidance renders to have a change of 10 million dollars of firm value in case of South Korea (Hanlon et al., 2010).

Therefore, summarizing the results of different studies above in the same research area which have purpose of studying the impact of tax avoidance in the firm's value of listed companies in the stock exchange give different signs of effect. In order to present in-depth knowledge that can be used as a guideline for executives, investors and governments as well as stakeholders, this study carries out a new perspective on using tax avoidance procedures that may lead to increase firm's value. The main objective of this study is expected to answer the research question that "What does impact direction of the tax avoidance on firm's value of listed companies in the Stock Exchange of Thailand?" and "How the results from this study can be the guidelines and suggestions to drive right paths in order to help in rising the firm's value of listed companies in the Stock Exchange of Thailand?"

Consequently, this study is formed to support additional knowledge from previous studies in the area of tax avoidance and firm's value outline. To answer debating of various studies which still have conflicts of results and effective reasons to support the impacts, this study has ability to fill the gaps of studies which are left by past knowledges.

Research Objective

To study the impact of tax avoidance on firm's value of listed companies in the Stock Exchange of Thailand.

Hypotheses

Tax avoidance has positive impact on firm's value (Tobin's Q) of listed companies in the Stock Exchange of Thailand.

Review of Literature

In this study, the authors have searching the information, articles, documents, and other related evidences in the matter of impact of tax avoidance on firm's value of listed companies in the Stock Exchange of Thailand to be used as a guideline and supportive strength evidence for future study. Regarding to currently, tax avoidance is observed as a term of procedures in order to gain a tax

advantage which various firms desire legal tax pathways that have impact on the firm's tax burden in the long term such as earning cash flow advantages (Abdul et al., 2012)

Once, the committees on conducting and setting Revenue Code of Thailand oversee the implementation of current Revenue Code, they try to develop the provisions under revenue code which are discussed in the term of tax avoidance. This management section under Revenue Code in the matter of tax avoidance procedures is tax administration and management methods (or called Tax Management). The tax avoidance is classified as transparency which is not distorted, and also acceptable due to provisions of tax avoidance section against tax evasion in the Revenue Code as a provision in accordance with Tax avoidance measures (Anti-Tax Avoidance) are derived from tax planning which prepares to pay taxes correctly, completely and economically that result in using tax avoidance is not illegal like tax evasion.

Revenue department of Thailand (2021) has given a definition of tax avoidance that tax avoidance refers to various legal methods which intends to reduce the tax burden for taxpayers. In order to have a lower tax burden, tax avoidance takes advantages of loopholes in the law on the provisions of tax payment to see the gaps that can used to claim in reduction of tax amount that must be paid without necessarily to make it being lower than before from general business operations.

Tax avoidance is a behavior which is employed to reduce tax costs and divert profits from tax savings to increase stable firm's value. Moreover, tax avoidance is able to desecration of the law as reducing the confidence in rules of law (Chen et al., 2014). Unlike tax evasion, various previous empirical evidences show that tax evasion can reduce the value of a business as it destroys firm image on transparency and has direct impact on investment of both domestic and international investors. Nevertheless, tax avoidance is also beneficial in vary ways such as providing shareholders to have the opportunity in receiving more return from assets in the form of dividends. This leads to arise the result to the firms in order to have more capital to pay off debt and the manage their organization to expect more benefits in upcoming future (Yorke, 2016). However, Desin and Dharmapala (2006) and Chen et al. (2014) argue that tax avoidance leads increasing of firm operation costs as tax avoidance is a practice of complying with the rules, procedures, and conditions of tax law by using their loopholes which has to consume the professional persons to work in these matters.

An empirical study of Desai and Dharmapala (2011) in the research area of the impact of tax avoidance on firm's value has been stated that tax avoidance is one of the most important procedures which is used in optimal corporate governance and have a significant impact on management policies regarding tax avoidance is able to rise the value of the enterprise. However, the use of tax avoidance can be viewed from many different perspectives. From the perspective of the disadvantage, tax avoidance can still gain risk that the firm can face from misunderstanding the provision of tax law and take some details in order of gaps of law to do tax avoidance which may lead the firm faces with tax penalties. This author also mentions the advantage of tax avoidance in similar reasons of Yorke (2016).

The case study of Stock Exchange of Thailand about relationship between tax avoidance and firm's value which is carried out Desai et al. (2011) presents the result of a negative impact of tax avoidance on firm's value. The authors state the reasons that tax avoidance leads to mistrust between investors and firm's management due to management distortions. Besides, the study of Chen et al. (2014) finds a negative effect of tax avoidance which is provided the reason about management distortions. Anyhow, once the management strategy of tax avoidance is good corporate governance with board size indicators, board diversity, independent commissioners, and audit committee on the firm value then the tax avoidance is able to rise the firm value relationship by reducing the firm's tax burden through accounting procedures and legal cracks (Hoseini et al., 2019)

Apart from deliberating the advantages of tax avoidance, it is able to rise cash flow and net income which are able in generating the increase of firm value. On the other hand, it is also able to decrease firm value regarding to organisation problems that will occur. Park et al. (2015) states that there is significant negative impacy of tax avoidance on firm value as it also finds non-financial costs that is created from tax avoidance actions, such as the chance of restating financial statements and lawsuit risk by the tax authority (Chen et al., 2015).

However, Hoang et al. (2017) divides the executives into two groups. The first group is a group of executives of listed companies in the stock exchange who reside in the country and the second group is executives of listed companies in the Stock Exchange who reside outside the country. The results shows that if the group of executives of listed companies in the stock exchange are residing in the country, the use of tax avoidance by these executives will have a negative impact on the firm's value as they are less worrying on tax costs when compare with the executives of listed companies in the stock exchange are residing outside the country. On the other hand, if the executives of listed companies in the stock exchange are residing outside the country, it will have a positive impact on the firm's value.

Notwithstanding, there are other factors which can affect firm's value which should be concerned by entities. Asiri et al. (2014) mention the use of financial ratios to describe the value of a company and the result shows that size of the company (Firm size) has a significant effect on the firm value. They provide the reason that firm size can reflect signals to investors that large companies are excessive growing when compares small companies. This situation aids to attract more investors and result in high firm value. In the same direction, Corvino et al. (2019) also finds that firm size has a positive impact on firm value.

For factors within the organization such as Financial risk (Leverage) has a opposite influence on firm value regarding to the study of Chaipinchana et al. (2018). This study mentions that which if the within the organization has high leverage from the corruption of personnel, personnel intentionally violate rules and regulations, this issues will inevitably affect the operational efficiency and firm performance. However, the study of Eslam et al. (2017) finds no relationship between financial risk and firm value.

Chia et al. (2020) finds the liquidity level benefits in rising firm value case of Malaysia. The firm value impact demands a more liquidity in operation with political connections, higher foreign nominee ownership and higher foreign institutional ownership. Nevertheless, there is one important factor that can affect firm value is return on assets. The finding of Raja Adri et al. (2016) states the higher the return on assets is able to generate firm value as it indicates firm's ability to generate profits using the assets owned by itself. The increase of profits is a positive influence in rising the company's share price in the capital market because the demand and supply of the capital market are reflected by the public's assessment of the company's performance.

Research Conceptual Framework

From a review of related literatures, this research conceptual framework can be defined as follows:

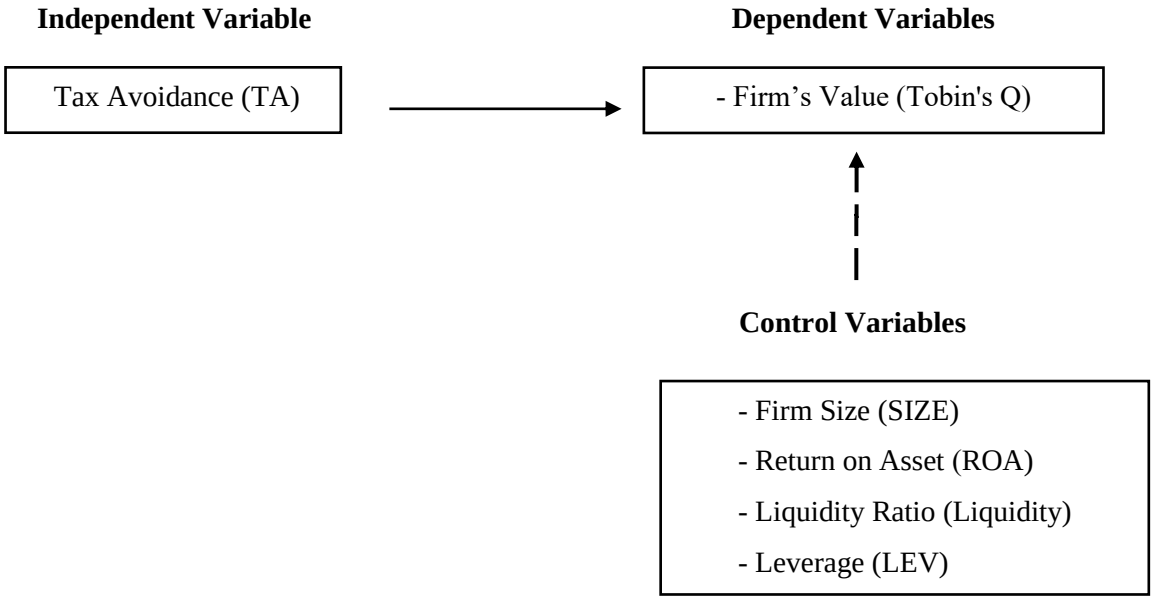

Figure 1. Conceptual Framework

Methodology

This study examines the impact of tax avoidance on firm's value of listed companies on the Stock Exchange of Thailand which the primary sources of data are carried out from the considering information from official database such as the Stock Exchange of Thailand's annual report (Form 56-1) and SET Smart that shows the explanations and statistics for the variables which are employed in this study in the subject to find relationship between tax avoidance and firm's value. The data collection is during year 2016 - 2019 for a total of 4 years. In 2019, there were 847 listed companies in the Stock Exchange of Thailand excluding financials group, real estate and mutual funds group, rehabilitating operations and MAI. Accordingly, this study selects the sample size in total 331 listed companies which provide complete information to avoid the error and bias of analysis.

Research Sampling

The research sampling is selected from the Stock Exchange of Thailand which consist of 7 groups of listed companies as they are presented below:

Agro and Food Industry Group	37 companies
Resources group	38 companies
Technology group	27 companies
Services group	75 companies
Industrials group	56 companies
Consumer products group	24 companies
Property and construction group	74 companies

These total 331 sampling companies are not involved the financials group because the financial statements have high movement and fluctuation which are difficult to use in measurement in this research subject area. Besides there are real estate and mutual fund group, rehabilitating operations MAI which are excluded by the same reason with financials group.

Data Variables

Measuring variable in this study include independent variable, dependent variables, and control variables as follows:

1. Independent variable is tax avoidance which obtains from listed companies in the Stock Exchange of Thailand that is expected to have an effect on firm value.

2. Dependent variables is firm's value which is measured by Tobin's Q

3. Control variables consist of:

3.1 Firm size (Size) is measured from the logarithm of total assets.

3.2 Return on asset (ROA) is the measurement for profitability of enterprises.

3.3 Liquidity ratio (Liquidity) is measured by the ratio of current assets to current liabilities.

Research Tools

The tools that are used in this study in order to collect data collection are the collecting of data from the database of the Stock Exchange of Thailand (SET SMART) and the companies' annual reports (Form 56-1) with the details of each variables can be seen below:

1. Independent Variable is the tax avoidance which is measured by income tax expenses to pre-tax income.

Tax Avoidance = Income Tax Expenses/Pre-Tax Income

2. Dependent Variables

2.1 Firm value (Tobin's Q) is measured by the sum of the market value of common stock and the total liabilities to total assets.

Tobin's Q = (Market Value of Common Stock + Total Liabilities)/Total Assets

3. Control Variables

3.1 Firm size (Size) is measured from the logarithm of total assets.

Size = log Total Asset

3.2 Return on asset (ROA) is the measurement for profitability of enterprises where a company's net income is divided by its average total assets.

ROA = Net Income/Average Total Asset

3.3 Liquidity ratio (Liquidity) is measured by the ratio of firm's ability to cover short-term obligations by dividing current assets by current liabilities.

Liquidity = Current Assets/Current Liabilities

3.4 Leverage (LEV) is the debt-to-equity ratio which usually signifies that a firm has been aggressive in financing its growth with debt

LEV = Total liabilities/Total Shareholders' Equity

Data Analysis

In this study, the authors have procedures for data analysis of a total sample 331 companies by analysed to measure the effects of independent variables, dependent variables, and control variables. This study employs fixed effect model (FEM) regression to analyse the panel data (Field, 2009) to see the impact between tax avoidance on firm's value of listed companies in the Stock Exchange of Thailand. The data sets of variables are collected from company's annual report database (Form 56-1) and SET Smart.

Fixed effect model (FEM) regression analysis is used in this study to examine causal effects between tax avoidance and firm's value of listed companies in the Stock Exchange of Thailand which the equation can be written as follows:

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 TA_{it} + \beta_2 SIZE_{it} + \beta_3 ROA_{it} + \beta_4\ Liquidity_{it} + \beta_5\ LEV_{it} + \varepsilon_{it}$$

Where:

Tobin's Q	=	the natural logarithm of the performance of company i in year t
TA	=	tax avoidance of company i in year t.
SIZE	=	the size of company i in year t
ROA	=	return on assets of company i in year t.
Liquidity	=	current assets to current liabilities of company i year t.
LEV	=	Leverage of company i in year t.
β_0	=	constant value
β_{1-4}	=	coefficient value of variables
ε	=	error value
i	=	listed company in the Stock Exchange of Thailand
t	=	time year 2016- 2019

Research Results

Table 1. Result of Descriptive Statistics

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Tobin's Q	331	.69	149.03	12.6826	15.00657
TA	331	-1.80	4.60	.0784	.42236
SIZE	331	21.82	37.52	27.2878	2.64800
ROA	331	-45.65	33.46	2.6087	11.24716
Liquidity	331	.36	1257.11	20.3286	79.66117
LEV	331	.07	25.95	2.8333	3.47452
Valid N (listwise)	331				

From Table 1, the result of the descriptive statistics show that the sampling companies have firm's value (Tobin's Q) at minimum of .69 with the maximum of 74.06 and the mean of 12.0640 with standard deviation 12.41310. The result of descriptive statistics on independent variable show that tax avoidance (TA) has minimum amount at -1.80 with the maximum of 4.60 and the mean of .0784 with standard deviation .42236. For control variables, firm size (SIZE) from the logarithm of total assets presents minimum amount at 21.82 with the maximum of 37.52 and the mean of 27.2878 with standard deviation 2.64800. The return on assets (ROA) presents minimum amount at -45.65 with the maximum of 33.46 and the mean of 3.0844 with standard deviation 9.25618. For the liquidity, it has minimum amount at .36 with the maximum of 96.02 and the mean of 11.0470 with standard deviation 12.06131. Lastly, leverage (LEV) present statistic at minimum of .07 with the maximum of 25.95 and the mean of 2.8333 with standard deviation 3.47452.

Table 2. Result from Correlation Matrix

		Tobin's Q	**TA**	**SIZE**	**ROA**	**Liquidity**	**LEV**
Tobin's Q	Pearson Correlation	1					
	Sig. (2-tailed)						
TA	Pearson Correlation	-.017	1				
	Sig. (2-tailed)	.756					
SIZE	Pearson Correlation	.175	-.081	1			
	Sig. (2-tailed)	.001***	.144				
ROA	Pearson Correlation	.072	-.152	.047	1		
	Sig. (2-tailed)	.192	.006**	.395			
Liquidity	Pearson Correlation	-.001	.004	-.086	-.041	1	
	Sig. (2-tailed)	.989	.943	.117	.454		
LEV	Pearson Correlation	.168	-.056	-.032	-.012	-.036	1
	Sig. (2-tailed)	.002**	.308	.568	.831	.516	

Note: ***, **, * mean there is a relationship at the significance level of 0.01, 0.05, 0.10, respectively.

From Table 2, it is found that independent variable, namely the firm size (SIZE) has a relationship in the same direction with the firm's value (Tobin's Q) at a statistical significance of 0.001. While the return on assets (ROA) has a relationship in the opposite direction with tax avoidance statistically at 0.006. For leverage (LEV), it has a relationship in the same direction with the firm's value (Tobin's Q) at a statistical significance of 0.002. Moreover, the correlation coefficient between variables is not more than 0.8 as the variance factor (VIF) (Hair et al., 2010).

Table 3. Result from Fixed Effect Model Regression (Dependent Variable: Tobin's Q)

Variable	B	Std Error	t	Sig.
(Constant)	-17.819	8.480	-2.101	.036
TA	.632	1.936	.327	.044*
SIZE	1.025	.306	3.345	<.001***
ROA	.092	.072	1.275	.203
Liquidity	.005	.010	.445	.657
LEV	.763	.232	3.285	.001***
R Square	.066			
Adjusted R Square	.052			

*p< 0.05, ** p< 0.01 *** p< 0.001

From Table 3 to test the relationship between firm's value (Tobin's Q) and the independent variable tax Avoidance along with the control variables as firm size (SIZE), return on assets (ROA), Liquidity and leverage (LEV), it is found that tax avoidance (TA) has significantly impact on firm's value (Tobin's Q) which has a significant level 0.044. This statistic value can be used to explain that if there is increasing in tax avoidance of 0.632, it will result in the rising of firm's value at 1.

Furthermore, firm size (SIZE) also has strongly significant positive impact on firm value which the result presents same as the study of Corvino et al. (2019) which state that the firm size is positively related to firm value. As if the firm is large, it will have an advantage in terms of huge capital. For investment. It can be explained that if firm size is increased by 1.025, it will lead firm value increased by 1. However, return on assets (ROA) and Liquidity are not significantly related to give impact on firm's value (Tobin's Q) as the study of Yorke, Amidu and Agyemin - Boateng (2016) mention that it can be happened from the effect of omit variables .

Nevertheless, the study finds that leverage (LEV) has a significant positive impact on firm value (Tobin's Q). It can be explained that if leverage (LEV) is increased by .763, it will lead firm value increased by 1. This results is conflict to the study of Chaipinchana et al. (2018) which this study states that if financial risk of the business are high, it will result in the firm value decreasing that has causes from the corruption of personnel in the organization , personnel violate rules and regulations.

Discussion and Conclusions

Regarding to the results of study the impact of tax avoidance on firm's value of listed companies in the Stock Exchange of Thailand, this study finds that that tax avoidance (TA) has a positive impact on firm's value (measured by Tobin's Q) in the case of listed companies in the Stock Exchange of Thailand. This finding can be seen that tax avoidance has ability to help the company in order to carry out the tax management process efficiently. Moreover, tax avoidance procedures has ability to lead companies in increases the firm's value through the reducing of tax payments and increase overall capital which result the companies can use these gains in improving and expanding the business. Once the company does not have an effective tax management process, the value of the company shall be likely to decrease. These results are supported by Zemzem and Ftouhi (2016), Oyeyemi and Babatunde (2016), Zemzem and Ftouhi (2013) and Fajrin et al. (2018).

Research Benefits

From the research results , the information can be used as guidelines for the board of directors, independent committees and audit committees who can have the benefits from receiving how to conduct tax provisions under revenue code to aid tax avoidance practices acting properly for investing to help investor reducing their tax burden. Moreover regulatory agencies can use the results of the study as guidelines for developing good corporate governance mechanisms as well as governments can use them to formulate various policies that are consistent and appropriate to help in minimize loopholes of tax law.

Research Suggestions

1. The future study should expand the time period for studying in order to expand the scope of the study and obtain more data for making strong evidence of statistical support.

2. The future study can use other variables besides this research to avoid error from omitted variables.

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WAGE-LED OR PROFIT-LED: INCOME DISTRIBUTION AND ECONOMIC GROWTH IN THAILAND

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Naphon Phumma[1]

Abstract

Thailand is currently facing with high household debt and economic stagnation, which may come from insufficient in people income. The impact of debt on the economy is dual edged, serving as a potential stimulant for consumption but also create the risk of economic instability. On the other hand, when individual income, sourced primarily from wages, experiences an increase, there is a potential for a decrease in investment. This is because investors or capitalists may face higher production costs. This research's primary objective is to determine the main driver of the Thai economy, namely labor, capital, or household debt. This research uses a demand regime analysis framework to determine the main driver. Specifically, the study examines whether increasing labor share drives consumption more than harms investment, leading to a wage-led demand regime. Alternatively, capital share drives the economy, which is called a profit-led demand regime. The research finds that the demand regime in Thailand is profit-led, which means investment has a more substantial impact on the Thai economy than consumption, with household debt failing to stimulate consumption and, instead, decreasing investment. Therefore, the study recommends addressing the household debt problem as an essential problem that should be fixed. Furthermore, the study suggests that policymakers focus on developing a supply-side view of the economy concurrently with efforts to enhance labor wealth, improve people's quality of life, and stimulate economic growth through demand-side policies. This integrated approach is essential for economic development and effectively addressing the household debt problem.

Keywords: Macroeconomics, Economic Growth, Income Distribution, Household Debt

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Introduction

The household debt challenge has grown significantly in Thailand since the late 2010s, posing the potential to initiate economic downturns and adversely affect the overall economy. This issue places a burden on both borrowers and lenders. In cases where an individual is unable to repay his debts, a lender may encounter difficulties. From a macro perspective, the financial sector may also have problems, harming the broader economy. Nonetheless, it is essential to recognize that household debt can also serve as a stimulus for the economy. As people borrow money, they gain additional funds for consumption, potentially boosting private consumption on a macro scale.

shows a predominantly upward trend, raising notable concerns due to its rapid escalation over the past 15 years. This trend has surged from approximately 60 percent of GDP in 2006 to exceed 80 percent in 2021—an increase of more than 20 percent within this relatively short timeframe. Moreover, according to the Bank of Thailand's report, Thailand's household debt surpassed that of other emerging market economies such as Malaysia, India, and Indonesia. Furthermore, Thailand 's household debt to GDP ratio is comparable to that of high-income countries such as the USA and the United Kingdom.

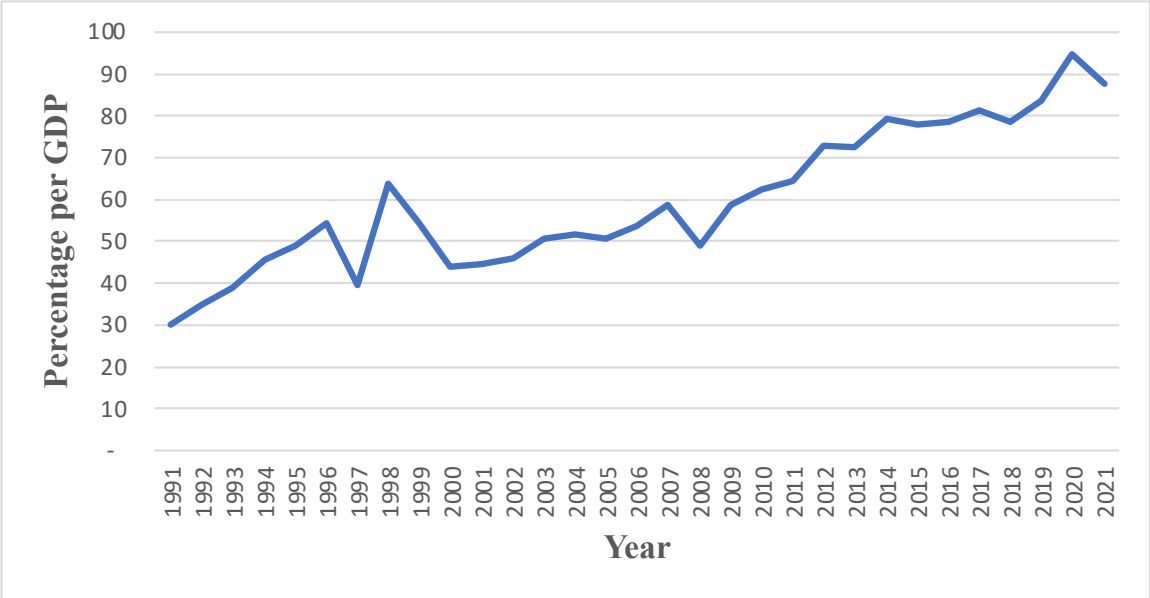

Figure 1. The household debt to GDP ratio in Thailand 1991-2021.

The higher household debt to GDP ratio is related to numerous aspects. One angle suggests that people do not have enough money to repay their debts. Individuals aspire to consume, but when their income is insufficient to fulfill their consumption needs, they may resort to debt; this allows them to maintain their desired level of consumption. However, if their income is unchanged or decreases while the debt persists, it leads to a rise in household debt. Another angle is that the GDP grew slower than household debt recently, causing the debt-to-GDP ratio to increase (see Figure 2).

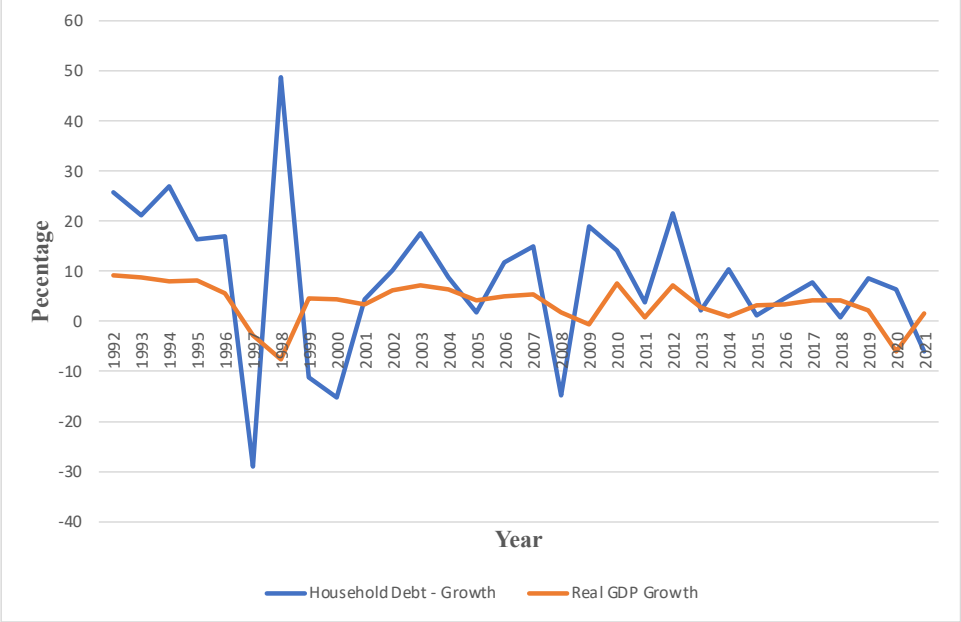

Figure 2. Thailand Household debt growth compares with GDP growth rate 1991-2021

The higher household debt to GDP ratio can be attributed to various factors. One perspective posits that individuals may face challenges in repaying their debts due to insufficient income. As people aspire to maintain a certain level of consumption, they may turn to borrowing when their earnings fall short. While this enables them to sustain their desired consumption patterns, if their income remains stagnant or decreases while the debt endures, it results in a surge in household debt.

Another dimension to consider is the possibility of GDP growth trailing behind household debt expansion. If the growth of the economy, as measured by GDP, lags behind the pace at which household debt accumulates, it contributes to an increase in the debt-to-GDP ratio.

Since the primary source of household income is wages, this concern regarding household debt might result from a lower labor share in the national income. The portion of national income allocated to labor is known as the labor share. It is a part of functional income distribution, which is the distribution of income in a country based on factors of production.

Functional income distribution can be further divided into labor share, the income sources from compensation such as wages, and capital share or profit share, which pertains to income generated from capital, such as profits, rents, and interests. Additionally, low wages may limit consumption, but they do not necessarily harm the economy, as investment is another component of aggregate demand. Low wages can reduce production costs for investors or exporting firms, enabling them to accumulate more profit and further increase their investments. Additionally, low wages may attract foreign businesses to invest in a country due to the advantage of lower labor costs.

Consequently, these factors might lead to an increase in aggregate demand and, hence, economic growth. What are the main factors driving the Thai economy? Have household debts made positive contributions? Have wage shares, and consequently consumption, been too low to contribute

to growth significantly? Have the high profits and exports resulting from low wages been the economy's key drivers? To find the answer, we need to examine Thailand's aggregate demand. This term refers to the overall demand for the country's economy, considering various macroeconomic aspects such as consumption, investment, government spending, exports, and imports. Wages impact consumption and imports by affecting people's disposable income. Wages also influence investment as they constitute a production cost for capitalists, investors, or business owners. Furthermore, as previously mentioned, labor wages will be represented by the labor share in this place.

Furthermore, aggregate demand has played an important role in the economy. Bhaduri and Marglin (1990) argue that if an increase in income has a more significant positive impact on consumption than a negative impact on investment, aggregate demand and economic growth will increase. They refer to this scenario as a wage-led demand regime. On the other hand, if a higher wage negatively affects investment more than it positively influences consumption, they refer to it as a profit-led demand regime.

The demand regime will answer the main question of this research, which is to identify the primary driver of the Thai economy: whether it is labor, capital, or possibly debt. It also explores the impact of income distribution on economic growth.

Literature Review

Theoretical Framework

Bhaduri and Maglin (1990) are pioneers of a wage-led and profit-led demand regime. They constructed a macroeconomic framework to emphasize the influence of aggregate demand and income distribution on economic growth. Wages represent the purchasing power of labor and act as a constraint for capitalists or investors because higher labor wages mean higher production costs for them.

Numerous studies have expanded upon the ideas and theories presented initially by Bhaduri and Marglin (1990), with Stockhammer playing a significant role in this development. In his 2011 literature, Stockhammer discusses that if the world economy is indeed wage-led, policymakers should adopt wage-led strategies to stimulate economic growth. Implementing distributional income policies to increase labor share is essential. Palley (2017) contributes to the discussion by arguing that income/wage distribution can influence an economy's regime. He proposes a new model departing from the assumption that workers save none of their wages. He suggests that workers, particularly those in capitalist-manager roles, save a portion of their wages, thus owning a share of wealth and receiving some profit. Palley emphasizes that changes in income distribution can reshape an economy's outlook, cautioning against econometric pitfalls in determining whether an economy is wage-led or profit-led. Lavoie (2017) reviews demand regimes literature without relying on econometrics, using a historical methodology instead. Based on various works, he concludes that the post-Keynesian school generally identifies aggregate demand as wage-led. In contrast, the Marxian school leans towards identifying aggregate demand as profit-led. Lavoie also references Palley's (2017) conclusion that economic policies can endogenize demand regimes.

The Model Approaches

Blecker (2016) explores two methods for estimating the impacts of income distribution: the structural approach and the aggregative approach. The structural approach entails the distinct estimation of individual components in aggregate demand through econometrics, offering insights into each element's specific impact and magnitude. On the other hand, the aggregative approach simplifies equations into vectors, simultaneously dealing with demand and distribution and capturing dynamic interactions. Then, there exist two primary model approaches for delineating a demand regime. Each has its own set of advantages and disadvantages. Structural approaches will be used for estimation in this research because they allow us to capture the impacts of labor share on all variables in the demand function more precisely than the aggregative approach. Furthermore, the aggregative approach might lack detailed accuracy for individual components of aggregate demand (consumption, investment, and net export).

Empirical Analysis

Numerous pieces of literature delve into the analysis of cases in Asian countries. Jetin and Kurt (2016) analyzed the case of Thailand, utilizing theoretical concepts from Bhaduri and Maglin (1990) and building on ideas from Stockhammer et al. (2009). Employing a structural approach, they estimated each demand component. Their analysis underscored the significance of exports to the Thai economy, as many Thai industrial companies operate within the global supply chain. The estimation suggested that increasing labor wages would raise production costs in the industrial sector, impacting Thailand's exports. Conversely, higher wages did not significantly stimulate consumption, concluding that Thailand has a profit-led demand regime.

Joo et al. (2020) examined the South Korean economy. They calculated functional income distribution using methods such as Jetin (2012), Gollin (2002), and Jetin and Kurt (2016). Their results indicated a decline in South Korea's labor share during 1982-2018, regardless of whether the denominator was National Income (factor cost) or Gross Value Added. Their methodology for calculating income share and estimating the impact of income on consumption or investment differed from previous methods. They also used the single equation approach, adopted by Hein and Vogel (2008), to estimate each aggregate demand component. The study concluded that South Korea had a wage-led demand regime, as the effect of income on consumption outweighed its impact on investment.

The Labor Share

Various methodologies have been proposed for calculate labor share. A straightforward method, suggested by OECD and ILO (2015), is to assume that two-thirds of mixed income should be counted as labor share. Alverado et al. (2020) introduced similar method, suggesting a benchmark that employs a 70-30 ratio to distinguish between labor share and capital share in mixed income.

Methodology

In this paper, the calculation of Thailand's labor share will employ the Rule of Thumb method, which is based on the principle of dividing mixed income into labor income and capital income with a predefined ratio. The widely accepted ratio for this method is 70% for labor income and 30% for capital income. By following the Rule of Thumb method with these specific parameters, the objective is to ascertain the labor share in Thailand. This determination is crucial for analyzing the economic dynamics and aggregate demand regime of the country.

Hence, the adjusted labor share formulation in this research is.

$$\frac{Compensation\ of\ employees\ +\ 70\%\ of\ household\ mixed\ income}{Net\ National\ Income\ -\ Taxes\ on\ production}$$

Since the income of country at equilibrium is equal to, determining aggregate demand equal to to solve the impact of labor share on income.

$$Y^* = AD = C(Y, LS) + I(Y, LS) + NX(Y, LS)$$

By function of C, I, and NX, they contain Y and LS, when Y= income and LS = labor share.

To explore the impact of labor share on aggregate demand, one needs to find the differential of Y with respect to the labor share.

Given at equilibrium, thus, the differential of Y* by labor share is.

$$\frac{dY^*}{dLS} = \frac{\frac{\partial C}{\partial LS} + \frac{\partial I}{\partial LS} + \frac{\partial NX}{\partial LS}}{1 - \left(\frac{\partial C}{\partial Y} + \frac{\partial I}{\partial Y} + \frac{\partial NX}{\partial Y}\right)}$$

Given $h_1 = \frac{\partial C}{\partial Y} + \frac{\partial I}{\partial Y} + \frac{\partial NX}{\partial Y}$ and $h_2 = \frac{\partial C}{\partial LS} + \frac{\partial I}{\partial LS} + \frac{\partial NX}{\partial LS}$.

The coefficient from every estimation result (elasticities of each variable to labor share and income) would be modified into marginal effect to find the total effect.

When $\alpha_{C,WS}$, $\alpha_{I,WS}$, $\alpha_{NX,WS}$ is the estimated coefficient from the estimation by a change in labor share to consumption, investment, and net export, respectively. ($Y_{Private}$ = Consumption + Investment Export-Import)

$$h_2 = \frac{\partial Y_{Private}}{\partial WS}\frac{1}{Y} = \alpha_{C,WS}\frac{C}{Y}\frac{1}{WS} + \alpha_{I,WS}\frac{I}{Y}\frac{1}{WS} + \alpha_{NX,WS}\frac{NX}{Y}\frac{1}{WS}$$

The real GDP (Y) serves as the denominator for comparing with the marginal effect of change in private excess demand (consumption, investment, and net export) by real GDP. When divided by Y,

the result will be the percentage of change by GDP, providing a clearer understanding of the impact size compared to expressing it solely in terms of the absolute volume of change.

Then, the marginal effect of a 1% change in real GDP on consumption, investment, and net export can be written in this form: by gamma (the coefficients) is elasticity between each variable and Y. And I use average C, I, NX, and Y in the calculation.

$$h_1 = \frac{\partial C}{\partial Y} + \frac{\partial I}{\partial Y} + \frac{\partial NX}{\partial Y} = \gamma_{C,Y}\frac{C}{Y} + \gamma_{I,Y}\frac{I}{Y} + \gamma_{NX,Y}\frac{NX}{Y}$$

The consumption and investment functions share common variables, including real GDP, labor share, household debt, property price, and stock price index. Then, Net export will be separated into export and import to capture the effect more clearly. Variables in export function contain world GDP, exchange rate, and labor share. Import contains real GDP, exchange rate, and labor share. Moreover, dummy variables for the COVID-19 pandemic will be added as a control variable in the net export case.

Four specifications are outlined for both the consumption and investment functions, while two are defined for the export and import functions. The real property price index and stock market price index may serve as indicators of economic stabilization. However, a dummy variable of the COVID-19 situation in 2020 and 2021 was added for all aggregate demand component functions. Economic downturn happens around the world. Thailand also faced a crisis; the data from 2020 and 2021 may not be revised yet, and the dummy variable may stabilize the result in that case, especially for the export and import function.

Research Result

The Empirical Estimation

The results from unit root testing indicate that all variables in the consumption and investment functions have an order of integration of I(1), except the export, which has the order of integration at I(0). In part of cointegration, all of the functions, except Specification 2 of the export function, is not cointegrated, which means all of the variables in each function have long-run relationships.

h_1 and h_2 are used to define the aggregate demand regime. The key thing is h_2 (the private excess demand); if the private excess demand is more than 0 [$(\frac{\partial C}{\partial LS} + \frac{\partial I}{\partial LS} + \frac{\partial NX}{\partial LS}) > 0$], that means the labor share has negative relation with the demand, then, the demand regime is wage-led. On the other hand, if the private excess demand is less than 0, the aggregate demand is profit-led. So, h_1 and h_2 will be analyzed from an estimation result.

In addition, the impact of household debt is also significant, and it is one of the focuses of this research because it affects all components of aggregate demand, especially consumption and investment. Then, there will have an estimation result of,and for finding the impact of household debt on consumption and investment and capturing the influence of household debt on aggregate demand and economy.

Table 1. Consumption function estimation result

Dependent Variable:	Specification 1	Specification 2	Specification 3	Specification 4
lnY	1.12154***	1.1157***	1.08337***	1.2187***
	(0.0930)	(0.0862)	(0.0836)	(0.0532)
$lnWS$	0.289094**	0.41289***	0.34075**	0.3323**
	(0.125)	(0.0953)	(0.1437)	(0.1411)
$lnDH$	-0.027076	-0.02638	-0.05450	-0.03103
	(0.0430)	(0.0412)	(0.0472)	(0.0331)
$lnPP$	-0.114847	-0.1338	-	-0.26877***
	(0.0940)	(0.0940)		(0.0736)
$lnSP$	-0.018612	-	-0.02353	-0.0051
	(0.0126)		(0.0128)	(0.0138)
Dummy	-	-	-	0.07775
				(0.0131)
Constant	-1.37484	-1.281	-0.8280	-2.2200
	(0.8132)	(0.7676)	(0.695)	(0.5074)

Remark: Y is real GDP, WS is labor share, DH is household debt, PP is the Property Price index, and SP is the Stock market index.

*,**,*** indicate significance levels at 90 percent confidence interval, 95 percent confidence interval, and 99 percent confidence interval, respectively. The bracket under the coefficient is the standard deviation of each variable.

In specification 4, the coefficient of change in the property price index in consumption become statistically significant when a dummy variable is included in the estimation. At the same time, it was found statistically insignificant on the rest of the specifications. This result may imply that the property price does not have a particular influence on consumption and aggregate demand. However, for the other two main variables, GDP and the labor share, their impact on consumption is robust; increasing both of them will increase consumption.

Table 2. Investment function estimation result.

Dependent Variable:	Specification 1	Specification 2	Specification 3	Specification 4
lnY	1.2256***	1.3123***	1.09***	1.319***
	(0.1596)	(0.3584)	(0.1675)	(0.1526)
$lnWS$	-1.7821***	-3.6235***	-1.5987***	-1.740***
	(0.4882)	(0.6962)	(0.4829)	(0.5373)
$lnDH$	-0.3018**	-0.3120**	-0.3991***	-0.30562***
	(0.0863)	(0.1189)	(0.0835)	(0.0770)
$lnPP$	-0.4077**	-0.124986	-	-0.55648**
	(0.1936)	(0.3363)		(0.2602)

Table 2. Investment function estimation result. (Cont.)

Dependent Variable:	Specification 1	Specification 2	Specification 3	Specification 4
lnSP	0.2768***	-	0.25937***	0.28987***
	(0.0361)		(0.0316)	(0.0456)
Dummy	-	-	-	0.0751
				(0.0587)
Constant	-1.021	-2.406	0.9206	-1.8370
	(1.5716)	(3.8218)	(1.5022)	(1.5488)

Remark: Y is real GDP, WS is labor share, DH is household debt, PP is the Property Price index, and SP is the Stock market index.

*,**,*** indicate significance levels at 90 percent confidence interval, 95 percent confidence interval, and 99 percent confidence interval, respectively. The bracket under the coefficient is the standard deviation of each variable.

Investment relates strongly to the three main focuses of this research (GDP, labor share, and household debt) and strongly to the stock market in all specifications. The property price is statistically significant in Specifications 1 and 4 but insignificant in Specifications 2. Additionally, the coefficient on Specification 2 differs from Specification 1 and Specification 4, although all coefficients exhibit the same directionality, as observed in the case of consumption.

Table 3. Export function estimation result.

Dependent Variable:	Specification 1	Specification 2
lnY_f	2.2687***	2.1541***
	(0.0702)	(0.1249)
lnE	-0.5916***	-0.5389**
	(0.1792)	(0.2374)
lnWS	-1.3708**	-1.0036
	(0.6922)	(0.2374)
Dummy	-0.2633***	-
	(0.0657)	
Constant	-62.490***	-58.5408***
	(2.8792)	(4.720)
R-squared	0.9812	0.9669
Adjusted R-squared	0.9783	0.9632

Remark: Where Yf is world GDP, E is exchange rate, WS is labor share,

*,**,*** indicate significance levels at 90 percent confidence interval, 95 percent confidence interval, and 99 percent confidence interval, respectively. The bracket under the coefficient is the standard deviation of each variable.

Table 4. Import function estimation result.

Dependent Variable:	Specification 1	Specification 2
lnY	1.3453***	1.30026***
	(0.0818)	(0.0759)
lnE	0.16386	0.15454
	(0.2554)	(0.2697)
$lnWS$	0.7098	0.8890
	(0.9871)	(1.0113)
Dummy	-0.16545*	-
	(0.1077)	
Constant	-6.325***	-5.51992***
	(1.672)	(1.4678)

Remark: Where Y is real GDP, E is exchange rate, WS is labor share,
*,**,*** indicate significance levels at 90 percent confidence interval, 95 percent confidence interval, and 99 percent confidence interval, respectively. The bracket under the coefficient is the standard deviation of each variable.

Export and import are strongly influenced by income (World GDP and GDP). Then, the open economy sector typically relates to the economic situation at that time rather than another factor.

Impact of household debt

Household debt does not relate to consumption, which is statistically insignificant in Table 1. However, investment is strongly related to the household debt. Although they have a negative relation, increasing household debt will decrease the investment *ceteris paribus.* Henceforth, the rise in household debt will harm the economy because it will decrease investment and not noticeably maintain or stimulate consumption. The higher household debt rate will increase economic instability and burden people's quality of life.

Based on this findings, it is evident that household debt does not play a role in boosting the Thai economy. The growth observed in the past does not appear to be driven by an increase in household debt. So, for this reason, the household debt problem will be a crucial economic problem for Thailand. Whether the demand regime is profit-led or wage-led.

The Overall Results

The result of the marginal effects of 1 percent changes in labor share on private excess demand, measuring in % of real GDP, is shown in Table 5.

Table 5 the marginal effects of 1 percent changes of labor share on private excess demand, measuring in % of real GDP.

Consumption (C)	Investment (I)	Net Export (NX)	Private excess demand (C+I+NX)
0.2322	-0.7454	-1.3731	-1.8863

Then, the marginal effect of a 1% change in real GDP on consumption, investment, and net export can be expressed in this form, where beta (the coefficients) represents the elasticity between each variable and Y. And I use average C, I, NX, and Y in the calculation. The result of the marginal effects of 1% changes in real GDP on private excess demand is shown in Table 6.

Table 6. the marginal effect of 1 percent change in real GDP on consumption, investment, and net export

Consumption (C)	Investment (I)	Net Export (NX)	Private excess demand (C+I+NX)
0.5987	-0.4955	0.8525	-0.7492

Import was treated as net export in the calculation because real GDP does not affect export in the Keynesian view. Since the net export is export minus import (net export = export-import), the net export is negative in the marginal effect calculation.

Following h_1 is equal to -0.7492, and h_2 is equal to -1.8863. The multiplier of change in labor share to equilibrium aggregate demand will follow equation (2). Accordingly, h_2 is a change of private excess demand by changes in labor share while $1/(1-h_1)$ is a magnitude of change in GDP to change in labor share. Hence, the total effect of this empirical analysis is -1.8863 divided by 0.5717. Subsequently, the total effect is equal to -3.2996.

The aggregate demand regime can be defined by h_2, and the magnitude of this impact by h_1 or $1/(1-h1)$. So, in this case, when 1 unit changes in labor share, the GDP will decrease by 3.2996 units at equilibrium *ceteris paribus.* Therefore, Thailand's aggregate demand regime is profit-led.

The result of this research aligns with the previous literature of Jetin & Kurt (2016). They conclude that Thailand's demand regime is profit-led.

Discussion and Conclusions

Growth and economic development

Based on the empirical results, the demand regime in Thailand over the past 30 years has been profit-led. This conclusion aligns with many narratives about Thailand's economic development. Investment has been a key engine of the Thai economy, particularly before the economic crisis in 1997.

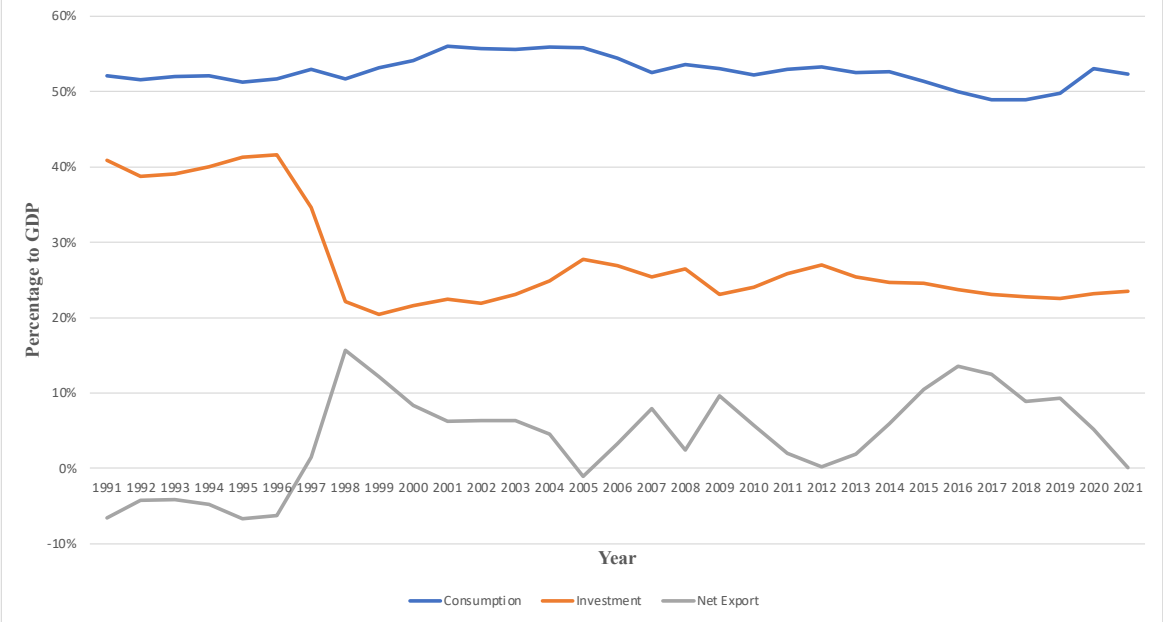

Figure 3. the ratio of consumption, investment, and net export to GDP

Thailand experienced a high growth rate from the late 1980s to the mid-1990s, during which financial liberalization policies attracted significant foreign capital. Money entered the country through foreign direct investment (FDI) and loans. In 1995, investment funds exceeded the combined total of investments made from 1977 to 1987 (Phongpaichit & Baker, 2003). High investment and export rates contributed to Thailand's economic growth. In 1996, the ratio of investment to GDP was 42.5% (Naphon & Thanadej, 2017). However, after the 1997 crisis, the investment-to-GDP ratio never again exceeded 30%.

Considering that investment is a key driver of the Thai economy, and the demand regime is profit-led, it is reasonable to conclude that a decrease in investment rates may lead to economic stagnation. Additionally, an increasing in household debt could worsen the investment and overall economy. Hence, Thailand should focus on investment and fix household debt problem.

Policy Recommendations

Thailand's demand regime is profit-led, policies to stimulate investment should be considered. Regression analysis indicates that increased labor share leads to higher consumption but simultaneously decreases investment. Nonetheless, reducing labor income is not a practical solution, as a higher labor income share typically contributes positively to improving people's quality of life. Balancing the stimulation of investment with maintaining or enhancing labor income becomes a suitable way in policy considerations.

Policymakers should focus on improving people's quality of life, regardless of whether the demand regime is wage-led or profit-led. Addressing the household debt problem is essential. Balancing policies that support consumption, investment, and exports is crucial as well. Tax reduction policies

could boost consumption and investment. However, caution is needed to avoid adverse effects on income distribution and potential income inequality.

Appropriate tax policy adjustments can redistribute income, promoting income equality and reducing household debt levels. Such income redistribution through tax policies can transfer resources from wealthier individuals to others, potentially increasing welfare and disposable income for the broader population.

The government can simultaneously enhance people's quality of life and address household debt by expanding the social safety net or social protection programs. Such subsidies can assist vulnerable individuals, increase disposable income, and promote consumption. More disposable income reduces the risk of borrowing for consumption and lowers household debt levels.

Higher labor wages also impact competitiveness. Many countries, including Thailand, have developed industrial and economic strategies by lowering wages. However, competitiveness is influenced by more than just labor income. Thailand can maintain or increase competitiveness while raising labor income.

From a demand-side perspective, policies generally impact the short run. However, stimulating investments in small and medium-sized enterprises (SMEs) can boost competitiveness. Residuals from SME investments may drive innovation and increase labor wages. Institutions comfortable with fostering innovation in micro-businesses play a significant role.

Alternatively, from a supply-side perspective, competitiveness can be improved by enhancing labor skills and increasing human capital to align with higher technology. Innovation not only enhances competitiveness but also improves overall quality of life.

Therefore, both demand-side and supply-side policies should be implemented to enhance competitiveness and economic growth, In the long-term, increased competitiveness and sustained growth can contribute to a reduction in household debt. Moreover, improving people’s quality of life can be achieved through a more equal income distribution, potentially reducing overall inequality, thus, a decrease in inequality would make more economic stablitiy and create more opportunities for enhancing the country’s economy.

Conclusion

In conclusion, this research aimed to define the regime of aggregate demand through empirical analysis and found that Thailand's demand regime is profit-led. This conclusion aligns with Thailand's economic history, indicating that labor income affects a decrease in investment more than an increase in consumption. Thailand's aggregate demand appears to favor investment over consumption. The research also addressed the impact of household debt, which significantly hampers aggregate demand, especially not stimulating consumption and negatively affecting investment.

The policy recommendations in this research emphasize the need to stimulate aggregate demand while enhancing people's quality of life. This policy recommendation includes finding a balance

between policies that support consumption, investment, and exports. Addressing household debt is vital, and both demand-side and supply-side policies can achieve it.

Limitation and further research

This research has some limitations, including the potential omission of factors such as wealth in the estimation due to data unavailability in the Thailand database. The further research may add other factors in estimation or each aggregate demand variable's function. Additionally, the data before 1990s of Thailand is imperfect and contains many missing data points. If efforts are made to correct this issue or improve the quality of historical data, especially prior to 1990, there exists an opportunity to enhance the timespan of the analysis. Revision and improvement of data quality could contribute to a more comprehensive and accurate understanding of the dynamics influencing aggregate demand in Thailand over an extended period.

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THE INFLUENCE OF FEAR OF FAILURE ON THAI FEMALE ENTREPRENEURS THROUGHOUT THE ENTREPRENEURIAL JOURNEY

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Abstract

This exploratory research examines how fear of failure influences the behavior of Thai female entrepreneurs throughout the entrepreneurial process. Employing qualitative methods, the study involved in-depth interviews with ten female entrepreneurs from Bangkok. These participants were selected through purposive and snowball sampling methods. The findings reveal that in the pre-launch phase, fear of failure leads to delayed decision-making. Entrepreneurs often procrastinate and engage in extensive information-seeking, which can sometimes result in hastily made, last-minute decisions. However, some counter this by adopting proactive strategies, blending fear and determination, to meticulously prepare and overcome the fear of failure. During the launch phase, female entrepreneurs tend to embrace masculine traits and emotional expressions to gain trust and project credibility. They work harder, driven by the need to solve problems, prevent failure, and prove their capabilities. Nevertheless, there is a hesitation in hiring, leading many to opt for outsourcing to avoid the commitments associated with full-time employment. In the post-launch phase, there is a reluctance to make decisions, leading to a dependency on others perceived as more confident. This results in missed opportunities and a lack of diversity in decision-making roles. Additionally, there is a tendency towards risk-aversion, limiting autonomy and innovative decision-making. Female entrepreneurs also face choices between career and personal life, often leading to a lack of work-life balance and potential burnout. This research sheds light on the complex impact of fear of failure on female entrepreneurs in Thailand, highlighting the need for support mechanisms tailored to their unique challenges and stages in the entrepreneurial journey.

Keywords: Fear of Failure, Female Entrepreneur, Hegemonic Masculinity

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Introduction

In the dynamic world of entrepreneurship, Thai female entrepreneurs encounter unique challenges, one such obstacle is the "Fear of Failure." This term captures the confusion and uncertainty stemming from societal expectations and gender biases. Despite Thailand hosting approximately 10.7 million women entrepreneurs, there's been a notable decline in women-owned businesses from 29.5% in 2012 to 13.9% in 2017 (Guelich, 2019).

The traditional view of entrepreneurship as a male-dominated field exacerbates this gap (Henry et al., 2016, as cited in Zampetakis et al., 2016; Eagly, 1987, as cited in Ali, 2018). Women face additional hurdles such as unequal access to resources and societal roles (Sullivan & Meek, 2012). Despite high entrepreneurial intentions among Thai women, there's a decline in actual business establishment, as indicated by the GEM Women's Entrepreneurship Report 2018/19 (Elam et al., 2019; Guelich, 2019).

Studies highlight various factors contributing to the entrepreneurial intention-action gap. External factors such as economic-financial barriers (Oliveira & Rua, 2018), self-identity, family influence, and formal institutions play a crucial role (Roos & Botha, 2022). However, internal dynamics, especially fear of failure, significantly affect women's entrepreneurial pursuits (Noguera et al., 2013; Cacciotti et al., 2020). Women globally, and particularly in Thailand, report higher fear of failure than men, impacting their entrepreneurial engagement and behaviors (Elam et al., 2021; Koellinger et al., 2011; Kong et al., 2020; Cacciotti et al., 2016).

Among the various factors impacting female entrepreneurs' engagement in business activities, fear of failure and self-efficacy are their most critical socio-cultural obstacles (Noguera et al., 2013). The American Psychological Association defines the fear of failure as "persistent and irrational anxiety about failing to measure up to the standards and goals set by oneself or others." In the entrepreneurship perspective, fear of failure is defined as a "negative affective reaction based on cognitive appraisals of the potential for failure in the uncertain and ambiguous context of entrepreneurship" (Cacciotti et al., 2020).

The gender difference appears to affect the fear of failure. The GEM Women Entrepreneurship Report 2020/21 reveals that, on average, women fear failure more than men globally (Elam et al., 2021) in accordance with a 17-country cross-sectional analysis showing a lower rate of entrepreneurial propensity in women entrepreneurs due to their lower confidence in entrepreneurial skills and higher fear of failure than men (Koellinger et al., 2011).

Fear of failure has numerous effects on entrepreneurs. Initially, it weakens the link between entrepreneurial intention and action (Kong et al., 2020). It prevents aspiring entrepreneurs from starting a venture even though the opportunity exists (Ekore & Okekeocha 2012, as cited in Cacciotti & Hayton, 2014). Fear of failure also influences entrepreneurs to create only a small business due to the fear of the uncertainty of the future (Finnerty & Krzystofik, 1985, as cited in Jain & Ali, 2013).

Fear of failure also negatively influences daily entrepreneurial behaviour, such as procrastination, ignoring complex tasks, or spending too much time with them (Cacciotti et al., 2016).

Interestingly, in the GEM global report survey 2018/19, Thai entrepreneurs (both male and female) were ranked 2 out of 49 countries for fear of failure. Moreover, Thai women entrepreneurs experience fear of failure more than the global average; according to the GEM Women Entrepreneurship Report 2018/19, 41.1 percent of women entrepreneurs in Thailand are not deterred by fear of failure, compared to the global average of 67.9 percent (Elam et al., 2019). This finding is consistent with the ASEAN Regional Entrepreneurship Report by the UNESCAP, which indicates that fear of failure was highest in Thailand and Vietnam. Women reported greater fear of failure than men in every country surveyed (UNESCAP, 2017).

Fear is a strong emotion. Entrepreneurs deal with emotions throughout their journey (Baron, 2008, as cited in Cardon et al., 2012). However, the present literature mainly studies entrepreneurial emotion in the business's early or late stages (Cardon et al., 2012). Even the GEM database measures fear of failure by a single dimension item, “fear of failure would prevent me from starting a business” (Bosma et al., 2008, as cited in Hayton et al., 2013).

However, according to Cacciotti in 2020, fear of failure impacts not only the decision to become an entrepreneur but also the multiple dimensions of the venture and entrepreneur over time, including the ability to fund the venture, the potential of the idea, a threat to social esteem, opportunity costs, personal ability, financial security, and the venture's capacity to execute.

This study aims to explore the influence of fear of failure on Thai female entrepreneurs at various stages of their entrepreneurial journey, enhancing understanding of gender-specific challenges in entrepreneurship and contributing to empowering women in this field.

Research Objective

1. To elucidate the way in which fear of failure influences female entrepreneurial behavior in each stage of the entrepreneurial process.

Research Question

1. How does fear of failure influence female entrepreneurs’ behavior in each stage of the entrepreneurial process?

Review of Literature

Entrepreneurial Process

An entrepreneur is a person who creates new ventures, products, or services to capture business opportunities, and this process includes opportunity identification, evaluation, and exploitation (Shane & Venkataraman, 2000). The general definition of the entrepreneurial process is “*all the functions, activities, and actions associated with perceiving opportunities and creating*

organizations to pursue them" (Bygrave, 2011). Literature in this area (Baron, 2008; Bygrave, 2011; Shane & Venkataraman, 2000) identifies 'stages,' 'actions,' and 'processes' for an entrepreneur in a similar function, from spotting a business opportunity to the completion process.

Industrial-organizational psychologists, alongside entrepreneurship scholars, have contributed to understanding the entrepreneurial process. Baron and Henry (2011) proposed the Process Model of Entrepreneurship, outlining the stages from pre-establishment to post-launch of a business. Each phase contains a sample of entrepreneurial activities such as opportunity identification and evaluation, gathering the resources during the pre-launch phase, developing a business model and strategies during the launch phase, and building a consumer base and improving product design during the postlaunch phase. Additionally, it identifies three variable categories—individual, group, and societal—that influence these activities at each stage, including internal factors, social networks, and industry-related elements.

Fear of Failure: Definitions and measurements

Fear of failure is a common fear among entrepreneurs (Bosma et al., 2008, as cited in Cacciotti & Hayton, 2014). The American Psychological Association defined fear of failure as *"persistent and irrational anxiety about failing to measure up to the standards and goals set by oneself or others"*. The field of entrepreneurship defines the fear of failure differently. Cacciotti and Hayton (2014) systematically reviewed studies about the fear of failure in entrepreneurship published between 1994 and 2013. As a result, Cacciotti & Hayton conclude that two groups of definitions are used to define the fear of failure.

The first group defines the fear of failure as *risk aversion*, which is fear associated with individual characteristics of an entrepreneur (Ray 1994; Helms 2003; Wagner and Stenberg 2004; Arenius and Minniti 2005; Hessels et al. 2011, as cited in Cacciotti & Hayton, 2014). This approach believes that fear of failure is a trait that influences people to behave differently from others in the same situation (Cacciotti & Hayton, 2014).

The second group defined fear of failure as a *negative emotion resulting from the perception of environmental threats,* which indicates that fear results from environmental cues (Patzelt and Shepherd, 2011; Welpe et al., 2011; Li, 2011, as cited in Cacciotti & Hayton, 2014). This approach believes that fear of failure is a temporary emotional stage that influences decision-making and behaviour in a particular situation (Cacciotti & Hayton, 2014).

The different definitions of fear of failure in entrepreneurship result from the debate over whether the fear of failure is an emotional state or a stable disposition of an entrepreneur. The argumentled to various definitions of failure of failure in entrepreneurial context.

Variations in defining fear of failure have led to diverse measurement approaches. It's measured as risk aversion with a single-dimension scale in some studies, exemplified by the GEM report's single query on fear's impact on starting a business. Conversely, researchers viewing it as a negative emotional state use multi-dimensional scales, like the extensive scale by Cacciotti et al. (2020), which assesses fear's impact on the entire entrepreneurial journey, encompassing aspects such as *ability to fund the venture, the idea's potential, the threat to social esteem, opportunity costs, personal ability, financial security, and the venture's capacity to execute.*

Fear of Failure and Gender

Evidence shows differences in the degree of fear of failure between males and females. For example, Borgonovi and Han (2020) surveyed 517,047 participants in 59 countries worldwide and found that women reported a greater degree of fear of failure than men in 56 of the 59 countries surveyed.

In terms of entrepreneurship surveys, the GEM Women Entrepreneurship Report 2020/21 surveyed 115 economies and discovered that, on a global average, women fear failure more than men by ten percent. Previous entrepreneurship research has also shown that female entrepreneurs fear failure more than their male counterparts (Koellinger et al., 2011; Noguera et al., 2013)

In the context of Thailand, according to the GEM global report survey, Thai entrepreneurs (both male and female) were ranked 2 out of 49 countries for fear of failure in 2018/19. Moreover, Thai women entrepreneurs experience a fear of failure more than the global average; according to the GEM Women Entrepreneurship Report 2018/19, 41.1 percent of women entrepreneurs in Thailand are not deterred by fear of failure, compared to the global average of 67.9 percent. This finding is consistent with the ASEAN Reginal Entrepreneurship Report by the UNESCAP, which indicates that fear of failure was highest in Thailand and Vietnam. Women reported greater fear of failure than men in every country surveyed (UNESCAP, 2017).

The impact of Fear of Failure

Research predominantly indicates that fear of failure negatively affects entrepreneurs, reducing their likelihood to start businesses (Koellinger et al., 2011). Women, showing higher fear of failure and lower confidence than men, often face obstacles to entrepreneurship due to self-efficacy and sociocultural factors (Noguera et al., 2013). The GEM Women Entrepreneurship Report 2020/21 also notes that women generally run smaller businesses than men. Fear of failure may lead to entrepreneurial behaviors like procrastination or task avoidance (Cacciotti et al., 2016).

Conversely, fear of failure can motivate entrepreneurs, with Morgan and Sisak (2016) suggesting that loss aversion can drive high-aspiration entrepreneurs to work harder to avoid failure.

Cultural perspectives, like those in Asia, see fear of failure as a motivator for success due to the associated risk of lost self-respect (Ray, 1994).

Interestingly, fear of failure might not always deter women entrepreneurs. Wannamakok & Chang (2020) suggest that with supportive social contexts, like role models and knowledge of entrepreneurial processes, fear of failure may not affect entrepreneurial intentions.

Locus of Control and Fear of Failure

The locus of *of external forces, existing along a continuum from a more internalized orientation to a more external* control is a psychological concept developed by American psychologist Julian Rotter in 1954. Rotter defined it as *"the degree to which a person perceives an outcome as contingent on their actions or those orientation"* (Rotter, 1966, as cited in Tyler et al., 2020). Later, American Psychological Association officially defined locus of control as *"a construct that is used to categorize people's basic motivational orientations and perceptions of how much control they have over the conditions of their lives."*

There are two types of locus of control, internal and external (Rotter, 1966, as cited in Asante & Affum-Osei, 2019). Internal Locus of Control refers to a person who have high level of locus of control, who believes that the outcome of an event in their life results from their action (Spector, 1982, as cited in Galvin et al., 2018). External Locus of Control refers to a person who have low level of locus of control, who believes that the outcomes of an event result from the external force which out of their control (Spector, 1982, as cited in Galvin et al., 2018). According to Rotter, people can have either internal or external locus of control, which could be measured by the I-E scale, which Rotter developed in 1966.

The locus of control level varies from person to person, but cultural differences between individualism and collectivism impact the locus of control in general. For example, Shah et al. (2015) discovered that Americans have a higher locus of control, a lower fear of failure, and a higher propensity for risk-taking due to their need for self-driven achievement. In comparison, Chinese and Indian have a lower propensity for risk-taking and higher fear of failure due to their need for societal approval and conformity to the societal norm. This result implies the differences between individualism and collectivist culture in terms of locus of control and fear of failure.

Gender Performativity

The concept of gender performativity, first introduced by Judith Butler in her book "Gender Trouble," first published in 1990, has had a significant impact on literary analysis. According to this concept, gender is not an innate quality but a social construct that individuals enact through repetitive behaviours and actions. These performances conform to societal expectations and serve to reinforce cultural norms.

Butler (1990) explains this concept in her own words: *"Gender is the repeated stylization of the body, a set of repeated acts within a highly rigid regulatory frame that congeal over time to produce the appearance of substance, of a natural sort of being."*

Hegemonic Masculinity

The concept of hegemonic masculinity, according to R.W. Connell, *is "the configuration of gender practice which embodies the currently accepted answer to the problem of the legitimacy of patriarchy, which guarantees the dominant position of men and the subordination of women" (Connell 1995, as cited in* Schippers, 2007*)*

The general definition of hegemonic masculinity *is a "culturally idealized form of masculine character* (Connell, 1990, as cited in Hechavarria & Ingram, 2016). Anyone with these traits or characteristics has a higher social status than those without. This idea explains that men are positioned and believe they have power over women and minorities of men who do not conform to this stereotype (Connell & Messerschmidt, 2005, as cited in Rubio-Bañón & Esteban-Lloret, 2016).

Methodology

In this exploratory study, a qualitative and inductive approach was adopted to investigate the influence of fear of failure on Thai female entrepreneurs. Focusing on the behavior of ten female entrepreneurs from Bangkok, each with at least a year of business experience, the study utilized non-probability and purposive sampling methods informed by the 2018-19 GEM Thailand Report. Primary data was gathered through in-depth interviews, initially with three participants selected purposively and expanded to seven additional participants via the snowball technique. These interviews, conducted in Thai and lasting between one and one and a half hours, were structured around semi-structured formats, incorporating tools like the entrepreneurial fear of failure scale by Cacciotti et al. (2020) and the entrepreneurial process model by Baron and Henry (2011). The methodology emphasized open-ended questions to enable participants to freely share personal experiences and perspectives. For data analysis, thematic analysis as proposed by Braun and Clarke (2006) was employed. This involved a meticulous process of transcribing, coding, identifying themes, and reviewing these themes to finalize the analysis, thereby providing a comprehensive understanding of the research objectives.

Research Results

In response to the research question, 'How does fear of failure influence the behavior of female entrepreneurs at each stage of the entrepreneurial process?' the author analyzes the influence of fear of failure in each phase of the entrepreneurial process as follows.

1. The Influence of Fear of Failure on Female Entrepreneurial Behavior During the Pre-Launch Process. The fear of failure among female entrepreneurs during the pre-launch process has a significant impact on two primary behaviours: the postponement or delay of decision-making, and the development of proactive strategies, along with increased effort to counteract self-doubt.

1.1 Delay the decision-making. A delay in decision-making is a common concern among some key informants, leading to a tendency to engage in procrastination and conduct an extensive search for information. This prolongs the decision-making process and occasionally results in hastily made conclusions at the last moment. The resulting sense of indecision and uncertainty often causes distress and dissatisfaction, reflecting a deeper struggle with fear and self-doubt. These insights were gathered from 4 out of the 10 key informants.

"People like to say that I'm clearly aware of the direction I'm headed, but I tend to procrastinate. I delay making decisions constantly until the actual deadline. It's a period that feels endless because I am unsure whether or not to proceed until someone steps in to spur me on. But I don't know what causes this.

"Fear greatly influences my behaviour, particularly in terms of expressing myself and making decisions. When I'm extremely afraid, I don't dare to act, make decisions, or risk making mistakes. Even though I've decided to pursue a master's degree in business, I still feel that fear. I'm afraid to make decisions for myself, so I constantly seek information. Until I feel that I must have academic information to back up everything before I dare to make a decision." (Key Informant J)

1.2 Come up with a proactive strategy. Once key informants reach the decision to pursue their careers as entrepreneurs but still have self-doubt, two out of ten key informants often develop proactive strategies to cope with their doubts. Female entrepreneur in question embrace a mindset characterized by a combination of fear and determination, ultimately leading them to take action. Additionally, they priorities meticulous preparation in their endeavors. Through persistent effort and self-motivation, individuals strive to overcome their lack of confidence and attain triumph in their business pursuits.

*"It feels like the principle is to 'be afraid but do it anyway'. There is no day when I wake up without fear or absolute confidence, but I still go on. Therefore, when I am afraid, I plan even more, writing clearly about what stage my current actions will lead to. If this happens, what stage will follow? If that happens, then it will surely proceed to the next point. And it will be a sequence of further points. "I feel like I am overthinking and being a workaholic. I work 24/7 these days. The more fearful I become, the more I want to do my best" (*Key Informant I)

Table 1. Summary of the Influence of Fear of Failure on Female Entrepreneurial Behavior During the Pre-Launch Process.

Entrepreneurial process	Influence of Fear of Failure on female entrepreneurial behavior
Pre-Launch	**Delay the decision making.** often driven by a fear of letting others down, leads to procrastination and extensive information-seeking, sometimes culminating in hastily made, last-minute conclusions.
	Come up with proactive strategy. Entrepreneurs with self-doubt employ a proactive strategy, blending fear and determination, to meticulously prepare and persistently work through insecurities, thereby navigating toward business success.

2. The Influence of Fear of Failure on Female Entrepreneurial Behavior During the Launch Process. Fear significantly impacts female entrepreneurs during the launch period, manifesting in various ways. A female entrepreneur may adopt masculine traits in her physical appearance and behavior to project enhanced confidence and trustworthiness. Furthermore, they often exert additional effort to overcome obstacles and establish their competence. Additionally, a cautious approach is frequently observed in hiring decisions, leading to a reluctance to hire the first employee.

2.1 Disguising to be macho. During the launch phase, a common concern among five out of ten key informants is the fear of not being trusted, leading them to adopt masculine traits and alter their behaviour to appear more confident while operating the business. Consequently, they tend to embrace male characteristics and modify their conduct to project more confidence in their entrepreneurial endeavors. This is the act of making modifications to one's posture, speech patterns, and body language to effectively communicate trustworthiness. Additionally, it involves the selection of appropriate professional apparel and the adoption of a more composed and refined speaking style. These modifications are seen as essential to establish confidence among prospective investors and portray a more credible image. Additionally, some informants suppress emotions and stress, adhering to a belief that effective CEOs and entrepreneurs should not display emotions or weaknesses.

"I adjusted my posture, speech, and various body language cues to appear more trustworthy. When I attend presentations, I have to be more still and confident. Otherwise, potential investors may not trust me." (Key informant M)

"When we first started the company, the initial phase wasn't too stressful, but everything changed when our co-founder passed away. I suddenly had to face the fear of flying solo,

At that time, I thought to myself, 'Hey, a good leader, a good CEO, shouldn't show emotions.' So, I had to suppress my feelings. I acted normal in every aspect. If I wanted to express my emotions, I did it at home. It led to a mental breakdown at one point. But if you ask whether I could work, my workdays seemed normal, but I would cry every day for months." (Key Informants K)

2.2 Work harder. Another behaviour influenced by the fear of failure during the launch phase is the commitment to working harder, as reported by three out of ten informants. The commitment to working harder, as exemplified by the following statements from the informants, showcases how the fear of failure motivates individuals to increase their efforts and dedication.

"Let's imagine there are ten problems. I know that if I can't solve even one problem, my entire business could fail. That's why I have to work hard and solve every problem that comes my way." (Key informant L)

"I have to work hard and put in a lot of effort to prove to others that I am capable of being an entrepreneur and CEO. I have to demonstrate my qualifications by working as hard as I can." (Key informant I)

2.3 Deny support. Apart from adopting masculine traits in terms of outward appearance and working harder, the fear of failure during the launch phase also influences management decisions in business, particularly when it comes to the conclusion of hiring the first employee. Three out of ten key informants reported this influence. Some informants conveyed a sense of diminished self-assurance and reluctance in the recruitment and hiring process, mostly stemming from uncertainties about their competencies and apprehensions about the long-term viability of their businesses. Consequently, they opted for the practice of outsourcing jobs as a provisional measure, driven by apprehensions over the long-term obligations and accountabilities associated with hiring full-time personnel. The hesitancy above led to a prolonged length of time before the employment process was initiated.

"I didn't have the courage to hire the first employee either. It felt like, who would want to come and work with me? I am not that good. So for those two years, I didn't hire any employees." (Key informant H)

"At first, I thought about hiring, but I had many doubts. I was afraid that the business might not survive, so I didn't dare to hire full-time employees. Instead, I outsourced tasks to other companies as temporary solutions. I was afraid to commit to taking care of a full-time employee at that time." (Key informant F)

Table 2. Summary of the Influence of Fear of Failure on Female Entrepreneurial Behavior During the Launch Process.

Entrepreneurial process	Influence of Fear of Failure on female entrepreneurial behavior
Launch	**Disguising to be macho** Female entrepreneurs embrace male characteristics and emotional expression to gain trust and project credibility.
	Work harder The increased commitment to working hard is driven by the need to solve problems to prevent business failure and to prove their capability and qualifications as entrepreneurs and CEOs.
	Deny support Entrepreneurs exhibit hesitancy in hiring due to doubts about their competencies and business viability. Consequently, they often opt for outsourcing to avoid the long-term commitments associated with hiring full-time employees, thus delaying the commencement of the employment process.

3. The Influence of Fear of Failure on Female Entrepreneurial Behavior During the Launch Process. The fear of failure during the post-launch phase has various influences on entrepreneurs. Key informants highlighted several themes. Firstly, some key informants become reluctant to make decisions and leave them in the hands of others, lacking the courage to assert themselves and express their opinions. Secondly, fear leads to a more cautious approach, playing it safe and avoiding risks. Thirdly, the desire to have children can lead entrepreneurs to consider slowing down their careers to focus on their families. Lastly, the lack of work-life balance and the pressure to work excessively can result in burnout and strained relationships with family members. These themes shed light on the challenges faced by entrepreneurs as they navigate the post-launch phase.

3.1 Reluctant to make decisions and leave them in the hands of others. Two out of ten entrepreneurs admit to hesitancy in decision-making, often stemming from self-doubt and a fear of failure. This uncertainty may lead them to rely on others whom they see as more confident or decisive. Within professional settings, such power dynamics become evident as those with dominant personalities often take the lead in discussions, overshadowing their less assertive counterparts. This imbalance can result in missed opportunities and a lack of diversity in leadership roles, perpetuating a cycle of dependency and a culture of silence among those who do not assert themselves.

"Fear leads me to depend on someone else to take charge. In my company, there is a female employee who appears confident and expresses herself with masculine traits. When there's an issue, I wait for her solution and follow her lead. Though I may not always agree, I accept her

decisions, assuming she has considered them thoroughly, while I lack the courage to stand up for myself and my opinion." (Key informant H)

My fear of incompetence to lead had a significant impact on my behaviour, especially when it came to expressing my opinions. I vividly remember a day when we were discussing in a meeting room, and male co-founders and male employees were dominating the conversation. It felt like I had vanished from that discussion, and the men continued discussing among themselves because I didn't know what to say. I was afraid that whatever I said would make me look stupid. Later, those individuals were chosen as C-level executives, while I didn't receive the position. (Key informant P)

3.2 Deny Risk. Three out of ten key informants indicate a prevalent theme of caution and risk aversion, especially during the transition from a startup to a more established company. This careful approach seems to limit autonomy and decision-making as individuals no longer seize opportunities without thorough consideration. Instead, they focus on assessing the financial implications of decisions and their impact on core business aspects. Strategic thinking and engaging investors in discussions have become crucial elements of their business practice. Over time, this fear-driven cautious approach has increased, leading to a hesitancy to take risks. As a result, there's a preference to maintain the status quo, avoiding changes even if the potential for improved sales exists.

"Fear has a significant impact, especially now during the transition from a startup to a company, limiting my autonomy and decision-making. I no longer seize opportunities without careful consideration. Even exploring new business units requires assessing their financial implications and impact on the core business. Strategic thinking and increased discussions with investors have become necessary." (Key Informant P)

"As time has progressed, my fear has increased. I am less willing to take risks like I did in the early days. It feels like I have to play it safe, and not knowing if investing more will lead to better sales, I prefer to stick to the status quo and avoid making changes." (Key informant F)

3.3 Considering Slowing Down Entrepreneurial Career Due to the Desire to Have Children. Balancing career and personal life, especially when planning to start a family, is a concern for some female entrepreneurs. Two out of ten key informant shared that focusing on children might mean slowing down their careers. This decision gets more complicated when their partners want to keep growing the business. Often, they consider selling the company to make time for family.

"As a female entrepreneur, I used to believe I could balance work and having children. However, seeing my entrepreneur friends starting to have kids, I realize it's not that simple. Many of them have decided to slow down their careers and prioritize their children, which makes sense considering the important early years of child development. If I become a mother, I also want to invest significant time with my child, but it means slowing down my career. Meanwhile, my partner (also co-founder) is still interested in taking risks and exploring new business ventures. We face a choice: selling the business or growing it further. While my partner leans towards growth, I'm inclined to sell them and slow down my entrepreneurial career" (Key informant P)

3.4 Lack of work-life balance and start to burnout. Work-life balance is a significant issue for some entrepreneurs, with two out of ten key informants mentioning that their intense focus on work leaves little time for family or personal activities. They describe their lifestyle as being centered around their entrepreneurial pursuits, often to the detriment of their relationships and emotional health. This constant work without adequate breaks or relaxation can lead to burnout, leaving them drained and questioning the purpose of their hard work.

"An ongoing problem that I face is the lack of work-life balance, leaving me with little time for my family. It feels like I have found the thing I want to do the most in life, but it makes everything else seem less important. This is the downside for me. It makes me feel focused on the entrepreneur lifestyle, neglecting the importance of spending time with my family. Working hard for an extended period eventually leads to burnout, leaving me with no energy to do anything else." (Key informant J)

"I don't go on vacations, I don't take breaks, I don't buy things. I work hard, sacrificing sleep and health. It's a disease of workaholics, a disease of people who work. I have no time for anything, no time for exercise, no time for anything at all. And what do I lose? My relationships with my family suffer. I have no time to meet them, no time to spend together. There comes a point when it becomes unbearable and exhausting. I no longer want to continue like this and question the purpose of it all." (Key informant F)

Table 3. Summary of the Influence of Fear of Failure on Female Entrepreneurial Behavior During the Post-Launch Process.

Entrepreneurial process	Influence of Fear of Failure on female entrepreneurial behavior
Post Launch	**Reluctant to make decision and leave them in hands of others.** reluctant to make decisions due to self-doubt and fear of failure, resulting in dependency on others perceived as more confident. This leads to missed opportunities and a lack of diversity in decision-making roles.
	Deny Risk caution and risk-aversion during the transition from a startup to a more established company, limiting autonomy, decision-making, and leading to a preference for maintaining the status quo
	Considering slowing down entrepreneurial career facing a choice between selling the business to make time for family or considering having a children make a hard choice for female entrepreneur to choose.
	Lack of work-life balance leading to burnout An intense focus on work often leaves little time for family or personal activities, resulting in a lack of work-life balance. This can lead to burnout and prompt questions about the purpose of hard work.

Discussion and conclusion

Fear of failure is influencing female entrepreneurs throughout the entrepreneurial process.

This study found that fear is not only present throughout the entrepreneurial journey for female entrepreneurs, but it influences female entrepreneurial behavior throughout the entrepreneurial process. In the pre-launch phase, fear of failure leads to procrastination, excessive information-seeking, and delayed decision-making until the last minute. During the launch phase, it prompts the adoption of masculine characteristics and controlled emotional expression to gain trust and credibility, as well as a drive to prove their capabilities and qualifications. However, it also results in denial of support and hesitation to hire the first employee due to fear of business failure. In the post-launch phase, fear influences behaviors such as decision-making reluctance, extreme caution, risk avoidance, and considering slowing down their entrepreneurial career for family planning. This often culminates in a lack of work-life balance, potentially leading to burnout.

This supports Cacciotti et al. (2020) definition of fear of failure as "a negative affective reaction based on cognitive appraisals of the potential for failure in the uncertain and ambiguous context of entrepreneurship.

Hegemonic Masculinity as a Shield: Female Entrepreneurs Battling the Fear of Failure Patriarchy is deeply embedded not only within the Thai social structure (Tantiwiramanond, 1997) but also within its business infrastructure. The concept of Hegemonic Masculinity, as defined by R.W. Connell, refers to the 'culturally idealized forms of masculine character' (Connell, 1990, as cited in Hechavarria & Ingram, 2016). Those who exhibit these traits typically enjoy a higher social status. Connell's notion also suggests that men are often viewed as, and believe themselves to be, dominant over women and other men who diverge from these norms (Connell & Messerschmidt, 2005, as cited in Rubio-Bañón & Esteban-Lloret, 2016). This concept holds true in entrepreneurship, where those who personify hegemonic masculine ideals often become the benchmark for entrepreneurial success, prompting widespread conformity.

Our research indicates that female entrepreneurs adopt masculine traits in response to fear of failure. Particularly during the launch phase, fear compels female entrepreneurs to assume such traits and modify their behavior. They adjust their posture, speech patterns, and body language to project confidence in their business endeavors. Notably, the masculine traits adopted by our informants encompass more than mere appearance; they also extend to emotional expression. One informant disclosed that she suppresses her emotions and stress, adhering to her belief that a competent CEO and entrepreneur should not display emotions or weaknesses to others.

Limitation of the study

Although this study provides valuable insights into the fear of failure among female entrepreneurs, there are some limitations that should be acknowledged. One significant limitation is the number of key informants used in the research. While the study includes ten key informants, enabling deep exploration through in-depth interviews, this number may be too small to generalize the findings to a broader population. The main reasons for this limitation are time and budget constraints. Additionally, the selection method for key informants may introduce limitations to the study. Seven out of the ten informants were recruited through snowball sampling, which may lead to selection bias because informants may recommend individuals with similar backgrounds, statuses, or challenges, leading to a homogeneous sample. While suitable for exploratory research, such a methodology is not equipped to provide generalizations applicable to the broader population, as it was not designed for this purpose. The presence of self-report bias in the study also poses challenges. Key informants were given the choice to report or not report certain information, and they might have censored themselves, omitting details they did not want to disclose. This self-censorship could lead to a lack of complete and honest responses, potentially impacting the accuracy and authenticity of the findings.

Suggestion for future study

Future research on the fear of failure among entrepreneurs should consider several key areas. Comparative studies between male and female entrepreneurs could clarify if challenges are gender-specific or more universally experienced, thereby enriching our understanding of gender dynamics in entrepreneurship. Longitudinal studies tracking fear of failure through different entrepreneurial phases would provide more accurate insights. Exploring the impact of cultural and societal changes, especially in the context of evolving gender equality and feminist movements in Thailand, is crucial to understand the current influence of fear of failure on female entrepreneurs. Additionally, investigating effective intervention strategies to counteract hegemonic masculinity in entrepreneurship is vital. Such strategies should aim to empower female entrepreneurs, allowing them to succeed without conforming to masculine norms. Finally, the role of social support, including mentors and networks, in helping female entrepreneurs overcome fear and achieve success should be examined, along with the interplay between fear of failure and other entrepreneurial outcomes like innovation, performance, and risk-taking.

Implications for both managerial and academical aspects

Through a thorough examination of the fear of failure and its behavioral influences on female entrepreneurial behavior, this research has valuable insights. These findings can be the foundation for future initiatives aimed at empowering female entrepreneurs and promoting gender equality in entrepreneurship.

During the pre-launch phase, a recommended policy would be the introduction of "training and mentoring programs for female entrepreneurs." These initiatives would ensure that women have equal access to entrepreneurship courses and workshops, with a focus on enhancing their business knowledge and confidence. To further combat gender prejudices and cultural pressures, these programs should also include training on how to handle and overcome gender stereotypes, while highlighting the worth and skills of women in the entrepreneurial world.

During the launch phase, it would be beneficial to create policy advocating for Inclusive Startup Accelerators and Advocacy Campaigns. The accelerators should actively promote diversity, with a special focus on assisting women-led enterprises and provide tailored resources and mentoring to overcome the unique obstacles faced by female entrepreneurs. Moreover, public awareness campaigns can highlight the achievements of female entrepreneurs, thereby addressing cultural biases and increasing awareness of the capabilities and competencies of women in the business world.

During the post-launch phase, a policy recommendation would be the formation of Female Entrepreneurial Support Networks, which would provide peer support, resource sharing, and chances for collaboration. They can give a forum for female entrepreneurs to support and encourage one another, building a sense of community and collective power to combat with fear of failure.

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FACTORS INFLUENCE ON CONSUMER PURCHASE INTENTION TOWARD LUXURY CAR IN KUNMING

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Abstract

This research is aimed at studying the influence of demographics and perceived value on luxury car purchase intention in Kunming. The researcher used the questionnaire survey tool to collect data from 405 customers who were interested in luxury cars. The statistics used to analyze the data were descriptive statistics including frequency, percentage, mean, standard deviation, and standard deviation, and inferential statistics, including independent samples t-test, one-way ANOVA, LSD, and multiple linear regression with a statistical significance level of 0.05. The results found that most of the respondents were female, aged 20-30 years old, with a bachelor's degree, married status, and a monthly income of more than 16,000 yuan. The first hypothesis was tested and it was found that gender, education level and income have significant effects on different purchase intentions of luxury cars in Kunming. For the second hypothesis was tested, it was found that brand, quality, price, design, utility and technical considerations have significant impact on the purchase intention of luxury cars in Kunming.

Keywords: Perceived Value, Purchase Intention, Luxury Cars

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Introduction

In 2022, Kunming's regional GDP will reach 754.14 billion yuan, and the per capita disposable income will be 38,167 yuan. As the living standards of Kunming residents improve, the demand for luxury cars has gradually increased. Kunming's luxury car market has a large number and variety of brands, including Mercedes-Benz, BMW, Audi, and other internationally renowned brands. The competition among these brands is very fierce, leading to price drops and profit compression of luxury cars (Ministry of Commerce of the People's Republic of China, 2019).

Dhanabalan et al. (2018) perceived value was positively influenced by brand, price, quality, design, utility, technical consideration. And all these factors affecting the purchase decision of the automobile consumer.

There are currently few studies on the influencing factors of Kunming consumers' willingness to purchase luxury cars, Therefore, the purpose of this study is to explore the influencing factors of consumers' willingness to buy luxury cars in Kunming, in order to understand the needs, preferences and expectations of Kunming consumers for luxury cars, provide market strategies and marketing suggestions for luxury car brands.

As a special consumption behavior of luxury car consumption involves many factors such as consumer psychology, society and culture. Understanding consumers' purchase intention for luxury cars and their influencing factors is of great significance for luxury car companies to formulate effective marketing strategies, improve market competitiveness, and meet consumer needs. However, current research on luxury car consumption behavior mainly focuses on developed countries or large cities, and there is a lack of sufficient attention and in-depth discussion on luxury car consumption behavior in small and medium-sized cities especially in Kunming city. Therefore, this study takes Kunming as an example to analyze consumers' purchase intention for luxury cars and its influencing factors from the perspectives of demographic factors and perceived value of consumers in Kunming, so as to formulate better plans for enterprises to increase customers' purchasing intentions.

Research Hypothesis

H_1: Differences in demographic characteristics (gender, age, education level, marital status, income level) have different impacts on customer purchase intention.

H_2: Perceived value has influence consumer purchase intention toward luxury car.

Research Objective

1. To study the difference in consumer purchase intention toward luxury car based on demographic factor.

2. To study the difference in consumer purchase intention toward luxury car based on perceived value factor.

Research framework

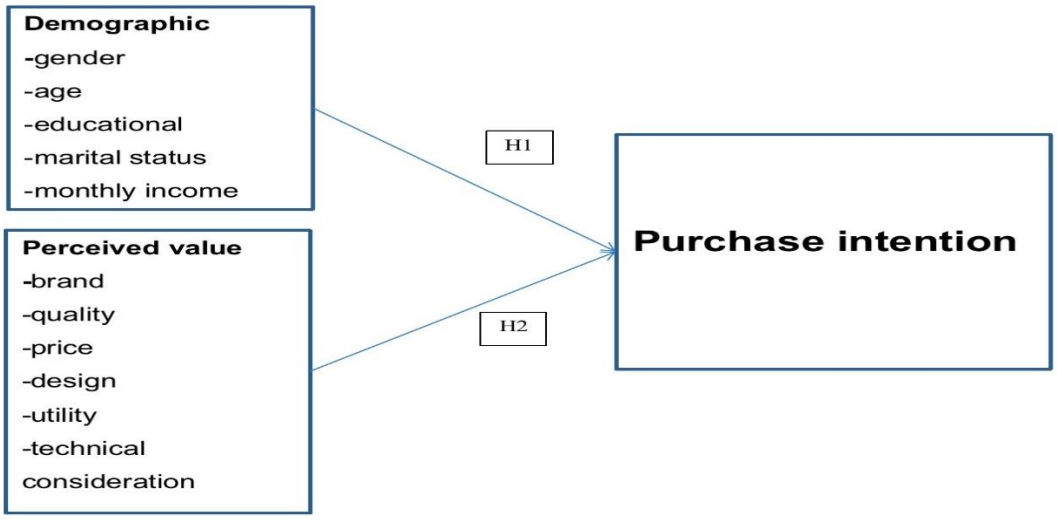

Figure 1. Research framework

Review of literature

Demographic factors

Nerurkar et al. (2023) explored the impact of demographic factors on consumer intention to buy electric vehicles in Malaysia. The study found that education and income had significant positive effects on consumer intention to buy electric vehicles. And also consistent with Choo et al. (2012) conducted a survey on luxury car consumers in South Korea and found that gender, education and income level have a significant impact on the purchase intention of luxury cars.

Demographic factors are one of the important factors affecting consumer behavior and purchase intention, and many scholars have conducted empirical research on them. For example, Dubois and Duquesne (1993) conducted a survey on luxury car consumers in France, the United States, Japan and the United Kingdom and found that age, gender, education and income level have a significant impact on the purchase of luxury car. Phau and Prendergast (2000) conducted a survey on luxury car consumers in Australia and found that age, gender and income level have a significant impact on the purchase of luxury car. Wong and Ahuvia (1998) conducted a survey on luxury car consumers in mainland China, Hong Kong and Singapore and found that age, gender, education and income level have a significant impact on the purchase of luxury goods.

Perceived value

Perceived value refers to consumers' feelings about the value of a product or service based on their subjective evaluation of the benefits it can provide and the price it requires. Perceived value is one of the most direct and important factors affecting consumer behavior and purchase intention. It determines whether consumers think a product or service is worth purchasing. This section will review relevant literature from the following aspects.

Factors Influencing Car Purchasing Intention: A Study among Vietnamese Consumers. This study explored factors influencing the intention of buying a car among Vietnamese consumers. This quantitative study administered questionnaire surveys to 242 respondents in Ho Chi Minh City, Vietnam. The linear regression analysis revealed five factors influencing the car purchasing intention: brand, perceived quality, technology, the performance of the car and customers' purchasing capacity (i.e. value and income). As the strongest contribution to the car purchasing intention, the car brand contributed the most to customers' decision-making process (Phuong, et al., 2020).

A rhombus model refers to a rhombus-shaped research model consisting of three predictor variables including brand image, perceived price, and perceived quality that is used to predict purchase intention. This study aims to predict a person's purchase intention relating to Low-Cost Green Cars (LCGC). In Indonesia market, this type of passenger vehicle is targeted towards lower income consumers and those who are concerned with the environment. Data were analyzed using exploratory factor analysis and structural equation modeling. Findings: The study found that in the case of Toyota Agya, brand image has a significant impact on perceived price and perceived quality. Also, perceived price has a significant impact on purchase intention (Petravičiūtė, et al., 2021).

The goal of this study is to pinpoint the success criteria for the product launch stage in connection to consumers' purchase intentions in Malaysia's automobile sector. The research will concentrate on the activities that take place during the stage of product development, examining the pertinent reintroduction variables that impact the outcome. The findings demonstrated that, among the seven independent factors considered, six of them were significant and had an impact on consumers' intentions to buy products when they were first introduced to the Malaysian automobile market. These included cost of ownership, performance, features, specifications, design, and affordability. Competitive pricing was seen to be irrelevant. The results verified that the success of the product launch was determined by two factors: the product and the price (CheeSeng & Husin, 2015).

Sharp (2012) found that product utility become more and more important in business along with the development of the relationship between demand and supply in the market. This relationship is dynamic because the power of each side changes along with the development of the business world. The fast developing business world not only fostered companies in earning incomes, it trained consumers to gain more benefits in their spending. Consumers became more rational and smarter. Today, consumers are more concerned about product utility rather than just quality. Companies need to identify product utility from the customers‟ point of view because customers hold more power in today market.

Dhanabalan et al. (2018) studied the influencing factors of consumers' car purchase decisions in the Indian automobile industry. The study shows that the target research variable customer perceived value is positively affected by brand, price, quality, design, practicality and technology considerations. All these factors force the results to show that perceived value of brand, price, quality, design, practicality and technology considerations influence purchasing decisions.

Rizka and Hidayatullah (2020) Study the effect of luxury brand, brand image, and product quality on purchase intention. This shows that the stronger consumers' perception of the influence of luxury brands, the more Image and product quality will increase purchase intention.

To sum up, perceived value is one of the most direct and important factors that affects the purchase intention of luxury cars. Different types and levels of consumers also have different perceived values of luxury cars. This study will take consumers in Kunming as the object to explore the degree and direction of the impact of perceived value on luxury car purchase intention. In this study the perceived value that researcher will choose as the variables include Brand, Quality, Price, Design, Utility, and Technical Consideration.

Consumer Purchase intention

Consumer purchase intention refers to the consumer's tendency or possibility to purchase a certain product or service in a specific situation. Consumer purchase intention is an important and hot topic in consumer behavior research, and many scholars have discussed and analyzed it from different angles and levels. This section will introduce the following representative theories:

Huang and Ge (2019) Research on the Development of Electric Vehicles in Beijing: Analysis of Consumer Purchase Intention. The research results show that attitude, perceived behavioral control, cognitive state, product perception and monetary incentive policy measures have a significant positive impact on Beijing consumers' purchase intention of electric vehicles. However, subjective norms and non-monetary incentive policy measures have no significant impact on purchase intention. In addition, multi-group SEM analysis results show that there are significant differences in demographic variables (gender, age, education level, income, car ownership) on the path of consumer purchase intention (Huang & Ge, 2019).

The main purpose of this study is to understand how social media has a strong impact on the car-related factors that consumers consider when formulating car purchase intentions. Automakers and marketing retailers can use these findings to develop strategies and innovative marketing techniques that focus on consumer needs. Automakers can make social media platforms more engaging and focused on the type of information consumers want (Kiran & Vasantha, 2016).

Methodology

Population and sample

1. Population

The population of this study is the ones who are interested in luxury cars in three different show that is included BMW showroom, Mercedes-Benz showroom and Audi showroom in Kunming, so population is unlimited.

2. Sample

Samples were collected from three luxury automobile companies. This study collected 405 samples.

Sampling method

Multi-stage Sampling Method

Stage1: Quota sampling method will be used to select three luxury car companies.

Stage2: Apply a fixed sample size of 135 customers per luxury car companies.

Stage3: Convenience Sampling Method.

Research Instrument

Part1: Demographic

Respondents in this section was asked questions about the population that include gender, age, educational, and income level. The researcher used closed-ended questionnaire.

Part2: Perceived value Respondents in this section was asked about perceived value, which includes brand, quality, price, design, utility and technology considerations. There were 3 questions for each independent variable and likert scale was used for questionnaire.

Part3: Purchase intention. There are 3 questions in this section and likert scale was used for questionnaire.

Content Validity and Reliability

IOC (Item Objective Congruence Index) content validity. To address and address the issues with the research, three specialists in the development of research tools were assess the questions' content and measurement. These specialists evaluated the surveys in accordance with predetermined standards.

All questions with an IOC index of at least 0.5 will be chosen. Any question that does not meet the 0.5 threshold but is deemed important to provide the appropriate measurement will be amended in accordance with advice from experts. The IOC index of all questions is more than 0.5.

The result shows the value for perceived value and purchase intention are 0.704 and 0.743. So the cronbach’s alpha value are higher than 0.7, collecting the data is the next stop.

Data Collection

In this study the method of data collection was using the questionnaires. The researcher have been sent questionnaires to samples via Questionnaires Star. The researcher have been collected 405 questionnaires from the samples.

Data analysis

Descriptive Statistics: Utilizing descriptive statistics, we were analyze respondent demographics such as by using frequency and percentage. The mean and standard deviation are applied for perceived value that included Brand, quality, price, design, utility, technical considerations Customers’ purchase intention.

Inferential statistics: At a statistical significance level of 0.05, inferential statistics are used to test the hypotheses. Under the following hypotheses, the analysis will assess the relationship between a dependent variable and independent variables:

H1: There are significant differences in consumer purchase intention toward luxury car based demographic factors.

Independent Sample t- test (Gender) and the One-way ANOVA (Age, Education Level, Gender, Marital Status and Monthly Income) are applied for testing the hypothesis.

H2: Perceived value has influence consumer purchase intention toward luxury car. (Multiple Linear Regression Analysis is used for testing the hypothesis.)

Research Results

Part I: The analysis results of respondents demographic factors data.

Table 1. Show frequency and percentage of the respondents.

		Frequency	Percent
Gender	Male	192	47.4
	Female	213	52.6
Age	21-30 years old	154	38
	31-40 years old	152	37.5
	> 40 years old	99	24.5
Education	Less than Bachelor	143	35.3
	Bachelor	208	51.4
	Higher than Bachelor	54	13.3
Marital Status	Married	203	50.1
	Unmarried	202	49.9
Monthly Income	Less than 6,000	74	18.3
	6,000 - 12,000	96	23.7
	12,000 - 16,000	95	23.4
	More than 16,000	140	34.6
Total		405	100

From Table 1, The description of consumers who are considering buying luxury car are described as follows: Of the 405 respondents, 192 (47.4%) are male and 213 (52.6%) are female. Regarding age, 38% of the respondents were between the 21-30 years old. The proportion of respondents who are more than 44 years old is lowest 24.4%. Out of all the respondents, 51.4% had a bachelor's degree, while just 13% had education higher than a bachelor's degree. There are 202 unmarried (49.9%) and 203 married (50.1%) regarding marital status. Less than 6,000 yuan accounts for 18.3% of respondents' monthly income, while more than 16,000 yuan accounts for 34.6% of respondents' monthly income.

Part II: The analysis results of range of judgment on perceived value factors, and purchase intention.

Table 2. The descriptive statistics of perceived value.

level of opinion (percent)

	Very disagree	Disagree	Neutral	Agree	Very Agree	Mean	SD	Meaning	Ranking
Brand	3	5.9	25.7	45.9	19.5	3.73	0.941	Agree	4
Quality	3.5	10.4	25.2	40	21	3.65	1.032	Agree	5
Price	2.7	4	16	43.2	34.1	4.02	0.952	Agree	1
Design	2.7	4.2	22.7	44.2	26.2	3.87	0.941	Agree	3
Utility	5.4	11.4	19.3	45.2	18.8	3.60	1.082	Agree	6
Technical Consideration	2	4.4	19	43.7	30.9	3.97	0.925	Agree	2
Perceived Value	**0**	**4.2**	**14.6**	**73.8**	**7.4**	**3.84**	**0.603**	**Agree**	

Form table 2, describes the descriptive statistics of the study's independent variables, which are perceived values of brand, quality, price, design, utility, technical consideration. Each variable is measured on a Likert scale ranging from 1 - 5, with the highest score indicating the excellent level of engagement or presence. The analysis results show that the brand value is 3.73, which represents the amount of agree level that customers have with the content's brand value. For quality, the mean value is 3.65, which represents the amount of agree level that customers have with the content's quality value. For price, the mean value is 4.02, which represents the amount of agree level that customers have with the content's quality value. For design, the mean value is 3.87 which represents the amount of agree level that customers have with the content's design value. For utility, the mean value is 3.60 which represents the amount of agree level that customers have with the content's utility value. And for technical consideration, the mean value is 3.97 which represents the amount of agree level that customers have with the content's technical consideration value. And the total perceived value's mean value show the average is 3.84 which represents the amount of agree level that customers have with the content's perceived value.

Table 3 The descriptive statistics of purchase intention.

level of opinion (percent)

	Very disagree	Disagree	Neutral	Agree	Very Agree	Mean	SD	Meaning	Ranking
Purchase Intention	3	5.7	25.4	44.7	21.2	3.76	0.950	Agree	

For table 3, purchase intention factors, the analysis results show that the mean value of purchase intention is 3.76, which represents the amount of agree level that customers have with the content's Purchase Intention**.**

Inferential Statistics

Inferential statistics was employed for testing the hypotheses of independent a statistical significance level of 0.05. The analysis evaluated the influence dependent variable on dependent variables under the following hypotheses.

Part I: Differences in demographic characteristics (gender, age, education level, marital status, income level) have different impacts on customer purchase intention.

Part II: Perceived value has influence consumer purchase intention toward luxury car.

Table 4. Summary result on Hypothesis 1

Demographic	Repurchase Intention
Gender	√
Age	-
Education	√
Marital Status	-
Income	√

- The mean difference has a significant value more than the level of 0.05.

√ The mean difference has a significant value less than the level of 0.05.

From Table 4, This study found that gender ($t(403) = -2.11$, $p = 0.04$), education ($F = 6.073$, $p = 0.003$) , and income ($F = 4.982$, $p = 0.002$) significantly influence the purchase intention. However, age ($F = 0.012$, $p = 0.988$) and marital status ($t(403) = -1.191$, $p = 0.738$) were found to have no significant difference effect on repurchase intention.

Part II: Perceived value has influence consumer purchase intention toward luxury car.

In Hypothesis 2, Y = purchase intention, X_1, X_2, X_3, X_4, X_5, X_6 are Brand, Quality, Price, Design, Utility, and Technical Consideration.

Table 5. Summarize model of perceived value has influence with purchase intention.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.554[f]	0.307	0.296	0.79706

f. Predictors: (Constant), technical consideration, quality, utility, price, design, brand

From table 5, the analysis results show that perceived value has influence with purchase intention with multiple correlation (R) = 0.554. The ability to predict the analytical equation is 29.6% at the statistical significant level of 0.05.

Table 6. Multiple Linear regression on purchase intention factors (n = 405)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.355	0.262		1.353	0.177
Technical Consideration (X_6)	0.193	0.047	0.188	4.118	0*
Quality (X_2)	0.159	0.041	0.173	3.889	0*
Utility (X_5)	0.144	0.039	0.164	3.665	0*
Price (X_3)	0.142	0.046	0.142	3.05	0.002*
Brand (X_1)	0.127	0.046	0.126	2.783	0.006*
Design (X_4)	0.127	0.045	0.125	2.792	0.005*

a: Dependent Variable: Purchase Intention

*p<.05.

Equation 1:

$$Y = 0.355 + 0.193X_6 + 0.159X_2 + 0.144X_5 + 0.142X_3 + 0.127X_1 + 0.127X_4$$
$$(0.000^*) \quad (0.000^*) \quad (0.000^*) \quad (0.002^*) \quad (0.006^*) \quad (0.005^*)$$

For

Y = purchase intention

X_1 = Brand, X_2 = Quality, X_3 = Price, X_4 = Design, X_5 = Utility, X_6 = Technical Consideration

It can be found from Equation 1. Technical Consideration is the most important variable that influences the repurchase intention by the regression coefficient of about 0.188, followed by quality, utility, price, brand, and design respectively, with the coefficient of 0.173, 0.164, 0.142, 0.126 and 0.125.

Discussion and Conclusions

Demographic

After descriptive statistical analysis, it is found that：Of the 405 respondents, 192 (47.4%) are male and 213 (52.6%) are female. Regarding age, 38% of the respondents were between the 21-30 years old. The proportion of respondents who are more than 44 years old is lowest 24.4%. Out of all the respondents, 51.4% had a bachelor's degree, while just 13% had education higher than a bachelor's degree. There are 202 unmarried (49.9%) and 203 married (50.1%) regarding marital status. Less than 6,000 yuan accounts for 18.3% of respondents' monthly income, while more than 16,000 yuan accounts for 34.6% of respondents' monthly income.

This study found that gender ($t(403) = -2.11$, $p = 0.04$), education level ($F = 6.073$, $p = 0.003$), income ($F = 4.982$, $p = 0.002$) had a significant impact on purchase intention. Age ($F = 0.012$, $p = 0.988$) and marital status ($t(403) = -1.191$, $p = 0.738$) had no significant difference on the purchase intention.

Perceived value

The research results show that technical factors are the most important variable affecting repurchase intention, with a regression coefficient of approximately 0.188, followed by quality, utility, price, brand and design, with coefficients of 0.173, 0.164, 0.142, 0.126 and 0.125 respectively.

Demographic

The research results show that gender, education level, and income level have significant positive impact on consumer purchase intention toward luxury car in Kunming. This result consistent with Nerurkar et al. (2023) explored the impact of demographic factors on consumer intention to buy electric vehicles in Malaysia. The study found that education and income had significant positive effects on consumer intention to buy electric vehicles. And also consistent with Choo et al. (2012) conducted a survey on luxury car consumers in South Korea and found that gender, education and income level have a significant impact on the purchase intention of luxury cars.

Perceived value

The research results show that brand, quality, price, design, utilities, and technical considerations in perceived value all have a significant impact on customers' purchase intention, and technical consideration is the most important variable in regression intention, which is consistent with Dhanabalan et al. (2018) studied the influencing factors of consumers' car purchase decisions in the Indian automobile industry. The study shows that the target research variable customer perceived value is positively affected by brand, price, quality, design, practicality and technology considerations. All these factors force the results to show that perceived value of brand, price, quality, design, practicality and technology considerations influence purchasing decisions. And also consistent with Rizka and Hidayatullah (2020) Study the effect of luxury brand, brand image, and product quality on purchase intention. This shows that the stronger consumers' perception of the influence of luxury brands, the more image and product quality will increase purchase intention.

Implication for Practice

The researcher studied the purchase intention of luxury cars in Kunming by demographic analysis and perceived value, in order to respond to the purchase intention demand of luxury car customers in Kunming. This study has great reference value, because it can better help car service providers to make successful plans. The researchers recommend the following:

1. The research results found that among the demographic factors of luxury car customers in Kunming, the respondents were mainly female, and most of them had a bachelor's degree, and there was a significant relationship with those with an income level of more than 16,000 yuan. Therefore, store clerks or leaders need to regard these customers as key customers and increase their purchase intentions through attentive reception and high-quality services when they arrive at the store.

2. The research results found that the most important customers' perceived value is technical considerations, and the less important is design. Therefore, staff selling luxury cars can use this data to formulate correct marketing plans and design vehicles based on technical considerations that customers are interested in to influence the needs of luxury car customers in the Kunming area and recommend technologically advanced luxury cars to customers.

Recommendation for future research

In future studies, a larger sample size should be collected and the scope of the study should be expanded. In order to improve the accuracy of the research, attention should also be paid to the impact of after-sales service on consumers' willingness to purchase automobile manufacturers' products and services again, and the verification of related strategies should be further strengthened.

As technology continues to advance and EV (electric vehicle) infrastructure has been drastically improved recently, researchers might find factors that influence individuals' intentions to purchase EVs, e.g., environmental concerns, economic incentives, government regulations, technology, and features, or even brand reputation, are interesting and might be a good research title and be beneficial to the growing demand for EVs in the market.

Limitation of the Study

The limitations of this study are mainly reflected in the following aspects: First, the study had a limited sample size. In the study of perceived value and luxury car purchase intention, this article mainly selected 405 samples for targeted empirical analysis. The sample size is small and the sample range is mainly from Kunming area. The samples may also not be representative of different demographics or customer segments.

Secondly, research on the impact of consumer perceived value on luxury car purchase intention is mainly limited to a specific framework, focusing on the impact of factors such as brand, price, quality, design, practicality and technical value on purchase intention. It should be noted that consumers' perceived value is not only reflected in these aspects, but also in consumers' sense of gain. Further research is needed.

Finally, this study mainly focuses on luxury car brands in Kunming and limits luxury brand cars in other regions.

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PROJECT OPERATIONS MANAGEMENT IN CHINA'S REAL ESTATE INDUSTRY: A CASE STUDY OF THE B REAL ESTATE COMPANY

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Abstract

The research objectives were as follows: 1) to analyze the challenges faced by B Real Estate Company in project operation management; 2) to study the current state of project operation management in B Real Estate Company; and 3) to propose initiatives for project operation management at B Real Estate Company. To achieve these objectives, this paper mainly adopted a qualitative approach, utilizing document study and in-depth interviews with eight experts in project operation management as key informants. The research findings revealed that: 1) B Real Estate Company faced multifaceted challenges in project operations management; 2) B Real Estate Company currently employed traditional project management methods, emphasizing detailed planning, resource allocation, and adherence to budget procedures. And 3) initiatives for project operation management at B Real Estate Company included strategic vision refinement, strategic harmony, operational symphony, tech synergy, and talent cultivation odyssey. These initiatives formed a strategic roadmap, demonstrating the company's proactive approach to remaining competitive and agile in the real estate sector.

Keywords: Real Estate Company, Project Management, Operations Management

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Introduction

Review born with the domestic real estate regulation policy, it can be seen that business cycle of domestic real estate industry and economic cycle, since the reform and opening is the domestic economy high speed development of decades, the real estate industry has always been playing the macroeconomic engine and the role of stabilizer, and in the future for a long time will still plays an important role. For the development of the real estate industry, the stages it has experienced can be divided into three stages of "starting-expansion-transformation", which have different development characteristics respectively.

First of all, the initial stage of the real estate industry began in 1980, when houses were first defined as commodities, which can be regarded as the first year of the domestic real estate industry. In 1984, the central government attached great importance to the driving effect of the real estate industry on the national economy, which provided strong support for its high-speed development in the future. In 1987, the first land was successfully auctioned in Shenzhen, marking the beginning of the commercialization process of the domestic real estate industry; In 1988, the average price of residential property in Hainan province rose to 1,350 yuan per square meter, and then reached 5,000 yuan per square meter in 1991-1992. In 1993, the figure even shot up to 7,500 yuan per square meter. The central government began to pay attention to the commercial housing market and issued and implemented the country's first real estate regulation policy. The housing sales in Hainan province were in trouble, and the retention rate of 13,000 real estate enterprises was almost only 5% (Ma et al., 2021).

Second, the expansion phase began in 1997 Asian financial crisis, then went into the downturn in the global economy, for the development of China, be badly in need of a strong economic growth, the real estate industry has experienced the early stage after the last period of adjustment, began to walk into the government's vision, and showed potential development capacity, Therefore, the government began to support the real estate industry as a new source of economic growth, and put forward a series of development policies in the following years (Sou et al., 2022).

Research Questions

1. What are the specific challenges encountered by B Real Estate Company in the field of project operation management?

2. What initiatives can be recommended to enhance project operation management at B Real Estate Company?

Research Objectives

1. To analyze the challenges faced by B Real Estate Company in project operation management.

2. To propose initiatives for project operation management at B Real Estate Company.

Review of Literature

Real Estate Industry in China

In recent years, with the rapid development of China's real estate market, the government continues to introduce various regulatory measures, resulting in the real estate market profits are gradually compressed. Therefore, the operation and management of the real estate market has attracted more and more attention from professionals. How to optimize the operation management of the enterprise, achieve the business objectives of the enterprise, and then improve the business income of the enterprise has become the focus of the industry professionals. Al-Hashimy et al. (2022) pointed out that the operating body of a real estate development enterprise should consider aspects such as department construction, financial management, customer resources and business processes. Rockel & Barth (2019) analyzed the problems in daily operation and maintenance management of real estate companies after the introduction of SAP ERP system.

Project Management Theories

Project schedule management is an organizational structure that involves the realization of operating results and the sharing of technology, resources, methodology and information in the process of project management.

Project schedule management at different management levels has different organizational levels. Project schedule management has multiple levels of functions, including tactical project schedule management with planning, schedule control, cost management and problem traceability feedback, and multi-functional project schedule management with risk prevention, risk control, organizational resources and additional management functions. Strategic project schedule management with business strategy, performance evaluation, revenue evaluation, providing comprehensive project management technology functions, and Enterprise EPMO (Enterprise PMO) with cross-management, human resources management functions. For the real estate industry, the type of project schedule management depends on the project hierarchy, main responsibilities and project scale. In the current stage of real estate development in China, enterprises with project management office and operation with this as the core axis have higher project management score and comprehensive inspection evaluation. It fully reflects the important role of project management organization in improving the maturity of project management in real estate companies (Yazici, 2021). Project priority refers to when the company is faced with the decision to carry out multiple projects and the task priority decision within a single project, according to the complexity of the project and related issues, resource requirements, benefits and time required and other factors, and finally according to the comprehensive consideration of benefits and costs for the company, the priority of the project and tasks and determine the order of resource input (Mahmoudi et al., 2021).

Operations Management Concepts

Project information processing system

The project information processing system of real estate company refers to the comprehensive management of the whole project from the four main lines of project investment, design, development and service, covering the important stages of project operation management such as project development (including project demonstration and project planning), planning and design, project construction (including procurement, bidding, construction, etc.) and sales and service. So as to realize the comprehensive operation and management of the whole project standardization, process and refinement. In addition, with the support and assistance of the management and control mode under scientific centralization and decentralization and professional and efficient functional lines, the level of operation and management of the whole project will not only directly determine the final rate of return, but also truly reflect the comprehensive management level of an enterprise. (Szakonyi, 2020)

Tan Shukui (2017) believes that the main function of the operation management department is schedule control and comprehensive coordination, focusing on strategic planning, business objectives, project positioning multi-dimensional research and analysis of practical problems in project management, through the establishment of integrated management of cross-department coordination function responsible for overall planning to solve problems, full cycle tracking, supervision of multi-project parallel operations.

Methodology

Research Design

This research is a qualitative study. Based on the research objectives, this paper asserts that it is crucial to address the current practical challenges faced by Company B and examine the status quo of its planning and operation system. The challenges encountered by Company B, including those from the company itself, government management, and industry operations, should be systematically sorted out. In order to obtain intuitive data about the current challenges and existing problems facing Company B, this paper will conduct sample interviews with its a diverse group of informants to understand their cognition of these challenges and current situation. At the same time, to obtain more specific information. Finally, experts' evaluation was conducted based on four key criteria: consistency, suitability, feasibility, and usefulness of initiatives.

Research Instrument

This section primarily explains the interview guidelines, with the objective of collecting data to address the research objectives. The researchers have created a set of questions for interviewing on each topic, in line with research objective 1: To analyze the challenges faced by B Real Estate Company in project operation management, as shown in Table 1.

Table 1. Interview guidelines for collecting data about the challenges faced by B Real Estate Company in project operation management.

Issues	Questions
Government regulation and related policies of the industry	1. How have government regulations and industry policies affected the project operation management at B Real Estate Company? 2. Can you provide examples of specific regulations or policies that have posed challenges to the company's project operations? 3. How does B Real Estate Company ensure compliance with government regulations and industry policies in its project management?
Macroeconomic conditions	1. How do macroeconomic conditions, such as economic downturns or fluctuations, impact the project operation management at B Real Estate Company? 2. Have there been instances where economic conditions have led to challenges or changes in project planning and execution? 3. What strategies or approaches does the company employ to adapt to changing macroeconomic conditions in the real estate industry?
Social and cultural factors	1. In what ways do social and cultural factors influence project operation management at B Real Estate Company? 2. Can you provide examples of how social and cultural factors have affected project planning and execution? 3. How does the company address challenges related to social and cultural factors in its projects?
Technological Advancement	1. How does market competition affect the project operation management strategies at B Real Estate Company? 2. Have increased market competition led to changes or challenges in project planning and execution? 3. What competitive strategies does the company employ in project management to maintain its position in the market?
Market competition	1. How does market competition affect the project operation management strategies at B Real Estate Company? 2. Have increased market competition led to changes or challenges in project planning and execution? 3. What competitive strategies does the company employ in project management to maintain its position in the market?
Labor market and skills availability	1. How does the availability of skilled labor impact the company's project operation management? 2. Have there been instances where challenges related to labor market dynamics affected project outcomes? 3. What initiatives or practices does B Real Estate Company implement to address issues related to labor market and skills availability in project management?

Interview guidelines for collecting data for research objective 2: To study the current state of project operation management in B Real Estate Company, as shown in Table 2.

Table 2. Interview guidelines for collecting data about the current state of project operation management in B Real Estate Company.

Issues	Questions
Project planning and scheduling	1. Can you describe the current processes and methodologies used by B Real Estate Company for project planning and scheduling? 2. How does the company ensure that project timelines and schedules are effectively managed? 3. Are there any specific tools or software applications that the company relies on for project planning and scheduling?
Project resource allocation	1. How does B Real Estate Company allocate resources for its various projects? 2. Can you explain the criteria or factors considered when allocating resources to different projects? 3. What challenges, if any, does the company face in resource allocation, and how are they addressed?
Budget and cost management	1. What procedures and practices does the company follow for budgeting and managing project costs? 2. How does B Real Estate Company ensure that projects are completed within budgetary constraints? 3. Are there any cost control measures or strategies that have been particularly effective?
Project quality control and assurance	1. How does the company maintain and ensure the quality of its projects throughout the project lifecycle? 2. Can you provide examples of quality control and assurance processes in place? 3. What measures are taken to address quality issues or deviations during project execution?
Stakeholder engagement and communication	1. How does B Real Estate Company engage with various stakeholders, including clients, partners, and regulatory authorities, during project management? 2. Can you describe the company's communication strategies for keeping stakeholders informed and engaged? 3. Have there been instances where effective stakeholder engagement and communication have significantly influenced project outcomes?

Data Collection

1. Document Study

Review internal project documents, reports, and historical project data to gain insights into the company's current practices and challenges.

2. In-depth Interviews

Conduct semi-structured interviews with key informants selected based on expertise, relevance to research objectives, direct involvement in project management, knowledge of challenges, and an innovation mindset. Interviews will be audio-recorded, transcribed, and analyzed.

Research Results

1. The challenges faced by B Real Estate Company in project operation management

Based on the data analysis, it can be concluded that the challenges faced by B Real Estate Company in project operations management are illustrated in Table 3.

Table 3. Key findings of the challenges faced by B Real Estate Company in project operations management.

Issues	Key findings
Government Regulations and Policies	Government regulations and industry policies can have a direct impact on the project operation management of B Real Estate, and these regulations and policies need to be incorporated into the project management plan and ensure its execution.
Economic Conditions	The impact of financial policies will lead to the reduction of bank loans, resulting in increased financial pressure on companies. At the same time, economic downturn or volatility may lead to a decrease in market demand and a decrease in buyer confidence, which will reduce sales and cash flow
Social and Cultural Factors	Including Employment opportunities, Economic growth, Improvement of community infrastructure, Cultural exchange and integration, social stability and sense of security, Green and sustainable development. It should be noted that in the actual situation, each case may have special factors or other factors that are not listed but are equally important.
Technological Advancements	Technological progress has become one of the important driving forces to promote the development of the industry. Through the introduction of advanced technology, real estate companies have made significant improvements in all aspects of design, construction, operation and so on
Market Competition	First of all, in the market competition, product quality and price is one of the determining factors. Secondly, in terms of marketing, effective communication and advertising also play a crucial role good after-sales service can win customer reputation and promote the willingness to buy again.
Labor Market and Skills Availability	First of all, with the continuous development of China's economy, the real estate industry has also shown a booming trend. Secondly, it is essential for a successful project employee to have a certain level of professional knowledge and skills. In addition, flexibility and adaptability are also one of the characteristics of a good project employee.

2. Initiatives for project operation management at B Real Estate Company

The initiatives for project operation management at B Real Estate Company are a comprehensive set of strategic actions aimed at addressing key challenges and enhancing operational efficiency in the ever-evolving real estate landscape. These initiatives cover a spectrum of critical areas as show in Figure 1.

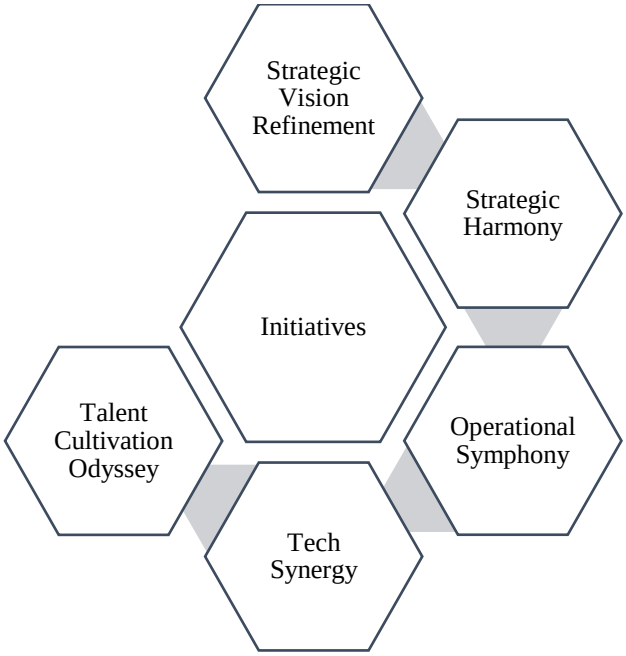

Figure 1. Initiatives for project operation management at B Real Estate Company

Strategic vision refinement initiative focuses on revamping the strategic planning process, ensuring alignment with operational goals. The company aims to achieve this by conducting a thorough review of current strategies, establishing clear objectives, and implementing a structured goal subdivision for projects. The objective of strategic harmony initiative is to strengthen management mechanisms for streamlined decision-making and execution. The company aims to identify and eliminate sources of conflict, establish a centralized decision-making process, and implement clear communication channels.

Operational symphony initiative focuses on restructuring the organizational framework to enhance strategic implementation. By evaluating and redefining department functions, establishing a long-term management and supervision system, and introducing agile structures, the company aims to improve strategic alignment, increase efficiency in project execution, and enhance communication within the organization. The Tech Synergy initiative aims to elevate project efficiency through technological integration. By identifying suitable technology solutions, implementing project management software, and providing relevant training, the company strives to increase efficiency in project schedules, resource allocation, and cost management.

The Talent Cultivation Odyssey initiative is designed to strengthen the skills and adaptability of project employees. Through skills assessment, customized training programs, and integration of cutting-edge technology, the company aims to improve employee skills, increase adaptability, and receive positive feedback from project teams.

These initiatives collectively form a strategic roadmap for B Real Estate Company, addressing challenges in strategic planning, management structures, organizational efficiency, technological integration, and talent development. The company's commitment to these initiatives reflects a proactive approach to staying competitive and agile in the dynamic real estate sector, fostering innovation, growth, and sustained excellence.

Discussion and Conclusions

Discussions

1. Discussions of the challenges faced by B Real Estate Company in project operation management

B Real Estate Company is currently facing several challenges in project operation management. These challenges have a significant impact on the company's overall performance and success. In this discussion, we will analyze some of these challenges and propose potential solutions to address them effectively.

B Real Estate company is currently facing several challenges in project operation management. These challenges have a significant impact on the overall performance and success of the company. In this discussion, we will analyze them.

1) Lack of effective communication:

One of the major challenges that B Real Estate faces in project operations management is the lack of effective communication between team members, stakeholders, and clients. This can lead to misunderstandings, delays in the decision-making process, and ultimately impact the project's timeline and results. This is consistent with the research of Rajhans (2018), in which the authors argue that effective common channels should be established among project team members, customers and stakeholders, and that regular meetings should be held to ensure that all relevant parties are informed of the progress of the project, solve problems in a timely manner, and make collective decisions. However, Company B has deficiencies in this aspect, especially the lack of communication channels between the company as a whole and external stakeholder, which has affected the progress and efficiency of the project.

2) Resource allocation:

Another major challenge for B Real Estate is the allocation of resources during project operation. Insufficient or misallocated resources can lead to delays or even failure to meet customer expectations. This is like the study of Chin et al. (2008). In this study, the author believes that when the number of projects carried out by a company is multiple, resource allocation should be carried out for

each project, and the resource allocation plan should be optimized according to the characteristics of different projects. At present, Company B has not established a holistic resource planning system to integrate with other projects before starting the project, and lacks a comprehensive evaluation system for required resources (such as human, financial, equipment/material availability, etc.), which makes it difficult for the project to match the established schedule and deliverables in terms of resources obtained.

2. Discussions of the current state of project operation management in B Real Estate Company

The current situation of project operation and management of B real estate company is a subject that needs careful analysis and evaluation. In this discussion, we will discuss various aspects of project operations management in a company.

1) Project plan

Effective project planning is necessary to achieve desired results. This includes defining project objectives, setting realistic timelines, allocating resources appropriately, and identifying potential risks or challenges. As discussed in Zika-Viktorsson et al. (2006), project planning is crucial for a real estate company to decide whether to carry out a new project, and the quality of the plan is directly related to whether the project can be completed in time. At present, B Real Estate Company still needs to further optimize the project plan, especially in the aspects of potential risk management and effective communication proposed in the previous section, which should be systematically constructed at the early stage of the project plan to ensure that every link can be reflected in the project plan.

2) Project quality control

Maintaining high quality standards throughout the project is essential for customer satisfaction and reputation building. In this regard, Enwall & Jerbrant (2003) pointed out that an important aspect of project management is the quality control of the project by the company. Whether the quality of the project can be ensured in this way directly affects the future earnings of the project and the company. In this regard, although B Real Estate Company has also built a project control process and system, the difference with relevant research is that it does not linkage analysis of project quality and future income, thus reflecting the shortcomings of quality control for the sake of quality, resulting in a failure to monitor compliance with established standards at each stage of the project life cycle. Project team members also showed a lack of enthusiasm for this problem.

Conclusions

With the development of the global financial market, the real estate industry will continue to maintain its importance for a long time in the future. As a person participating in this process, B Real Estate Company must realize that the industry has entered a new development cycle. Therefore, the company should take the initiative to meet this opportunity and take effective measures to get the

opportunity. This stage is a very critical stage for B Real estate Company. There may be different problems such as speed of progress, stability of quality, increase or decrease of investment and construction cost, which means that there are large potential variables in the construction process. Therefore, under the current market, new policy environment and new development situation, B Real estate company needs to strengthen the strict control of project progress, project quality, construction cost as well as the existing mechanism and management in the construction process, solve possible problems in a timely and efficient manner, and ensure the proper execution of project construction. Plan operation management must have high efficiency, strong coordination and execution, otherwise it will affect the project planning, construction and later operation, as well as the company's final profit situation. In view of this, this paper aims to analyze the existing problems in project planning and operation management by combining the relevant information of B Real Estate Company and the projects it is responsible for developing in the construction stage, and put forward corresponding improvement plans.

This paper mainly adopts the research methods of in-depth interview and experience summary to study and analyze the outstanding problems existing in the planning and operation management of the real estate project of B Real estate company, and puts forward improvement measures. Based on the results obtained from the interview and analysis, this paper believes that there are some problems in the planning management and operation management of B Real estate Company. In terms of plan management, there are mainly unclear strategy, insufficient matching degree with the company's strategy and insufficient target segmentation. In terms of operation management, there are mainly problems such as weak functional service consciousness, low organizational efficiency and weak execution force.

Given the dynamic nature of the real estate market in China, it is essential to emphasize adaptability. Future research could benefit from delving into the impacts of investments, exploring financing alternatives, assessing market demand, and considering other pertinent factors, aiming to acquire a more profound comprehension of the intricacies inherent in the sector.

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THE EFFECT OF ENTREPRENEURSHIP RESILIENCE ON CHINESE LITHIUM BATTERY NEW VENTURE GROWTH

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Abstract

Entrepreneurship resilience plays a positive and stable role in the entrepreneurial process and has a good predictive function for entrepreneurial performance. The lithium-ion battery industry is the cornerstone of the development of four emerging industries: “new energy,” “new materials,” “new technology,” and “high-end manufacturing.” In the past, scholars have not considered the characteristics of entrepreneurs in their research on improving Chinese lithium battery new venture growth. The characteristics of entrepreneurs, as a key issue in the field of entrepreneurship, have not received widespread attention from scholars. This article will start with the characteristics of entrepreneurs themselves and explore the path on which entrepreneurship resilience affects Chinese lithium battery new venture growth. This article uses a structural equation model to empirically examine the relationship between variables. The results show that entrepreneurial resilience significantly affects the growth of new startups. The findings of the study are beneficial for practitioners of Chinese lithium battery enterprises and will allow their strategies to promote sustainable new venture growth.

Keywords: Entrepreneurship Resilience, New Venture Growth, Structural Equation Model.

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Introduction

In recent years, the Chinese government has issued various entrepreneurial support policies, and private entrepreneurial activities have been extremely active. Currently, although China has a significant number of new ventures, they are facing relatively severe survival and growth problems. Currently, the average survival period of Chinese new ventures is less than 3 years, and a large number of new ventures have failed to cross the Death Valley and have fallen. According to the GEM (2018) report, although there are an average of 20,000 companies established in China every day, most of them face failure difficulties at the early stages of entrepreneurship, with less than 20% of new ventures surviving for more than 3 years (Zeng, 2021). Most new businesses quickly end up failing due to their newly entered defect characteristics (Dahl & Reichstein, 2007). New enterprises often face resource constraints as they grow due to their limited resource and capability bases. The grim entrepreneurial situation has dampened the entrepreneurial enthusiasm of many people, casting a shadow over China's booming entrepreneurial economy. Therefore, new enterprises must solve the problem of surviving and developing in today's era of drastic changes and continuous development.

Entrepreneurial resilience has an important impact on entrepreneurial performance. Entrepreneurs must constantly keep up with changing emergencies by adjusting their goals and strategies (Xiu & Meng, 2020). They need to have a certain degree of resilience so that entrepreneurs can lead their teams forward in the process of confronting difficulties and pain. Resilience is a very important personality trait that can help individuals overcome hardships and continue to meet challenges (Bullough et al., 2014).

The Chinese economy has entered a stage of “sub-rapid growth.” Innovation, adjustment, and acceleration of the development of strategic new law industries are the fundamental choices for China's economy. The lithium-ion battery industry is the cornerstone of the development of four emerging industries: “new energy,” “new materials,” “new technology,” and “high-end manufacturing.” It is a new driving force for global economic development and a driving force for global industrial economic recovery.

In the past, scholars have not considered the characteristics of entrepreneurs in their research on improving Chinese lithium battery new venture growth. The characteristics of entrepreneurs, as a key issue in the field of entrepreneurship, have not received widespread attention from scholars. This article will begin by examining the characteristics of entrepreneurs and their impact on the growth of Chinese lithium battery new ventures. Specifically, this article studies the relationship between entrepreneurial resilience and startup growth in Chinese lithium battery enterprises.

Literature Review

New ventures are enterprises that have recently been established and lack sufficient funds and resources, often encountering challenges such as funding shortages, talent shortages (typically limited to founders and a few core employees), and difficult business development. According to

Batjargal et al.'s (2013) chronological classification of startups, this study identifies new ventures that have been established for less than 8 years as the research object. The growth of new ventures is the process of generating revenue, adding value, and expanding business scale.

Entrepreneurs' resilience depends on their psychological state, indicating that they have not succumbed to negative effects such as dissatisfaction or setbacks and have the ability to recover and surpass themselves from difficulties, adversity, conflicts, and failures, thereby achieving success (Lafuente et al., 2019). The higher the resilience of entrepreneurs, the more they can calmly cope with and overcome adversity to help companies resist internal and external shocks. Ingram et al. (2015) found through the bankruptcy of the Bitcoin Exchange that in order for a company to survive for the long term, it must always be prepared to face sudden extreme events and respond through entrepreneurial resilience. High-resilience entrepreneurs have better adjustment abilities (Ayala & Manzano, 2014), are able to adjust to external market changes, choose appropriate business strategies, and quickly carry out business around them to improve enterprise competitiveness. When a company faces a crisis, it can stimulate the resilience of entrepreneurs, enabling them to quickly adjust and take action (Bullough & Renko, 2013). High-resilience entrepreneurs can quickly emerge from difficulties, better learn from and reflect on failed crises, and help companies quickly adjust to environmental changes (Ingram et al., 2015). Based on previous relevant theories, this current study proposes the following hypothesis:

H1: Entrepreneurial resilience plays a positive role in new venture growth.

Research Methodology

Data Collection

In order to explore the influence of entrepreneurial resilience on Chinese new venture growth, this study will collect primary data to analyze the influence of individual psychological characteristics of entrepreneurs on new venture growth in China. This study will select executives from sample companies and collect first-hand data through online questionnaires. This study uses the Questionnaire Star platform (https://www.wjx.cn/) to conduct a survey by providing QR codes and links to the respondents.

Sampling

According to SPIR, there are currently 3,466 lithium battery companies in China (see Table 1) This study adopts the stratified sampling method. The stratified sampling method involves randomly selecting samples (individuals) from a population that can be divided into different subpopulations (or layers) in a specified proportion from each layer. The researchers set the sample size for this study at 384, with an extraction ratio of 11.08% for each layer (the sample size divided by the number of target populations). This study randomly selects corresponding samples.

Table 1. Regional Distribution of Chinese Lithium-Ion Battery Enterprises

Region	Number of Chinese Lithium-Ion Battery Enterprises
Guangdong Province	1,067
Jiangsu Province	313
Shandong Province	200
Anhui Province	263
Zhejiang Province	209
Hunan Province	310
Henan Province	148
Hebei Province	45
Hubei province	153
Jiangxi Province	223
Xinjiang Uygur Autonomous Region	12
Qinghai Province	9
Gansu Province	14
Inner Mongolia Autonomous Region	19
Ningxia Hui Autonomous Region	9
Beijing	14
Tianjin City	14
Liaoning Province	28
Jilin Province	24
Heilongjiang Province	9
Shaanxi Province	40
Shanxi Province	38
Guangxi Zhuang Autonomous Region	24
Yunnan Province	12
Guizhou Province	45
Shanghai City	31
Chongqing City	40
Hainan	7
Fujian Province	148
Total	3,466

Instrumentation

The Connor-Davidson Resilience Scale (revised) ten-item scale was used to measure entrepreneurial resilience in the current study (Fatoki, 2018). This study draws inspiration from Wei and Xiao's (2007) research and measures new venture growth from the perspectives of competitiveness and technological innovation ability. The above two scales' items range from 1 (strongly disagree) to 5 (strongly agree).

Reliability and Validity Analysis and Data Analysis

Reliability describes how far a particular test, procedure, or tool, such as a questionnaire, will produce similar results in different circumstances, assuming nothing else has changed. A measurement model is said to have good convergence efficiency by Ming (2010) only if each measurement indicator has a factor load between 0.50 and 0.95, the combined reliability is higher than 0.60, and the average variance extracted (AVE) is higher than 0.50. If the factor load of individual items is less than 0.50, it is necessary to delete the item and modify the measurement model. Fornell and Larcker (1981) also pointed out that for the test of discriminant validity, the standard is that the square of the correlation coefficient between two latent variables is less than the square root of the AVE of the latent variable.

Researchers use the structural equation model (SEM) to test the hypothetical relationship between observation items and latent variables, as well as between latent variables (Ullman & Bentler, 2012). This study uses SEM as a method to test the relationship between commitments and outputs.

Results

The demographic characteristics of the sample in this questionnaire survey are shown in Table 2.

Table 2. Profile of Respondents

Demographic	Category	Frequency	Percentage (%)
Gender	Male	213	55.5
	Female	171	44.5
Education Background	Below undergraduate	105	27.3
	Undergraduate	114	29.7
	Master	93	24.2
	Ph.D. or above	72	18.8
Marital Status	Single	98	25.5
	Living together or married	185	48.2
	Divorced	88	22.9
	Widowed	13	3.4
Age	Below 20	6	1.6
	20-30	43	11.2
	31-40	147	38.3
	41-50	128	33.3
	Above 50	60	15.6
Years of Establishment of The Firm	Less than one year	57	14.8
	1-3 years	191	49.7
	4-7 years	136	35.4

Table 2. Profile of Respondents. (Cont.)

Demographic	Category	Frequency	Percentage (%)
Number of employees	No employee	8	2.1
	1-4	9	2.3
	5-9	52	13.5
	10-49	176	45.8
	50-100	114	29.7
	More than 100	25	6.5
Total		384	100.0

Reliability Test

The reliability test results are shown in the table below. From Table 3, it can be seen that the Cronbach's Alpha coefficients of the scales for the two variables are all greater than 0.7, indicating that the scales for these two variables have good reliability and can be used for subsequent analysis.

Table 3. Reliability Test Results

Variable Name	Number of Items	Cronbach's Alpha
New Venture Growth	8	0.947
Entrepreneurial Resilience	10	0.944

Convergent Validity Analysis and Confirmatory Factor Analysis

From Table 4, it can be seen that the standardized factor loading of all observed variables is greater than 0.7; The CR of all latent variables is greater than 0.7, and the AVE is greater than 0.5. Therefore, it can be concluded that all four variable scales in this article have good convergent validity.

Table 4. Confirmatory Factor Analysis Results

Latent variable	Observation variable	Standardized factor loading	S.E.	C.R.	*p*	CR	AVE
New Venture Growth (NVG)	NVG1	0.781	-	-	-	0.947	0.691
	NVG2	0.772	0.055	16.608	***		
	NVG3	0.834	0.055	18.245	***		
	NVG4	0.810	0.056	17.613	***		
	NVG5	0.824	0.053	17.913	***		
	NVG6	0.855	0.054	18.967	***		
	NVG7	0.870	0.056	19.367	***		
	NVG8	0.898	0.054	20.095	***		

Table 4. Confirmatory Factor Analysis Results. (Cont.)

Latent variable	Observation variable	Standardized factor loading	S.E.	C.R.	*p*	CR	AVE
Entrepreneurial Resilience (ER)	ER1	0.751	-	-	-	0.945	0.635
	ER2	0.780	0.068	15.969	***		
	ER3	0.727	0.065	14.729	***		
	ER4	0.727	0.064	14.688	***		
	ER5	0.769	0.065	15.705	***		
	ER6	0.784	0.064	16.159	***		
	ER7	0.876	0.062	18.274	***		
	ER8	0.883	0.058	18.443	***		
	ER9	0.839	0.058	17.413	***		
	ER10	0.816	0.054	16.876	***		

Discriminant Validity Analysis

From Table 5, it can be seen that the square root of AVE for each latent variable is greater than the absolute value of the correlation coefficient between latent variables, indicating that the two variable scales of NVG and ER have good discriminative validity.

Table 5. Discriminant Validity Analysis

	NVG	ER
NVG	**0.831**	-
ER	0.490	**0.797**

Note: The bold value in the upper right corner is the square root of AVE, and other values are the correlation coefficients between latent variables.

Measurement Model Fit Evaluation

Figure 1. and Figure 2. below show confirmatory factor analysis of model graph and the measurement model of two latent variables.

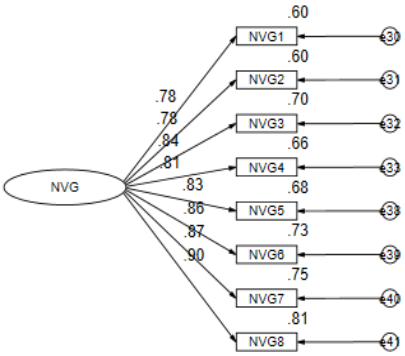

Figure 1. Confirmatory Factor Analysis of NVG

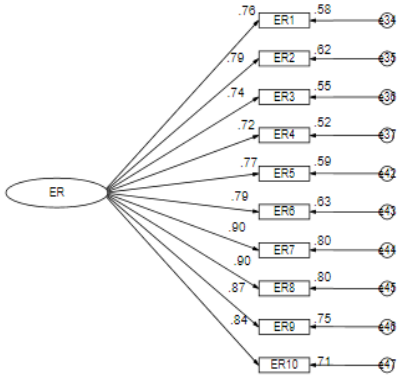

Figure 2. Confirmatory Factor Analysis of ER

Model Fit Evaluation of CFA

Table 6. shows the model fitting indicators for confirmatory factor analysis using two latent variables together. As shown in Table 6, χ^2/ df = 1.705, RMSEA = 0.043, RFI = 0.934, NFI = 0.941, CFI = 0.975, indicating that the model fitting indicators fully meet the standards.

Table 6. Fitting Indicators of the Confirmatory Factor Analysis of the Model

Indicator	χ^2/ df	RFI	IFI	NFI	TLI	CFI	RMSEA
Estimate	1.705	0.934	0.975	0.941	0.972	0.975	0.043
Threshold	<5	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08
Interpretation	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified

Hypothesis Testing

In order to test whether entrepreneurial resilience has a significant direct impact on the growth of Chinese lithium battery new ventures, this article uses AMOS software to construct a structural equation model and conduct path analysis for testing. Table 7 shows the SEM fitting indicators for the indirect effect analysis. As shown in Table 8, χ^2/df = 1.545, RMSEA = 0.038, RFI = 0.922, NFI = 0.927, and CFI = 0.973, indicating that the model fitting indicators fully meet the SEM standards.

Table 7. Fitting Indicators of the SEM

Indicator	χ^2/ df	RFI	IFI	NFI	TLI	CFI	RMSEA
Estimate	1.545	0.922	0.973	0.927	0.971	0.973	0.038
Threshold	<5	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08
Interpretation	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified	Qualified

Table 8. shows the direct effect analysis results of the impact of entrepreneurial resilience on the growth of a Chinese lithium battery new venture. The standardized path coefficient of the impact of entrepreneurial resilience on Chinese lithium battery new venture growth is 0.130, and the significance probability (p-value) of the direct effect hypothesis of H1 is 0.041, as shown in Table 8. The above results show that entrepreneurial resilience has a significant positive impact on Chinese lithium battery new venture growth, which supports the hypothesis H1.

Table 8. Direct Effect Analysis

Direct effects	Standardized Estimate	S.E.	C.R.	*p*	Hypothesis
NVG ←ER	0.130	0.079	2.045	0.041	H1

Discussion

The findings indicate that the ability of entrepreneurs to adapt and recover from challenges has a beneficial impact on the success of new Chinese lithium-ion battery companies. This aligns with the proposed research hypothesis H1. The research findings align with the findings of Vizcaíno et al. (2021) and Timmons (1978). When faced with a challenge and reaching a deadlock while performing activities, one's self-efficacy becomes the impetus that propels them to progress and enables them to accomplish their objectives. Ayala and Manzano's (2014) research findings provide empirical evidence that entrepreneurial resilience has a beneficial effect on entrepreneurial growth. These findings also complement the prior research by Hayward et al., which concluded that entrepreneurial resilience positively influences the growth of new startups. In order to attain sustainable growth for startups, entrepreneurs must possess entrepreneurial resilience, heightened motivation, and unwavering belief to effectively navigate challenges. This enables them to overcome critical situations that arise during the entrepreneurial process, relying on their strong determination to overcome the obstacles to the growth of startups. By doing so, they are able to emerge from failures and crises even stronger than before (Reivich & Shatté, 2002).

Implications and Conclusion

Theoretical Implications

Firstly, this article explores the direct role of entrepreneurial resilience in entrepreneurial behavior from the perspective of actions triggered by entrepreneurial personal characteristics. Secondly, there is limited literature on exploring the impact of personal traits on the growth of new startups. Therefore, this study uses entrepreneurial resilience as an explanatory variable and confirms through data analysis that entrepreneurial resilience can significantly and positively affect the growth of new startups, which adds to the research on the theory of entrepreneurial resilience.

Practical Implications

Enhancing one's entrepreneurial resilience is of great value to entrepreneurs of Chinese

literacy in batty new ventures. Entrepreneurs should have the characteristic of “resistance to twists and turns.” In order to cultivate entrepreneurs' entrepreneurial resilience, entrepreneurs and aspiring entrepreneurs need to take the following three actions: 1) participate in business development training to establish a belief in their entrepreneurial ability; 2) find online activities, special lectures, and guidance opportunities to enhance the entrepreneurial resilience of entrepreneurs through “role models” learning; and 3) actively engage in entrepreneurial activities, enhance practical business acumen, and seek feedback from those who are objective, critical, and inspiring.

Conclusion

This article investigates the relationship between entrepreneurial resilience and the growth of new startups. In the empirical analysis section of this study, we first tested the internal consistency, reliability, convergence validity, discriminant validity, and normality of 384 valid sample data collected through formal research. After verifying that the reliability and validity of the scale reached a high level, this article then used AMOS to construct a structural equation model to test the direct effect (H1). The research conclusion reveals that entrepreneurial resilience has a significant positive impact on the growth of new startups.

Acknowledgements

First of all, I would like to give my heartfelt thanks to all the people who have helped me with this paper. My conscience and heart needs and admissions go first to my supervisor, Mr. Khahan Na Nan, whose suggestions and resources have given me multiple insights into these translation studies. It has been a great privilege and joy to study under his guidance and supervision. Furthermore, it is my pleasure to benefit from his personality and diligence, with which I will treat my whole life. My graduation from his knowledge knows no bounds. I would also like to thank Associate Professor Dr. Montree, Li Liu yuan, and every other professor.

I am also extremely grateful to all my friends and classmates who have kindly provided me with assistance and company in the course of preparing this paper. In addition, many thanks go to my family for their unfailing love and unwavering support. Finally, I am truly grateful to all those who develop multiple times to read this thesis and give me multiple advice, which will benefit me in my later study.

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COMPETITIVE STRATEGY BY USING SOAR ANALYSIS: A CASE OF SP COMPANY

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Abstract

This research aimed 1) to analyze the competitive environment of SP Company; 2) to utilize the SOAR strategic model to develop sustainable competitive advantage strategies for SP Company; and 3) to establish initiatives for implementing the sustainable competitive advantage strategies for SP Company. Utilizing a qualitative approach, 50 engineers and technologists provided insights into the competitive landscape, while 10 senior managers, marketing personnel, and 5 government officials contributed to the SOAR analysis. Findings revealed SP Company's operation within a competitive realm influenced by global carbon neutrality policies and photovoltaic power generation trends. Economic factors, technological advancements, supplier challenges, and competition with established players like Foster were identified. The company's sustainable strategies focused on technical expertise, R&D leadership, cost optimization, and strong supplier relationships. Initiatives for implementation were designed to position SP Company as a renewable energy leader, addressing specific operational facets such as photovoltaic film production, innovation through R&D, cost optimization, and strategic market expansion. Strengthening supplier relationships, capitalizing on green energy opportunities, and forming strategic partnerships aimed at comprehensive market leadership and sustained growth.

Keywords: Competitive Strategy, SOAR Analysis, Photovoltaic Industry

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Introduction

The global photovoltaic industry experienced rapid growth, with the market size of photovoltaic film increasing by over 30% annually. The emergence of POE adhesive film, characterized by superior properties compared to EVA adhesive film, gained traction, particularly in NV-type cells, double-sided modules, and perovskite modules. N-type components, especially TOPCON, were on the verge of widespread adoption, with an expected market share of 30% in 25 years and 60% in 30 years (Shen et al., 2020). The double-sided double-glass ratio was anticipated to reach 60% in 25 years and 70% in 30 years for both PERC and N-type components (Ma et al., 2023). The demand for POE film was set to surge, driven by the growth of N-type and double-glass modules.

The plastic film particles market, integral to the photovoltaic industry, was projected to witness substantial growth, aligning with the expansion of photovoltaic power generation. China dominated global plastic film production capacity, yet it heavily relied on imports for core packaging materials, EVA, and POE. Despite efforts to expand production capacity, the bottleneck in photovoltaic material supply was expected to persist in 2022. The demand for vinyl acetate (VA) was projected to remain high in 2022 due to the large-scale production of EVA. The POE market faced technical challenges, hindering its widespread use, but efforts for localization were underway.

In the photovoltaic adhesive film sector, the share of POE adhesive film was expected to increase from 23% in 2021 to 31% by 2025, driven by the shift towards N-type batteries and double-glass modules. Domestic enterprises were focusing on POE localization, with Wanhua Chemical making significant progress (Energy Trend, 2023). The paper proposed exploring sustainable competitive advantage strategies through SOAR analysis to aid enterprise development in the photovoltaic industry, emphasizing the potential for POE as a material substitute.

In the midst of the exponential growth experienced by the global photovoltaic industry, SP Company emerged as a focal point for in-depth analysis and strategic exploration. The decision to spotlight SP Company was grounded in its substantial footprint within the dynamic landscape of photovoltaic power generation. As a key player in this burgeoning industry, SP Company witnessed notable developments and challenges, prompting the need for a comprehensive understanding of its competitive environment and corporate strategy.

The photovoltaic sector, characterized by a consistent annual growth rate of over 30%, saw pivotal shifts in technology, materials, and market dynamics. SP Company, positioned at the forefront of these transformations, faced a complex landscape marked by the ascendancy of novel technologies such as N-type components, the surge in demand for double-sided double-glass modules, and the increasing prominence of POE adhesive film over traditional EVA adhesive film.

Amidst these industry-wide shifts, SP Company's corporate strategy came under scrutiny. The research aimed to unravel the intricacies of SP Company's strategic decisions, exploring how it navigated the challenges and opportunities presented by the evolving photovoltaic market. The quest for sustainable competitive advantage was particularly pertinent, given the rapid pace of innovation and

the anticipated market trends, including the projected adoption of N-type components and incorporation of double-sided double-glass modules within the next three decades.

To address the evolving landscape of the global photovoltaic industry marked by rapid growth and emerging trends, this research aimed to fulfill the following objectives: 1) conduct a comprehensive analysis of the competitive environment of SP Company within the industry; 2) apply the SOAR strategic model to formulate sustainable competitive advantage strategies tailored to SP Company's unique position; and 3) develop actionable initiatives for the implementation of identified sustainable competitive advantage strategies. This research was motivated by the significant advancements in the photovoltaic sector, including the increasing market size of photovoltaic film, the prominence of POE adhesive film, and the anticipated growth of N-type components and double-sided double-glass modules. By exploring and implementing strategic initiatives, this study sought to contribute valuable insights to propel SP Company's growth and competitiveness within the dynamic photovoltaic industry.

Review of Literature

Strategic management

In the realm of strategic management, the concept of strategic competition involves the formulation and implementation of forward-looking strategies aimed at preserving or enhancing a company's competitive advantage in the market (Zekiri & Nedelea, 2012). This process entails a systematic analysis of the company's prevailing strategic position, the development of effective market strategies, and their alignment with the overarching goals and capabilities of the organization. The foundational theoretical framework for comprehending competitive strategy is drawn from Michael Porter's seminal works on "competitive strategy" and "competitive advantage," emphasizing the importance of industry analysis and the establishment and perpetuation of competitive advantages. These advantages may take the form of either cost leadership—positioning as a low-cost manufacturer—or differentiation—offering unique products or services at premium prices (Porter, 1997; Belton, 2017).

The pursuit of a cost leadership strategy involves delivering products or services at lower market prices through mechanisms such as large-scale production, cost reduction, and meticulous cost control. Successful implementation requires substantial capital, distinctive processing skills, streamlined value chain management, low-cost sales channels, and capabilities for mass production. In contrast, the differentiation strategy focuses on providing distinctive products or services, necessitating creativity, innovation, and adept marketing. Differentiation avenues encompass unique product features, design elements, technical prowess, and delivering an exceptional customer experience. The overarching objective of differentiation is the cultivation of a sustainable competitive advantage within the market. The focused strategy targets specific customer segments, tailoring products or services to meet their specific needs. This approach involves meticulous industry segmentation, enabling the enterprise to serve a particular segment more effectively than its competitors. The efficacy of this

strategy hinges on the accurate identification and adept servicing of the chosen segment (Porter, 1997; Valipour et al., 2012; Belton, 2017; Bansal & Bashir, 2023).

Strategic tools

In tandem with the analytical frameworks utilized in this study, a PEST analysis was systematically conducted to evaluate macro-environmental factors—Political, Economic, Social, and Technological—that exerted influence on organizations (Zhang, 2023). This methodological approach proved instrumental in discerning potential threats and vulnerabilities, contributing substantively to a comprehensive strategic assessment as part of the subsequent SWOT analysis.

The strategic management framework known as Porter's Five Forces Model, acknowledged as seminal in its field, was systematically applied to analyze the competitive dynamics and attractiveness of the industry (Felsmann, 2016). This model meticulously assessed the threat of new entrants, bargaining power of suppliers and buyers, the threat of substitutes, and rivalry among existing competitors. Functioning as a pivotal tool, it facilitated a nuanced understanding of industry attractiveness, thereby guiding strategic decisions and shaping competitive strategies tailored to navigate and thrive in dynamic market landscapes. Noteworthy research underscores the relevance of Michael Porter's Five Forces Model for a comprehensive strategic analysis, with specific emphasis within the photovoltaic industry on market-oriented strategies, policy considerations, and technological innovation to enhance competitiveness. Simultaneously, domestic research highlights imperatives such as cost control, risk aversion, and effective plan management within the context of market competition (Bao et al., 2021).

The Boston Matrix, originating from the Boston Consulting Group, systematically categorizes products or business entities into four distinct quadrants based on their market growth rate and relative market share (Ward, 2005; Hague, 2023). These quadrants—Stars (high growth and market share), Cash Cows (low growth but high market share), Question Marks (low market share with high growth potential), and Dogs (low market share and growth)—facilitate strategic resource allocation, fostering equilibrium within a company's product portfolio. To apply the Boston Matrix for the assessment of SP Company, a structured approach involves identifying its products or business units, evaluating their respective market growth and market share, categorizing them into the appropriate matrix quadrants, and conducting a comprehensive analysis of tailored strategies for each identified category.

The SOAR Analysis, functioning as a strengths-focused strategic planning framework, accentuates key components—Strengths, Opportunities, Aspirations, and Results. This methodological approach serves as a catalyst for positive organizational transformation, fostering creativity, and motivating individuals or entities to leverage strengths, seize opportunities, articulate goals, and achieve tangible outcomes (Stavros et al., 2003; Gheibi et al., 2018). A nuanced comprehension of SP Company's strategic management of its product portfolio, incorporating the Boston Matrix and capitalizing on strengths through the SOAR Analysis, provides valuable insights into its competitive

strategy. Furthermore, an examination of relevant research, particularly within the photovoltaic industry, serves as a valuable resource to inform strategic decision-making processes.

Methodology

Research design

This qualitative case study employed diverse data collection methods, encompassing documentary study, interviews, and focus group discussions. The documentary study entailed comprehensive research on the new energy automobile industry, drawing from sources such as the Internet, libraries, and industry documents. The case study methodology centered on analyzing SP Company's photovoltaic energy automobile business, scrutinizing its development and competitive strategy through frameworks like Porter's competitive strategy, PEST analysis, Five Forces Model, and the Boston Matrix.

The primary objective of the study was to discern prevalent issues in domestic photovoltaic energy enterprises, utilizing the SOAR model. SP Company's strategic positioning necessitated an understanding of the industry environment, an assessment of internal resources, and the application of competitive strategies to foster sustainable growth. The research underscored the implementation of the SOAR strategic model to optimize organizational structure, marketing initiatives, and capital efficiency. In pursuit of insights, key informants from various sectors within the PV industry were interviewed, and focus group discussions were conducted. The research employed fuzzy comprehensive evaluation, principal component analysis, and data envelopment analysis as evaluation methods. Subsequently, the initiatives were evaluated by five experts based on their consistency, suitability, feasibility, and usefulness.

Key informants

In this study, twelve key informants were carefully chosen, considering their expertise, diverse perspectives, extensive experience, and willingness to engage in the research process. The focus group, comprising 12 stakeholders representing various entities such as PV companies, industry associations, research institutions, and policymakers, was convened to gather insights. Furthermore, the evaluation of the initiatives was conducted by a panel of five experts who critically assessed their consistency, suitability, feasibility, and overall usefulness.

Data Collection

In the realm of primary data collection methods, this research incorporates document analysis and key informant interviews. Document study entails a meticulous examination of various sources, including industry reports, competitors' strategies, internal documents sourced from SP Company, and exemplars of effective implementations of sustainable competitive advantage. Simultaneously, key informant interviews and focus group discussions, facilitated through a SOAR workshop, delve into the

perceptions, experiences, and insights of individuals closely associated with the photovoltaic (PV) industry. This comprehensive approach, encompassing diverse data sources and validation techniques, aims to yield robust findings pertaining to the strengths, opportunities, aspirations, and results characterizing the photovoltaic industry, with a specific emphasis on the SOAR model.

Data Analysis

Thematic analysis served as the methodological framework for scrutinizing the gathered data pertaining to the photovoltaic (PV) industry. The analytical process encompassed several sequential steps, commencing with data familiarization, followed by coding, theme development, and ultimately culminating in data interpretation. These systematic stages collectively facilitated the extraction of meaningful insights and the formulation of conclusive observations regarding the PV industry.

To uphold the integrity of the findings, two crucial measures were implemented—member checking and peer review. Member checking, a validation strategy, involved the dissemination of research findings to key informants within the PV industry. This process aimed to ensure the accuracy and credibility of the data by incorporating the perspectives and feedback of individuals intimately familiar with the industry. Simultaneously, peer review, an additional layer of scrutiny, engaged independent experts and researchers in the PV field. Their evaluations and feedback further fortified the robustness and reliability of the study's outcomes, contributing to the overall validity of the research findings.

Research Results

Competitive environment of SP Company

Within the context of SP Company's competitive environment, a thorough analysis unveils pivotal factors that shape its industry landscape. Regarding the policy environment (P), a global commitment to carbon neutrality prevails, placing a significant emphasis on clean energy, particularly in the form of photovoltaic power generation. Notably, economic factors (E) exert substantial influence as the cost of photovoltaic power generation decreases, resulting in a surge in global installed capacity. The photovoltaic industry's overarching dynamics are further shaped by China's dominance, contributing to economic dynamics.

Social and cultural factors (S) underscore the increasing prominence of photovoltaic power generation, anticipated to constitute a substantial portion of new installed capacity among renewable energy sources. The projection of global photovoltaic installed capacity exceeding 8500GW by 2050 reflects a societal shift toward sustainable energy. On the technical front (T), SP Company stands to benefit from continuous advancements in photovoltaic cell technology, facilitating the efficient fulfillment of packaging requirements for new modules.

Examining the industrial competition structure, supplier bargaining power highlights a considerable gap in the supply and demand for POE film, underscoring the necessity for strategic

supplier management. Established players such as Foster, Swick, Haiyouwei, and Saiwu contribute to competitive rivalry, with Foster leading with over 51% market share, showcasing comprehensive advantages in scale, cost, and quality.

The threat analysis of potential entrants indicates barriers related to technology, cost, and capital, though industry leaders may face competition from downstream component companies. Customer bargaining power has intensified due to the rapid growth of photovoltaic module enterprises, impacting prices in the packaging film industry. Substitutes, particularly co-extruded POE adhesive film (EPE adhesive film), present potential challenges, necessitating careful consideration of material compatibility and density differences with POE film.

Porter's Five Forces Model further elucidates industry dynamics, emphasizing the bargaining power of customers and suppliers, the threat of substitutes, potential entrants, and competitive rivalry. To enhance its market position and profitability, SP Company is advised to adopt a clear market position, strategic direction, and a well-defined competitive strategy. The External Factor Evaluation (EFE) Matrix, constructed through weighted factors and questionnaire-based assessments, indicates SP Company's strength in responding to external factors, boasting an overall score above 2.5, signifying a positive response to opportunities compared to threats.

Incorporating the Boston Matrix Analysis, Porter's Five Forces Model, and the three general competitive strategies provides valuable insights into industry competitiveness, emphasizing the importance of strategic positioning and responsiveness to external factors for long-term success. In conclusion, SP Company's competitive edge hinges on strategic adaptability, technological advancement, and effective management of external factors.

Sustainable competitive advantage strategies for SP Company

Sustainable Competitive Advantage Strategies for SP Company as show in Table 1.

1) Strength-Aspirations

Leveraging Technical Expertise: SP Company boasts extensive experience in POE film processing and formulation, constituting a significant strength. As part of its overarching strategy, SP Company should harness this technical expertise with the aspiration to emerge as an industry leader in photovoltaic film production, actively pushing the boundaries of technological innovation.

R&D Capabilities: The company's robust research and development capabilities, inherited from the 3M R&D system, present an opportunity to aspire to the development of new, more efficient, and cost-effective products. This proactive approach can differentiate SP Company from its competitors, positioning it as a pioneer in the photovoltaic industry.

Table 1. Sustainable Development Strategies for SP Company

Strategy	Result
Strength-Aspirations	1. Leverage Technical Expertise: SP Company has rich experience in POE film processing and formulation, which is a significant strength. As part of its strategy, SP Company should leverage this technical expertise to aspire to become the industry leader in photovoltaic film production, pushing the boundaries of technological innovation. 2. R&D Capabilities: The company's strong R&D capabilities, inherited from the 3M R&D system, can be used to aspire to the development of new, more efficient, and cost-effective products. This could set SP Company apart from its competitors and position it as a pioneer in the photovoltaic industry.
Strength Results Strategy	1. Cost Leadership: SP Company's strength in cost optimization can be used to achieve better financial results. By continuously improving its processes to reduce costs, the company can increase its profit margins, contributing to its sustainable development. 2. Strong Supplier Relationships: SP Company's strong relationships with international chemical industry leaders and well-known suppliers can be leveraged to ensure stable supply chains. This can result in consistent production outputs, meeting customer demands efficiently, and thereby driving positive business results.
Opportunities-Aspiration Strategy	1. Green Energy Transition: The global transition towards green and low-carbon energy presents a significant opportunity for SP Company. The company can aspire to be a key player in this transition by providing high-quality photovoltaic films for renewable energy solutions. 2. Market Expansion: The rapidly growing photovoltaic film market, with an annual growth rate exceeding 30%, offers expansion opportunities. SP Company can aspire to capture a larger market share by ramping up production and broadening its customer base.
Opportunities-Result Strategy	1. Product Demand: The increasing demand for POE of N-type and double-glass modules in the photovoltaic industry is an opportunity for SP Company. The company can capitalize on this demand to increase sales, thereby positively impacting its financial results. 2. Strategic Partnerships: The opportunity to form strategic partnerships with industry leaders can be used to bolster SP Company's position in the market. Such partnerships can lead to increased business opportunities, thus driving growth and contributing to the company's sustainable development.

2) Strength-Result Strategy

Cost Leadership: Capitalizing on SP Company's strength in cost optimization can lead to improved financial outcomes. Through continuous process improvement to reduce costs, the company stands to enhance its profit margins, contributing significantly to its sustainable development.

Strong Supplier Relationships: Leveraging SP Company's robust relationships with international chemical industry leaders and reputable suppliers becomes instrumental in ensuring stable supply chains. This stability can result in consistent production outputs, efficiently meeting customer demands, and consequently driving positive business results.

3) Opportunities-Aspiration Strategy

Green Energy Transition: The global shift towards green and low-carbon energy presents a noteworthy opportunity for SP Company. By aspiring to be a key player in this transition through the provision of high-quality photovoltaic films for renewable energy solutions, the company can carve out a significant niche in the market.

Market Expansion: The rapidly growing photovoltaic film market, exhibiting an annual growth rate exceeding 30%, provides ample expansion opportunities. SP Company can set its sights on capturing a larger market share by scaling up production and diversifying its customer base.

4) Opportunities-Result Strategy

Product Demand: The escalating demand for POE of N-type and double-glass modules in the photovoltaic industry creates a strategic opportunity for SP Company. The company can capitalize on this demand to increase sales, thereby positively impacting its financial results.

Strategic Partnerships: The opportunity to forge strategic partnerships with industry leaders can be harnessed to fortify SP Company's market position. Such partnerships hold the potential to unlock additional business opportunities, fostering growth and contributing to the company's sustainable development.

Initiatives for implementing the sustainable competitive advantage strategies for SP Company.

The articulated initiatives designed for the implementation of sustainable competitive advantage strategies at SP Company constitute a comprehensive and strategic roadmap aimed at positioning the organization as a frontrunner in the renewable energy sector. Each of these initiatives, intricately formulated to address distinct facets of SP Company's operations, undergoes evaluation by experts against four pivotal criteria: consistency, suitability, feasibility, and usefulness.

1) Leverage Technical Expertise: The initiative aims to revolutionize photovoltaic film production by establishing a cross-functional team of technical experts. Experts rate it favorably for consistency, suitability, feasibility, and usefulness, indicating strong alignment with organizational goals and potential for positive impact on efficiency and quality.

2) Forging Tomorrow's Breakthroughs: Empowering R&D Capabilities for Innovation: This initiative focuses on enhancing research and development capabilities to drive innovation. Experts acknowledge its high consistency, suitability, feasibility, and usefulness, indicating its potential to position SP Company as a technological trailblazer.

3) Streamlining Excellence: A Strategic Drive for Cost Optimization: Targeting operational efficiency, this initiative emphasizes cost optimization. The evaluation suggests strong consistency, suitability, and feasibility, highlighting its potential to enhance financial health and ensure sustained growth.

4) Cultivating Resilience: Nurturing Strong Supplier Relationships for Mutual Success: Recognizing the significance of supplier relationships, this initiative seeks to fortify them through an SRM program. The experts indicate high consistency, suitability, and feasibility, emphasizing the importance of a resilient supply chain for operational efficiency.

5) Powering Tomorrow: Accelerating Green Energy Transition Through Strategic Marketing: The Green Energy Transition initiative aims to position SP Company as a sustainable energy leader. The experts recognize its consistency, suitability, feasibility, and usefulness, affirming its potential to capture market share and revenue through a strategic marketing campaign.

6) Unleashing Potential: Strategic Market Expansion for Photovoltaic Leadership: Targeting market expansion, this initiative focuses on scaling production capacity. The experts find it consistent, suitable, and feasible, suggesting its potential to solidify SP Company's position as a key player in the renewable energy landscape.

7) Driving Growth: Strategic Response to Escalating Demand for POE Modules: Proactively responding to demand for specific POE modules, this initiative is well-received by experts for its consistency, suitability, feasibility, and potential for market leadership through innovative marketing strategies.

8) Elevating Synergy: Crafting Strategic Partnerships for Sustained Growth: Seeking collaborations with industry leaders, this initiative is viewed positively for consistency, suitability, feasibility, and its potential to unlock new growth opportunities and strengthen SP Company's market position.

The initiatives collectively form a robust strategy encompassing technological innovation, research and development excellence, operational efficiency, strategic marketing, market expansion, and collaborative partnerships. The positive expert evaluations across consistency, suitability, feasibility, and usefulness underscore the strategic coherence and potential effectiveness of these initiatives in achieving sustainable competitive advantage for SP Company in the dynamic renewable energy market.

Discussion and Conclusions

The competitive landscape of SP Company is intricately shaped by diverse factors, encompassing global commitments to carbon neutrality, economic influences such as the diminishing cost of photovoltaic power generation, and the industry dominance wielded by China. The strategic orientation of the company aligns with the increasing prominence of photovoltaic power generation, emblematic of a societal shift towards environmental responsibility. Capitalizing on technological advancements and adept supplier management, SP Company positions itself as a pivotal player in the renewable energy sector (Gawusu et al., 2022).

In pursuit of sustainable competitive advantage, SP Company directs its focus towards technical proficiency in POE film processing and formulation, aspiring to lead in photovoltaic film production through persistent technological innovation. Essential to financial outcomes is the imperative of cost optimization, facilitated by an ongoing commitment to process enhancement. Additionally, the company underscores the cultivation of robust associations with international leaders in the chemical industry, championing the green energy transition, expanding its market footprint, and meeting specific product demands to sustain competitiveness (Azarpour et al., 2022).

The implementation of sustainable competitive advantage strategies is underpinned by various initiatives, including the harnessing of technical expertise through a cross-functional team, fortifying research and development capabilities, streamlining operational excellence for cost optimization, fostering resilience through robust supplier relationships, propelling the green energy transition through strategic marketing, and strategically expanding the market for photovoltaic leadership. These initiatives, rigorously evaluated for their consistency, suitability, feasibility, and utility, coalesce into a comprehensive strategy. For instance, the "Leverage Technical Expertise" initiative involves the assembly of a diverse team to enhance efficiency and quality. The "Forging Tomorrow's Breakthroughs" initiative centers on empowering research and development capabilities for sustained competitive advantage (Buljac-Samardzic et al., 2020; Fabrizio et al., 2022).

The "Streamlining Excellence" initiative accentuates operational efficiency and cost optimization, aligning with overarching organizational goals. "Cultivating Resilience" underscores the nurturing of robust supplier relationships for mutual success, acknowledging the criticality of a resilient supply chain. "Powering Tomorrow" involves accelerating the green energy transition through strategic marketing, in alignment with prevailing market trends. "Unleashing Potential" entails strategic market expansion for photovoltaic leadership, aligning with the escalating demand for renewable energy. Finally, "Driving Growth" represents a strategic response to the increasing demand for specific products, emphasizing targeted marketing and the potential for market leadership. The last initiative, "Elevating Synergy," concentrates on crafting strategic partnerships for sustained growth, acknowledging the importance of collaboration and partnerships in achieving long-term success (Gulati et al., 2012; Jain et al., 2017).

In summation, SP Company adopts a multifaceted approach, leveraging technical expertise, optimizing costs, aligning with market trends, and strategically expanding, supported by meticulously designed initiatives aimed at fostering sustained growth and competitiveness in the renewable energy sector.

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ANALYSIS OF HUMANIZED MANAGEMENT IN SMALL AND MEDIUM-SIZED ENTERPRISES IN BISHAN DISTRICT, CHONGQING

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Abstract

The research objectives were as follows: 1) To study the problems in humanized management; 2) To analyze the factors of humanized management; and 3) To propose guidelines for improving humanized management. In order to address the research objectives, a combination of qualitative and quantitative approaches was used, qualitatively utilizing Content Analysis and quantitatively employing Descriptive Analysis and CFA analysis. The results of Study 1 and Study 2 were integrated and used for the guidance of Study 3, and finally, the guidance of this study was obtained to provide help for humanized management, which made a certain contribution to humanized management. This research provided actionable guidelines for small and medium-sized technology enterprises in Bishan District, Chongqing, to enhance humanized management practices. The emphasis on recognizing individual potential, promoting self-control, fostering team cohesion, addressing welfares, and ensuring fairness collectively contributed to creating a workplace culture that prioritized employee well-being and development.

Keywords: Humanized Management, Human resource management, Small and Medium-Sized Technology Enterprises

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Introduction

Human resources management serves as the cornerstone of enterprise development, with people constituting the nucleus of the enterprise. Humanized management, functioning as the soul of the enterprise, channels continuous power and capital (Jackson, 2023). This management approach is characterized by a focus on human nature, aiming to fully exploit human potential. The application of theory guides management practices, aligning with the fundamental principles of human nature management philosophy (Armstrong & Taylor, 2023).

Post-World War II, small and medium-sized enterprises (SMEs) witnessed efficient development, becoming indispensable to the global economy. In China, the number and size of SMEs have significantly increased, surpassing 52 million by the end of 2022, indicating rapid growth and dynamism. However, SMEs face a challenge of short life spans, as highlighted by the 2020 Chinese Enterprise Development Data Annual Report, with most living only 2.5 years, and a mere 7% surviving beyond five years (China's Economy Ignites a New Engine, 2021). This concern has prompted government attention and research efforts, revealing that the quality of China's SMEs could be enhanced through improved management practices. Current approaches often follow an experience management model, focusing on pre-job skills training and apprenticeship models, neglecting the vital role of human creativity. The study argues for a people-oriented management model, emphasizing the pivotal role of employees' creativity and positioning humanized management as an imperative trend in contemporary SME development. Nowadays, the competition between enterprises is the competition for talents, and high-quality human resources can bring higher economic benefits for enterprises. From the long-term and sustainable development perspective, the enterprise's core is "people," adhering to the people-oriented scientific development concept. The humanized management concept is a necessary trend in the development of contemporary SMEs.

The study of humanized management in small and medium-sized enterprises (SMEs) not only contributes to theoretical innovation but also holds practical implications. The role of SMEs in the overall structural adjustment of the state economy is crucial, as they adapt to market changes, promote economic development, and facilitate economic transformation and restructuring during economic downturns (Abisuga-Oyekunle et al., 2020). SMEs serve as catalysts for developing countries. Furthermore, SMEs act as incubators for technological innovation, playing a substantial role in creating science and technology projects. They contribute significantly to invention patent rates, demonstrating their impact on technological advancements. Additionally, SMEs play a vital role in solving employment issues, offering a versatile business model that positively influences employment rates (Hoang et al., 2021; Kazakov et al., 2021).

The study, focusing on practical examples from Bishan District enterprises, not only explores humanized management knowledge but also facilitates the transformation of enterprise practices. Analyzing and solving existing problems in humanized management is essential, establishing a macro

perspective and an overall vision to systematize the analysis and establish a theoretical framework for small and medium-sized enterprise management.

Review of Literature

Humanized management, within the academic discourse, is characterized by an organizational approach that accords priority to the well-being, satisfaction, and developmental trajectories of employees. This conceptualization underscores the recognition of the individuality inherent in each employee, with an overarching objective to cultivate a work environment conducive to collaboration, transparent communication, and the cultivation of a positive company culture (Hornung & Thomas, 2019; Monaci, 2020; Matheson et al., 2021).

The theoretical underpinnings of humanized management are grounded in perspectives such as Theory Y, Theory Z, and Leader-Member Exchange Theory, which serve as foundational frameworks in the context of scholarly investigations in this domain. Based on the three theories and the findings of nine researchers, nine variables were summarized and analyzed, as shown in Table 1

Theory Y, as applied to humanized management, posits organizational recommendations advocating the prioritization of operational efficiency, systematic processes, and hierarchical corporate centralization within enterprises. However, Douglas McGregor, the proponent of Theory Y, recognizing the multifaceted nature of human beings as both "economic" and "social" entities, proposed a paradigm shift in organizational theory. This culminated in the formulation of Theory Y, a conceptual framework aimed at aligning organizational objectives with the socio-psychological needs inherent in individuals within the workplace (Larsson et al., 2017).

Theory Z, emphasizing the construction of an enterprise culture, contends that effective enterprise management should concentrate on fostering respect and trust between managers and employees. Central to this approach are the establishment of positive relationships and the implementation of effective communication mechanisms, contributing to the cultivation of shared values and behaviors between the company and its employees. Consequently, Theory Z positions humanized management as an integral corporate philosophy (Okochi & Ateke, 2020).

The Leader-Member Exchange Theory posits that the relationship between leaders and employees, characterized by varying attributes and performance levels, is heterogeneous, exhibiting differences in affinity and quality contingent upon available resources. High-quality leader-member exchanges, rooted in social exchange, are marked by mutual respect, trust, affinity, and support. Within such interactions, employees are designated as "insiders," thereby receiving augmented resource support, entrusted with more challenging tasks, and expected to make substantial contributions. Conversely, low-quality leader-member exchanges rely on economic exchanges, confined to formal contracts and delineated responsibilities, where employees are relegated to the status of "outsiders"

(Mumtaz & Rowley, 2020). Socially exchanged work relationships manifest heightened levels of loyalty, commitment, support, and trust compared to those grounded in economic exchange (Qi, 2022).

Table 1. Related research under humanized management

Theories	Variables	Wan (2022)	Zhao (2021)	Liu (2021)	Qiao (2020)	Yan and Li 2018)	Xi (2023)	Wang and Cheng (2014)	Chen (2023)	Qiao et al. (2023)
Theory Y	Self-Control;	√	√	√					√	√
	Recognize an employee's potential;	√	√	√		√				
	Responsibility	√	√	√						
Theory Z	Employee Participation		√		√	√				√
	Working Relationship				√	√	√		√	
	Team cohesion				√		√			√
Leader-Member Exchange theory	Mutual respect							√	√	√
	Leader Expectation							√	√	√
	Team Support							√	√	√

Methodology

This research employs a methodologically comprehensive approach designed to address three distinct objectives concerning issues related to humanized management within small and medium-sized technology enterprises situated in Bishan District, Chongqing, in which is summarized in Table 2.

Table 2. Objective-based research design

Research Design	Objective 1	Objective 2	Objective 3
Population and sample size	8 CEOs	400 respondents	3 experts
Research instruments	Interview guideline	Questionnaire	Interview guideline
Data collection	Telephone interviews with CEOs of 8 companies	Online Questionnaire	Online Conference
Data analysis	Thematic Analysis	Descriptive and CFA Analysis	Content Analysis

Objective 1 concentrates on a target of 8 CEOs. The sample size for in-depth interviews requires a minimum sample size of between 5 – 25 (Saunders, 2012). Therefore, these 8 CEOs are selected for their experiential and leadership roles. Employing telephone interviews and a semi-structured interview format facilitated an exploration of challenges encountered by these CEOs in implementing humanized management practices. The ensuing qualitative data underwent thematic analysis to discern patterns and recurring themes associated with humanized management problems.

Objective 2 entails the quantitative analysis of factors influencing humanized management in Bishan District, Chongqing. The sample size in the questionnaire is typically about 5 to 10 times the number of questions. With 27 questions in this questionnaire, the calculated sample size is approximately 135 to 270, which is more appropriate. Therefore, it exceeds the minimum requirement (SPPSAU, 2022). The collected data underwent Descriptive Analysis and Confirmatory Factor Analysis (CFA) to summarize key features and validate relationships among identified factors associated with humanized management.

Objective 3, which aims to propose guidelines for enhancing humanized management, sought the input of three professionals proficient in human resource management and organizational development. Expert interviews conducted through online conferences facilitated interactive discussions, generating insights and recommendations. Subsequent content analysis of the gathered data extracted meaningful insights, patterns, and recommendations.

This methodologically comprehensive and triangulated approach, integrating qualitative insights from CEO interviews, quantitative data from employee surveys, and expert perspectives, enhances the credibility and validity of the study's findings and recommendations. This approach is particularly germane in addressing the nuanced complexities of humanized management within the context of small and medium-sized technology enterprises in Bishan District, Chongqing.

Research Results

1. Problems of humanized management of small and medium-sized technology enterprises in Bishan District, Chongqing

The findings derived from interviews conducted with eight Chief Executive Officers (CEOs) reveal the identification of eleven initial challenges within their respective companies. Specifically, the initial challenges have been categorized into axial coding, where the first three issues are grouped under the themes of team cohesion. Additionally, the second cluster pertains to welfare concerns, while the third cluster is associated with issues of fairness. This categorization is visually depicted in Figure 1, illustrating the distinct thematic groupings of the identified problems as illuminated by the CEOs' responses.

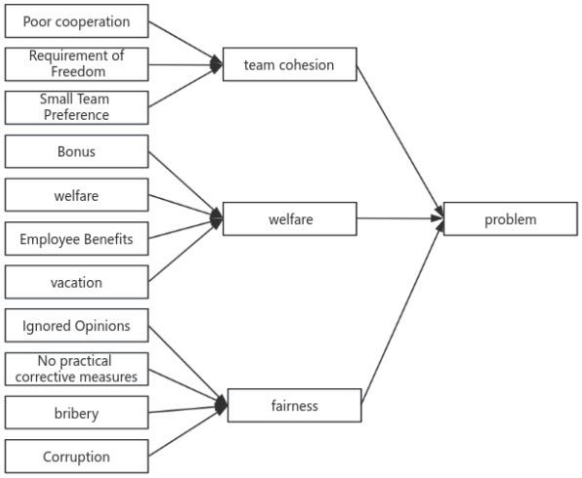

Figure 1. Problems of humanized management of small and medium-sized technology enterprises in Bishan District, Chongqing

As illustrated in Figure 1, the problems associated with humanized management within the context of small and medium-sized technology enterprises in Bishan District, Chongqing, primarily revolve around team cohesion, evident in instances of poor cooperation and a desire for increased freedom. Additionally, these challenges manifest in the characteristics of a preference for small teams. On the other hand, welfare-related issues are intertwined with concerns regarding bonuses and various benefits that are deemed essential or aligned with the employees' needs. The third set of problems pertains to fairness, reflecting instances of neglecting employee opinion, engaging in bribery practices, and succumbing to corrupt practices.

2. Factors of humanized management in Bishan District, Chongqing

2.1 Descriptive Analysis

The presentation of descriptive analyses pertaining to the variables under consideration is delineated in Table 3.

Table 3. Descriptive analyses of variables

Factors	Average	S.D.	skewness	kurtosis
Self-Control	3.04	1.22	-0.16	-1.30
Recognize an employee's Potential	3.13	1.21	-0.13	-1.37
Responsibility	3.07	1.23	-0.08	-1.32
Employee Participation	3.13	1.24	-0.13	-1.31
Working Relationship	3.02	1.24	-0.05	-1.25
Team Cohesion	3.06	1.21	-0.05	-1.39
Mutual respect	3.10	1.22	-0.15	-1.30
Leader Expectation	3.06	1.24	-0.08	-1.37
Team Support	3.20	1.19	-0.21	-1.26

Table 3. reveals noteworthy characteristics within the current dataset. The mean and standard deviation indicates absence of outliers that significantly deviating from the overall pattern. In addition, the Skewness within the range between -0.5 and 0.5 is considered normal, while skinny-tailed distribution has a kurtosis value less than 3 (Demir, 2022). These statistical observations contribute valuable insights into the distributional properties of the variables under examination, offering a foundation for the subsequent analytical considerations in this study.

2.2 First-order model analysis results

2.2.1 Results of Reliability and Validity

Upon satisfying the criteria for descriptive analysis, the investigation proceeds to the implementation of Confirmatory Factor Analysis (CFA). There are important measurement criteria, including construct reliability, convergent validity, and discriminant validity that the researchers need to firstly scrutinize (George et al, 1996).

First, construct reliability, also known as composite reliability, assesses whether all the questions in each latent variable consistently explain the latent variable. When the value exceeds 0.70, it indicates good construct reliability for the latent variable.

Second, the convergent validity indicates standard regression weights demonstrated the correlation between the factor (latent variable) and the analytical item (explicit variable/measure). The absolute value of the standardized loading coefficients being greater than 0.7 signifies significance for each measurement relationship, indicating a strong measurement relationship. The Average Variance Extraction (AVE) and Combined Reliability (CR) were employed for convergent validity analysis. High convergent validity is affirmed if AVE is greater than 0.5 and CR is greater than 0.7. Additionally, if either AVE or CR surpasses 0.7, it indicates high convergent validity (with the condition that CR > AVE is also satisfied).

Third, the discriminant validity is verified using the AVE square root value and the comparison of correlation coefficient sizes between factors (Fornell-Larcker method). Additionally, the table above employs the HTMT method (heterogeneous-monogeneous ratio) to assess discriminant validity.

Table 4. Measurement Model Criteria

Measurement Model	Criteria
Construct Reliability	CR (Composite Reliability) > 0.7
Convergent Validity	Factor loading • All factor loadings should be statistically significant • Standardized loading estimates should be 0.5 or higher, ideally 0.7 or higher. AVE > 0.5 CR > AVE (Average Variance Extracted)

Table 4. Measurement Model Criteria

Measurement Model	Criteria
Discriminant Validity	HTMT (Heterotrait - Monotrait) < 0.9 Fornell - Larcker Criterion • SQRT(AVE) for each construct > correlations between that construct and other construct

The analytical outcomes pertaining to the first-order models are delineated in Tables 5 through 6. These tables serve as instruments for presenting and interpreting the findings derived from the CFA, offering a systematic examination of the validity and reliability measures associated with the proposed analytical models.

Table 5. Analysis of factor loading coefficients and convergent validity (convergent validity)

Factors	Item	Standardized factor load	CR	AVE
Self-Control	SEL001	0.832	0.843	0.641
	SEL002	0.769		
	SEL003	0.800		
Recognize an employee's potential	REC001	0.761	0.827	0.615
	REC002	0.802		
	REC003	0.789		
Responsibility	RES001	0.787	0.847	0.649
	RES002	0.860		
	RES003	0.766		
Employee	EMP001	0.813	0.852	0.658
	EMP002	0.836		
	EMP003	0.784		
Working	WOR001	0.864	0.861	0.674
	WOR002	0.814		
	WOR003	0.783		
Team	TEA001	0.752	0.831	0.621
	TEA002	0.783		
	TEA003	0.827		
Mutual respect	MUT001	0.799	0.821	0.604
	MUT002	0.747		
	MUT003	0.785		

Table 5. Analysis of factor loading coefficients and convergent validity (convergent validity) (Cont.)

Factors	Item	Standardized factor load	CR	AVE
Leader Expectation	LEA001	0.752	0.842	0.641
	LEA002	0.816		
	LEA003	0.831		
Team Support	TES001	0.759	0.821	0.605
	TES002	0.785		
	TES003	0.790		

Table 6. Fornell-Larcker Criterion: Pearson's correlation vs. AVE square root values

	SEL	REC	RES	EMP	WOR	TEA	MUT	LEA	TEA
SEL	0.801								
REC	0.617	0.784							
RES	0.619	0.621	0.806						
EMP	0.651	0.658	0.665	0.811					
WOR	0.690	0.662	0.650	0.591	0.821				
TEA	0.678	0.673	0.611	0.607	0.584	0.788			
MUT	0.653	0.643	0.658	0.651	0.625	0.661	0.777		
LEA	0.665	0.674	0.600	0.641	0.681	0.622	0.560	0.800	
TEA	0.633	0.637	0.615	0.611	0.587	0.639	0.577	0.500	0.778

Table 7. HTMT (Heterogeneous-Elemental Ratio) results

	SEL	REC	RES	EMP	WOR	TEA	MUT	LEA	TEA
SEL	-								
REC	0.739	-							
RES	0.734	0.744	-						
EMP	0.768	0.784	0.784	-					
WOR	0.810	0.785	0.762	0.689	-				
TEA	0.810	0.812	0.729	0.721	0.691	-			
MUT	0.786	0.781	0.790	0.779	0.744	0.802	-		
LEA	0.790	0.809	0.712	0.756	0.800	0.743	0.674	-	
TEA	0.761	0.774	0.738	0.730	0.698	0.773	0.705	0.602	-

2.2.2 Model Fit Criteria

Figure 2. shows the first-order model diagram of this CFA analysis. The first-order modeling was done mainly to account for the reliability, validity, degree of fit, and degree of association

between the 27 questions in the questionnaire and the 9 factors they correspond to. When the first-order modeling is fully complied with, it can ensure that the questionnaire is applicable to this study. Then, the second-order modeling can be further carried out to find the most prominent factors in humane management. Table 8 shows the results of the model fit indicators (SPASSAU, 2022) versus the results of those total 14 indicators.

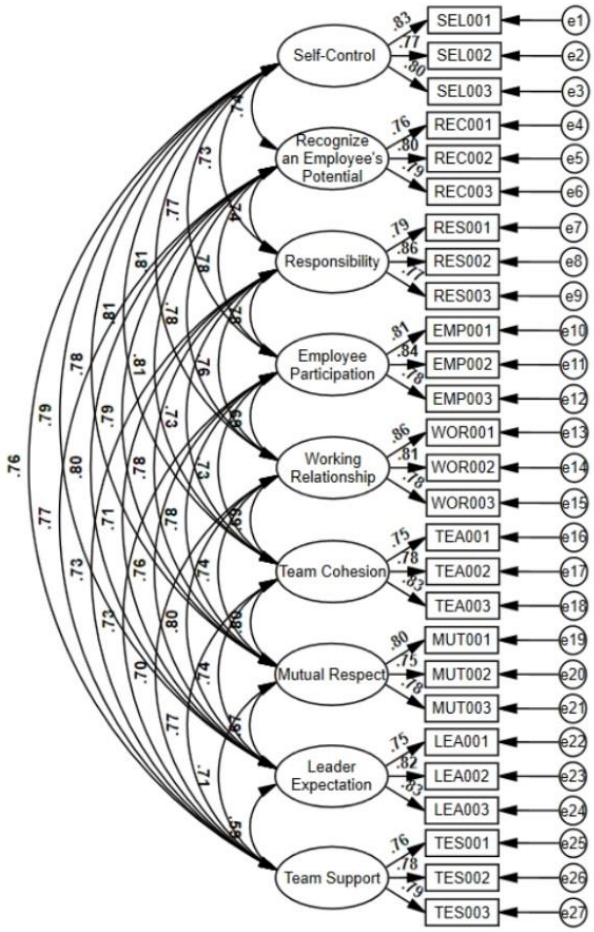

Figure 2. Validation factor analysis model diagram

Table 8. Results of model fitting indicators

Indies	**Cut off**	**Result of model fit**
$\chi 2$	-	290.612
df	-	288
p	>0.05	0.446
X^2/df	<3	1.009
RMR	<0.5	0.043

Table 8. Results of model fitting indicators

Indies	Cut off	Result of model fit
SRMR	<0.5	0.022
CFI	>0.9	0.950
AGFI	>0.9	0.934
PGFI	>0.5	0.723
NFI	>0.9	0.959
NNFI	>0.9	1.000
PNFI	>0.5	0.820
TLI	>0.9	1.000
RMSEA	<0.10	0.004
Default Model: $\chi 2(351)=7017.212$, p=1.000		

2.3 Second-order model analysis results

As shown in Table 9, this validated factor analysis (CFA) was conducted for a total of 9 factors and 27 analysis items. From the above table, it can be seen that all the AVE values corresponding to a total of 9 factors are greater than 0.5, and all the CR values are higher than 0.7, which implies that the data of this analysis have good convergent (convergent) validity (SPASSAU, 2022).

Table 9. Model AVE and CR indicator results

Factor	Mean variance extraction AVE value	Combined Reliability CR
Self-Control	0.641	0.843
Recognize an employee ‘s potential	0.615	0.827
Responsibility	0.649	0.847
Employee Participation	0.658	0.852
Working Relationship	0.674	0.861
Team Cohesion	0.621	0.831
Mutual Respect	0.604	0.821
Leader Expectation	0.641	0.842
Team Support	0.605	0.821

Based on the modeling results in Figure 3, the conclusions in Table 9 can be obtained. Factors obtained for class1, and analyzed for objective 2.

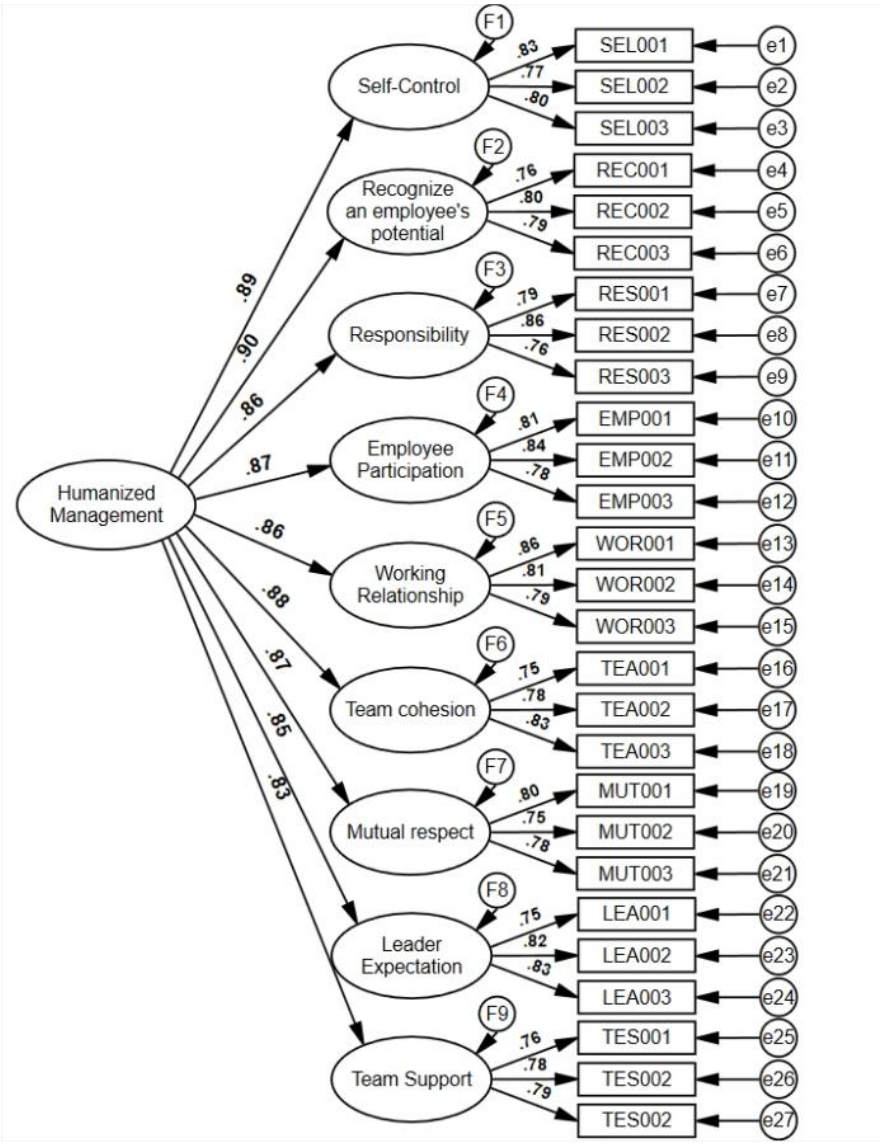

Figure 3. Plot of second-order model results

Table 10. Theoretical division table

Class	Variables	Factor loading
Class 1	Recognize an employee's potential	0.90
	Self-Control	0.89
	Team cohesion	0.88
Class 2	Employee Participation	0.87
	Mutual respect	0.87
	Responsibility	0.86
	Working Relationship	0.86
Class 3	Leader Expectation	0.85
	Team Support	0.83

3. Guidelines for improving the humanized management of small and medium-sized technology enterprises in Bishan District, Chongqing

Combining the results of Objective 1 and the results of Objective 2, where team cohesion is a common item, the final result is the expert questionnaire questions for Objective 3. By summarizing the results of the questionnaire, it can be found that there are many ways and perspectives to solve the problem, from the material level to the spiritual level, from the outside to the inside of the enterprise. Guidelines for improving the humanized management of small and medium-sized technology enterprises in Bishan District, Chongqing, focusing on recognizing employee potential, self-control, team cohesion, welfares, and fairness as show in Table 11.

Table 11. Guidelines for improving the humanized management of small and medium-sized technology enterprises in Bishan District, Chongqing

Issues	Guidelines
Recognizing Employee Potential	● Implement regular performance assessments to identify and acknowledge individual strengths, skills, and areas for development. ● Foster a culture of continuous learning and development, providing opportunities for skill enhancement and career advancement. ● Establish mentorship programs to facilitate the exchange of knowledge and skills among employees.
Self-Control	● Encourage employees to set personal and professional goals, promoting a sense of autonomy and self-management. ● Provide training on stress management and resilience-building techniques to help employees cope with work-related challenges. ● Establish clear expectations and guidelines, empowering employees to take ownership of their tasks and deadlines.
Team Cohesion	● Promote open communication and collaboration through regular team meetings, encouraging the sharing of ideas and feedback. ● Foster a positive team culture by recognizing and celebrating team achievements and milestones. ● Implement team-building activities and workshops to strengthen interpersonal relationships and trust within the team.
Welfares	● Conduct regular surveys and feedback sessions to understand the well-being needs and preferences of employees. ● Offer flexible work arrangements, such as remote work options or flexible hours, to support a better work-life balance. ● Provide comprehensive employee benefits, including health and wellness programs, to address physical and mental well-being.
Fairness	● Establish clear and transparent performance evaluation criteria, ensuring that assessments are objective and unbiased. ● Implement a fair of responsibilities and opportunities within the organization. ● Encourage open dialogue on issues of fairness and address concerns promptly through a well-defined grievance resolution process.

Discussion and Conclusions

This research investigates humanized management in small and medium-sized technology enterprises in Bishan District, Chongqing. The research comprises three phases aligned with specific objectives. The first phase (Objective 1) involves CEO interviews, focusing on humanized management issues. The second phase (Objective 2) includes a questionnaire for 400 individuals, utilizing statistical analysis (CFA) to explore factors influencing humanized management. The final phase (Objective 3) synthesizes insights from Objectives 1 and 2, guiding expert interviews and the development of guidelines. Issues identified include challenges in Recognizing Employee Potential, Self-Control, Team Cohesion, Welfares, and Fairness. The paper utilizes descriptive analysis and theoretical frameworks such as Theory Y, Theory Z, and Leader-Member Exchange Theory. Expert opinions contribute significantly, emphasizing the importance of humanized management and providing guidelines for improvement.

The proposed guidelines underscore the importance of regular performance assessments as a strategic tool for recognizing individual strengths and areas requiring development. This aligns seamlessly with the overarching philosophy of cultivating a culture of continuous learning and development within the organization. Complementary to this, the guidelines advocate for the implementation of mentorship programs to facilitate the exchange of knowledge and skills among employees, fostering an environment that prioritizes professional growth (Prastyaningtyas et al., 2023). Moreover, the research recommends the cultivation of employee autonomy and self-management through the encouragement of personal and professional goal-setting (Dhanpat et al., 2021). This approach not only empowers employees but also contributes to a sense of ownership and accountability in their roles. To address the challenges posed by work-related stress, the guidelines propose training initiatives on stress management and resilience-building techniques, reflecting a proactive stance in supporting employees' well-being (Mendy, 2020).

In line with the principles of humanized management, the guidelines emphasize the pivotal role of open communication and collaboration in fostering a positive team culture (Wei et al., 2020). Regular team meetings serve as a platform for promoting dialogue and idea exchange, while the recognition and celebration of team achievements contribute to building a cohesive and motivated team (Jyoti, 2022). Additionally, the incorporation of team-building activities and workshops is suggested to fortify interpersonal relationships and trust within the team (Nauman et al., 2022). The research strongly advocates for a holistic understanding of employees' well-being needs through the implementation of regular surveys and feedback sessions. Flexible work arrangements and comprehensive employee benefits, including health and wellness programs, are recommended strategies to address both the physical and mental aspects of employee well-being.

Furthermore, the guidelines stress the importance of establishing clear and transparent performance evaluation criteria to ensure objective and unbiased assessments (Sifah et al., 2020). The research suggests implementing a fair and equitable distribution of responsibilities and opportunities

within the organization as a means to promote a culture of inclusivity and equal opportunities. Open dialogue on issues of fairness and the incorporation of a well-defined grievance resolution process contribute significantly to fostering a fair work environment and addressing concerns promptly (Gulzar et al., 2022).

This research provides actionable guidelines for small and medium-sized technology enterprises in Bishan District, Chongqing, to enhance humanized management practices. The emphasis on recognizing individual potential, promoting self-control, fostering team cohesion, addressing welfares, and ensuring fairness collectively contributes to creating a workplace culture that prioritizes employee well-being and development. Implementation of these guidelines can lead to a positive impact on employee satisfaction, productivity, and overall organizational success.

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AN EXPLORATION OF INTEGRATED MARKETING COMMUNICATION STRATEGIES: A CASE OF SUZHOU'S UNIQUE CITY BRAND

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Abstract

The research objectives were as follows: 1) to investigate the key components that contribute to the uniqueness of Suzhou's city brand; 2) to study the effectiveness of Suzhou's integrated marketing communication strategies in promoting the city brand and; 3) to propose initiatives for enhancing Suzhou's unique city brand through integrated marketing communication strategies. This research adopted qualitative research methods and collected primary data through interviews, with a total of 15 key informants selected. Secondary data were gathered from previous reports, studies, and documents related to Suzhou City. Qualitative data analysis was conducted using thematic analysis. The research findings revealed that: 1) Suzhou's city brand was uniquely characterized by four key components: historical and cultural heritage, economic strengths, market potential, and resident quality of life; 2) through a combination of social media campaigns and online advertising campaigns, Suzhou has successfully used contemporary technology to effectively promote its city brand image and attract more domestic and foreign tourists to explore this fascinating and historic destination. Suzhou has implemented several successful strategies and achieved significant results in terms of increasing engagement and positive brand awareness. Through effective publicity and promotion of tourism resources, improvement of service quality, and enhancement of the business environment, Suzhou has successfully created a brand image with a high reputation and influence; and 3) the initiatives outlined for enhancing Suzhou's city brand through integrated marketing communication strategies encompassed strengthening online and offline synergy, establishing a unified visual identity, seamlessly integrating online and offline activities, addressing potential challenges, showcasing cultural heritage, learning from successful cases, and employing audience segmentation.

Keywords: Suzhou, Integrated Marketing Strategy, City Brand

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Introduction

In a globalized and increasingly competitive market, city brands and their overall image play a key role in attracting investment, promoting tourism and stimulating overall economic growth (Ma et al., 2021). Therefore, to explore the city brand construction and research of integrated marketing communication strategy is particularly urgent.

Taking Suzhou, China as an example, this city with profound historical and cultural heritage has demonstrated its unique charm and huge market potential of city brand to the world with its rich tourism resources and dynamic economy. Therefore, the study of Suzhou city brand and its integrated marketing communication strategy will provide useful insights for theoretical discussion and practical application.

In the current process of urban development, city brand and integrated marketing communication strategy play a central role. Because of globalization and increasingly fierce market competition, cities need to be on the global stage show its unique attraction and the competitive advantage (Ng et al., 2023). Therefore, in building a city brand, we must comprehensively consider various factors, such as history and culture, tourism resources, economic characteristics and residents' quality of life (Yang et al., 2019; Zhou et al., 2020). By adopting effective integrated marketing communication strategies, cities are able to communicate their core values and unique attractions to target audiences such as tourists, investors, and local residents (Kavaratzis, 2004; Ma et al., 2021).

According to the research object of this paper, after combing the literature on city brand, the author finds that most of the studies discuss the management and development of city from the perspective of urban planning and business administration, and few studies study city brand from the direction of integrated marketing communication. Therefore, based on the current media environment, this paper takes the theory of integrated marketing communication as the entry point, and uses the theories of city branding, communication and branding to analyze how to build the city brand in Suzhou from multiple perspectives, so as to make the theoretical system of city brand direction more diversified and provide theoretical support for the development and enrich the theory of city brand.

Research Questions

1. What are the key factors that lead to the uniqueness of Suzhou City brand?

2. Why does Suzhou adopt integrated marketing communication strategy for its city brand? What is the effect of promoting the city brand?

Research Objectives

1. To investigate the key components that contribute to the uniqueness of Suzhou's city brand.

2. To study the effectiveness of Suzhou's integrated marketing communication strategies in promoting the city brand.

3. To propose initiatives for enhancing Suzhou's unique city brand through integrated marketing communication strategies.

Review of Literature

City Brand Defined

The term "city brand marketing" originated from Western countries, and the concept of "national marketing" prevailed in the Western academic circles at that time, attracting many scholars and researchers to study the related issues of national marketing. Kotler, the father of marketing, once proposed that any country, city or even town can carry out "location marketing", encouraging different locations to use their actual construction as a competitive advantage and brand image for residence, tourism, investment and so on. "the national marketing: creating the strategic methods of the nation's wealth will be in marketing also is regarded as a kind of marketing behavior, he believes that in the process of regional marketing, should be around the region to develop, to the needs of the audience, the inside and outside of the" product "together (Kotler et al., 2021). Lalaounis (2020) in his book the strategic brand management, puts forward all kinds of things can be the brand, the brand, the purpose of is to make the audience to know the brand information, finally have imagination on the brand. The transformation of economic resources plays an important role in the development of city brand, and commercial investment and related tertiary industry will also be significantly promoted and influenced. Therefore, it is necessary to strengthen the connection and integration among the various elements of city brand, so as to promote the development of city brand to a more professional and international direction.

Destination Branding

The concept of destination branding has emerged as a central focus in tourism research, underscoring the growing acknowledgment of the pivotal role played by branding strategies in shaping perceptions and drawing visitors to specific locations. Scholars contend that destination branding constitutes a multifaceted process, involving the creation and management of a distinctive identity that sets a destination apart from its competitors (Kladou et al., 2017). This intricate process necessitates a strategic alignment of the destination's attributes, values, and positioning to resonate with the target market and cultivate a positive image (Pike et al., 2018).

Destination branding is intricately connected to the broader realm of place branding, transcending the confines of tourism to encompass the comprehensive image and reputation of a place (Kim et al., 2010). Scholars underscore the significance of adopting a holistic approach, taking into account various stakeholders, including residents, businesses, and policymakers, in the process of destination branding (Golestaneh et al., 2022). The efficacy of destination branding hinges on comprehending the unique selling points of a destination and leveraging them to construct a compelling narrative (Beritelli & Laesser, 2018). Scholars emphasize the potency of storytelling as a formidable

tool in destination branding, facilitating the establishment of emotional connections and the creation of memorable experiences for visitors (Tafesse, 2016). Nonetheless, challenges persist in the implementation of destination branding strategies. Maintaining authenticity in branding narratives is imperative to mitigate the risk of "destination overpromise and under-delivery" (Pike et al., 2018). Additionally, the dynamic nature of consumer preferences and the influence of online platforms present challenges in effectively managing and controlling destination brands (Oliveira & Panyik, 2015).

In summary, destination branding constitutes a multifaceted and dynamic process involving the crafting of a unique identity for a locale to attract visitors and enhance its overall image. Scholars underscore the necessity of adopting a holistic approach, strategically developing narratives, and considering various stakeholders to ensure the success and sustainability of destination branding efforts.

Integrated Marketing Communication (IMC)

Because of its comprehensive and integrated marketing communications theory occupies more and more important status in the field of marketing. Integrated marketing communications is a combination of a variety of communication tools and strategies, aims to create a consistent, unified information, effectively target and attract consumers. This article will explore the basic principles and benefits of IMC and their application in the contemporary business environment.

Don Schultz proposed the theory of IMC. He believed that thinking from the perspective of consumers is the core of IMC. He is good at communicating with consumers and shows brand image to consumers with diversified communication methods (Schultz & Schultz, 2004). At the same time, he believes that IMC should have a systematic planning and system. The purpose is to form a brand communication process that can be evaluated by management, and set this as the goal to complete. He emphasized the systematic planning of communication behavior and the formation of a closed-loop communication process.

Methodology

Research Design

This research adopts qualitative research methods, to achieve research objectives. In order to collect data, we used two sources: primary data and secondary data. The primary data was obtained through interviews with the study sample. Secondary data were collected from prior reports, studies, and documents related to SuZhou City.

Research Instrument

The interview guideline was used as a research instrument for conducting in-depth interviews. The primary purpose of these interviews is to explore the key elements contributing to the uniqueness of Suzhou's city brand and to assess the effectiveness of Suzhou's integrated marketing communication

strategies in promoting the city brand. Additionally, the interviews aim to propose initiatives for enhancing Suzhou's distinct city brand through integrated marketing communication strategies.

Data Collection

This paper mainly selects the method of interviewing, which is a commonly used qualitative research method. The main function of this method is to extract a representative part of the sample from many relevant target groups in the industry to be investigated, to conduct research analysis on the research object and infer the characteristics, trends, and changes of the research object. In view of this, this paper selects 15 tourism brand managers from Suzhou cultural tourism industry to conduct in-depth interviews through the interview method, to obtain relevant information about the progress and effect of the current Suzhou cultural tourism brand integrated marketing strategy.

Data analysis

This research involved qualitative data analysis using thematic analysis. Thematic analysis is a widely accepted method for identifying, analyzing, and reporting patterns (themes) within qualitative data. Also, the analysis was ensured by considering issues of validity and reliability, which were achieved through member checking (where participants reviewed the findings).

Research Results

1. Key components that contribute to the uniqueness of Suzhou's city brand.

Key components that contribute to the uniqueness of Suzhou's city brand as shown in Table 1.

Table 1. Key components that contribute to the uniqueness of Suzhou's city brand.

Key components	Sub components
Historical and Cultural Heritage	Garden Art and Architectural Style
	Silk Culture
	Local Festivals and Traditions
	Architectural Style and Regional Customs
	Internationally Renowned Suzhou Gardens
	Suzhou Opera and Human History
	Unique Cultural Events and Festivals
Economic Strengths	Key Industries Driving Local Development
	Diverse Business Sectors
	Advantages of Suzhou in economic issue

Table 1. Key components that contribute to the uniqueness of Suzhou's city brand. (Cont.)

Key components	Sub components
Market Potential	Attractive Demographics
	Consumer Trends
	Urbanization and Infrastructure Development
	Growing Middle Class
	Government Support and Business Environment
	Initiatives for Market Tapping
	Integration of Digital Technology
Resident Quality of Life	Cultural Preservation and Green Development
	Infrastructure and Amenities
	Long-Term Stay Experience
	Economic Opportunities
	Educational and Medical Services
	Cultural Tourism Industry and Housing Policies

The theme of the uniqueness of Suzhou's city brand is a harmonious integration of historical charm, economic vitality, and a commitment to enhancing the quality of life for residents and visitors. The city's brand is built upon four key components, each representing a distinct theme, as illustrated in Figure 1.

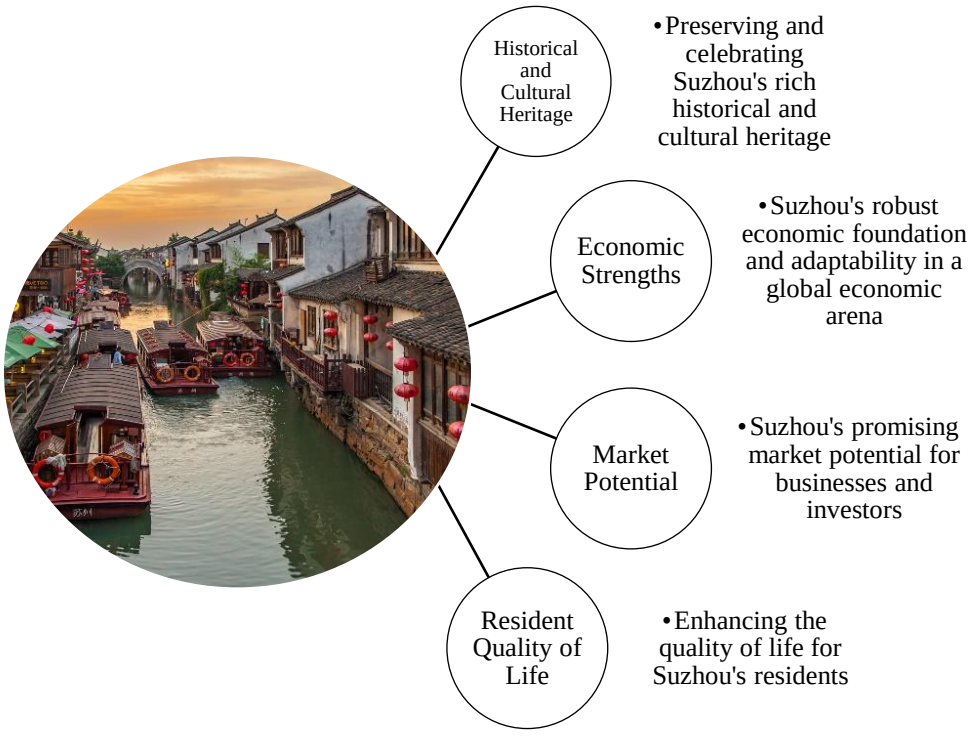

Figure 1. The theme of the uniqueness of Suzhou's city brand

The city's brand is built upon four key components, each representing a distinct theme, for historical and cultural heritage theme, emphasis on preserving and celebrating Suzhou's rich historical and cultural heritage. Subcomponents include Garden Art and Architectural Style, Silk Culture, Local Festivals and Traditions, Internationally Renowned Suzhou Gardens, Suzhou Opera, and Unique Cultural Events and Festivals.

> *"Suzhou's historical landmarks and cultural traditions have played an important role in shaping the city's brand image. For example, the Humble Administrator's Garden, a classical Chinese garden with a long history, showcases Suzhou's unique garden art and architectural style and attracts a large number of tourists to visit. This unique cultural heritage has earned Suzhou the reputation of 'City of Gardens' and has become an indispensable element in its city brand, (Participant no. 1)"*

Economic strength's theme, focus on Suzhou's robust economic foundation and adaptability in a global economic arena. Components include Key Industries Driving Local Development, Diverse Business Sectors, and Advantages of Suzhou in economic matters. For market potential theme highlighting Suzhou's promising market potential for businesses and investors. Components include Attractive Demographics, Consumer Trends, Urbanization and Infrastructure Development, Growing Middle Class, and Government Support and Business Environment. and for resident quality of life theme, emphasis on enhancing the quality of life for Suzhou's residents. Components include cultural preservation and green development, infrastructure and amenities, long-term stay experience, economic opportunities, educational and medical services, and cultural tourism industry and housing policies.

> *"Suzhou is one of the important manufacturing bases in China, covering many fields such as electronics, automobiles and machinery. Suzhou also has a well-developed IT industry, attracting many domestic and foreign technology enterprises and innovative companies. In addition, Suzhou has made remarkable progress in the field of biomedicine, becoming an important national center for biomedical research and development and production, (Participant no. 2)"*

The overarching theme is the seamless integration of tradition and progress, where Suzhou is portrayed not just as a city but as a living testament to the coexistence of historical heritage and modern development. This integration creates a unique and vibrant tapestry that defines Suzhou's city brand.

2. The effectiveness of Suzhou's integrated marketing communication strategies in promoting the city brand.

Suzhou's integrated marketing communication strategy in promoting the city's brand encompasses a multifaceted approach that leverages both online and offline channels. In the realm of

online marketing, the city employs social media campaigns and online advertising to showcase its historical and cultural richness. Suzhou actively engages its online audience through platforms like Weibo and WeChat, fostering interaction, addressing queries, and employing special initiatives such as influencer collaborations and live-streamed cultural performances. Despite the city's successes, Suzhou faces challenges in online marketing, including limited digital infrastructure, language barriers, intense competition, trust issues, and the need to adapt to changing consumer behavior. To overcome these hurdles, the city emphasizes the importance of content creation, regular updates, collaboration with local businesses, and efficient management of negative reviews.

Offline activities and events play a crucial role in Suzhou's marketing strategy, drawing on factors such as appealing content, venue selection, strategic publicity, interactive sessions, service quality, and partnerships to engage tourists and potential investors. The city highlights specific romantic places to enhance its offline appeal.

> *"These offline activities are effective in attracting target audiences, including tourists and potential investors, because they provide opportunities to interact with the brand or product. By participating in the events, people can gain a deeper understanding of the brand or product and make an emotional connection. Another reason is that these offline events are often unique and innovative. By providing a unique and memorable experience, they attract the interest and curiosity of the target audience. In addition, these offline events are often promoted using channels such as social media to generate word-of-mouth online and further expand their reach (Participant no. 7)"*

To measure brand awareness and engagement, Suzhou utilizes tools like questionnaire surveys, social media monitoring, internet search data analysis, and online reservation system statistics. These tools help in understanding visitor satisfaction, sentiment analysis, public interest, and market demand. The collected data informs decision-making processes for facility improvements, targeted promotions, marketing strategy adjustments, and enhanced supply-side management. Despite occasional challenges in offline activities, Suzhou learns from experiences, emphasizing a clear understanding of the target audience, meticulous venue and timing considerations, and effective cost control in planning events.

Suzhou's integrated marketing communication strategy is a comprehensive blend of online and offline initiatives, incorporating engagement strategies, brand awareness measurement tools, and adaptive approaches to overcome challenges. The city's success lies in effectively showcasing its cultural heritage, enhancing visitor experiences, and fostering positive brand perceptions both online and offline.

Table 2. Suzhou's integrated marketing communication strategies in promoting the city brand.

Strategies	Detail
Network channels	Social media campaigns or online advertising campaigns
	Engage with its online audience through social media
	The challenges or obstacles
Offline activities and events	The factors make offline activities effective
	Cases about offline activities
Measuring brand awareness and engagement	Specific tools or analytics platforms
	Examples of successful engagement strategies
Put forward measures	Synergistic effect of online and offline marketing
	Advices on how Suzhou can seamlessly integrate online and offline activities
	Potential challenge or risk in achieving synergy

Through a combination of social media campaigns and online advertising campaigns, Suzhou has successfully used contemporary technology to effectively promote its city brand image and attract more domestic and foreign tourists to explore this fascinating and historic destination.

Overcoming these obstacles will require concerted efforts by both government bodies supporting business development initiatives as well as individual companies investing time and resources into enhancing their capabilities within the ever-evolving world of online marketing

To enable Suzhou to carry out offline activities to effectively attract target audiences including tourists and potential investors, it is necessary to take into account multiple factors such as content theme, venue selection and layout, publicity strategy, participation in interactive links, service quality and partnership, and make flexible adjustments and improvements according to the actual situation.

3. The initiatives for enhancing Suzhou's unique city brand through integrated marketing communication strategies.

Through the innovative marketing content forms, Suzhou successfully combines its unique charm with the cultural and tourism industry, and has achieved remarkable results in the process of city brand promotion. However, as the social environment changes and people's needs become more diverse, this is only a starting point. In the future, Suzhou should continue to improve and adapt to the development needs of The Times, and constantly update its ideas and methods to ensure that it always maintains a leading position in the global competition.

Table 3. Initiatives for enhancing Suzhou's unique city brand through integrated marketing communication strategies.

Initiatives	Details
Synergistic effect of online and offline marketing	Strategies or methods Suzhou adopt to achieve greater synergies Advices on how Suzhou can seamlessly integrate online and offline activities Potential challenge or risk in achieving synergy
Content strategies for showcasing cultural heritage and economic opportunities	Innovative content forms or narrative techniques that could consider incorporating into marketing efforts Innovative marketing content forms in the integration of city brand promotion and cultural tourism industry Effect evaluation and future outlook
Measuring brand awareness and engagement	Specific tools or analytics platforms Examples of successful engagement strategies
Segmentation of target audience	Specific criteria or variables that Suzhou could use for audience segmentation Experience of other destinations or industries when targeting specific audience segments

By utilizing these criteria effectively through market research techniques such as surveys or focus groups analysis; businesses operating in Suzhou will gain a better understanding of their target audiences' diverse characteristics. This knowledge enables them to develop tailored marketing campaigns that address specific segment needs efficiently while maximizing customer satisfaction and business growth opportunities.

Discussion and Conclusions

Discussions

1. Discussions of the key components that contribute to the uniqueness of Suzhou's city brand

Suzhou's rich historical and cultural heritage has played an important role in shaping the city's brand. With a history of more than 2,500 years, Suzhou boasts many well-preserved monuments, such as the Humble Administrator's Garden and Tiger Mountain. These landmarks not only showcase traditional Chinese architecture, but also reflect the artistic achievements of past generations. The analysis of the uniqueness of Suzhou's city brand is consistent with the research results of Bian and Haque (2020) and Tang and Zhang (2022), that is, a city needs a unique self-characteristic to build the image of a city brand, while Suzhou builds the image basis of its own city brand with its unique historical and cultural heritage.

Comparative analysis of Suzhou's city brand strategies with those of other cities unveils both unique attributes and commonalities that contribute to its distinctiveness. Examining similar urban centers provides valuable insights into the effectiveness and innovation of Suzhou's approach. One city of relevance is Kyoto, Japan, renowned for its rich historical and cultural heritage (Brumann, 2009). Both Suzhou and Kyoto leverage their historical charm through elements like garden art, architectural styles, and preservation of cultural traditions. However, Suzhou distinguishes itself through the integration of silk culture, internationally acclaimed gardens, and distinctive events, setting it apart in its thematic approach.

In contrast, the city of Shenzhen in China offers a compelling comparison in terms of economic strengths. Suzhou's economic strategy, emphasizing diverse business sectors and key industries driving local development, aligns with Shenzhen's robust economic landscape. Both cities capitalize on government support and a conducive business environment (Zhang & Sun, 2019), showcasing similarities in their pursuit of economic vitality. However, Suzhou's focus on silk culture and the unique architectural style adds a nuanced layer to its economic branding, differentiating it from Shenzhen's more technology-driven narrative.

Examining the market potential, Suzhou's initiatives for market tapping and integration of digital technology find resonance with cities like Seoul, South Korea, and Singapore. These cities share a focus on leveraging attractive demographics, consumer trends, and urbanization for economic growth (Joo, 2023). Suzhou's emphasis on cultural preservation and green development, however, uniquely aligns with Singapore's commitment to sustainable urban living, adding a distinctive dimension to Suzhou's market potential strategies.

Comparisons with cities like Florence, Italy, and Vancouver, Canada, shed light on resident quality of life components (Senese et al., 2016). Suzhou's emphasis on cultural tourism industry and housing policies mirrors Florence's commitment to cultural preservation. Vancouver's focus on long-term stay experiences, economic opportunities, and comprehensive amenities draws parallels with Suzhou's strategy. However, Suzhou stands out with its dedicated initiatives in silk culture and unique cultural events, showcasing a fusion of economic vibrancy and cultural richness in enhancing the resident quality of life.

In essence, while Suzhou shares commonalities with other cities in leveraging historical, economic, and livability aspects, its uniqueness lies in the integration of silk culture, distinctive events, and a harmonious blend of economic and cultural elements. Suzhou's strategies exhibit a thoughtful combination of global trends and locally rooted initiatives, setting it apart in the competitive landscape of city branding.

2. Discussions of the effectiveness of Suzhou's integrated marketing communication strategies in promoting the city brand.

Suzhou, as a city with a long history and profound cultural heritage in China, has unique advantages in urban brand construction. Through the integrated marketing communication strategy, we can better display the advantages of Suzhou's rich and diverse tourism resources, cultural landscape and economic development achievements. This is consistent with the research results of Schultz & Schultz (2004) and Zhang (2022), that is, a city should promote its city brand through multiple channels, such as advertising through various media channels, launching well-designed theme activities, and interacting with social media. It can increase the public's awareness and favorable impression of Suzhou as a city brand image.

3. Discussions of the initiatives for enhancing Suzhou's unique city brand through integrated marketing communication strategies.

The recommendation to adopt innovative content forms for promoting cultural heritage aligns with the growing emphasis on experiential marketing in city branding (Smilansky, 2017). Drawing inspiration from successful city branding strategies in other cities is a well-supported approach (Chen & Thwaites, 2018). Leveraging iconic symbols and participating in international exchanges have been identified as successful strategies in various contexts. The study underscores the importance of audience segmentation based on demographic, psychographic, and behavioral factors, aligning with established practices in marketing research (Nica et al., 2019). Suzhou's commendable efforts in integrating its unique allure with the cultural and tourism industry are acknowledged. However, the research underscores the imperative of continuous adaptation to evolving societal dynamics and preferences to maintain a leading position globally. Through the implementation of the recommended initiatives, Suzhou holds the potential to create a distinctive and appealing city brand resonating effectively with diverse audience segments.

Implementing initiatives to enhance Suzhou's city brand through integrated marketing communication strategies faces formidable challenges. Firstly, achieving a seamless integration of online and offline activities is hindered by technological barriers, diverse audience preferences, and the need for substantial infrastructure investment. Striking a balance in messaging consistency between digital platforms and real-world interactions proves challenging. Additionally, resistance to change within the community, cultural barriers, and the dynamic digital landscape may limit the realization of synergies, requiring careful alignment with evolving target audience preferences (Vaccari, 2010; Peng & Lorenzo, 2023)

In terms of content strategies, the development of innovative forms necessitates a profound understanding of local culture and global market trends (Olssen & Peters, 2005). The delicate balance between authenticity and diverse audience expectations is a central challenge, compounded by potential resistance from conservative stakeholders, which may impede the implementation of certain narrative techniques. Furthermore, subjective evaluation of content effectiveness and varying impacts on the

city's image across audience segments pose limitations (Reap et al., 2008). Sustaining audience engagement over time demands continuous innovation to prevent content fatigue.

Measuring brand awareness and engagement encounters challenges in the selection of tools, given variations across platforms. Ensuring data accuracy, privacy compliance, and adapting to rapidly changing analytics technologies present additional hurdles (D'Acquisto et al., 2015). Adapting successful engagement strategies to Suzhou's unique context may be challenging, and reliance on quantitative measures alone may restrict the comprehensive understanding of the cultural and economic impact of branding efforts.

The segmentation of the target audience introduces challenges in identifying criteria for segmentation, demanding thorough research into Suzhou's diverse audience. Balancing personalized content with a unified city brand image proves challenging, particularly considering evolving demographics and cultural shifts. Moreover, reaching niche audience segments may be limited, risking potential backlash if segments feel excluded (Wheeler, 2017). The experiences of other destinations may not directly apply, necessitating tailored approaches aligned with Suzhou's unique cultural context. Addressing these challenges necessitates a strategic and adaptive approach. Suzhou must anticipate hurdles, continuously evaluate the effectiveness of initiatives, and refine strategies to navigate the dynamic landscape of destination branding and integrated marketing communication.

Conclusions

The city brand of Suzhou exhibited distinctive features attributed to four key components, namely historical and cultural heritage, economic strengths, market potential, and resident quality of life. Employing a blend of social media campaigns and online advertising initiatives, Suzhou effectively harnessed contemporary technology to promote its city brand image, attracting both domestic and international tourists to explore the rich historical and cultural facets of this captivating destination. The success of Suzhou's strategies is evidenced by heightened engagement levels and enhanced brand awareness. This accomplishment was facilitated through proactive publicity and promotion of tourism resources, enhancements in service quality, and improvements in the overall business environment, thereby establishing Suzhou's city brand as one with a distinguished reputation and considerable influence.

The proposed initiatives for elevating Suzhou's city brand via integrated marketing communication strategies encompass a comprehensive approach. This includes fortifying the synergy between online and offline channels, establishing a cohesive visual identity, seamlessly integrating activities across both domains, proactively addressing potential challenges, highlighting cultural heritage, drawing insights from successful cases, and implementing audience segmentation strategies.

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THE MEDIATING ROLE OF THE BRAND BETWEEN PERCEIVED ESG AND INTENTION TO INVEST AMONG THAI HIGH-NET-WORTH-INDIVIDUAL (HNWI) CLIENTS

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Abstract

This research study aims to propose a framework that suggests the mediating role of brand factors between the perceived ESG and the intention to invest among Thai HNWI clients. The objectives of this study include confirming the factors influencing investment intentions, analyzing the impact of perceived ESG on these intentions, and evaluating the mediating role of brand factors. Amid the emergence of socially conscious portfolios and sustainability funds, the study investigates the role of ESG factors in influencing investment decisions of HNWIs, considering the unique characteristics of the Thai client base, and understanding of such concept grants originality to this study. Theoretical underpinnings draw from the three pillars of CSR (with CSR as the foundation for ESG framework), Aaker's brand equity model, Keller's brand relationship model, commitment-trust theory, and antecedents of brand love are used in this study. Based on the literature review, the independent variable stands out as the perceived ESG, and the dependent variable as the intention to invest. In addition to that, the mediating variables include brand equity, brand trust, brand attitude, and brand loyalty. A total of 9 hypotheses were developed in this research, and the findings of the study is expected to be evaluated using a quantitative methodological approach, collecting data through close-ended survey questionnaire, and analyzing through SEM statistical analysis.

Keywords: Perceived ESG, Brand, Intention to Invest, HNWI, Private Bank

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Introduction

High Net-Worth Individuals (HNWI) are a segment of affluent clients, characterized by their substantial financial assets, typically exceeding a certain threshold of accumulated assets (Curry, 2023). The HNWI's landscape in Thailand, over the past decade, has witnessed a growing population of high-net-worth individuals, driven by economic development, entrepreneurship, and increased investment opportunities. As of 2023, it was reported that Thailand is home to over 125,400 HNWIs, with a combined wealth exceedingly over USD 15 billion. Curry (2023) states that these HNWIs are motivated through wealth creation, wealth preservation, tax planning, and succession planning. However, with the changing landscape of the HNWI's investment motivation, their new target focus surrounds the investment in 'making an impact'. In light of this opportunity, private banks in Thailand offer a wide range of wealth management services, including investment advisory, estate planning, and offshore wealth management, with a strong commitment to maintaining client confidentiality and delivering personalized financial solutions – including ESG-based investments.

Prominent banks like Kasikorn Bank, UOB, and Bangkok Bank have publicly committed to spearheading ESG initiatives in Southeast Asia. However, Gavrilakis and Floros (2023) contend that this adoption might be characterized by herding behaviour, wherein firms emulate one another rather than making deliberate decisions driven by stakeholder considerations. This raises pivotal questions about the sincerity and depth of commitment to ESG principles within the industry. The study further explores the emergence of socially conscious portfolios and sustainability funds, both locally and globally, particularly in response to the COVID-19 pandemic. The surge in popularity of ESG funds during this period prompts an investigation into their role in the investment intentions of High-Net-Worth Individuals (HNWIs) (Park and Jang, 2021). The introduction of Thailand-based ESG funds, including those by the Government Pension Fund (GPF), adds complexity to understanding the impact of ESG responsibilities on investment behaviour. The primary focus of this research is to ascertain whether corporate adoption of ESG responsibilities genuinely influences the investment decisions of clients, specifically HNWIs. This not only emphasizes the necessity for a comprehensive understanding of the motivations behind ESG adoption but also underscores the relevance and influence of ESG factors on investor behaviour in the dynamically evolving financial landscape (Silanes et al., 2022). Furthermore, the authors including Silanes et al., (2022) and Zumente and Bistrova (2021) – the authors have stated that, ESG investments contributes positively to the investment intentions of wealthy investors.

In tandem with the evolving financial landscape, the study acknowledges the unique characteristics of the customer base in Thailand, particularly the limited number of clients, who are, in turn, highly loyalists. In 2021, Thailand recorded 125,400 High-Net-Worth Individuals (HNWIs), with a projected increase to 162,500 HNWIs by 2026 (Statista Search Development, 2023), while the number of Ultra-High-Net-Worth Individuals (UHNWIs) is notably scarce, comprising only 1,300 individuals in 2021. Furthermore, Li-Huang's (2017) on "The Psychology of High-Net-Worth Individuals,"

underscores that HNWIs are motivated by wealth creation, possess a strong focus on social impact, and exhibit high levels of loyalty. Similarly, the findings presented in the study by Dzogbenuku et al., (2023) and Crass et al., (2019) have further stated that, investors tend to also seek the validity and credibility of a brand, and the brand name – prior to ensuring their association with a said product/service. Thus, the entry of new private banks and partnerships between local and international banks in Thailand introduces heightened competition among the available, yet limited client group – the role of brand plays a vital role in defining the intention of clients to invest with a specific product/service. Thus, private banks are required to identify strategies that could motivate the intention to invest, specifically in attracting clients from their existing bank. Understanding this unique customer landscape is, therefore, critical in exploring the interplay between ESG responsibilities and investment decisions within the HNWI community in Thailand.

In light of this issue, this paper aims to propose a framework that suggests the mediating role of brand factors between the perceived ESG and the intention to invest among Thai HNWI clients. The objectives of this study are stated as follows:

(i) To confirm the factors that influence the investment intention among HNWI clients in Thailand.

(ii) To analyse the impact of perceived ESG on investment intentions of HNWI clients in Thailand.

(iii) To evaluate the mediating role of brand factors on the investment intention among HNWI clients in Thailand.

Meeting the aforementioned objectives holds the potential to not only contribute theoretically to the academic literature on factors influencing investment intentions among High-Net-Worth Individuals (HNWIs) in Thailand but also has broader implications for the global understanding of wealth management practices in emerging markets. The empirical evidence generated by this study will shed light on the interplay between perceived ESG, brand factors, and investment intentions among Thai HNWIs. This, in turn, can provide valuable insights for financial professionals, investment advisors, and wealth managers operating not only in the Thai market but also globally. The study's findings may contribute to the global understanding of how wealthy individuals in emerging markets make investment decisions, specifically in the context of ESG considerations and the importance of brand factors. The research has the potential to inform the evolving landscape of ESG investment trends among HNWIs, emphasizing the balance between traditional financial goals and social/environmental responsibility. Moreover, it may influence global wealth management practices by highlighting the significance of building strong brands aligned with ESG values to attract and retain HNWI clients. Additionally, the study could offer insights into how policy and regulatory frameworks may be developed or modified in emerging markets to encourage ESG investing among HNWIs, taking into account the role of brand in shaping investment decisions.

Review of Literature

Theoretical Review

The primary literature, focused on this paper, is grounded on the key elements of the 3 pillars of CSR, Aaker's brand equity model, Keller's brand relationship model, the commitment-trust theory, and the antecedent of brand love. A brief review of each of these theories and emergent hypotheses is proposed as follows.

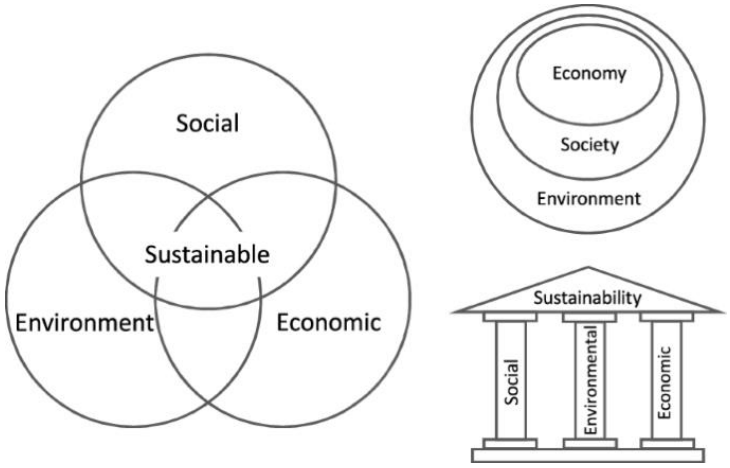

Figure 1. 3 Pillars of CSR Framework (Cornell & Shapiro, 2021)

In discussing the pillars of social responsibility, researchers often discuss the 3 pillars of sustainability, comprising social, environment, and economic factors. The first pillar of CSR involves the economic dimension, emphasizing an organization's responsibility to contribute to the economic well-being of society (Carroll & Brown, 2018). The second pillar centres on social responsibility, reflecting an organization's commitment to contributing positively to society, which extends beyond economic considerations to address social issues and concerns (Carroll, 1991). The third pillar underscores environmental responsibility, reflecting the growing awareness of the impact of business activities on the natural environment (Saleh, 2022). These pillars of CSR are, often, acts as the foundation of ESG dimensions, comprising environmental, social, and governance factors (Rau & Yu, 2023) – which have an extended effect on the behaviour of the client, customers, and end-consumers, as it has a direct impact on the mediating element of brand – leading to a significant impact on how a client perceives or conducts their business with the said-brand. In addition to the study by Rau and Yu (2023), the study by Shapsugova (2023) has further affirmed that, CSR dimensions are the foundation of understanding ESG dimensions.

In the context of Thailand's High-Net-Worth Individuals (HNWIs) and wealthy investors, the three pillars of sustainability and Environment, Social, Governance (ESG) play a crucial role in shaping their investment decisions. For Thai HNWIs, economic well-being, as the first pillar suggests, holds significant importance. Their investment choices are influenced by the economic contributions and responsibilities of the organizations they choose to associate with. The second pillar, focusing on social

responsibility, aligns with the emphasis on social impact and loyalty observed among Thai HNWIs. Investments that contribute positively to society, beyond mere economic considerations, resonate well with the values of this investor group (Zumente and Bistrova, 2021). Lastly, the growing awareness of environmental responsibility, the third pillar, reflects the evolving preferences of Thai HNWIs who are increasingly considering the environmental impact of business activities in their investment decisions.

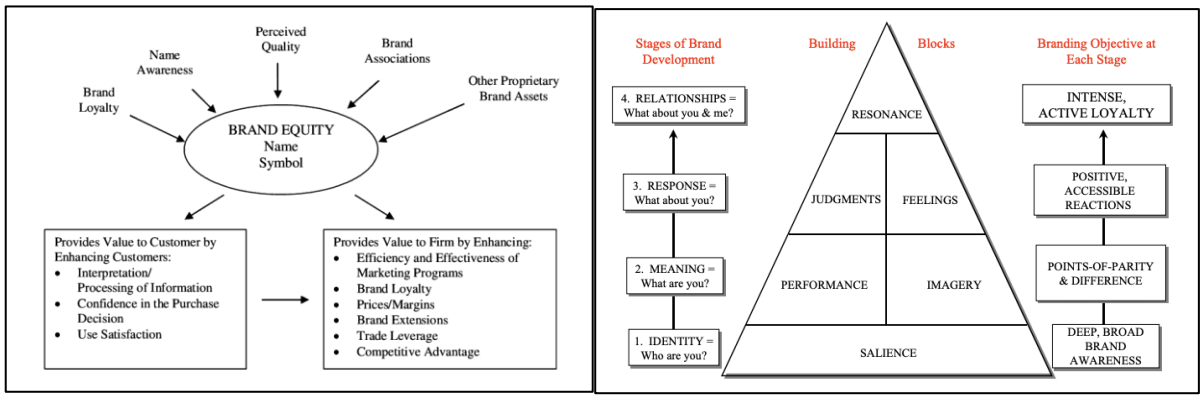

Figure 2. Aaker's Brand Equity Model (Left) (Aaker, 1991) and Keller's Brand Relationship Model (Right) (Keller, 1993)

The second set of theories is associated with the brand factor. Aaker's model proposes that brand equity comprises five key components: brand loyalty, brand awareness, perceived quality, brand associations, and brand assets (Aaker, 1991). This conceptualization provides a structured framework for assessing and managing the strength and value of a brand – is even more significant when considering the value creation and the long-term returns for the shareholders (Zumente and Bistrova, 2021). The dimensions under the brand equity model of Aaker (1991, 2009) include brand loyalty, brand awareness, perceived quality, brand association, and brand assets. On the other hand, Keller's model, introduced in the 1990s, has become a seminal framework for understanding and managing brand equity, with authors like Kuhn and Alpert (2004) and Yousaf et al. (2017) citing the model as a key model in understanding or measuring the attributes of a brand. Each of these theories comprises of unique brand component/element, which is reviewed in the following table below.

In the realm of wealthy investment behavior among Thai High-Net-Worth Individuals (HNWIs), Aaker's brand model components hold pivotal influence. Characterized by their strong loyalty (Li-Huang, 2017), Thai HNWIs form emotional connections with brands, as emphasized by Chi et al. (2009) and Asif (2015). The competitive landscape among a limited number of HNWIs in Thailand necessitates a strategic focus on brand awareness, crucial for building trust and reliability in the minds of these discerning investors (Asif, 2015).

Perceived quality, a key component in Aaker's model and studied by Zeithaml (1988), aligns with the expectations of Thai HNWIs who prioritize brand validity and credibility (Dzogbenuku et al., 2023; Crass et al., 2019).

Table 1. Summary of Aaker's Brand Equity Model

Brand Factors	Review/Definition
Brand Loyalty	Numerous studies have delved into the concept of brand loyalty within Aaker's model. Chi et al. (2009) and Asif (2015) explored the emotional and relational aspects of brand loyalty, emphasizing the connection between consumers and brands. The research suggests that brand loyalty is not merely a behavioural outcome but is deeply rooted in consumers' emotional responses and attachment to the brand.
Brand Awareness	The literature on brand awareness within Aaker's model underscores its role in influencing consumer choice and purchase behaviour. The author Asif (2015) highlighted the significance of brand awareness in building brand equity, as it serves as a critical foundation for other brand perceptions. Studies have further explored the impact of different awareness levels on brand choice and the creation of mental availability in the minds of consumers.
Perceived Quality	Aaker's model places considerable emphasis on perceived quality as a component of brand equity. Studies, such as Zeithaml (1988), have investigated the relationship between perceived quality and consumer preferences, finding that perceived quality significantly influences brand choice and loyalty. The literature also delves into the challenges of maintaining and enhancing perceived quality amidst changing market dynamics and consumer expectations.
Brand Association	Research on brand associations within Aaker's model explores the cognitive and affective connections consumers form with brands. Aaker (2009) emphasizes the importance of creating strong, favourable brand associations to enhance brand equity. Studies have examined how brand associations contribute to consumer perceptions and attitudes, affecting brand choice and loyalty.
Brand Assets	Aaker introduced brand assets as a component of brand equity, representing proprietary brand features. Severi and Ling (2013) explored the role of brand assets in creating a unique brand identity and differentiating it from competitors. The literature discusses how brand assets, such as logos, taglines, and characters, contribute to brand recall and recognition.

Cognitive and affective connections through brand associations, highlighted by Aaker (2009), are essential for private banks targeting Thai HNWIs, especially those emphasizing social impact. Additionally, brand assets, explored by Severi and Ling (2013), play a crucial role in creating a unique

brand identity, contributing to brand recall and recognition in the competitive financial landscape. Thus, an understanding and strategic application of Aaker's brand model are imperative for private banks to effectively engage and influence the investment decisions of Thai HNWIs.

In the realm of Thai High-Net-Worth Individuals (HNWIs), Keller's brand model components play a crucial role in influencing investment decisions. Brand Resonance aligns with the observed emotional connections and loyalty of Thai HNWIs (Li-Huang, 2017). Brand Judgement reflects the discerning nature of these investors, emphasizing brand validity and credibility (Dzogbenuku et al., 2023; Crass et al., 2019). Brand Feelings resonate with the social impact emphasis among Thai HNWIs (Li-Huang, 2017). Brand Performance meets the expectations for tangible benefits in investments, and Brand Image correlates with the significance of brand associations. Brand Salience is vital for private banks seeking strategic marketing efforts among the limited but highly loyal Thai HNWI clientele. Strategically leveraging these brand factors is imperative for private banks to effectively connect with and influence Thai HNWIs in the competitive financial landscape.

In addition to the brand theories, the study by Morgan and Hunt (1994), and Carroll and Ahuvia (2006) reviews the existing theory that is associated with brand trust and brand love. The seminal work by Morgan and Hunt (1994), stands as a cornerstone in elucidating the intricacies of enduring relationships between buyers and sellers.

Table 2. Summary of Keller's Brand Relationship Model

Brand Factors		**Review/Definition**
Brand Resonance		Brand resonance represents the highest level of consumer-brand relationships, representing a deep, emotional connection and engagement between the brand and the consumer (Keller, 1993; Keller & Sood, 2003).
Brand Response	Brand Judgement	Brand judgement refers to the way consumers evaluate and form opinions about a brand, and assess the brand's quality, credibility, and relevance (Keller, 1993; Keller & Sood, 2003).
	Brand Feelings	Brand feelings capture the emotional responses and sentiments evoked by a brand, measured by the eliciting positive feelings tend to establish stronger connections with their audience Keller, 1993; Keller & Sood, 2003.

Table 2. Summary of Keller's Brand Relationship Model. (Cont.)

Brand Factors		Review/Definition
Brand Meaning	Brand Performance	Brand performance refers to how well a brand meets or exceeds consumer expectations regarding functional attributes and features, which involves the tangible benefits and functionalities that consumers associate with the brand (Keller, 1993; Keller & Sood, 2003).
	Brand Image	Brand image encompasses the overall perception and mental representation that consumers hold about a brand, and is a composite of associations, beliefs, and impressions that consumers accumulate through interactions and experiences with the brand (Keller, 1993; Keller & Sood, 2003).
Brand Salience		Brand salience refers to the prominence and visibility of a brand in the minds of consumers. A strong brand salience reflects an easily recalled or recognized brand – and authors state that salience is a key aspect in improving the strategic marketing efforts among consumers (Keller, 1993; Keller & Sood, 2003).

This foundational theory underscores the mutual nature of trust and commitment, which suggests that the synergy between these elements is pivotal in shaping the quality and longevity of business relationships. The trust comprises dimensions like competence, integrity, and benevolence, which has been a focal point of extensive research, with studies such as Boateng & Narteh (2016) and Ponder et al. (2016) emphasizing its role in developing business-to-customer relationships. In addition to the commitment-trust theory, the study by Carroll and Ahuvia (2006) delved into studying the antecedents of brand love. For Thai High-Net-Worth Individuals (HNWIs), the insights from Morgan and Hunt's (1994) commitment-trust theory are pertinent. The theory highlights the mutual nature of trust and commitment, aligning with the expectations of Thai HNWIs known for their emphasis on brand validity, credibility, and loyalty (Dzogbenuku et al., 2023; Crass et al., 2019; Li-Huang, 2017). Trust, as elucidated by Boateng & Narteh (2016) and Ponder et al. (2016), is a crucial element in developing enduring business-to-customer relationships, a key consideration for Thai HNWIs with their loyalty and relationship-focused approach.

The study by Carroll and Ahuvia (2006) outlines the research of hypotheses related to brand love, which focuses on the passionate emotional attachment that satisfied consumers form with brands. The research sheds light on several key findings, contributing to our understanding of consumer behaviour

and brand management. The study suggests that consumers exhibit a greater degree of love for brands in product categories perceived as more hedonic, emphasizing the emotional and experiential aspects of consumption. This aligns with the idea that emotional engagement plays a crucial role in brand relationships, especially in product categories associated with pleasure and enjoyment. The findings, emphasizing the emotional and experiential aspects of consumption leading to brand love, align with the cultural values of pleasure and enjoyment in Thai society. This resonates with Thai HNWIs' preference for investments that go beyond financial gains, incorporating emotional engagement and a passion for the brands they choose to associate with in their wealth management endeavors.

Independent Variable: Perceived ESG

The idea of perceived ESG performance has become more relevant lately since more stakeholders, such as investors, consumers, and regulatory bodies, understand that corporations must be evaluated by something other than just financial indicators. Scholars have analysed the intricacies of perceived ESG, the process by which people and institutions judge the extent of a company's consideration for the environment, social responsibility, and governance (Rau & Yu, 2023). Aksoy et al. (2022) research on transparency in corporate reporting emphasizes that stakeholders take a positive view of ESG initiatives when there is communication on a company's commitment to sustainability practices. Studies by Koh et al. (2022) also focus on ESG activities as a determinant of the perceived social dimension of ESG. These include but are not limited to, philanthropy, employee welfare and other socially responsible activities that create a positive image and boost social responsibility perception.

Apart from that, the governance dimension of perceived ESG has also been examined, looking into the influence of board structures, executive compensation, and ethical leadership on stakeholder perception. The work of Clementino & Perkins (2021) shows that strong governance practices are associated with higher perceived ESG performance, implying that transparent and accountable governance has a considerable influence on overall ESG evaluations. The literature also examines the impacts of perceived ESG on various organizational outcomes. For example, a study by Nilsson et al. (2014) shows that high perceived ESG performance corresponds with improved financial performance and economic benefits. Koh et al. (2022) also show the impact of perceived ESG on consumer behavior. The study suggests that socially and environmentally conscious consumers have a higher tendency to support and engage with companies that have similar values.

Dependent Variable: Behavioral Intention to Invest

Behavioural intention is an important dependent variable for social science and marketing research which measures an individual's willingness to adopt a particular behaviour, also defined as the tendency to do something or not to do something before action is taken (Ajzen, 2002). As informed in the study by Ajzen and Fishbein (2000), the behavioural intention factor precedes actual behaviour and provides crucial information on the chances that people may take a particular action. Behavioural

intention is of significant relevance in consumer behaviour or when making investment decisions and can be used as a predictor for whether individuals are likely to perform the steps, such as purchasing a product, subscribing to a service, and the like, especially when it comes to exploring why or how do specific consumer respond to unique external factors, subsequently and what is their impact on the investment intention. Here, the intention to invest represents the propensity of people to channel their financial resources into various forms of investment, their confidence levels, how much risk they feel comfortable with, and their perceptions of the investment environment. Examining the intention to invest reveals essential information related to individuals' perception of market conditions, confidence in financial institutions, and financial awareness (Sudarsono, 2015).

Hence, studying behavioural intention is crucial in helping financial service providers, educators and policymakers make informed investment decisions which enhance the economic well-being of people. This is particularly related when exploring the impact of unique external factors on consumer responses and their subsequent influence on investment intentions. In the context of Thai High Net Worth Individuals (HNWIs), studying behavioral intention in the realm of investment signifies their inclination to allocate financial resources across various investment avenues. This examination provides valuable insights into the confidence levels of Thai HNWIs, their risk tolerance, and perceptions of the investment environment. Exploring behavioral intention among this demographic shed light on their perceptions of market conditions, confidence in financial institutions, and financial awareness, all of which are crucial factors influencing their investment decisions.

Research Gap

The current body of research study on branding factors and intention to invest exhibits a gap concerning the lack of in-depth investigation into the interplay between perceived Environmental, Social, and Governance (ESG) factors, brand-related variables, and the behavioural intentions of High-Net-Worth Individuals (HNWIs), with a specific emphasis on their intention to invest. While existing literature has made efforts to explore the relationship between perceived ESG and behavioural intentions, a notable gap exists in studies that integrate the dynamics between perceived ESG considerations, brand factors, and the specific behavioural intention of HNWIs to invest. The gap is further widened, whereby, there is a lack of research study that focuses on the HNWI clients, as past studies such as Cal & Lambkin (2017), Ismail et al., (2023), Rau & Yu (2023) only have limited focus on general investors perception – and fails to address the specific to HNWI. Furthermore, it was observed that prevailing research tends to concentrate on broader behavioural intentions, such as purchasing or recommending, rather than focusing on the unique context of HNWIs' intention to invest. This research gap stresses the need for more targeted and comprehensive research into the relationship among perceived ESG dimensions, brand elements, and the investment-oriented behavioural intentions of this distinctive segment of financial stakeholders. Addressing this research gap is crucial not only for the emerging private banks and international banks in Thailand but also for gaining insights into the factors influencing the decision-making processes of

HNWIs in sustainable investments (Paetzold & Busch, 2014). This research has significant implications for financial institutions aiming to tailor their strategies to the preferences and values of this distinctive segment, contributing to the advancement of sustainable investment practices and enhancing the understanding of HNWI behavior in the financial landscape.

Proposed Framework and Hypotheses

Proposed Conceptual Framework

In this section of the report, the researcher illustrates the conceptual framework, that is associated with this study, and intends to investigate literature, that supports the development of the hypotheses.

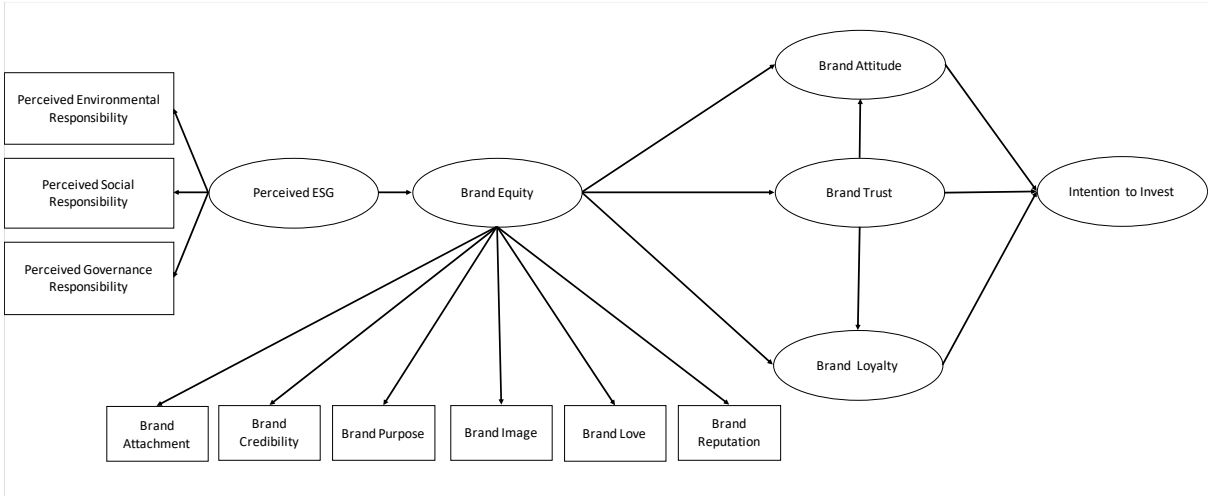

Figure 3. Conceptual Framework for the Research

The conceptual framework in this study emerges to showcase the intricate relationship that exists between the independent variable perceived ESG (observed factors = perceived environmental responsibility, perceived social responsibility, and perceived governance responsibility), the mediating factors – brand equity (observed factors = brand attachment, brand credibility, brand purpose, brand image, brand love, and brand reputation), brand attitude, brand loyalty and brand trust, and the dependent variable – intention to invest. Empirical literature supporting the conceptual framework is presented as follows.

Before investigating the hypotheses, it is important to note that, perceived Environment-Social-Governance (ESG) responsibility is a multi-faceted construct that represents stakeholders' judgements regarding a company's commitment to sustainable and socially responsible practices (Paetzold & Busch, 2014). The three pillars of CSR—economic, social, and environmental responsibility (Rau & Yu, 2023) — constitute the observed variables contributing to perceived ESG (Cornell & Shapiro, 2021). Economic responsibility involves fair business practices, emphasizing long-term value generation and equitable distribution of benefits (Carroll & Brown, 2018). Social responsibility extends to philanthropy,

community engagement, and ethical practices, enhancing corporate reputation and stakeholder relationships (Carroll, 1991; Carroll & Brown, 2018). Environmental responsibility emphasizes minimizing ecological footprints and implementing sustainable practices, aligning closely with the 'E' in ESG and considering the impact of business activities on the natural environment (Saleh, 2022). ESG considerations, as disclosed by organizations following the Global Reporting Initiative (Saleh, 2022), play a crucial role in shaping stakeholder behaviour. This is particularly evident in how clients, customers, and end-consumers perceive and conduct business with a brand.

The interconnectedness of CSR and ESG highlights that ESG factors are integral components of CSR initiatives. The disclosed ESG metrics impact brand perception, influencing how individuals interact with and evaluate a brand. Thus, perceived ESG becomes an observed variable reflecting the holistic sustainability and responsibility practices of an organization Similarly, brand equity is a multifaceted concept comprising brand attachment, brand credibility, brand purpose, brand image, brand love, and brand reputation. Aaker's Brand Equity Theory proposes a structured framework that includes five key components: brand loyalty, brand awareness, perceived quality, brand associations, and brand assets (Aaker, 1991). These components serve as observed variables representing different facets of brand equity. For instance, brand loyalty, explored by Chi et al. (2009) and Asif (2015), goes beyond behavioural outcomes, delving into the emotional and relational aspects of consumer-brand connections. Brand awareness, as highlighted by Asif (2015), is foundational for building brand equity, influencing consumer choice and mental availability. Perceived quality, an integral part of Aaker's model, significantly influences brand choice and loyalty, as indicated by studies such as Zeithaml (1988). Similarly, Keller's Brand Relationship Model introduces dimensions like brand resonance, brand judgement, brand feelings, brand performance, brand image, and brand salience, serving as observed variables for brand equity. These dimensions represent different facets of consumer-brand relationships, emphasizing emotional connections, consumer evaluations, and brand perceptions.

Hypotheses Development

The intricate relationship between perceived Environmental, Social, and Governance (ESG) practices and brand equity is rooted in consumers' evolving perceptions of responsible and sustainable business conduct (Paetzold & Busch, 2014). Extensive research supports the assertion that perceived ESG has a profound impact on several dimensions that collectively contribute to the overall strength and value of a brand. Notably, the positive association between perceived ESG and brand image is a cornerstone of this relationship. Companies actively engaged in ESG practices are viewed favourably by consumers, who attribute positive traits such as responsibility and sustainability to these brands (Koh et al., 2022). This positive brand image, in turn, aligns with Aaker's Brand Equity Theory, where brand image is a fundamental component influencing brand loyalty, awareness, and associations. Moreover, the impact of perceived ESG extends to the realm of brand credibility. Companies prioritizing ESG activities are perceived as more trustworthy and credible, with consumers recognizing the transparency

and ethical commitment associated with these practices (Tripopsakul & Puriwat, 2022). This positive relationship between perceived ESG and brand credibility aligns seamlessly with Aaker's model, wherein credibility is identified as a critical element shaping overall brand equity.

Additionally, perceived ESG practices shape the perceived purpose of a brand. Companies committed to social and environmental responsibility articulate a stronger sense of purpose, resonating with consumers seeking value alignment in their purchasing decisions (Riches, 2021). This purpose-driven narrative contributes to the emotional and perceptual dimensions of brand equity, reflecting the interconnected nature of perceived ESG and brand strength. Furthermore, perceived ESG practices foster emotional connections, as evident in consumers' expressions of love and admiration for brands engaging in sustainable and socially responsible activities (Quezado et al., 2022; Puriwat & Tripopsakul, 2023). This emotional dimension, coupled with consumers' inclination to form stronger attachments to brands aligned with their values, reflects the profound impact of perceived ESG on brand attachment (Zhao et al., 2023; Lee & Rhee, 2023). The culmination of these positive associations contributes to a favourable brand reputation, where companies prioritizing ESG practices are viewed more favourably by consumers, further enhancing overall brand equity (Koh et al., 2022; Cheng et al., 2023). In essence, the relationship between perceived ESG and brand equity is a holistic one, with consumers increasingly valuing brands that demonstrate a commitment to responsible and sustainable business practices, ultimately influencing multiple dimensions that collectively contribute to brand strength and value. In light of this, it can be stated that:

- *H1: Perceived ESG has a positive significant impact on brand equity.*

The review of the existing literature reveals that brand image, credibility, purpose, love, attachment, and reputation are components of brand equity. The literature suggests that a positive brand image has a significant impact on brand attitude (Ramesh et al., 2019; Wu & Wang, 2014). When consumers perceive a brand positively in terms of image, they are more likely to form favourable attitudes. Similarly, brand credibility is proposed to positively impact brand attitude, as credible and trustworthy brands are perceived more favourably by consumers (Kao et al., 2020; Chin et al., 2020). Brand purpose, another component of brand equity, is also suggested to contribute positively to brand trust, which in turn influences brand attitude. Similarly, existing literature also suggests that consumers are more likely to trust brands with a clear and meaningful purpose, especially when aligned with societal values (McKinney & Benson, 2013; Chin et al., 2020). Additionally, brand credibility, especially in the context of environmental and social responsibility, positively influences consumer trust (Kao et al., 2020; Chin et al., 2020). Given that brand credibility and brand purpose are integral components of Aaker's Brand Equity Theory, it can be inferred that brand equity has a significant relationship with brand trust. Furthermore, the expression of love of a brand is more likely to exhibit loyalty in terms of repeat purchases and positive word-of-mouth (Carroll & Ahuvia, 2006; Huang, 2017). Similarly, emotional attachment, as represented by brand attachment, is a key factor influencing brand loyalty (Rajaobelina et al., 2021; Tran et al., 2021). The positive impact of brand trust on brand

loyalty is also evident in the literature, suggesting that trust contributes to higher levels of brand loyalty (Bae et al., 2023; Moon et al., 2023). Considering these relationships, it can be justified that:

- *H2: Brand equity has a positive significant impact on brand attitude.*
- *H3: Brand equity has a positive significant impact on brand trust.*
- *H4: Brand equity has a positive significant impact on brand loyalty.*

Existing research studies have also consistently supported the positive impact of brand trust on brand attitude. Consumers who trust a brand are more likely to develop positive attitudes toward it (Koh et al., 2022). The findings by Lee & Rhee (2023) and Puriwat & Tripopsakul (2022) further found that brand trust significantly influences consumer attitudes, shaping their overall evaluation of the brand. Moreover, research by Morgan and Hunt (1994) emphasized the role of trust in forming positive consumer attitudes toward a brand. In line with that, in the literature by Bae et al. (2023), it was noted that customers who trust a brand are more likely to exhibit loyalty through repeat purchases and positive word-of-mouth. The authors also extended their research, to explore if trust is a key determinant of brand loyalty and found that trust is a key determinant of brand loyalty, with consumers more willing to commit to brands they trust. Additionally, research by Moon et al. (2023) suggested that brand trust contributes to higher levels of brand loyalty. Hence, it can be hypothesized that:

- *H5: Brand trust has a positive significant impact on brand loyalty.*
- *H6: Brand trust has a positive significant impact on brand attitude.*

The key brand factors, including brand trust, brand attitude, and brand loyalty are also found to have had a significant impact on intention to invest. Consumers who trust a brand are more likely to have positive intentions toward that brand, including the intention to invest in its products or services (Hati et al., 2022). Research by Hati et al. (2022) found that trust positively influences consumers' willingness to invest time and resources in a brand. Additionally, a study by Morgan and Hunt (1994) emphasized the role of trust in shaping consumers' intentions, indicating that trust contributes positively to investment-related behaviours. In addition to that, a dated study by Hati et al. (2022) found that brand attitudes play a crucial role in shaping consumers' purchase intentions. Additionally, research by Ismail et al. (2023) suggested that positive brand attitudes contribute to favourable consumer intentions, such as the intention to invest. Other research studies such as the study by Xie et al. (2023) found that loyal customers are more willing to invest in a brand over time. Moreover, research by Cal & Lambkin (2017) suggested that brand loyalty positively influences consumers' intentions to invest resources in the brand. Therefore, the following 3 statements are hypothesized:

- *H7: Brand trust has a positive significant impact on intention to invest.*
- *H8: Brand attitude has a positive significant impact on intention to invest.*
- *H9: Brand loyalty has a positive significant impact on the intention to invest.*

Methodology

Research Design

For this research study titled – "Mediating role of the brand between perceived ESG and intention to invest among Thai HNWI clients", the research design will be established, aligning with objectivism ontology and positivism epistemology, reflecting a quantitative approach. In the context of this study, which intended to investigate the mediating role of brand factors between perceived ESG and intention to invest, the researcher aligns with an objectivism ontology, believing that perceived ESG significantly contribute to the intention to invest. An objectivism ontology is associated with positivism epistemology, which is a quantitative and deductive approach. In this study, exploring the inter-relationship between perceived ESG, branding factor, and intention to invest emerges from theories such as, the CSR pyramid by Carroll (1991), the Aaker and Keller's brand equity model by Aaker (1991) and Keller (1993), and other theories. Following th e objectivism ontology and positivism epistemology, the study employs a quantitative approach for the research strategy. Unlike qualitative research, which is exploratory and inductive, aiming to capture rich, detailed data to understand individuals' experiences, perceptions, and meanings, quantitative research adopts a deductive and numerical approach to quantify trends, patterns, and relationships in data. The chosen ontological and epistemological foundations will be consistent with the study's objective.

Data Collection Strategy

The research instrument, a structured questionnaire based on established theories, will undergo reliability and validity testing through a pilot study. Data collection will utilize a stratified sampling strategy, targeting a minimum of 400 respondents via an online survey distribution platform, Google Forms. In terms of this study, the main population group includes individuals who meet specific criteria: (i) the respondent is of age 25 and above, (ii) the respondent has a net worth of USD 2 million, and (iii) the respondent is a Thai resident and nationality. The stratified sampling approach will categorize participants into distinct groups based on criteria relevant to the research objectives. These groups include Ultra-High-Net-Worth (UHNW), High-Net-Worth (HNW), respondents from the Bangkok metropolitan area, respondents from areas outside Bangkok, those with a focus on Environmental, Social, and Governance (ESG) investments, those without an ESG focus, and participants categorized by Asset Under Management (AUM) size, which ensures a comprehensive representation of diverse participant profiles within the study's scope.

Reliability and Validity Test

Before collecting the full 400 responses, a pilot research study is performed by collecting data from a total of 30 respondents, and the reliability and validity analysis is performed. Hence, the Cronbach stands as the first analysis for the study, followed by the validity analysis. Upon gathering

data from respondents, this study employs Cronbach's Alpha, a statistical metric utilized to evaluate the internal consistency or reliability of a scale or questionnaire (Tavakol & Dennick, 2011; Brown, 2002). Ranging from 0 to 1, where 0 denotes no consistency and 1 signifies perfect consistency, a Cronbach's alpha above 0.60 is considered reliable, as depicted by Ahdika (2017). In this analysis, the researcher assesses the reliability of each scale against the 0.60 alpha-value to ascertain the questionnaire's reliability and its ability to yield consistent results. Additionally, to assess discriminant validity, the study employs a method to evaluate the extent to which different constructs measure distinct aspects. Discriminant validity ensures that the items in the questionnaire are measuring what they are intended to measure, avoiding redundancy (Farrell & Rudd, 2009). The study examines the correlation between different constructs and aims to ensure that they are distinct from each other. SPSS is used for interpreting the discriminant validity of the variables – using Factors Analysis.

Data Analysis and Contribution to the Field

After the successful reliability and validity test is performed, and the 400 data is collected using a stratified sampling strategy, the chosen data analysis approach will involve descriptive statistics and structural equation modelling (SEM) using SPSS-AMOS, anticipating the examination of interrelationships among variables. The stratified sampling design ensures a comprehensive representation of diverse participant profiles within the study's scope, facilitating a nuanced understanding of the targeted subgroups, including UHNWI, HNW, respondents from the Bangkok metropolitan area, respondents from areas outside Bangkok, those with a focus on Environmental, Social, and Governance (ESG) investments, those without an ESG focus, and participants categorized by Asset Under Management (AUM) size. The potential outcome of the study lies in uncovering insights into the complex dynamics of brand factors, ESG considerations, and the interplay with investment intentions among Thai High-Net-Worth Individuals. This knowledge may provide valuable guidance for financial professionals, investment advisors, and wealth managers operating in the Thai market. The hypotheses developed in this study aim to address the research gap by examining the intricate relationships between perceived ESG, brand equity, and the behavioral intentions of Thai High-Net-Worth Individuals to invest. The chapter will conclude by acknowledging limitations, including the mono-methodological approach and potential restrictions in generalizing findings to non-Thai or non-HNWI/UHNWI populations.

Conclusion

In conclusion, this research delves into the mediating role of brand factors between perceived Environmental, Social, and Governance (ESG) considerations and the intention to invest among Thai High Net Worth Individuals (HNWIs). The study aims to confirm influential factors on investment intentions, assess the impact of perceived ESG on these intentions, and scrutinize the mediating role of

brand factors. With a focus on the distinctive characteristics of the Thai client base, the study contributes original insights into the evolving landscape of investment decisions for HNWIs. The theoretical foundation encompasses the three pillars of Corporate Social Responsibility (CSR), wherein CSR forms the basis for the ESG framework. Drawing from Aaker's brand equity model, Keller's brand relationship model, commitment-trust theory, and antecedents of brand love, this study establishes a robust theoretical framework. The independent variable is identified as perceived ESG, the dependent variable as the intention to invest, and mediating variables include brand equity, brand trust, brand attitude, and brand loyalty. Nine hypotheses were formulated, and the research findings will be assessed through a quantitative methodological approach, employing a closed-ended survey questionnaire, and analyzing data using Structural Equation Modeling (SEM) statistical analysis.

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IMPROVING THE ENVIRONMENTAL PERFORMANCE OF PHARMACEUTICAL COMPANIES THROUGH AMBIDEXTROUS GREEN INNOVATION: THE ROLE OF GREEN SUPPLIER INTEGRATION

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Abstract

The aim of this paper is to explore the relationship between green supplier integration (GSI) and environmental performance (ENVP) in the pharmaceutical manufacturing industry and whether the exploration (EORYGI) and exploitative (EIVEGI) dimensions of green innovation play a mediating role in it. Using data obtained from 400 Chinese pharmaceutical manufacturing companies, this research employs SPSS's regression analysis module and process plug-in to examine the hypotheses. The study finds that GSI positively influences ENVP in pharmaceutical manufacturing companies. EORYGI and EIVEGI serve as partial mediators in the relationship between GSI and ENVP. The pharmaceutical manufacturing industry is still in its early stages concerning green supply chain management. This research contributes to industry awareness regarding the significance of GSI, encouraging a commitment to implementing GSI strategies. Throughout this process, it is crucial to focus on maintaining the ambidexterity of green innovation.

Keywords: Pharmaceutical Manufacturing Companies, Green Supplier Integration, Exploration Green Innovation, Exploitative Green Innovation, Environmental Performance

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Introduction

In recent years, with the advancement of the concept of sustainable development, companies, as the primary entities responsible for environmental pollution and environmental governance, have increasingly garnered attention from various stakeholders regarding their environmental protection and performance. Demonstrating good environmental performance (ENVP) contributes to enhancing corporate reputation and alleviating financing constraints. Therefore, achieving commendable ENVP is not only a passive response to external pressures for businesses but also an active choice to gain a strategic competitive advantage and promote sustainable development (Qu, 2023).

However, it is not sufficient for companies to rely solely on their own capabilities to enhance ENVP. More and more companies are now seeking to improve their environmental performance through green innovation by integrating with suppliers (Ji et al., 2020). Green Supplier Integration (GSI), as a method for enhancing ENVP, has attracted attention from both practitioners and the academic community. It is defined as a strategic collaboration between businesses and their key suppliers, involving the coordination of internal and inter-organizational process management to collectively enhance ENVP (Jiang & Feng, 2022).

The complexity and challenges within the pharmaceutical supply chain are more pronounced than in other industries. Since medicines are directly linked to human health and safety, ensuring effective quality assurance at the right point, and at the right quality and time, is crucial across the entire chain from supply to consumption (WHO, 2010). The pharmaceutical supply chain must not only deliver quality and safe products but also ensure quality service and regulatory compliance (Argiyantari et al., 2020). The pharmaceutical supply chain has a substantial environmental footprint (Tao et al., 2023), and there are numerous potential risks associated with driving its greening process (Kumar et al., 2019). Improvement in ENVP can only be achieved by integrating with suppliers and collectively implementing green practices (Ji et al., 2020). GSI should play a vital role in the environmental improvement of pharmaceutical companies. The pharmaceutical industry should recognize the contribution of GSI to the ENVP of the organization and effectively deploy green activities through integration with suppliers. However, research on the green supply chain management of pharmaceuticals is still in its early stages, just beginning to advocate for the establishment of green supply chain management in pharmaceutical companies (Ricardianto et al., 2022). Some studies analyze the risks faced by the pharmaceutical industry in adopting a green supply chain (Kumar et al., 2019), while others focus on the issue of selecting green suppliers (Siddiquee et al., 2024; Sheykhzadeh et al., 2024). However, research on Green Supplier Integration (GSI) in the pharmaceutical manufacturing industry has not received sufficient attention yet. This study is the first attempt to investigate the role of GSI in realizing the ENVP of pharmaceutical manufacturing companies.

In addition, there is a consensus that green innovation helps improve the environmental performance of firms. Green innovation refers to innovations related to green products, processes, or services (Wang & Huang, 2022). According to the degree of innovation, it can be categorized into

exploratory green innovation (EORYGI) and exploitative green innovation (EIVEGI). Exploitative innovations help capture more short-term gains and efficient returns, but are difficult to adapt dynamically to the environment; exploratory innovations help firms be more adaptive to market changes but have a higher rate of innovation failure (Khan et al., 2019; Moreira et al., 2022). The combination of the two helps reduce innovation risk, improve enterprise viability, and obtain better performance (Moreira et al., 2022).

Currently, pharmaceutical companies are facing significant challenges in green innovation: primarily adopting EIVEGI practices of end treatment technology to reduce waste emissions and less focusing on EORYGI based on the entire production lifecycle (Ang et al., 2021). This approach does not meet the needs of the times, and both EORYGI and EIVEGI need attention (Moreira et al., 2022). However, carrying out both types of innovations at the same time will face constraints in terms of resources and technology (Sun & Sun, 2021). Existing literature suggests that supplier integration can help alleviate firms' technological and resource constraints (Ahmadi et al., 2020). Therefore, we believe that EORYGI and EIVEGI have the potential to play a mediating role between GSI and ENVP. That is, EORYGI and EIVEGI are effective means for pharmaceutical companies to achieve ENVP improvement through supply chain integration in response to external environmental pressures. There is little literature on this topic.

Therefore, this paper aims to examine the relationship between GSI and ENVP in pharmaceutical firms and explore whether EORYGI and EIVEGI play mediating effects between them. We will collect data from Chinese pharmaceutical manufacturing firms to test the hypotheses. Given that other industries, such as manufacturing and construction, have benefited from research on GSI (e.g., Ji et al., 2020; Pham & Pham, 2021), EORYGI and EIVEGI (e.g., Moreira et al., 2022), the study of GSI, EORYGI, EIVEGI, and ENVP in the pharmaceutical manufacturing industry could help pharmaceutical companies realize their green development goals and contribute to human health.

Review of Literature

GSI and ENVP

The concept of GSI has its origins in supplier integration. In green supplier research, the initial focus was mainly on the efforts of manufacturing companies to develop and select green suppliers, ignoring the active participation of suppliers. (Ji et al.,2020). In order to address environmental issues more effectively, academics have called for the active participation of suppliers (Cheng, 2020). Scholars have developed the concept of GSI from the perspective of the degree of cooperation with suppliers. GSI refers to the strategic cooperation between manufacturing firms and their key suppliers for better green practices, which involves the sharing of information, resources, and risks (Ji et al, 2020; Jiang and Feng, 2022). GSI emphasizes three main aspects : green orientation, strategic cooperation, and internal and external process management (Jiang & Feng, 2022). By sharing green information with suppliers, companies clearly communicate their environmental requirements to them and ask for green raw

materials, which helps companies improve environmental performance at the source of the supply chain (Pham & Pham, 2021). And green strategic cooperation with suppliers means involving suppliers in all green processes from green procurement, green design, green manufacturing to green delivery and waste disposal. This helps to promote the company's environmental management techniques and enhance its environmental management capabilities to achieve better environmental performance (Han & Huo, 2020).

Therefore, we propose the following hypothesis:

H1: GSI has a positive impact on ENVP.

GSI and green innovation

Green innovation is an innovation related to green products, processes, or services, aiming at reducing energy consumption and improving the environment (Wang & Huang,2022). According to the degree of innovation, green innovation can be categorized into EORYGI and EIVEGI (Sun & Sun,2021). Where EORYGI refers to the development of new green products, processes and services by companies relying on brand new green knowledge. EIVEGI refers to the discovery and utilization of existing green knowledge by companies to improve current green products, processes and services. Any innovation has risks (Iranmanesh et al., 2019), the risks of green innovation are mainly related to what kind of green innovation projects to adopt (Wong et al., 2020), how to overcome technical difficulties and insufficient funds (Eslami & Melander, 2019; Zhang et al., 2022).

GSI not only provides resources and technical support for green innovation (Zhou et al.,2020), but also provides manufacturing companies with green raw materials to meet their specific needs and quickly realize the greening of existing products and processes (Ji et al.,2020). In addition, the sharing of information and resources between both parties in the GSI process is more likely to trigger the collision of knowledge and technology, which will lead to the inspiration of innovation (Wong et al.,2020), clarifying the EORYGI and EIVEGI projects. Finally, green strategic cooperation with suppliers implies that both parties share a common green vision and realize bundling of interests to promote the development of EORYGI with higher risks (Han & Huo,2020).

Based on the above analysis, we propose the following hypothesis:

H2: GSI has a positive impact on (a) EORYGI and (b) EIVEGI.

Green innovation and ENVP

EIVEG is relatively simple to implement and can reduce environmental pollution in the short term, satisfying the basic requirement for companies to respond to government environmental regulation in the short term. GSI is critical to the achievement of this goal. For example, company-supplier integration can drive companies to use recycled or less hazardous materials for product modifications and redesign manufacturing processes to reduce waste generation (Wu, 2013).GSI can also help companies to reuse end-of-life products to reduce the environmental pollution from their products (Wong et al., 2020), and can even help companies to purchase from close-knit suppliers some parts that contribute to green improvements but are in short supply (Du et al.,2018).

EORYGI helps manufacturing companies to revolutionize their current production processes and dramatically reduce negative environmental impacts, resulting in new products and processes that even have the potential to heal and restore the environment (Rehman et al.,2021). In addition, EORYGI helps to enhance a company's green image and brand value, winning consumer trust as well as government support, which in turn facilitates green purchasing and financing (Shu et al.,2016). This not only provides financial support for future sustainable green innovation, but also stimulates a virtuous cycle of joint progress in business and environmental protection.

Therefore, we propose the following hypothesis:

H3: Both (a) EORYGI and (b) EIVEGI promote ENVP improvement.

Mediating role of green innovation

As mentioned above, GSI facilitates EORYGI and EIVEGI. Companies that actively engage in green innovation can improve ENVP. This implies that green innovation plays a mediating role between GSI and ENVP. Therefore, we propose the following hypothesis:

H4: (a)EORYGI and (b)EIVEGI mediate the relationship between GSI and ENVP.

The literature review can be utilized to establish the conceptual framework, as illustrated in Figure 1.

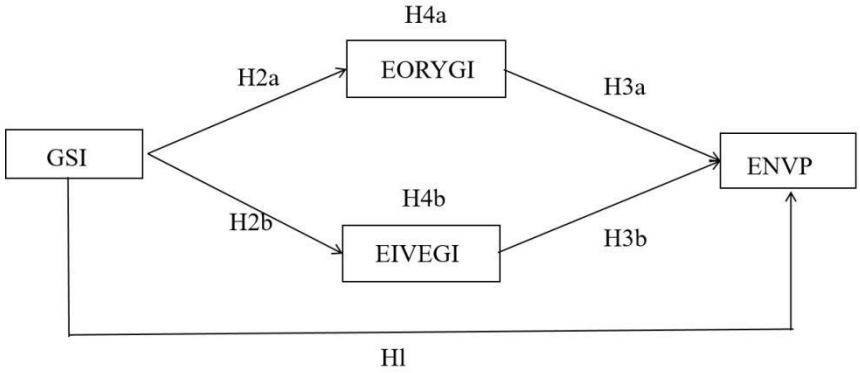

Figure 1. Conceptual Framework

Note: GSI: Green Supplier Integration, EORYGI:Exploration Green Innovation, EIVEGI: Exploitative Green Innovation, ENVP: Environmental Performance

Methods

Sampling and data collection

The aim of this study is to investigate the relationship between GSI and ENVP in pharmaceutical companies and whether EORYGI and EIVEGI mediate this relationship through a questionnaire. The study selects Chinese pharmaceutical manufacturing enterprises as a sample to test our hypotheses for the following reasons: 1) Since the 21st century, China's pharmaceutical manufacturing industry has experienced rapid growth and has become the world's second-largest pharmaceutical market, with API production and export consistently ranking first globally. Additionally,

with China facing significant aging, the development of the pharmaceutical industry not only reflects its role in the national economy but also has implications for the health of citizens and social stability. 2) The pharmaceutical manufacturing industry is known for its environmental impact, and China faces serious environmental issues. Addressing how to enhance the environmental performance of pharmaceutical manufacturing enterprises is a significant concern for the Chinese government and practitioners. Moreover, an increasing number of companies recognize the insufficiency of relying solely on internal capabilities to improve environmental performance. They acknowledge the need for green innovation through supplier integration to enhance environmental performance (Ji et al., 2020). Therefore, studying the impact of GSI on the ENVP of Chinese pharmaceutical companies is crucial. 3) China is considered an emerging economy where enterprise green innovation capability is still evolving, necessitating a balance between EORYGI and EIVEGI in the green innovation process.

Due to the large number of pharmaceutical manufacturing enterprises in China (a total of 28,421) and the fact that they have been characterized as industrial clusters, the operating revenues of pharmaceutical manufacturing enterprises in the Yangtze River Delta region (including Shanghai, Jiangsu, Zhejiang and Anhui provinces) account for one-third of the operating revenues of pharmaceutical manufacturing enterprises in the whole of China. Therefore, based on the comprehensive consideration of the characteristics of the research object, the research cost and the research objectives, this study sampled 400 pharmaceutical enterprises in the Yangtze River Delta region of China for investigation. There are a total of 5502 pharmaceutical manufacturing enterprises in the Yangtze River Delta region. We allocate the sample in proportion to the number of enterprises in each region, as shown in Table 1.

Table 1. Selected Area and samples

Selected Area	Enterprises	Percent	Sampled Enterprises
Shanghai Autonomous Region	483	8.78%	35
Zhejiang Province	991	18.01%	72
Jiangshu Province	2096	38.10%	152
Anhui Province	1932	35.11%	141
Total	5502	100%	400

Note: Autonomous Region is similar to province+

Finally, considering the purpose of this study, respondents were expected to possess knowledge of activities related to green supply chain and green innovation. Their positions may include chief executive officer, general manager, supply chain manager, purchasing manager, marketing manager, etc., within the company. We collected questionnaires using three methods: 1) at the venues of different types of conferences in the pharmaceutical industry; 2) with the assistance of personal contacts; and 3) through mail.

Measures

This study utilized scale entries from established literature for measurement. The GSI measurement was derived from Kong et al. (2021), while the measurements for EORYGI and EIVEGI were adapted from Jansen et al. (2006) and Wang et al. (2020). The measurement of ENVP was sourced from Han and Huo (2020). All items were assessed using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Reliability and validity analysis

In this study, Cronbach's Alpha coefficient is employed to assess the reliability of four variables. The results of the reliability tests are presented in Table 2. According to the table, the GSI scale comprises a total of 6 measurement items, and its Cronbach's Alpha coefficient is calculated as 0.939, surpassing the critical value of 0.70. This indicates that the data reliability of the GSI scale adheres to the established standard. Similarly, the data reliability of the three variable scales ENVP, EORYGI, and EIVEGI also meets the prescribed standards. Consequently, it can be inferred that the questionnaire utilized in this study exhibits satisfactory reliability.

Table 2. Reliability Testing Results

Variable	Number of Items	Cronbach's Alpha
GSI	6	0.939
ENVP	4	0.880
EORYGI	7	0.931
EIVEGI	6	0.902

The validity of this study was also assessed. Firstly, the scale items of this study were constructed based on existing literature, and then five experts were invited to conduct IOC inspections. Pilot tests were also conducted before the formal survey. Throughout this process, the questionnaire was continually revised. As a result, the content validity of the scale was satisfactorily confirmed.

Second, Table 3 displays that the standardized factor loadings of observed variables related to the four latent variables in this study are all above 0.6, indicating a substantial ability of the observed items to clarify their corresponding latent variables. The combined reliabilities (CRs) for all variables are higher than 0.7, and the AVE values from factor extraction exceed 0.5. This implies a consistent explanatory capability of each observed item within its respective latent variable. To sum up, the GSI, ENVP, EORYGI, and EIVEGI scales exhibit strong convergent validity.

Table 3. Confirmatory Factor Analysis Results

Latent variable	Items	Standardized factor loading	S.E.	C.R.	P	AVE	CR
GSI	GSI1	0.844	-	-	-	0.723	0.94
	GSI2	0.807	0.05	9.914	0.000		
	GSI3	0.825	0.047	20.671	0.000		
	GSI4	0.845	0.046	21.491	0.000		
	GSI5	0.852	0.046	21.800	0.000		
	GSI6	0.925	0.04	25.267	0.000		
ENVP	ENVP1	0.76	-	-	-	0.654	0.882
	ENVP2	0.85	0.065	17.467	0.000		
	ENVP3	0.713	0.063	14.368	0.000		
	ENVP4	0.897	0.063	18.294	0.000		
EORYGI	EORYGI1	0.780	-	-	-	0.667	0.933
	EORYGI2	0.808	0.058	17.75	0.000		
	EORYGI3	0.782	0.058	17.038	0.000		
	EORYGI4	0.761	0.052	16.458	0.000		
	EORYGI5	0.808	0.057	17.768	0.000		
	EORYGI6	0.887	0.049	20.04	0.000		
	EORYGI7	0.884	0.053	19.946	0.000		
EIVEGI	EIVEGI1	0.773	-	-	-	0.609	0.903
	EIVEGI2	0.787	0.065	16.429	0.000		
	EIVEGI3	0.738	0.061	15.25	0.000		
	EIVEGI4	0.768	0.064	15.963	0.000		
	EIVEGI5	0.774	0.062	16.119	0.000		
	EIVEGI6	0.838	0.059	17.692	0.000		

As depicted in Table 4, the AVE value for each latent variable exceeds 0.5, and the square root of AVE surpasses the absolute value of the correlation coefficient between latent variables. This observation suggests that the GSI, ENVP, EORYGI, and EIVEGI scales exhibit commendable discriminant validity.

Table 4. Discriminant Validity Testing Results

	Mean	Standard deviation	GSI	ENVP	EORYGI	EORYGI
GSI	3.319	1.069	0.851			
ENVP	3.187	1.123	0.377**	0.808		
EORYGI	3.115	0.957	0.325**	0.358**	0.817	
EIVEGI	3.088	0.893	0.324**	0.339**	0.358**	0.78

Note: The bold value in the upper right corner is the square root of AVE, and other values are the correlation coefficients between variables.

*p < .05. **p < .01.

Analysis and results

Table 4. also presents the means, standard deviations, and correlations among the constructs. The results reveal significant correlations among the constructs, offering preliminary validation of our hypotheses. We used regression analysis to examine the main effects (H1-H3), and the specific results are presented in Table 5. To investigate the mediating effects (H4a and H4b), we employed the process plugin in SPSS, and the detailed results can be found in Table 6.

Main effect analysis

H1 posits a positive association between GSI and ENVP. As illustrated by the findings in Model 1 of Table 5, GSI demonstrates a significantly positive impact on ENVP (β=0.396, p<0.01). Consequently, H1 is supported.

H2a and 2b propose that GSI is positively associated with EORYGI and EIVEG, respectively. The results from Model 2 and Model 3 of Table 5 reveal that GSI exerts a substantial positive influence on both EORYGI (β=0.292, p<0.01) and EIVEGI (β=0.270, p<0.01). Therefore, both H2a and H2b receive empirical support.

H3a and H3b posit that EORYGI and EIVEGI, respectively, are positively associated with ENVP. The outcomes of Model 4 and Model 5 suggest that both EORYGI (β=0.419, p<0.01) and EIVEGI (β=0.426, p<0.01) significantly contribute to a positive effect on ENVP. Thus, both H3a and H3b are substantiated.

Table 5. Main effect analysis

	Model 1		**Model 2**		**Model 3**		**Model 4**		**Model 5**	
	ENVP		**EORYGI**		**EIVEGI**		**ENVP**		**ENVP**	
	β	**t**	**β**	**t**	**β**	**t**	**β**	**t**	**β**	**t**
Constant	1.872**	11.007	2.147**	14.501	2.190**	15.844	1.881**	10.516	1.872**	9.828
GSI	0.396**	8.122	0.292**	6.867	0.270**	6.821				
EORYGI							0.419**	7.637		
EIVEGI									0.426**	7.181
F value	65.963**		47.157**		46.527**		58.330**		51.563	
$\overline{R}^2$	0.140		0.104		0.102		0.126		0.112	

*$p < .05$. **$p < .01$.

Mediation Effect Analysis

H4a and H4b assert that both EORYGI and EIVEGI function as mediators in the relationship between GSI and ENVP. To test H4a and H4b, the PROCESS plug-in for SPSS is employed to conduct the mediation effect test, with the Bootstrap sample size set to 5000. The results are presented in Table 6 below.

The study initially tests H4a. As depicted in Table 6, the total and direct effects of GSI on ENVP are 0.3962 and 0.3063, respectively, while the indirect effect of EORYGI is 0.0898. At the 5% significance level, the Bootstrap Confidence Interval (CI) ranged from [0.0513, 0.1314], and since it did not include 0, it indicates that this indirect effect is significant, thereby validating H4a.

Subsequently, H4b is assessed. As shown in Table 6, the total and direct effects of GSI on ENVP are 0.3962 and 0.3139, respectively, with the indirect effect of EIVEGI being 0.0823. At the 5% significance level, the Bootstrap Confidence Interval (CI) ranged from [0.0463, 0.1284], and as it did not encompass 0, it signifies that this indirect effect was significant, confirming the hypothesis of H4b.

Table 6. Mediation Effect Analysis

Mediation Variable	Total Effect	Direct Effect	Indirect Effect	95% CI	
				BootLLCI	BootULCI
EORYGI	0.3962	0.3063	0.0898	0.0513	0.1314
EIVEGI	0.3962	0.3139	0.0823	0.0463	0.1284

Discussion and Conclusions

Utilizing purposive and proportional sampling methods, we collected survey data from 400 pharmaceutical manufacturing companies in the Yangtze River Delta region of China, explored the relationship between GSI and ENVP in pharmaceutical manufacturing companies, and examined in-depth the mediating role of EORYGI and EIVEGI in this relationship. The results of the study show that GSI and ENVP of pharmaceutical manufacturing companies are positively correlated, while both EORYGI and EIVEGI play a partial mediating role in this relationship.

This study makes the following theoretical contributions: 1) It represents the first investigation into the ENVP effect of GSI in pharmaceutical manufacturing companies. Research on pharmaceutical green supply chain management is still in its early stages and has primarily focused on the issue of green supplier selection, neglecting the role of GSI. This study addresses this research gap. And 2) While existing literature underscores the significance of green innovation in the pharmaceutical industry (Sahoo et al., 2022), it predominantly highlights the efforts of manufacturing companies themselves, overlooking the importance of supplier involvement. This study contributes to the literature on drivers of green innovation in the pharmaceutical industry by revealing the positive impact of GSI on both EORYGI and EIVEGI.

The findings of this study have the following managerial implications: 1) Companies aspiring to become environmental leaders in the pharmaceutical industry should enhance their awareness of the importance of GSI and actively implement GSI strategies to facilitate the continuous improvement of ENVP. And 2) Pharmaceutical manufacturing companies can harness the positive effects of GSI on ENVP through EORYGI and EIVEGI. In other words, while actively implementing the GSI strategy, companies should also design environmentally friendly products and production processes according

to market demand. Providing differentiated green products and services and promoting activities related to EORYGI and EIVEGI are crucial. This way, not only can they fully leverage the positive effects of GSI on ENVP, but they can also gain additional competitive advantages in terms of customers, technology, and finance (Wang and Liu, 2020).

This study has yielded certain research outcomes, but there are also some shortcomings, primarily manifested in the following aspects: 1) The research data originate from Chinese pharmaceutical enterprises, providing insights only into the circumstances of Chinese pharmaceutical companies. This introduces regional limitations to the research conclusions. Future studies may consider expanding the sample to include other regions to further bolster the robustness of the research findings. 2) This study exclusively focuses on the relationship and mechanisms between Green Supplier Integration (GSI) and environmental performance in pharmaceutical manufacturing companies. Subsequent research could broaden its scope by investigating additional components of green supply chain integration, such as green customer integration and green internal integration. Exploring their relationships with the environmental performance, economic performance, and social performance of enterprises could expand upon the results of this study. And 3) The limited sample size and cross-sectional data may not fully capture the longitudinal dynamic changes of enterprises. Future research could involve a larger sample size and engage in longitudinal tracking studies to conduct a more in-depth exploration.

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INFLUENCE OF CONSUMER ATTACHMENT ON CONSUMER PURCHASE INTENTION TO CHINESE ONLINE COMMUNITY

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Abstract

This article aims to address how to facilitate more community members making purchases in Chinese online communities. The research is expected to shed new light on the underlying process by which consumer attachment influences their purchases in Chinese online communities. This article collected 600 first-hand data in the form of a questionnaire, and structural equational model (SEM) was used to test the research hypotheses. The results indicate that consumer attachment positively influences their purchases in Chinese online communities and perceived value mediates the relationship between consumer attachment and consumer purchase intention to Chinese online community. The findings of this study provide new insights for managers and designers of Chinese online communities to inspire them to achieve their goal of keeping consumers making purchases in the e-commerce modules of online commerce communities.

Keywords: Consumer Attachment, Consumer Purchase Intention, Perceived Value

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Introduction

Online commerce community has received increasing and widespread attention from practical and academic communities (Leong et al., 2023). It refers to a burgeoning form of e-commerce that employs social media techniques to develop e-commerce businesses (Chen et al., 2021). Recently, to maximize the monetisation of traffics, some social networking sites or online communities have started to develop their own e-commerce businesses, rather than advertising or just adding shopping links of partner e-commerce (Globalwebindex, 2019). China's social commerce community, Little Red Book, is an outstanding example with over 300 million users and a market value of over 20 billion RMB at the end of 2019 (Xinhua News, 2019). Nevertheless, the beauty product purchase conversion rate of social commerce communities is still less than 10%, which makes it difficult for investors and managers of social commerce communities to get the high returns they expect (iResearch, 2019). To combat this dilemma, managers of online commerce communities urge to develop and sustain more community purchases, where community members make purchases within the social commerce community rather than leaving for other channels.

This study focuses on the impact of consumer attachment on consumer purchase intention and attempts to explain whether and how consumer attachment affects consumer purchase intention to Chinese online community. There two three research objectives of this study as followed:

Objective 1: To study the direct effect of consumer attachment on consumer purchase intention to Chinese online community.

Objective 2: To analyze the indirect direct effect of consumer attachment on consumer purchase intention to Chinese online community, by considering perceived value.

Review of Literature

The Influence of Consumer Attachment on Consumer Purchase Intention

Consumers' attachment to other members of the social e-commerce community means that consumers have established a closer and closer relationship with the members of the community, such close relationships can increase consumer trust in community members and communities (Bapna R et al.,2017); This has a great promotion effect on consumers' decision to choose the e-commerce module set up by the social e-commerce community (Hajli N et al.,2017). Consumers' attachment to the social e-commerce community can increase consumers' understanding of the community, Reduced their concerns about the various possible risks and uncertainties, Thus, they are willing to complete the purchase of the e-commerce module set in the community (Chan&Li,2010); Consumers' attachment to the social e-commerce community also represents consumers' recognition and trust in the community, All these also increase the likelihood that consumers will choose to buy products on the community's own e-commerce modules (Campbell&Stanton,2019).Based on the above analysis, this article proposed the following hypotheses:

H1: Consumer attachment influences consumer purchase intention to Chinese online community.

The Mediation Effect of Perceived Value Between Consumer Attachment and Consumer Purchase Intention

Social media communities have become an important symbol of the identity of more and more people, and an important virtual place to express emotions. With the increase of user participation and frequency, users are more willing to establish continuous contact with the social community, identity construction and emotional expression, the more significant, draw information value (such as life sense), entertainment value (such as funny jokes), function value (such as skills) the more perceived value (Hussain et al., 2019).

Zeithaml (1998) in the study of consumer behavior, it is suggested that perceived value has a direct effect on purchase intention. Dodds et al. (1991) constructed a model, and found that when consumers 'perceived value of goods or services is positive, Chen and Dubinsky (2003) showed that consumers' perceived value is an important factor influencing their consumption or use behavior. Chang et al. (2014) proposed that perceived value can positively affect user engagement by influencing attitude and satisfaction, thus leading to in-app purchase intention. At present, the Internet is increasingly adopting the free model, where users can use the products at a lower cost, while the marketing cost of enterprises to acquire paying users is reduced, and they can achieve profits through subsequent value-added services. Kim et al. (2007) studied the influence of social networks and community members' perceived value when purchasing community digital products, and the results show that the influence of emotional value and social value on community members' purchase intention is significant.

Therefore, it is speculated that perceived value may play a mediating role in the impact of consumer attachment on consumer purchase intention, and the following hypotheses are proposed:

H2: Consumer attachment influences consumer perceived value.

H3: Consumer perceived value influences consumer purchase intention to Chinese online community.

H4: Perceived value mediates the relationship between consumer attachment and consumer purchase intention to Chinese online community.

Conceptual Framework

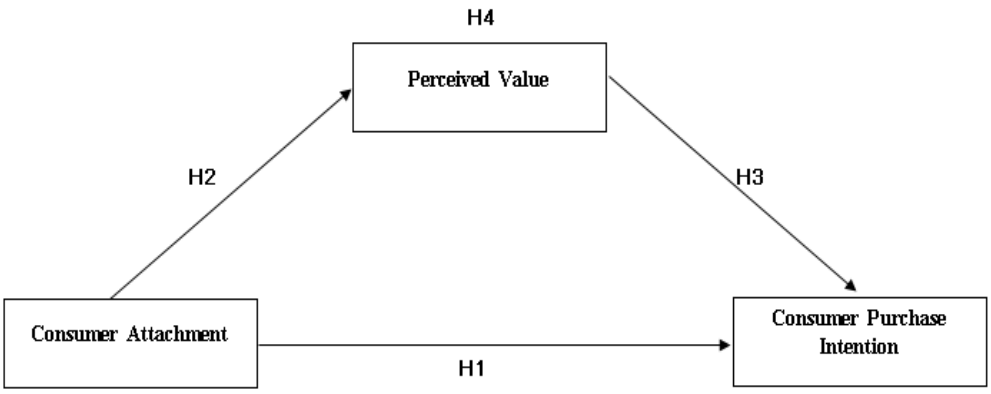

Figure 1. Conceptual Framework

Methodology

Population and Sampling

This study selects the registered users in the online social e-commerce community as the main research objects. The target population of the current study are consumers of Little Red Book, a well-known social e-commerce community in China.

It is argued that the sample size is determined based on the results calculated from the minimum sample. The minimum sample size determined by Hair et al. (2010) is: (number of indicators + number of potential variables) x (estimated parameters), so the sample size of this study should not be less than 357. According to Gorsuch (1983) with the structural equation model as the main analysis method, it is considered that the number of samples should be kept at more than 5 times of the number of measured items and more than 10 times of the optimal number of measured items. The number of measurement items in this study is 58, and the sample size should be greater than 580.So this study sets the sample size to 600.

Instrumentation

The instrument included following three sections: consumer attachment, perceived value and purchase intention. The consumer attachment is measured by two dimensions: member attachment and community attachment. The perceived value contains two dimensions: perceived functional value and perceived emotional value. The community purchase intention is measured by two dimensions: priority purchase and continued purchase.

A seven-point Likert-type scale (from 1-Strongly Disagree to 7- Strongly Agree) was used to measure items in six factors: member attachment, community attachment, perceived functional value, perceived emotional value, priority purchase and continued purchase.

Member attachment and community attachment was measured by 10 items from Chung et al. (2016). A sample item is “I really like the members of the Little red book” and “ I like the Little red book”. The scale for perceived functional value and perceived emotional value included ten items from Sweeney & Soutar (2001). A sample item is “I think that the products recommended by social media influencers have better quality” and “I think that the products recommended by social media influencers can bring me with happiness”.

Priority purchase and continued purchase scale included eight items from Yang Nan (2015), Wang Ran et al. (2022). A sample item is “When I need to buy products, I will give priority to Little red book e-commerce mall” and “I will continue to spend money in Little red book e-commerce mall in the future”.

Data collection Method

This study collected the data through an online survey questionnaire. The authors created an online questionnaire using Questionnaire Star (www.wjx.cn). The invitation to fill out the questionnaire was posted on several popular social media outlets, such as the Little Red Book community and Weibo and WeChat. Using purposive sampling, we sampled registered users who had consumption experience on Little Red Book.

In the first way, since the author is the blogger of Little Red Book platform, and owns the Little Red Book blogger group, forward 300 electronic questionnaires to the group. In the second way, with the advantages of working in the university, the author contacted and forwarded 500 electronic questionnaires to each student class group, and ask them to help distribute the questionnaires as volunteers; In the third way, the author contacted and forwarded 300 electronic questionnaires to Little Red Book, Weibo and WeChat (social media platform) through relatives, friends and other means. In order to collect as many questionnaires as possible more quickly and efficiently, the researchers set a cash reward of 10 yuan for each questionnaire.

After receiving the invitation to fill in the questionnaire, users can independently choose whether to become the interviewees to participate in the questionnaire survey. They can start filling out the questionnaire by clicking on the questionnaire link or identifying a QR code. Before answering the questionnaire, they were instructed to read the information sheet, which told participants to participate in the questionnaire both voluntarily and anonymously, and that only consumers of Little Red Book were eligible to participate in the questionnaire. Research in each questionnaire before the formal questions to provide their little red book user ID and they in the little red book personal homepage screenshots, using the respondents provide user ID and personal homepage screenshots can retrieve corresponding users in the small red book, the respondents user information and activity record file data grab down for use.

Data Analysis Techniques

This study used SPSS and AMOS to conduct validity tests on the data and statistical tests on the research hypotheses. Validity testing of data, including reliability and convergence validity, and discriminant validity testing. To test the research hypotheses H1-H4, this article uses AMOS to construct a structural equation model. Through the path analysis, this study analyses the direct and indirect effects among variables.

Research Results

Demographic Characteristics of the Sample

The demographic characteristics of the sample in this questionnaire survey are shown in Table 1.

Table 1. Demographic Characteristics of the Sample

Demographic Information	Category	Frequency	Percentage (%)
Gender	Male	314	52.3
	Female	286	47.7
Age	Under 20 years	68	11.3
	Between 20 – 29 years	224	37.3
	Between 30 – 39 years	232	38.7
	Between 40 – 49 years	76	12.7
Educational background	High school or below	142	23.7
	Junior college	184	30.7
	Bachelor	126	21.0
	Master	111	18.5
	Doctor or above	37	6.2
Personal monthly income (RMB)	Under 1000	108	18.0
	Between 1001-3000	136	22.7
	Between 3001-5000	113	18.8
	Between 5001-10000	133	22.2
	Between 10001-20000	70	11.7
	Above 20000	40	6.7
Registration years (years)	Less than 1 year	164	27.3
	1-2 years	167	27.8
	3-4 years	137	22.8
	More than 4 years	132	22.0

Reliability and Validity Tests

Reliability Test

According to Table 2, the Cronbach's Alpha coefficient of the consumer attachment scale is 0.892, which is higher than 0.70, indicating that the consumer attachment scale has good reliability. The Cronbach's Alpha coefficients of the other three scales are also above 0.70.

Table 2. Reliability Test

Variable	Number of Items	Cronbach's Alpha
Consumer Attachment	10	0.892
Perceived Value	10	0.919
Consumer Purchase Intention	8	0.880

Convergent Validity Test

Table 3 presents the convergent validity test results of this study. According to MacKillop et al. (2006), there are three main criteria for convergent validity testing: 1) the standardized factor load should be greater than 0.5; 2) The combined reliability (CR) should be greater than 0.7; 3) The average extracted variance (AVE) should be greater than 0.5. From Table 3, it can be seen that the standardized factor loadings, CR, and AVE of each variable measurement item in this article meet the requirements. Therefore, the scale used in this article has good convergent validity.

Table 3. Convergent Validity Test Results

Latent variable	Observation variable	Standardized factor loading	S.E.	C.R.	P	CR	AVE
Consumer Attachment	Membership Attachment	0.709	-	-	-	0.943	0.623
	Community Attachment	0.726	0.085	11.654	0.000		
Perceived Value	Functional Value	0.712	-	-	-	0.963	0.721
	Emotional Value	0.736	0.081	12.801	0.000		
Consumer Purchase Intention	Priority Purchase	0.619	-	-	-	0.954	0.723
	Continued Purchase	0.654	0.077	11.714	0.000		

Discriminant Validity

According to Table 4, the square roots of AVE values for each variable are greater than the correlation coefficients between variables. From this, it can be concluded that the discriminant validity of the questionnaire in this article meets the standard.

Table 4. Discriminant Validity Test Results

	Consumer Attachment	Perceived Value	Consumer Purchase Intention
Consumer Attachment	**0.789**	-	-
Perceived Value	0.519	**0.849**	-
Consumer Purchase Intention	0.574	0.473	**0.850**

Note: The bold numbers on the diagonal represent the square root of the AVE values of each variable, while the remaining numbers represent the correlation coefficients between variables.

Structural Equation Modeling Analysis Results

Model Fitting Test

This study constructs a structural equation model to test the relationship between latent variables and the research hypotheses of this paper. Firstly, it is necessary to fit the questionnaire data using structural equation modeling. In this article, the fitness index is used as the standard for model fit. Table 5 shows the fitting indicators of the structural equation model. According to Table 5, the model fit indicators are all within the reference range, indicating a good fit between the model and the data.

Table 5. Model Fitting Results of the Structural Equation Model

Fitting Indicators	Threshold	Estimate Value	Result
χ^2/ df	[1,5]	1.508	Qualified
NFI	>0.9	0.911	Qualified
IFI	>0.9	0.968	Qualified
TLI	>0.9	0.966	Qualified
CFI	>0.9	0.968	Qualified
GFI	>0.9	0.882	Qualified
RMSEA	<0.05	0.029	Qualified

Direct Effect Analysis Results

Table 6 presents the results of the direct effects test for the structural equation model in this study. From Table 6, it can be seen that consumer attachment has a significant positive impact on consumer purchase intention (r=0.532, p<0.01), therefore, hypothesis H1 is supported; Consumer attachment has a significant positive impact on perceived value (r=0.330, p<0.01), therefore, the hypothesis H2 is hold; Perceived value has a significant positive impact on consumer purchase intention (r=0.139, p<0.01), therefore, the hypothesis H3 is hold.

Table 6. Direct Effect Analysis Results

Direct effects	Estimate	S.E.	C.R.	P	Hypothesis
Consumer Purchase Intention ← Consumer Attachment	0.532	0.042	12.709	0.000	H1
Perceived Value ← Consumer Attachment	0.330	0.041	8.036	0.000	H2
Consumer Purchase Intention ← Perceived Value	0.139	0.037	3.757	0.000	H3

Indirect Effect Analysis Results

Table 7 presents the results of the indirect effects test of the structural equation model in this study. It can be seen from table 7 that the standardized estimate of the indirect effect of consumer attachment on consumer purchase intention through perceived value was 0.076, with 95% confidence interval of [0.053, 0.104], excluding 0, indicating that consumer attachment has a significant indirect effect on consumer purchase intention, through perceived value. So, perceived value plays a mediating role between consumer attachment and consumer purchase intention. Therefore, the hypothesis H4 is proved to be valid.

Table 7. The Indirect Effect Analysis Results

Indirect Effect Analysis	Standardized Estimate	SE	Lower	Upper	Hypothesis
Consumer Purchase Intention ← Perceived Value ← Consumer Attachment	0.076	0.013	0.053	0.104	H4

Discussion and Conclusions and recommendations

Discussion

1. The effect of consumer attachment on consumer purchasing intentions

The results of this study show that consumer attachment emotion has a significant positive influence on consumers' purchasing intention (H1). The results of the study are consistent with those of Bateman et al.(2011), Jang et al.(2008) who believed that consumers decided to complete purchases in the social e-commerce community and are very dependent on consumers' emotional attachment to the social e-commerce community.

The data show that after consumers form attachment to the members of the social e-commerce community and the social e-commerce community, consumers are more willing to use the social e-commerce community and buy products, generating certain loyalty and stickiness to the social e-commerce community, and consumers are more accustomed to and attached to the social e-commerce community for shopping. It can have a long-term and lasting emotional and community attachment impact on consumers. One of the most important influencing factors of consumers' participation in the social e-commerce community is consumer attachment. When consumers have a strong attachment to the social e-commerce community, Consumers' emotional commitment and loyalty to the community will also be correspondingly high, As a result, it is easier for these consumers to choose to stay in the community and complete the purchase through the e-commerce module set up by the community without converting to other ways to purchase (Zhang N et al.,2013).

2. The influence of consumer attachment on the perceived value

The results of this study show that consumer attachment has a significant positive effect on perceived value, which is consistent with the study hypothesis H2. In other words, the more significant the consumer attachment, the more it will increase the perceived value of consumers.

Referring to the views and research of previous scholars, the social e-commerce community is essentially a shopping application community with social functions. When consumers use the e-commerce community, they hope the community to provide various functional support. The output and resources of the e-commerce community enable consumers to generate functional attachment. When users 'inner attachment reaches a certain level, they will rely more heavily on the e-commerce community, further strengthen the use of the e-commerce community, and enhance consumers' perceived value of the social e-commerce community. In addition, consumers will be more inclined to search the information of the higher status sender in the community. And notes sharing is like social media influence, consumers first focus is the prestige value is high, high essence number of notes, because these notes won the recognition of most users, notes sharing through writing quality notes, easy to make consumers attachment, so as to enhance consumer perception of social electricity community value.

3. The impact of perceived value on consumers' purchase intention

The results of this study show that perceived value has a significant impact on consumers 'purchase intention, which is consistent with the research hypothesis H3. In other words, the more significant the perceived value, the stronger the consumers' purchase intention. The results are consistent with those of Jin liyin (2007).He argue that the higher the perceived value of a product recommended by social media influencers, the more willing they are to buy it. In the social e-commerce community, the perceived functional value will promote consumers' purchasing behavior, which is the same as the research results of Zhao Dawei and Feng Jiaxin (2021). Consumers through the introduction of the product good function, to further judgment, namely the influence recommended product good function can meet their own needs, namely the value of function, further, consumers will according to the utility of the product to meet the degree of purchase behavior.

In the social e-commerce community, the perceived emotional value will promote consumers' purchase behavior. The research of Peng L et al. (2018) points out that consumers will make purchase decisions according to the level of their perceived emotional value. Social influence through or witty, humor, or rigorous language for product recommendation, inspire consumers like the product, make consumers produce "the use of the product can bring me pleasure" idea, further, consumers according to the product for the emotional value of the satisfaction degree of product purchase. Consumer demand for product functional value and emotional value and consumers of social status and psychological feelings, at the same time can affect consumer individual self-concept

and feel the overlap between brand concept, can affect its ability to show the need of self-value, and affect the consumer brand identity (Wang Yue, 2020)

The findings of this study have the following implications: 1) From the perspective of theoretical development, previous documents have conducted some studies on social e-commerce and consumer purchasing behavior, but there are few studies on how the new social e-commerce model affects the purchasing intention of consumer communities from the level of consumer attachment. This study establishes a framework from how attachment emotion is a consumer purchase intention, and provides a new theoretical framework for the formation of consumer community purchase intentions in the social e-commerce community. 2) This study provides guidance for enhancing consumer attachment to promote consumer community purchases. The results show that consumer attachment can increase their willingness to buy in the community through their perceived value. Thus community managers and designers can add more designs that increase consumer attachment and perceived value. For example, community managers and designers should pay attention to the emotional bond between users and users and the community, constantly improve the ability to acquire new users and retain old users, and maintain the continuous use relationship between users and the community; adopt differentiated marketing strategies to provide consumers with products and services to meet their psychological needs, optimize the product function and interface design, care about the emotional needs of consumers, and promote consumers to have emotional preference for the community.

Conclusions

This study collected 600 first-hand data in the form of a questionnaire,explored the relationship between consumer attachment and consumer purchase intention to Chinese online community,and examined the mediating role of perceived value between consumer attachment and consumer purchase intention to Chinese online community. The results of the study show that consumer attachment influences consumer purchase intention to Chinese online community,consumer attachment influences consumer perceived value,consumer perceived value influences consumer purchase intention to Chinese online community and perceived value mediates the relationship between consumer attachment and consumer purchase intention to Chinese online community.

Recommendations

Although some important empirical results and theoretical progress have been made in this study, there are still some shortcomings in future research work, which need to be gradually improved.

All hypotheses of the study were verified by data on the social e-commerce community from Chinese mainland, and the applicability of this study may therefore be limited. Future scholars can recollect data in other cultural contexts to test the hypothesis of this paper to verify the universality of the findings or conduct cross-cultural comparative studies to examine the possible impact of culture therein.

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A STUDY OF MARKETING STRATEGY AFFECTING CUSTOMER LOYALTY OF PRIVATE KINDERGARTEN IN GUANGZHOU

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Wasutida Nakkasem[1]

Abstract

The purpose of this study is to explore the influence of marketing strategies of private kindergartens on customer loyalty in Guangzhou. The literature review deeply discusses the concept of preschool education, the concept of private kindergarten and the relevant theories of customer loyalty. Research methods Questionnaire and field interview form were used to collect data, and SWOT, STP and other analysis methods were used. The research results show the relationship between the macro environment, marketing strategy and customer loyalty of private kindergartens, and put forward relevant suggestions. This study is expected to develop more effective marketing strategies for private kindergartens, enhance customer loyalty, and provide useful references for the development of the industry.

Keywords: Guangzhou Private Kindergarten; Marketing Strategy; Customer Loyalty

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Introduction

Background and Significance of Research Problem

China's early childhood education, integral to basic education, aims at holistic child development. Market reforms and educational changes have presented unprecedented opportunities. In the last decade, China saw a substantial rise in kindergartens and enrolled children, with around 294,800 kindergartens by 2021. Government directives in 2018 barred private kindergartens from separate listings and disallowed listed companies from investing in for-profit kindergartens. Policies now mandate a specific ratio of children in public, inclusive private, and ordinary private kindergartens at 5:3:2, respectively, emphasizing balanced access to early education resources.

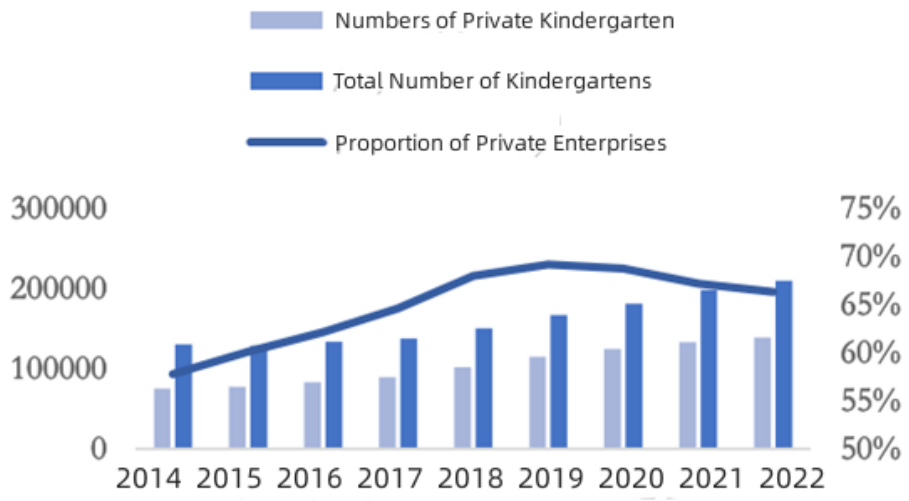

Figure 1. Changes in the Number of Kindergartens

China's focus on early childhood education has surged due to improved living standards. While private kindergartens face developmental hurdles amidst policy shifts, they remain pivotal in preschool education, outnumbering public counterparts in both schools and teachers. However, issues like inadequate management persist. To enhance competitiveness and social impact, modern marketing strategies are imperative (Guo & Zhou & Fang, 2014). Tackling challenges like high teacher turnover and resource inadequacies is crucial. Marketing approaches must align with the industry environment, considering internal kindergarten traits, to ensure sustainable development in this sector.

Research Objective

To study 7Ps Marketing Strategy effect to customer loyalty of private kindergartens in Guangzhou.

Research Hypothesis

7Ps marketing strategy has a significant impact on the customer loyalty of private kindergartens in Guangzhou in terms of macro environment and marketing strategy.

Scope of the Study

Researcher selects Guangzhou private kindergartens as the research object, research their marketing strategy, and according to the problem, hope to improve the marketing level of private kindergartens, improve the development ability, promote kindergarten mode diversification, comprehensive use of various resources for children to create good learning conditions and environment, the whole education industry development, the improvement of education structure has a positive role.

Review of Literature

Related concept

1. Concept of Preschool Education: Preschool education shapes children's intellect and temperament through family and teacher-guided brain stimulation. Crucial for lifelong learning, it boosts national quality and character development. Emphasized in the 19th National Congress, it's pivotal for children's well-being, societal stability, and the nation's future, representing a cornerstone in enhancing livelihoods and securing long-term progress (Xing, 2017).

2. Concept of Private Kindergarten: Private kindergartens, run by non-governmental entities, operate independently through self-financing and diverse investments. These institutions, such as the H Kindergarten in Guangzhou City, rely on enrollment profits to cover expenses.

3. Concept of Customer Loyalty: For private kindergartens to boost economic gains, nurturing trust with parents is crucial. Parent satisfaction and loyalty greatly impact a kindergarten's success. Customer loyalty, rooted in trust towards teachers and the institution, is pivotal and not easily transferable. Enhancing parent satisfaction through top-notch management and service boosts loyalty. Achieving parent loyalty is key for economic gains, validating the kindergarten's worth, and securing profits. This process ensures a win-win scenario benefiting both parents and the kindergarten.

Theoretical basis

Preschool education in Guangzhou is intricately guided by strategic marketing theories. The STP theory emphasizes the importance of market segmentation, targeting, and positioning, allowing kindergartens to tailor strategies to diverse parental needs (Guo, 2005). Building on McCarthy and Kotler's 4Ps theory, which focuses on product, price, place, and promotion, it provides essential insights for effective marketing in the competitive educational sector (Duncan et al., 2016).

The 7Ps theory of service marketing takes a customer-centric approach, highlighting the significance of understanding customer psychology, service personnel, and perceived service quality (Han, 2018). In the context of private kindergartens, it stresses the need to enhance customer satisfaction and loyalty for sustained growth (Chen, 2020).

Furthermore, theories like PEST and SWOT analyses offer a macro-environmental perspective. PEST analysis examines external factors, guiding kindergartens to adapt strategies aligned

with political, economic, societal, and technological conditions (Zhang et al., 2019). SWOT analysis helps craft strategies leveraging strengths and addressing challenges in Guangzhou's private kindergarten landscape. These theories collectively provide a comprehensive toolkit for private kindergartens to navigate the complexities of the educational landscape.

Methodology

Research Design

The study offers a comprehensive analysis of marketing in Guangzhou private kindergartens. It covers theories, methodologies, and various marketing aspects like market positioning, service strategies, and personnel management(Fang, 2011). Evaluating macro and industry environments using SWOT analysis identifies strengths, weaknesses, opportunities, and threats. It identifies target customer groups and proposes a customized marketing strategy for kindergartens. Additionally, it suggests measures to facilitate strategy i mplementation, aiming to foster rapid development and potentially benefiting similar institutions.

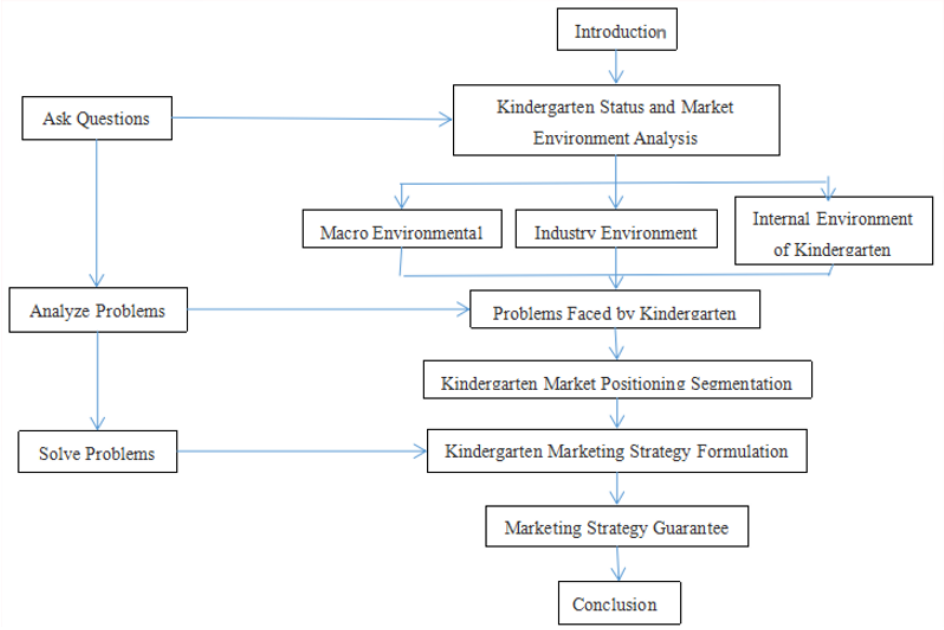

Figure 2. Research Framework

Population and Sample Size

The study focuses on private kindergartens in Guangzhou, specifically interviewing three principals and three teachers from each (Sha, 2010). Each kindergarten collects over five parent satisfaction questionnaires and surveys 10 parents to understand their needs and satisfaction.

H Kindergarten, established in 2018, covers 3,300 square meters with four classes accommodating 235 children, emphasizing comprehensive and innovative educational products for 2-6 year olds in Panyu District.C Kindergarten, established in 2021, is a full-day private kindergarten in Panyu District, covering 3002 square meters with 9 classes for children aged 2.5 to 6 years old.D

Kindergarten, a first-level kindergarten in Nansha District, covers 2600 square meters with an outdoor playground of 1700 square meters and a construction area of 4033 square meters, located in Huangge Town, Nansha District.

Research Instruments (Questionnaire & Field Visit Form)

This research aims to analyze the demand for private kindergarten education in Guangzhou, surveying parents' expectations and kindergarten channels. Data, collected through questionnaires and field visits, inform market segmentation and positioning. The study considers current market trends, consumer spending patterns, and parental satisfaction with preschool education. Two-part questionnaires were administered to interested and current kindergarten parents, supplemented by interviews with principals and teachers (Sheridan. 2012).

Data Collection

This study investigates parents of prospective kindergarten children, focusing on demographics, channel preferences (short videos, social software, new media platforms), aiming to offer fundamental data for future private kindergarten marketing, particularly in online strategies. The research delves into parents' early childhood education needs, providing insights for subsequent kindergarten network marketing and information outreach.

Data Analysis

This segment focuses on comprehensive data analysis methodologies within the context of the private kindergarten market in Guangzhou. It involves STP analysis for segmentation, target market selection, and positioning strategies. Additionally, it includes PEST analysis, evaluating the macro-environmental factors impacting customer loyalty. Furthermore, SWOT analysis is conducted to assess internal strengths, weaknesses, opportunities, and threats, aiding in the formulation of marketing strategies. Lastly, the 7Ps analysis examines the marketing strategies, covering product, price, promotion, place, people, physical evidence, and process aspects of private kindergartens in Guangzhou.

Research Results

1. Macro-environment Analysis of Private Kindergartens

Private entities are gaining influence in China's burgeoning early childhood education industry through diverse financing channels, adhering to regulations and government approval. This model has contributed to a comprehensive schooling system, expanding resources, and diversifying educational choices, bolstered by strong government support. Despite Guangzhou's modest 1.0% GDP growth in 2022, its high economic volume suggests a promising future, potentially prompting strategic investments by private kindergartens for market expansion. In the expanding early childhood education sector, private education spans from preschool to higher levels. Recent policy revisions encourage

Guangzhou's private kindergartens to prioritize educational quality over financial returns, aligning with the city's emphasis on standardized education, increased financial support, and inclusive services.

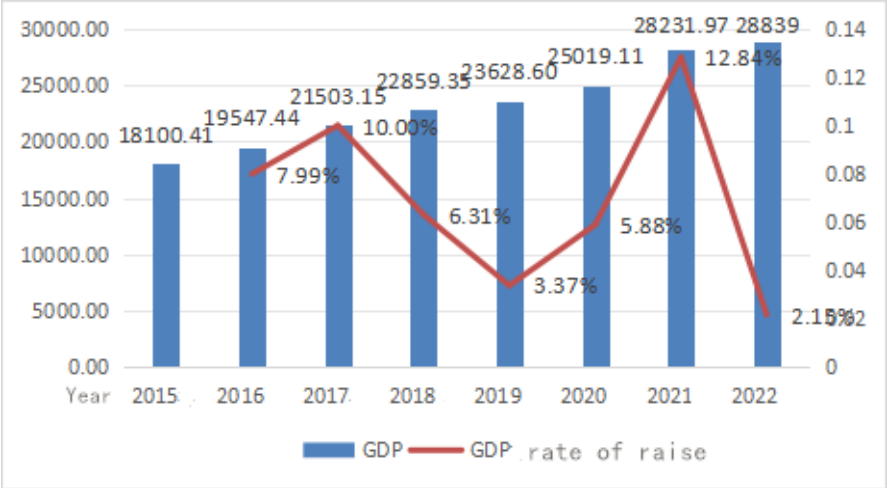

Figure 3. Guangzhou GDP trend in 2015-2022

In 2022, Guangzhou's government budget reflected a dip in revenue but increased investment in education, reaching 62.694 billion yuan, ranking third in China with a 6.5% year-on-year rise. The city's strong economy and rising household disposable income suggest a favorable market for private kindergartens. Despite a slight revenue drop, education spending remained robust, signifying ample government support for the sector. With a higher per capita income level and growing household disposable income, families might have greater financial capacity, potentially favoring private kindergartens with higher tuition fees.

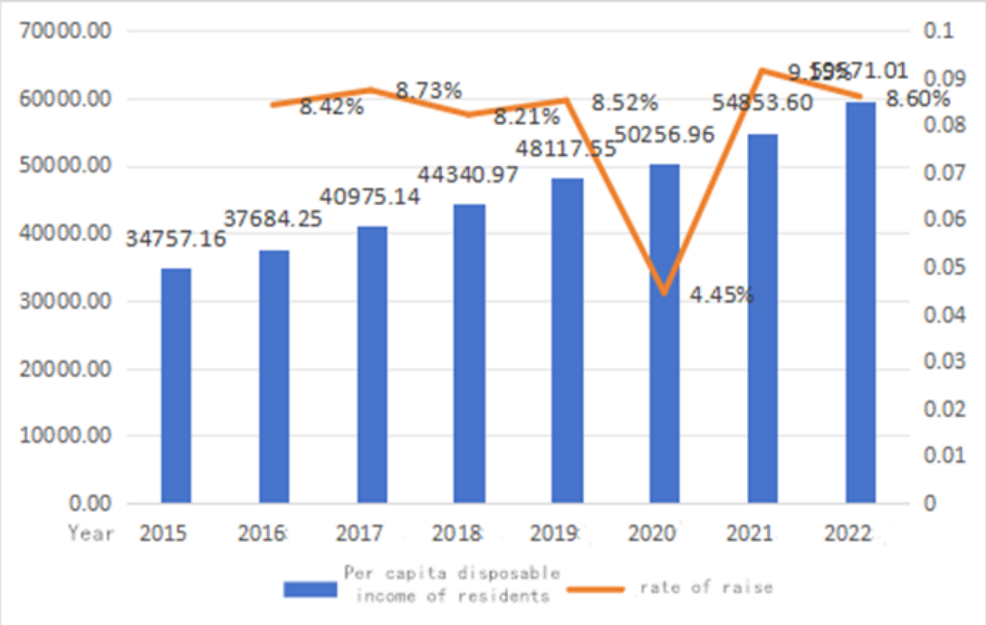

Figure 4. Per Capita Disposable Income of Residents

As can be seen from Figure 4-2, the per capita consumption expenditure of Guangzhou residents shows an overall upward trend. Except for a slight decrease in 2019 and 2020, with the basic control of COVID-19 epidemic in 2021, residents' consumption enthusiasm has increased somewhat. At the same time, the education and culture expenditure also presents the same growth law.

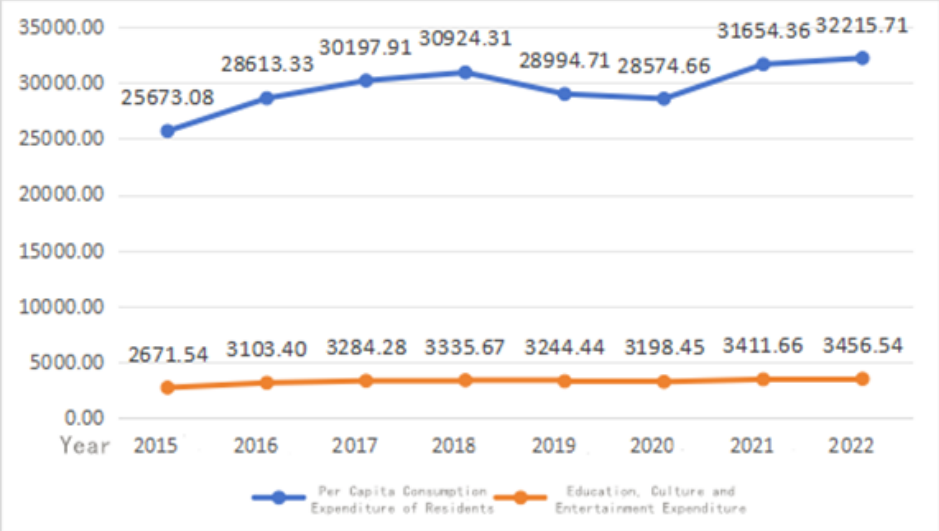

Figure 5. Per Capita Consumption Expenditure of Residents

China has seen a decline in birth rates and private kindergartens, with a 3.0% reduction in 2020 despite steady growth from 2014 to 2020. Private kindergartens still constitute over 60% of China's total. In Guangzhou, the birth rate, once rising, fell to 8.3% in 2022 due to the COVID-19 pandemic. High parental emphasis on education in Guangzhou poses challenges and opportunities for private kindergartens, necessitating adaptation to diverse cultural backgrounds and delivery of inclusive educational services.

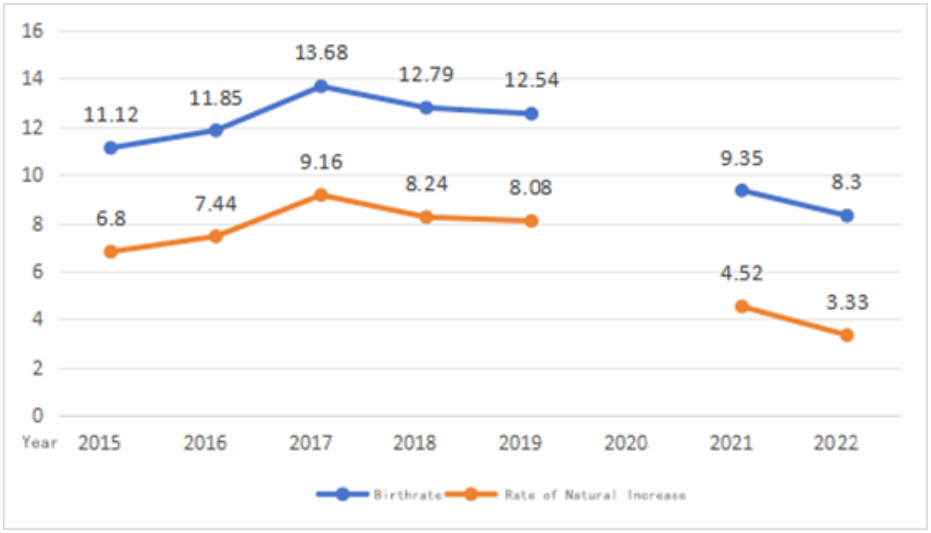

Figure 6. Trends in neonatal birth rates and natural growth rates

In summary, despite a favorable economic landscape in Guangzhou, declining birth rates advise caution for private kindergartens in expansion. The need for higher-quality education amid rising competition calls for refined services, targeted customer approaches, and strategic marketing. Technological influences are significant:

A. Digital Education: Integrating technology like smart boards and online platforms enhances teaching methods.

B. Internet Resources: Leveraging Guangzhou's IT infrastructure enables online courses and seamless communication.

C. Teacher Training: Proficiency in educational tools is vital, emphasizing the need for training programs.

D. Education System: China's focus on preschool education creates market demand, encouraging investments and diverse education systems.

2. Empirical Study On the Relationship Between Marketing Strategy and Customer Loyalty of Private Kindergarten

Classical measurement theory dissects observed variances into true, systematic, and random errors. Common Method Variance (CMV), a systematic error, stems from shared methodological sources. Employing Harman's Single-Factor test through exploratory factor analysis (EFA) in this study revealed 8 factors, with the first explaining 31.566% of variance, indicating no significant common method bias (less than 40% variance). Reliability, assessed by Cronbach's α coefficient, is crucial for survey accuracy. In this loyalty and marketing strategy survey for private kindergartens, low reliability undermines a true depiction, emphasizing the need for a higher α value for enhanced scale reliability.

Table 1. Reliability Analysis and Evaluation Standard Table

Reliability Assessment Index	Evaluation Standard	Evaluation Results
Cloned the Bach α coefficient	Evaluation > 0.8	The reliability is very good
	0.7 < Evaluation < 0.8	The reliability is acceptable
	0.6 < Evaluation< 0.7	The scale needs to be revised
	Evaluation < 0.6	The scale needs to be redesigned

Table 2. Sample Profile (N=418)

Latitude	Constitute	Number of People	Scale
Gender	Male	136	32.54%
	Female	282	67.46%

Table 2. Sample Profile (N=418) (Cont.)

Latitude	Constitute	Number of People	Scale
Age	Age 25 and below	14	3.35%
	26-30 Years old	177	42.34%
	31-35 Years old	132	31.58%
	36-40 Years old	64	15.31%
	Over 40 years old	31	7.42%
Parent Role	Father	129	30.86%
	Mother	268	64.11%
	Grandparent	14	3.35%
	other	7	1.67%
Educational Background	Junior high school and below	54	12.92%
	High school / Technical secondary school	86	20.57%
	Junior college	130	31.10%
	Bachelor degree or above	148	35.41%
Profession	Company employee	124	29.67%
	Government, public institutions, state-owned enterprises	57	13.64%
	Professional technicians (teachers, doctors, lawyers, etc.)	45	10.77%
	Retired	21	5.02%
	Individual household	89	21.29%
	Other	82	19.62%
Income	Below 5,000 yuan	46	11.00%
	5001-8000 yuan	84	20.10%
	8,001-12,000 yuan	155	37.08%
	Over 12,001-18,000 yuan	105	25.12%
	Above 18,001 yuan	28	6.70%

In the survey with 418 collected questionnaires, key demographics highlight trends:

A. Gender distribution: 32.54% male and 67.46% female respondents, with a higher participation of mothers indicating strong family interest in early childhood education.

B. Age range: 25-35 years old comprises 42.34%, marking them as the primary target audience for youth and representation in marketing strategies.

C. Educational background: A diverse sample with 35.41% holding an undergraduate degree or higher indicates a generally educated population.

D. Occupation diversity: Company staff (29.67%) and self-employed individuals (21.29%) reflect varied working patterns, requiring tailored marketing strategies.

E. Income level: Family incomes range from 8,000 to 12,000 yuan, suggesting above-average societal income levels and heightened expectations for educational quality and services within these families.

As can be seen from Table 4-4 that the score of customer loyalty is 3.78, which indicates that most parents have high loyalty to private kindergartens in Guangzhou.

Table 3. Measurement of Customer Loyalty

	Mean Value	**Standard Deviation**
I am very satisfied with the overall impression of the kindergarten.	3.75	0.583
I am willing to let the child continue to study in the kindergarten.	3.88	0.604
I would like to recommend the kindergarten to other parents.	3.69	0.618
The educational service of the kindergarten is consistent with my expectations.	3.81	0.567
Mean Value	3.78	0.594

Correlation analysis determines the linear relationship between variables. Pearson's correlation coefficient, ranging from 0.3 to 0.7, signifies a strong correlation. If it exceeds 0.7, collinearity exists; below 0.3 suggests minimal correlation. In this study, correlations between independent and dependent variables were assessed using the correlation coefficient r.Results from Table 4-5 revealed significant positive relationships between product, price, channel, promotion, personnel, process, and tangible display, each with customer loyalty (r values: 0.285 to 0.351, $p<0.01$). These findings demonstrate the substantial influence of various marketing strategies on customer loyalty.

Table 4. Correlations

	Product	**Price**	**Place**	**Promotion**	**Personnel**	**Process**	**Physical Evidence**
Customer Loyalty	0.348**	0.341**	0.285**	0.338**	0.322**	0.316**	0.351**

3. SWOT Analysis of Private Kindergartens

Private kindergartens in Guangzhou excel in innovative education, offering diverse approaches compared to standardized public institutions. Their adaptability to market changes and superior facilities contribute to competitiveness. Yet, limited publicity methods and a lack of online presence hinder brand awareness. Homogeneous service models and inadequate teacher quality pose challenges. Opportunities lie in the growing mid-to-high-end market demand and policy support. However, intense market competition and declining birth rates present threats, emphasizing the need for strategic adaptation for sustained development.

4. The STP Analysis of the Private Kindergartens

STP theory guides enterprises in market segmentation and positioning through three strategic steps: segmentation, targeting, and positioning (Wang, 2018). Market segmentation divides the overall market into sub-markets with similar consumer demands. Targeting selects a specific sub-market aligning with the company's strategy. Once identified, positioning creates a distinct product image through strategic marketing. Pioneered by Wendell Smith in the 1950s, this approach allows resource concentration, adaptation to consumer demands, and gaining a competitive edge. Target market selection considers size, prospects, competition, and alignment with the company's strategy.

5. Marketing Strategy and Suggestions of Private Kindergartens

Guangzhou private kindergartens, emphasizing their role in education, must strategically position their services. By categorizing products, considering high and low-end segments, and implementing meticulous customer segmentation, they can analyze diverse parental needs. Differentiated management guides customer expectations. Optimizing teacher allocation enables tailored teaching services, meeting the expectations of various customer groups. Formulating differentiated service content and standards based on kindergarten level and age stage enhances satisfaction, builds loyalty, and influences parents to choose private kindergartens in Guangzhou for their children's education.

Discussion and Conclusions

Discussion

The evaluation of private kindergartens in Guangzhou reveals a lack of differentiation in pricing and a need for improved marketing strategies. While the curriculum and tangible aspects receive positive feedback, there are opportunities for enhancing teacher professionalism and implementing more diverse promotion strategies. Regression analysis suggests that Physical Evidence Strategy has the greatest impact on customer loyalty, emphasizing the importance of creating a safe and enjoyable learning environment. Product strategy and targeted promotion are also influential, highlighting the need for customized educational offerings and effective marketing to improve customer loyalty.

Conclusions

This study explores the impact of marketing strategies employed by Guangzhou private kindergartens on customer loyalty. Through literature review and empirical research, the paper analyzes the connection between the macro environment, marketing strategy, and customer loyalty. Utilizing SWOT and STP analysis tools reveals opportunities, challenges, and target markets for private kindergartens. Findings indicate that strategic use of STP and 4P, 7P marketing theories significantly influences customer loyalty by improving service quality and precise market positioning. Future outlook emphasizes optimizing marketing strategies, innovating services, enhancing brand image, and fostering customer loyalty through increased interaction and communication with parents and communities. This ensures ongoing competitiveness and market leadership.

Suggestions

1. Create an Environment Suitable for Children's Development

Creating a conducive kindergarten learning environment involves thoughtful planning. Segregating spaces into quiet and active areas caters to varied developmental needs. Introducing living elements like plants fosters a connection with nature, enhancing children's appreciation for life. Involving children in decorations encourages creativity. Embracing a natural outdoor environment aligns with the essence of early childhood education, nurturing a holistic educational experience..

2. Improve Teachers' Professional Quality

Preschool education quality relies on competent teachers with a nurturing mindset, emphasizing genuine love for children. The Ministry of Education emphasizes qualities like responsibility, patience, and attentiveness. Australian kindergartens prioritize warm interactions, fostering emotional bonds through daily gestures like nodding, smiling, and hugging. Knowledge literacy is crucial, requiring a robust foundation in pedagogy and psychology. Elevating professional standards through qualification access, regular training, and skill-enhancing competitions ensures teachers are well-equipped for holistic child development.

3. Extensive Kindergarten Curriculum Research to Improve the Quality of Kindergarten Curriculum

Kindergarten curriculum, spanning health, social, language, science, and art, demands teachers' pivotal role in fostering holistic development. Social skills are honed through instilling concepts, promoting independent thinking, and engaging in community-based activities. Expanding the social curriculum beyond classrooms, encouraging collaboration between kindergartens and communities, enhances real-life learning. Science education integrates practical exercises, fostering environmental awareness. Strengthening kindergarten management ensures safety and health, addressing concerns about pickup situations and emphasizing orderly procedures for parents.

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A STUDY OF THE MARKETING MODEL OF AN AGRICULTURAL TECHNOLOGY COMPANY

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Abstract

Research objectives are outlined as follows: 1) To gain in-depth insights into the primary challenges facing cultivated land protection in China, including issues such as illegal occupation, declining land quality, and a reduction in rural labor force; and 2) To explore strategic approaches for utilizing saline-alkali land to promote agricultural development, ecological improvement, and nationwide food security. To achieve these goals, this study primarily employs a combination of literature research, on-site investigations, and expert evaluations. First-hand data regarding illegal occupation, declining land quality, and the impact on rural labor force are obtained through sample interviews with local government representatives, agricultural enterprises, and farmers. Additionally, a comprehensive analysis of global and domestic statistical data is conducted. The research results indicate significant challenges in Chinese cultivated land protection, including illegal occupation, declining land quality, and a decrease in rural labor force. In response to these issues, the study proposes the following measures: 1) Technological innovation; 2) Establishing a robust regulatory framework; and 3) Promoting mechanized agricultural practices. In conclusion, this paper, through a detailed discussion on the challenges facing cultivated land protection in China and strategic utilization of saline-alkali land, demonstrates a comprehensive understanding of sustainable land protection and agricultural development. It not only emphasizes economic development but also underscores the importance of ecological sustainability and food security, aligning with the overall goals of the nation.

Keywords: Farmland Protection, Saline-Alkali Land Transformation, Agricultural Development, Sustainability

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Introduction

Currently, approximately 1 billion hm^2 of land globally is affected by salinization, which is approximately 7% of the Earth's land surface. While much of this is caused by natural geochemical processes, an estimated 30% of irrigated land globally is affected by anthropogenic secondary salinization. In addition to the seawater intrusion in coastal areas caused by climate change and the increase in crop water demand, the application of low-quality irrigation water has further led to the expansion of saline soil distribution area. The continued decline in the world's arable land due to dwindling freshwater resources available for irrigation, land degradation and urbanization, coupled with a growing world population, will further complicate the search for sustainable solutions to the problem of salinization. (Sparks, D. L. (Ed.)., Hopmans, J. W., et al. (2023). (Trans.), Advances in Agronomy (Advances in Agronomy, Vol. 169, (1st ed.). (Trans.), advances in Agronomy (Vol. 169), (1st ed.). Beijing: Science Press.)

From 1982 to 1986, the CPC Central Committee issued the No. 1 Central Document on agriculture, rural areas and farmers for five consecutive years, making specific plans for rural reform and agricultural development. From 2004 to 2022, China issued the No.1 Central Document on agriculture, rural areas and Farmers for 19 consecutive years. On February 13, 2023, the Central government continued to issue the No.1 Central document with the theme of "agriculture, rural areas and farmers". Pepsi agriculture first, the central government for many years to "agriculture, rural areas" as the theme of the central number one document, showing that "agriculture, rural areas" issues in the "priority among priorities" in our country.

The summary of No. 1 central document of each year is detailed in “https://zhuanlan.zhihu.com/p/489276204”

The CPC Central Committee believes that we must make solving the problems concerning agriculture, rural areas, and farmers the top priority in the Party's work, and mobilize the efforts of the whole Party and society to comprehensively promote rural revitalization and accelerate the modernization of agriculture and rural areas. At the same time, the document states that a strong country must first strengthen agriculture, and only when agriculture is strong can the country be strong. If the country is to be revitalized, the countryside will be revitalized. (Quoted to the "CPC News Network" on December 26, 2022, the report that a strong country must first strengthen agriculture See website for detailshttp://theory.people.com.cn/n1/2022/1226/c40531-32593557.html)

China is a big agricultural country, but it is not a strong agricultural country. Building a strong agricultural country is beneficial to comprehensively promote rural revitalization, quickly complement the short board of modernization, and is very important for China to build a strong socialist modernization country.

Agriculture is inseparable from seeds and land, land resources are precious non-renewable resources, for human survival and development to provide the material basis and activity site. China

has a vast territory and abundant land resources, but relatively few land resources such as cultivated land and forest land can be directly used, while many lands such as deserts, Gobi and glaciers cannot be used for agriculture, forestry and animal husbandry, and some low-yielding lands such as salt, alkali and depression account for a high proportion of the country's land area.

The basic situation of cultivated land in our country is that the total area of cultivated land is decreasing continuously, and the quality of cultivated land is also declining. According to the data of the third National land survey, in the 10 years since the second national land survey, China's cultivated land has decreased by 113 million mu (Please refer to the data citation for details "https://news.ifeng.com/c/8RcT0lByziq"). and the illegal occupation of cultivated land has occurred from time to time. At the same time, the decline of cultivated land quality has also brought great challenges to agricultural production and ecological environment protection. In recent years, the government has introduced a series of policies and measures to strengthen the protection and management of cultivated land, such as intensifying the crackdown on illegal occupation of cultivated land, promoting agricultural modernization, and implementing land improvement, so as to ensure the quantity and quality of cultivated land. In addition, the rural labor force is reduced, the cost is high, the land is abandoned, the infrastructure is requisitioned, the cultivated land area is constantly reduced, the crop production is reduced, and the relative income of agriculture is declining year after year. China's crop seeds are controlled by foreign capital and grain is dependent on imports.

The situation of cultivated land protection in China is not optimistic, "it is easy to occupy farmland and difficult to restore it". The construction of occupied farmland only requires the land to be occupied before it can be used. However, the cost of re-reclamation of land already built into cultivated land is huge. But it takes a long time to fertilize the soil. Most of the newly reclaimed or reclaimed arable land, due to its poor land capacity, low yield, and eventually face the fate of abandonment, endless abandonment is only a waste of reclamation, reclamation costs at that time; The quantity of cultivated land is maintained, but the quality of cultivated land cannot keep up and the output continues to decline, which is also the problem facing the current supplementary cultivated land.

Saline-alkali land is a general term for a series of soils affected by saline-alkali components, including various saline-alkali soils and different degrees of saline-alkali soils. At present, soil salinization has become a global problem. The formation of alkaline soil and alkaline soil is mostly related to the accumulation of carbonate in the soil, so the alkalinity degree is generally high, and the plants can hardly survive in the serious saline-alkali soil area. According to the incomplete statistics of UNESCO and FAO, the saline-alkali land covers an area of 14 billion mu in the world, and about 500 million mu in China, among which about 200 million mu can be transformed and utilized. With huge potential for governance, it is an important reserve resource of agricultural land. (Data cited to https://www.163.com/dy/article/I1NQ1RPO0511E1HM.html)

Figure 1. Photos of saline alkali land (From network image)

Research Questions

1. What are the primary challenges and issues related to cultivated land protection in China, considering factors such as illegal occupation, declining quality, and the reduction in rural labor force?

2. How can the transformation and utilization of saline-alkali land be strategically approached to contribute to agricultural development, ecological improvement, and overall national food security in China?

Research Objectives

1. To focus on discerning trends in illegal occupation, assessing the persistent decline in land quality, and examining the socioeconomic repercussions on the rural labor force.

2. To conduct a comprehensive analysis of both global and domestic statistics.

Conceptual framework

Research ideas

This research follows the traditional framework of "finding problems - analyzing problems - solving problems", and makes a comprehensive analysis of the competitive situation of Baosu Agricultural Technology Co., LTD.

First of all, this study adopts PESTEL analysis method and SWOT analysis model to analyze the external environment of Bibaoshu Agricultural Technology Company from the perspective of enterprise and market environment, and summarizes the existing opportunities of the company.

Secondly, the core competitiveness of the company is studied and analyzed, and the advantages of the company are determined by comprehensive consideration of corporate governance, marketing management, after-sales service, human resources, financial status, development technology, enterprise management information system and other factors.

Finally, this study uses SOAR analysis method to determine the sustainable competitive advantage strategy of Baoshu Agricultural Technology Co., LTD., and provides the strategy implementation plan guide.

Marketing theory based on 4C

4C marketing theory: 4C refers to Customer, Cost, Convenience and Communication respectively. Based on consumer demand, it resets the four basic elements of the marketing mix, emphasizing that enterprises should first put the pursuit of customer satisfaction in the first place, then strive to reduce the purchase cost of customers, and then pay full attention to the convenience of customers in the purchase process, instead of deciding the sales channel strategy from the perspective of enterprises. Finally, effective marketing communication should be implemented with consumers as the center. (Introduced by Professor R.F. Lauterborn (1993), an American marketing expert)

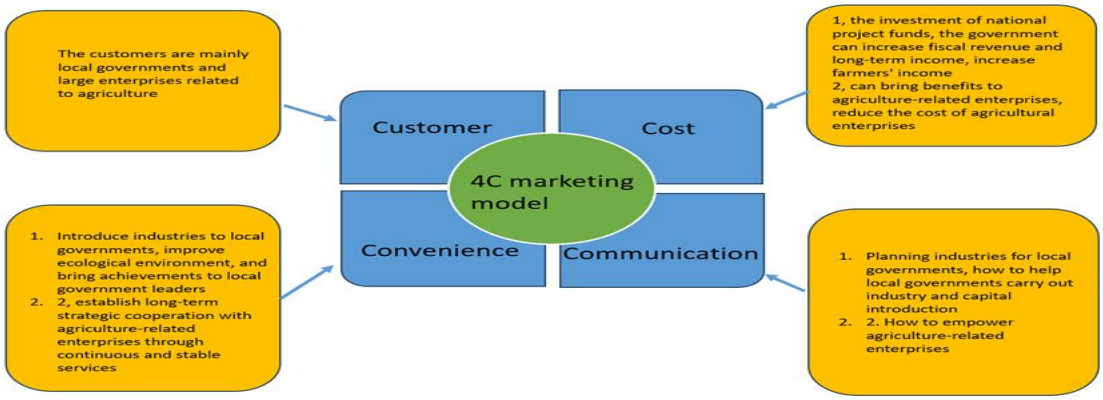

Figure 2. 4C marketing model (Image created by myself)

Review of Literature

1. Current situation and prospect of agricultural science and technology

Agricultural science and technology, leveraging advanced methods like genetic breeding, biotechnology, and information technology, have significantly enhanced agricultural efficiency and product quality. For instance, precision breeding through gene editing and IoT applications has improved crop yields. Looking ahead, the application of technologies like artificial intelligence, blockchain, and big data analysis is expected to play a crucial role in predicting climate changes, ensuring product traceability, and enhancing market competitiveness.

The collaborative efforts of the government, enterprises, and farmers are essential for successful technological integration. Moreover, to meet the demands of modern agriculture, such as building agricultural highlands, ensuring the supply of high-quality and safe products, achieving sustainable development, and increasing farmers' income, science and technology must be at the forefront. The continuous development of the agricultural science and technology industry is crucial, emphasizing the need for an innovation consortium and increased investments.

(The above is cited in the report "2023-2028 Agricultural Science and Technology Industry Market Deep Analysis and Development Strategy Research Report" by China Research Puhua Industry Research Institute, 2023).

2. Spirit of the Central Rural Work Conference

The Central Rural Work Conference underscores the imperative linkage between science and technology and the mission to build a robust agricultural nation, integral to China's socialist modernization. Advocating for accelerated agricultural modernization, the focus lies on the strategic integration of science and technology.

In realizing self-reliance in agricultural science and technology, the strategy emphasizes enhancing systematic support capacities, with specific attention to ensuring food security, promoting modern agriculture, and establishing competitiveness in science and technology (Kang Shaozhong, Li Defa, Zhang Fusuo, 2021).Regarding the role of agricultural universities in innovation, these institutions are deemed vital in shaping China's scientific and technological prowess. Recommendations include prioritizing basic frontier research, increased state support, and collaboration alliances for basic research (Gao Zhengli, Li Baoguo,, 2021).

In the context of national rural revitalization practices, a multifaceted approach is proposed, covering industrial, personnel, cultural, ecological, and organizational revitalization. The strategy highlights the need for integrated design and simultaneous implementation of agricultural and rural modernization. The viewpoints stress that while agricultural modernization is a prerequisite for rural modernization, the extension of the industrial and value chain into rural areas is crucial for synchronous development (Gao Zhongsheng and Chen Yuanyuan, 2021).

General secretary xi emphasize that, Protect farmland as you would the giant panda. We must protect cultivated land, which is vital to the livelihood of over a billion people. (General secretary xi proposed during the inspection of Jilin in July 2020)

3. Cultivated land protection strategy

General secretary xi emphasize that, Protect farmland as you would the giant panda. We must protect cultivated land, which is vital to the livelihood of over a billion people. (General secretary xi proposed during the inspection of Jilin in July 2020)

Multiple types of degradation of cultivated land quality and protective utilization are facing severe challenges. In Northeast China, the quantity and quality of black land has been reduced, groundwater funnel in North China continues to expand, land desertification in Northwest China is still serious, soil pollution is serious, soil acidification, and various degradation types of cultivated land salinization are superimposed, with worrying ecological consequences, forming unprecedented problems and challenges in the protection and protection of cultivated land. (The above is the views of Professor Gao, Professor Li, and Professor Sun from China Agricultural University, 2021)

Implementing farmland protection and ensuring national food security is always one of the major events in our development. With the increasing population and the gradual reduction of arable land. To ensure food security, we should not only ensure the quantity and quality of food, but also ensure that the limited cultivated land resources are used for food production. (Professors Yuan, Li, and Liu from China Agricultural University, 2018)

Methodology

1. Research Design

In this study, a combination of literature research, field investigation and expert evaluation was used to select samples from more than 10 provinces and cities, including Guangdong, Shandong, Jilin, Heilongjiang, Inner Mongolia and Xinjiang, to ensure broad geographical representation. Local government representatives: 5 representative prefecture-level city governments and 5 agricultural enterprises are selected to ensure full knowledge of the regional situation. Representatives of agricultural enterprises: Choose one representative each from Beidahu Group, a large commercial supermarket chain, Xinjiang Production and Construction Corps, an animal husbandry enterprise in Inner Mongolia and Jiangsu Academy of Agricultural Sciences. Through the investigation of relevant literature, we have an in-depth understanding of the national policies, regulations and industry status of China's agriculture, cultivated land protection and saline-alkali land utilization. Ensure coverage of academic publications, industry reports, and the writings of relevant experts and scholars to provide a theoretical basis for research. Obtain detailed information on field investigations through sample interviews with local government representatives, agribusiness and farmers. Focus on issues such as illegal occupation, declining land quality, and the impact on rural labor force to ensure the accuracy and reliability of data. Conduct an expert assessment, focusing on the consistency of proposed initiatives in terms of agricultural development objectives, ecological benefits, implementation feasibility and overall practicality. Use expert advice to ensure that research results are more practical and instructive.

2. Research Instrument

This section primarily explains the interview guidelines, with the objective of collecting data to address the research objectives. The researchers have created a set of questions for interviewing on each topic, in line with research objective 1: To focus on discerning trends in illegal occupation, assessing the persistent decline in land quality, and examining the socioeconomic repercussions on the rural labor force.

Table 1. Interviews on Identifying Trends in Illegal Occupation, Assessing the Sustained Decline in Land Quality, and Examining the Socioeconomic Impact on Rural Labor Force.

Issues	Questions
Illegal Occupation Trends	1. What are the discernible trends in illegal occupation of land?
Persistent Decline in Land Quality	2. How can the persistent decline in land quality be assessed?
Socioeconomic Repercussions on Rural Labor Force	3. What are the socioeconomic repercussions on the rural labor force due to the issues of illegal occupation and declining land quality?

Table 1. Interviews on Identifying Trends in Illegal Occupation, Assessing the Sustained Decline in Land Quality, and Examining the Socioeconomic Impact on Rural Labor Force. (Cont.)

Issues	Questions
Research Objectives (Overall)	4. How do the specific issues of illegal occupation, declining land quality, and their combined impact contribute to the broader research objectives?
Conducting Research Interviews in Multiple Provinces	5. How effective is the approach of conducting research interviews with relevant departments and agricultural enterprises in various provinces to understand the current situation of saline alkali land?
Content of Interviews with Local Governments & Enterprises	6. What key information is sought during interviews with local governments and agricultural enterprises regarding saline alkali land improvement?
Questionnaire Survey on Agricultural Enterprise Operators & Growers	7. What are the key areas of investigation covered in the questionnaire survey on agricultural enterprise operators and growers?
Research Tools (Literature Research, Investigation & Analysis, etc.)	8. How are different research tools, such as literature research, investigation and analysis, qualitative analysis, quantitative analysis, PESTEL analysis, SWOT analysis, and core competitiveness analysis, employed in the study?
Data Collection Methods (Literature Search, On-site Interviews, Surveys)	9. What are the methods employed for data collection, including literature search, on-site interviews, and survey questionnaires, and how do they contribute to the significance of the research work?
Data Analysis (Literature Content Analysis, Interviews & Questionnaire Analysis)	10. How is data analyzed, including the analysis of literature content, interviews, and questionnaire survey results, and what insights are gained from this analysis?

Interview guidelines for collecting data for research objective 2: To conduct a comprehensive analysis of both global and domestic statistics., as shown in Table 2.

Table 2. Comprehensive Analysis of Global and Domestic Statistical Data through Interviews

Issues	Questions
General Information of Respondents	1. Gender of respondents?
	2. Respondent's age?
	3. Education level of respondents
	4. Respondent's status?

Table 2. Comprehensive Analysis of Global and Domestic Statistical Data through Interviews

Issues	**Questions**
Local Government and Agricultural Enterprises Interviews	1. How many acres of local saline alkali land are there, and how many need improvement in the past 5-10 years? 2. What is the operational model for improving saline alkali land, and how is collaboration with companies achieved? 3. What is the national subsidy per acre, and how is funding for improvement sourced? 4. What are the local advantages and resources available for improvement projects? 5. How long does saline alkali land improvement acceptance take, and what is the payment timeline? 6. Are there abundant freshwater resources locally, and what are the water usage indicators? 7. Is the locally improved land planted with paddy or dry fields, and how is it contracted for planting? 8. How do local governments expect technology enterprises to participate in saline alkali land treatment projects?
Enterprises Interviews	1. What is the main business of the enterprise, and what is the annual business scale? 2. How many acres of land do enterprises own or manage? 3. What is the purpose of the enterprise for improving saline alkali land? 4. What is the collaboration model with soil improvement companies, and what is the cooperation period?
Questionnaire Survey	1. Do respondents understand recent important documents on agriculture, rural areas, and farmers issued by the State Council? 2. What other problems do respondents think exist in modern agriculture? 3. What effective measures do respondents suggest to promote agricultural technology? 4. In agricultural production activities, do respondents consider "scientific guidance" or "years of agricultural production experience" more important? 5. Do respondents believe the changes in agricultural by-products are related to the application of agricultural technology? 6. Do respondents agree with the effectiveness of current land salinization improvement methods? 7. What impacts do respondents think saline alkali land has on production and operation? 8. What obstacles do respondents perceive in the current land salinization improvement work?

Research Results

1. The challenges in Farmland Protection:

According to data analysis, the following conclusions can be drawn: Considering factors such as illegal occupation, declining quality, and reduced rural labor force, the main challenges and issues faced by China in farmland protection are summarized in Table 3.

Table 3. Considering factors such as illegal occupation, declining quality, and reduced rural labor force, China's farmland protection faces significant challenges and issues.

Challenges in Farmland Protection	**Solutions**
Illegal Occupation:	Unauthorized seizure of land poses a significant threat to farmland preservation. Addressing this challenge requires robust enforcement of land use regulations and protection measures.
Declining Quality:	Deterioration in land quality further exacerbates farmland challenges. Implementing soil improvement technologies and sustainable farming practices is crucial to combat this issue.
Reduced Rural Workforce:	The decline in the rural workforce adds complexity to agricultural operations. Strategies promoting efficient mechanization and rural development are essential for sustaining agricultural productivity.

2. Company Strategic Approach to Addressing Farmland Challenges in China

These issues collectively jeopardize the preservation and sustainable utilization of arable land in the country. In response, a strategic shift toward the transformation and utilization of saline-alkali land emerges as a vital measure to foster agricultural development, ecological enhancement, and overall food security in China.

Measures for Implementation

Technological Innovations: Investing in research and development of technologies for soil improvement on saline-alkali land is a pivotal step. This includes promoting precision farming techniques and encouraging sustainable agricultural practices that mitigate the impact of declining land quality. Policy and Regulatory Framework: A robust regulatory framework is essential to counter the challenge of illegal land occupation. Strengthening and enforcing land protection regulations will act as a deterrent. Simultaneously, developing supportive policies that incentivize the transformation of saline-alkali land will provide a conducive environment for change.

Mechanization and Rural Development: To counteract the decline in the rural workforce, there's a need to promote mechanized farming practices. Encouraging the adoption of advanced agricultural technologies and investing in rural development programs are crucial steps toward

enhancing livelihoods and attracting a skilled workforce. Collaborative Initiatives: Facilitating collaboration between government bodies, agricultural enterprises, and research institutions is imperative. Establishing partnerships will drive sustainable saline-alkali land transformation projects, leveraging collective expertise and resources.

Vision for Sustainable Development

Agricultural Growth: The strategic utilization of saline-alkali land is envisioned to drive sustainable development in agriculture. This involves implementing innovative technologies and practices to transform arid land into productive agricultural areas. Ecological Harmony: Restoring ecological balance is a key aspect of the vision. Targeted initiatives aim to enhance environmental conditions, fostering a harmonious relationship between agriculture and the ecosystem.

Food Security Assurance: Diversifying agricultural resources is critical for ensuring a comprehensive and secure food supply for the nation. The vision includes initiatives that enhance food security by exploring and utilizing different agricultural landscapes.

Discussion and Conclusions

Discussions

1. Discussion on the Main Challenges and Issues in Farmland Protection Considering Factors Such as Illegal Occupation, Declining Quality, and Reduced Rural Labor Force:

With the continuous progress of urbanization, the illegal occupation of land, the decline of quality and the reduction of rural labor force have become increasingly apparent, which poses a serious challenge to farmland protection. First, illegal occupation erodes available agricultural land and poses a serious threat to food security. Through the analysis of the case of "Baoshu Agricultural Technology Company" mentioned in the paper, we can learn that the land improvement technology of enterprises not only changes the quality of saline-alkali land, but also provides a feasible path for the protection of legal agricultural land. In addition, thinking about the reduction of rural labor force not only needs to consider technical means, but also needs to make corresponding adjustments in agricultural economic structure and agricultural labor training (" Baoshu Agricultural Technology Company "case).

2. Discussion on Strategic Advancements in the Transformation and Utilization of Saline-Alkali Land to Promote Agricultural Development, Ecological Improvement, and Overall Food Security in China:

In terms of the conversion and utilization of saline-alkali land, China is taking strategic steps to contribute to agriculture, ecological environment and food security through the ecologically oriented development model described in the paper. The success of Baoshu Agricultural Technology Company proves that advanced technology and flexible use of policies can promote the sustainable use of saline-alkali land. This strategic shift is not only related to agricultural production, but also to national food

security and ecological balance. By summarizing the experience of saline-alkali land improvement, this successful model is expected to be popularized in a wider range.

In November 2021, The General Office of the State Council issued the Opinions on Encouraging and Supporting Social Capital to participate in Ecological Protection and Restoration (GuOCofa (2021) No. 40) (hereinafter referred to as No. 40), which clarified that social capital can participate in the mode of independent investment, cooperation with the government, and public welfare participation. It is also clear that social capital can obtain benefits from ecological protection and restoration in the following ways: adopt the "ecological protection and restoration + industry introduction" way, and use the obtained natural resource assets or franchise rights to develop appropriate industries; Apply for verification of carbon sink increments and transactions for ecosystems with carbon sink capacity formed by investment and meeting relevant requirements; Income obtained through comprehensive utilization of resources approved by the government, etc.

Conclusions

Aiming at the obstacles encountered in the protection of cultivated land in China, this study selected the development case of Baoshu Agricultural Science and Technology Company as the research object, and explored the utilization strategy of saline-alkali land from the current situation of China's agriculture. Using the qualitative research methods of literature review, field investigation and expert evaluation, the challenges of cultivated land protection were highlighted, including illegal occupation, land quality decline and rural labor force reduction. The findings provide valuable insights into the challenges and necessary strategic measures to protect arable land, transform saline-alkali land and ensure sustainable agricultural development in China. Given the comprehensive understanding of sustainable land conservation and agricultural development, future research can be extended to ecological sustainability issues, focusing on illegal occupation and declining land quality trends, advocating precision agriculture technologies and sustainable agricultural practices, investing in research and development of soil improvement technologies, and exploring the application of advanced technologies such as artificial intelligence, blockchain, and big data analytics. Use agricultural technology to improve efficiency and product quality to provide additional insights into theoretical and management implications.

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MASS MEDIA REGULATOR: IDEAL PROFESSIONAL STANDARDS

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Abstract

This article aims to present information from reviews and collection of documents, concepts, theories, and related research on mass media supervision. It seeks to establish the relationship between 1) Self-regulation, 2) Rights, freedoms, and professional standards, and 3) Ethics, a code of conduct, laws related to the mass media profession. The results of the study, we found that self-regulation and self-regulation of the media show the importance of being a mechanism that the media chooses to control their operations by fulfilling their responsibilities under the rights and freedoms based on social responsibility as stipulated in the Constitution of the Kingdom of Thailand, 2017, Section 35. The appropriate self-regulatory framework for the media involves collaboration among the government, mass media, civil society, and the public, known as co-regulation. This framework emphasizes the importance of ethics, morality, and legal compliance. It reflects the freedom to perform duties while operating under the cooperation of relevant sectors and in accordance with media reform policies in the constitution. It is necessary to have guidelines for professional practice, professional ethics, and social responsibility based on human rights principles. Transparency, fairness, verifiability, and the importance of quality information for the public are the complete professional standards of mass media.

Keywords: Mass Media Regulation, Rights, Freedoms and Professional Standards, Ethics, A Code of Conduct and Law

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Introduction

When it comes to the professional standards of mass media, it is a primary goal to establish guidelines and promote collective practices under ethical frameworks. These frameworks aim to assist in the regulation and supervision of various media sectors, particularly concerning media control and management. This entails setting mechanisms and tools to organize media in order to govern their behavior within the boundaries of appropriate rights and freedoms, as well as to ensure balanced social responsibility, considering the interests of all sectors of society (Ramasoota, 2013, p. 199), Currently, mass media are gaining increasing importance, driven by the need to preserve professional integrity, foster acceptance, and gain social trust. It also reflects the responsibility that the media has towards society from the works it creates (Yusin, 2013, p. 201-202) instead of being regulated by state power. Which is regulated by law alone. However, there is self-regulation of the media. It is still necessary to rely on the law as a mechanism to support effective governance. Including using the participation of civil society and the public to help monitor and monitor and supervise the media in presenting information and news, which occurs voluntarily. Can be flexible and changeable It is considered to create more credibility for the professional standards of the mass media as well. (Euamornvanich, 2019, p. 150-153).

Therefore, this article on "Mass Media Regulator: Ideal Professional Standards" is part of a literature review that encompasses both domestic and international perspectives. The researchers have collected, analyzed, synthesized, and presented content, emphasizing the significance of self-regulation, rights and freedoms, professional standards in the mass media, ethics, and relevant laws. The aim is to summarize the findings and provide stakeholders with practical applications.

Objectives

To display information from the review and collection of documents, concepts, theories, and research related to media supervision.

Review of Literature

This study it is a literature review. To connect the relationship between: 1) Self-regulation, 2) Rights, freedoms, and professional standards, and 3) Ethics, a code of conduct, laws related to the mass media profession. This was analyzed together with the study of other related documents. As follows:

(1) Self-regulation

From the study of Oranop Na Ayutthaya (2013) on the past experiences, it can be concluded that the consistent nature of self-regulation in the mass media is a system that involves individuals in the industry, both at the individual level and the group or non-governmental

organization level, that are responsible for all aspects of regulation. This includes setting guidelines, monitoring, and enforcing compliance with these guidelines. This is a voluntary process and may or may not involve government intervention at a lower level or no intervention at all. Additionally, there may not be legal measures in place to ensure enforcement of these guidelines. The components and mechanisms involved in this process are illustrated in Figure 1.

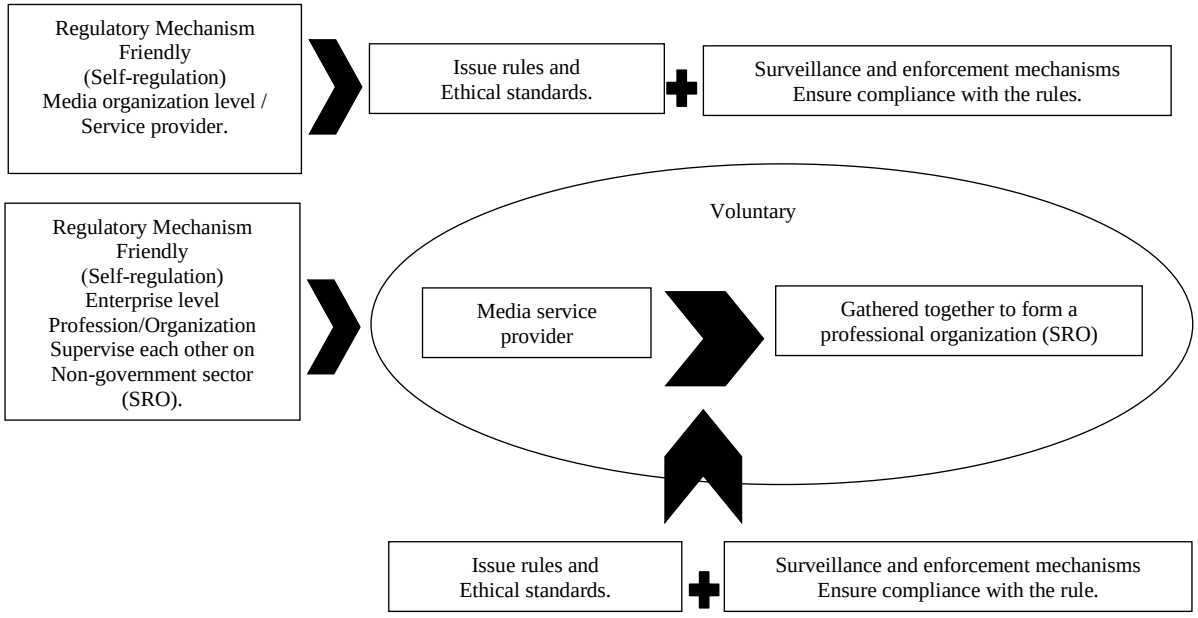

Figure 1. Components and mechanisms of self-regulation.

In actual practice, self-regulation is rarely enforced in various forms of media, such as print media, radio, and television, without involvement from the government or legal authorities. However, some forms of self-regulation do involve collaboration between regulatory organizations and those being regulated, known as co-regulation (ACMA, 2011, p. 4). This approach combines efforts from the government, professional organizations, and the public to oversee the media's operations. It establishes a robust self-control system that is implemented under a unified framework, reflecting the media's accountability to society. Currently, it is necessary for government agencies, media development institutions, civil society, and the public to participate in the regulatory process to ensure media accountability (Euamornvanich, 2019). This collaborative approach among relevant stakeholders is instrumental in maintaining media freedom while also demonstrating responsibility towards the content presented to the public and society as a whole.

The Constitution of the Kingdom of Thailand from 1997 to the present has guaranteed the principles. "Freedom of the press" is included, but they differ in detail. The Constitution of the Kingdom of Thailand, year 2017, dated April 6, 2017, which is the 20th constitution of Thailand, has

sections related to the media. That shows that in the overall picture of the Constitution of the Kingdom of Thailand, year 2017, there is increased emphasis on the importance of the media profession (Singkhachorn, 2017), with details as follows.

Section 34: A person shall have the freedom to express opinions, speak, write, print, advertise, and communicate meaning by other means. Such restriction of freedom shall not be permitted. Except by virtue According to the provisions of the law enacted specifically to maintain the security of the state. To protect the rights or freedoms of other people to maintain peace and order or good morals of the people. Or to protect public health.

Academic freedom is protected. But the exercise of that freedom must not conflict with the duties of Thai people or good morals of the people and must respect and not block other people's different opinions.

Section 35 Persons who practice the media profession shall have the freedom to present news. Or expressing opinions according to professional ethics.

Ordering the closure of newspapers or other mass media in order to deprive people of their freedom under paragraph one. Cannot be done.

Providing any news or messages prepared by mass media professionals to be examined by officials before being advertised in newspapers or any other media is prohibited. Unless done during a time when the country is at war.

The owner of a newspaper or other mass media business must be a Thai national.

Providing money or other assets to support private newspapers or other mass media. The state cannot do this. Government agencies that spend money or property for the media, whether for advertising purposes or public relations or for any other purpose of the same nature, details must be disclosed to the State Audit Commission within a specified period of time and announced to the public as well.

State officials performing media duties shall have the freedom under paragraph one. But consider the objectives. And the missions of the agencies to which they belong.

Section 59 The state must disclose information or public information in the possession of state agencies. That is not information about state security or is a government secret as provided by law. And must provide for the public to easily access such information or news.

Section 60 The state must preserve the frequencies and rights to use satellite orbits which are national property. To use for the benefit of the country and the people.

Providing for the utilization of frequencies under paragraph one, whether used for radio broadcasting radio, television, and telecommunications or for any other benefits, it must be in the best interests of the people. State security and public benefits Including allowing the public to participate in the use of frequencies as provided by law.

The state must establish state organizations that are independent in performing their duties. To be responsible and supervise Operations regarding frequency spectrum shall be in accordance with paragraph two. In this regard, the said organization must provide preventive measures to prevent unfair exploitation of consumers or creating more burden than necessary on consumers. Prevent frequencies from interfering with each other. Including preventing actions that have the effect of obstructing freedom of knowledge. Or block people's perception of information or news that is correct and true. And prevent persons or any group of persons making use of the frequency spectrum without considering the rights of the general public. Including determining the minimum proportion that users of the spectrum must operate for the public benefit as provided by law.

Section 98 Persons who have the following characteristics: Being a person prohibited from exercising the right to apply for election. Being a member of the House of Representatives

(3) Being an owner or shareholder in any newspaper or mass media business.

Section 184 Members of the House of Representatives and Senators must

(4) Do not do anything, whether directly or indirectly. Which is obstructing or interfering Unlawful use of rights or freedoms of newspapers or mass media.

(3) Ethics, a code of conduct, laws related to the mass media profession.

Ethics in the mass media profession refers to the moral conduct of professionals in the field of mass communication (Hinwiman, 2014, p. 3).

Professional ethics of mass media refers to the ethical standards that media professionals, who work in the field of communication, come together to establish as a professional association. These standards serve as guidelines for media professionals to fulfill their responsibilities (Bunsiriphan, 2013, p. 227).

It can be seen that ethics is crucial in society to bring about peace, prosperity, and progress. When individuals in society possess ethics, their minds are noble, pure, and enlightened. They work without causing conflicts or distress to themselves and others, becoming individuals of value, usefulness, and creativity that benefit their communities (Inthasara, 1998). As for professional ethics, it is a specific form of ethics in the professional field that provides principles and guidelines for professionals to adhere to. It is proclaimed at the level of "should" rather than being forcefully imposed. The efficacy and objectives of professional ethics and the dignity of professionals have the aim of benefiting people and their work. Therefore, in each profession, professional ethics have been established to define the roles, responsibilities, and behaviors of its members which Chinwanno (2003) summarized the importance of professional ethics as follows: professionals who have received training and have higher knowledge and than ordinary people have the opportunity to use their knowledge for the benefit of the general public, who may not be aware of it. For example, doctors

may treat patients with special care, police officers may abuse their positions to exploit the public for personal gain, and teachers may manipulate their students for personal benefits. These examples can be seen in society today. Finally, society demands professional ethics, which are defined by organizations or professional associations.

It can be seen that in 1923, the American Society of Newspaper Editors (1922) first established the principles of professional ethics in mass communication, stating 7 important principles, including 1) responsibility to society, 2) freedom of expression, 3) independence, 4) accuracy, 5) fairness, 6) justice, and 7) accountability. These principles are considered the foundation that professional media organizations have widely applied from the past to the present.

It can be seen that the ethical framework This professional code of ethics is not enforceable by law. And use the principles of voluntary observance but it is also important to bring acceptance and trust from the public.

While the law has conditions that govern behavior. The conduct of citizens in society in accordance with the needs of the state which is important (Royal Institute, 1999). This is crucial for the progress and orderliness of the nation, ensuring peace, justice, and safeguarding the freedoms and benefits of the people. It serves as a guiding principle for the government's administration and sets the framework for societal conduct that the mass media should be aware of and understand, in order to fulfill their responsibilities. These laws include:

1) The Constitution of the Kingdom of Thailand 2017, Section 3, Rights and Freedoms of the Thai People, Section 34, and Section 35.

2) Computer Crime Act (No. 2) B.E. 2017, Section 11, Section 14 (1) (2) (3) (4) (5), Section 16, Section 17 (1) (2) and Section 20 (1) (2) (3).

3) Personal Data Protection Act 2019, Section 4 (3) and Section 24 (1) (2) (3) (4) (5) (6).

4) Criminal Code, Section 1: Offenses against the King, Queen, Heir to the Throne, and Regent, Section 112, and Section 3: Offenses of defamation, Section 326, Section 327, Section 328, Section 329, Section 330, Section 331, Section 332. And Section 333.

5) Civil and Commercial Code Concerning the offense of violating reputation and honor, Section 423.

6) Juvenile and Family Court and Juvenile and Family Court Procedure Act B.E. 2010.

7) Copyright Act 1994.

8) Other relevant laws.

This is about the connection between the literature above. Can be created as a research conceptual framework in Figure 2.

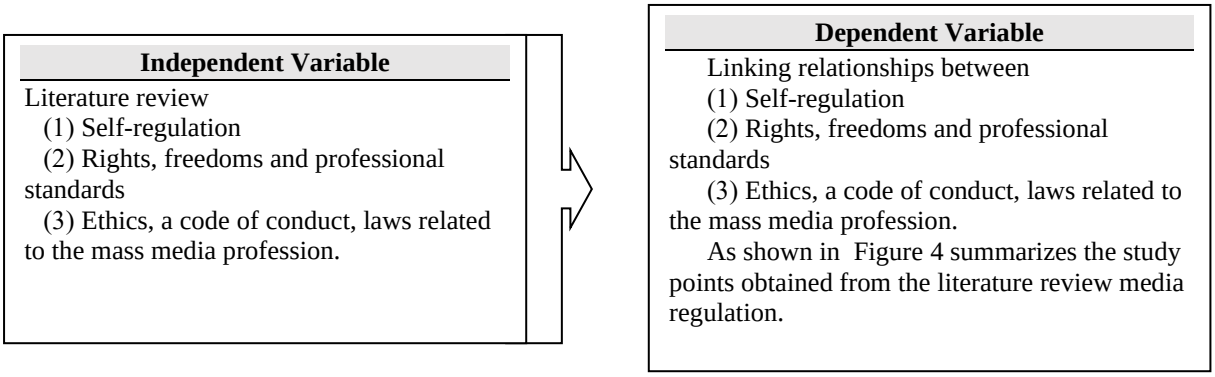

Figure 2. Conceptual framework.

Methodology

This study it is Qualitative Research using studies from related documents (Document Analysis) to review the literature. Then we analyzed the text (Textual Analysis) to link it to the study results. The process has the following methods:

1. Research, study, collect, and review content related to: 1) self-regulation, 2) rights, freedoms, and professional standards, and 3) ethics, a code of conduct, and laws related to the mass media profession.

2. Organize data, process, analyze, synthesize, and link relationships.

3. Summarize the relationship results and the connections between: 1) self-regulation, 2) rights, freedoms, and professional standards, and 3) ethics, a code of conduct, and laws related to the mass media profession for future use and application.

Research Results

The study found that: 1) Self-Regulation has various definitions, but there is no consensus on a common definition (Freiberg, 2010, p. 26; Lievens, 2010, p. 193). It is generally understood as self-regulation by the industry itself (Ang, 2003, p. 2). However, in 1997, Larry Irving, the former Assistant Secretary of Commerce for Communications, and Information in the United States, defined self-regulation as the distribution of regulatory power to government organizations, but it is also used to refer to the private sector's desire to self-regulate for various reasons. However, from a communication perspective, the Office of Communications (OFCOM) in the United Kingdom defines independent regulatory bodies as groups of businesses coming together to establish control over each other's behavior. Membership is voluntary, and members jointly formulate rules or standards. Members have a direct responsibility for monitoring and enforcing compliance with the jointly agreed guidelines, without relying on legal authority from state regulatory bodies, but rather on voluntary commitment and shared responsibility (Ramasoota, 2013, p.99). This aligns with the definition of the

Australian Communications and Media Authority (ACMA), which defines self-regulation as the development of guidelines for monitoring and enforcement to ensure compliance with industry standards, based on voluntary compliance without legal backstop measures to enforce compliance with these guidelines (ACMA, 2011, p. 4).

From the above mentioned, the self-regulation is essential in demonstrating the unity of a professional group that strives to establish standards, guidelines, or rules for self-control without the need for external influences such as government authority or laws. This concept is widely practiced in various professional fields, including the media industry, where it is known as media self-regulation. It refers to a mechanism that the media collectively adopts to regulate their own operations, ensuring the rights and freedoms to seek, select, and present information to the public without undue interference. However, this self-regulation must be based on a sense of responsibility towards society.

In order to be influential in the media, it is important to develop self-regulation in one's profession. Haraszti (2008, p. 12) states this, interestingly, and Biggins (2009, p. 63-64) presents the significance of self-regulation in business organizations through the use of professional ethics and adherence to 10 technical standards. These standards include: 1) Self-control systems should be global. 2) Collaboration should be carried out among multiple units. 3) Management should be independent. 4) Professional ethics should be internationally recognized. 5) Guidance notes should be provided to members. 6) Efficient handling of complaints should be conducted. 7) The committee to address complaints should be neutral and free from interference by the government or other organizations. 8) Effective action should be taken against violators. 9) Systematic inspections should be conducted. 10) Consumers should be aware of the channels available for filing complaints. Simultaneously, businesses should adhere to ethics and appropriate procedures. From the lessons of Thai scholars, it is found that self-regulation is considered a tool for guiding the media's responsibility towards society (Sirisampan, 1970, p.58). It is also a policy tool for government planning and decision-making to achieve desired goals (Ramasoota, 2013, p.199). Furthermore, it can serve as a main mechanism for disseminating quality information and news to society (Pipitkul, 2003, p.199), as well as a framework for international cooperation, following the spirit of media reform in the constitution, and ensuring the participation of various sectors in accordance with the objectives of the master plan. This is to regulate and monitor the quality and usefulness of content for the public, while considering human rights and diversity, preventing rights violations and unfair comparisons, under transparent and fair conditions (Ramasoota, 2013, p.200). Based on the collection of ideas and perspectives from scholars, the importance of self-regulation can be summarized for practical use, as shown in Table 1.

Table 1. Summarizes the consistency of key self- regulation. For use.

The importance of self-regulation			
Academic	**Viewpoints**	**Consistency**	**Utilization**
Haraszti (2008, p. 12)	Self-regulation gives editorial teams freedom in their work. There is no interference from the state or there is little state intervention. Therefore, it promotes the quality of the work of the mass media. However, this must be based on social responsibility. This will inevitably result in the receiver being able to access the identity of the mass media.	Social responsibility according to human rights principles Under independent work, resulting in the receiver having access to information good quality news according to the media reform policy in the Constitution for the benefit of the public. And create transparency and fairness.	1. Freedom in performing duties, while ensuring 2. Operations conducted in collaboration with relevant sectors and in accordance with media reform policies under the constitution 3. Guidelines for self-regulation and supervision 4. Professional ethics and social responsibility based on human rights, transparency, and accountability, which can be verified and 5. Emphasis on quality information and news for the benefit of the public.
Biggins (2009, p. 63-64)	Self-regulation is an international system accepted by media professionals, which is implemented in cooperation with many agencies. That must have independence in management have professional ethics There is a workable guideline for members and a complaint system that is accurate and efficient. And there is a committee that	Can operate with cooperation such as from the government sector, but there is independence in management. There is a	

Table 1. Summarizes the consistency of key self- regulation. For use. (Cont.)

The importance of self-regulation			
Academic	**Viewpoints**	**Consistency**	**Utilization**
	is neutral, transparent and inspects and manages violators. Can commit an offense for reliability and most importantly, the receiver must be aware of their rights as well.	professional code of ethics for the media that is transparent and verifiable and has a good work practice manual. For the benefit of the people.	
Sirisamphan (1970, p. 58)	Self-regulation can be considered a tool for ensuring that the media are socially responsible.	Social responsibility	
Ramasoota (2013, p. 199-200)	Self-regulation can be considered a government policy tool. For planning any action to lead a decision or to achieve the desired goal. It is a subsidiary agreement under the cooperation of international organizations. This is in accordance with the intent of media reform in the Constitution. as well as granting rights to participation of various sectors in line with the objectives of the master plan. To supervise business operations in terms of content to be of quality and beneficial to the public. Under consideration of human rights and diversity principles, do not violate rights and be taken advantage of. Under transparency and fairness.	Give importance to government policy Media reform in the constitution and human rights principles for the benefit of the public and transparency and fairness that result in the recipient having access to information. Quality news.	
Pipitkul (2003, p. 199)	Self-regulation can be considered a key mechanism for disseminating information. Quality news for society.	The audience can access and receive information. Quality news.	

And the format of self-regulation in mass media can be divided into three categories, divided using the criteria: 1) main aspects of supervision According in the surrounding context of the mass media system in which society exists, including structure, technology, access and distribution, content. 2) The form of the elements and relationships of those involved (Ramasoota, 2013, p. 200) includes direct supervision from the government sector, self-regulation. (Self-regulation) Co-Regulation (Co-Regulation) and 3) control from outside or within the mass media (Surasonthi, 2010, pp. 1-41) Including external control Both from the government sector, the public sector, and internal control of the media itself. The media will set up a joint organization. To consider and determine guidelines for performing duties. The self-regulation model of the media can be divided according to any criteria. In all formats, there is a clear connection to the power of the state, Mass media professionals' Civil society sector and the people, as shown in Figure 2.

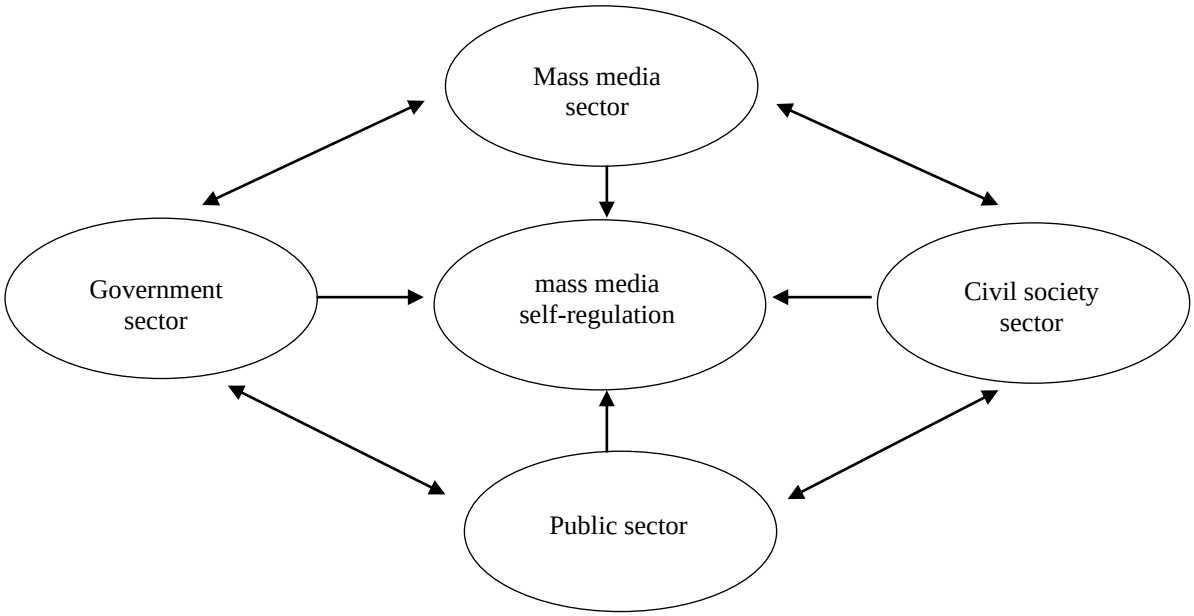

Figure 3. Sectors involved in mass media self-regulation.

2) Rights, freedoms, and professional standards of the mass media. It was found that if looking at the group of communication regulatory organizations in various countries, you will find self-regulation of the mass media. That is another word that has been defined. Along with the word "Freedom of the media is the freedom of the people." Therefore, it is very important for the media to have the freedom to perform their duties for the people. To receive news that is beneficial Without interference from various factors, the Constitution of the Kingdom of Thailand, Year 2017, Section 35 It is stated that "Persons who practice the media profession have the freedom to present news or express their opinions in accordance with professional ethics" and it clearly reflects that Although the media has the freedom to present news But the presentation of the news Inevitably, professional ethics must be taken into account. And self-regulation of the mass media it can be considered one of the

mechanisms used by the media to control the media's work. So that the media still has freedom under their responsibility in presenting the news. Which this self-regulation It relies on the principles of ethics that occur voluntarily. And will be effective There must be three important elements (Haraszti, 2008, p. 11; Southeast Asean Press Alliance, 2017; The Hon Ray Finkelstein and Tiffen, 2015, p. 950; Puddephatt, 2011, p. 12; Campbell, 1999, p. 715). As follows: 2.1) A legal environment that promotes and protects the rights to freedom of expression and freedom of the media, 2.2) A self-regulatory mechanism based on the principles of credibility, transparency, and democracy, 2.3) Participation Civil society and people Media self-regulation are flexible. Can modify and more effective than state control in addition, self-regulation of the media can also build credibility for the media.

And 3) ethics, morality, and laws related to the mass media profession are considered essential for the proper functioning of the media. In the past, self-regulation by the media seemed ineffective and unable to establish credibility in society (Euamornvanich, 2019) While ethics and morality are abstract concepts, laws provide clear guidelines on prohibited actions and corresponding penalties. Therefore, it is crucial for all media practitioners to be aware of and adhere to these principles, working within the framework of social responsibility and prioritizing the public interest. By doing so, society will not question or express dissatisfaction with the presentation of information. Moreover, any form of media regulation may no longer be as significant as before.

Discussion and Conclusions

From the review of literature including documents, concepts, theories, and related research both in Thai and foreign. In terms of media supervision, it was found that the self-regulation of the mass media considered important as it is a mechanism that the media choose to control their own operations. Any task performed must have rights and freedoms, without interference from others, but can be generated through cooperation, including the government sector, the media sector, the civil society sector, and the public sector, or what is called co-regulation, as found in the research of Oranop Na Ayutthaya (2013) and ACMA (2011, p. 4) refers to the practice where self-regulation is connected with governmental entities or legal authorities. It involves a collaboration between regulatory organizations and those being regulated, extending beyond just cooperation between the public sector and professional bodies, but also encompassing the social sector and the general public for the maximum benefit of society. It is based on the responsibility that society requires and is in line with Euamornvanich (2019) article on the media and self-regulation, which interestingly discusses how co-regulation by various stakeholders could assist in maintaining media freedom while also demonstrating the necessary accountability towards the public and society. (Sirisamphan, 1970, p. 58) and the most important thing is to be aware of ethics. Ethics and laws related to the media profession are also included (Royal Institute, 1999). Therefore, it will reflect the rights, freedoms, and professional standards of the mass media (Singkhajorn, 2017). This is the main objective to create guidelines for practice and to promote confidence in the profession, as well as to ensure the highest

quality and complete professional performance (Hinwiman, 2014, p. 3; Bunsiriphan, 2013, p. 227; Inthasara, 1998; Chinwanno, 2003). The researcher summarized the main points and created a diagram. “Summarizes the study points obtained from the literature review media regulation” This then leads to the creation of a diagram. “Mass Media Regulator: Ideal Professional Standards” as shown in Figure 4. and Figure 5., respectively.

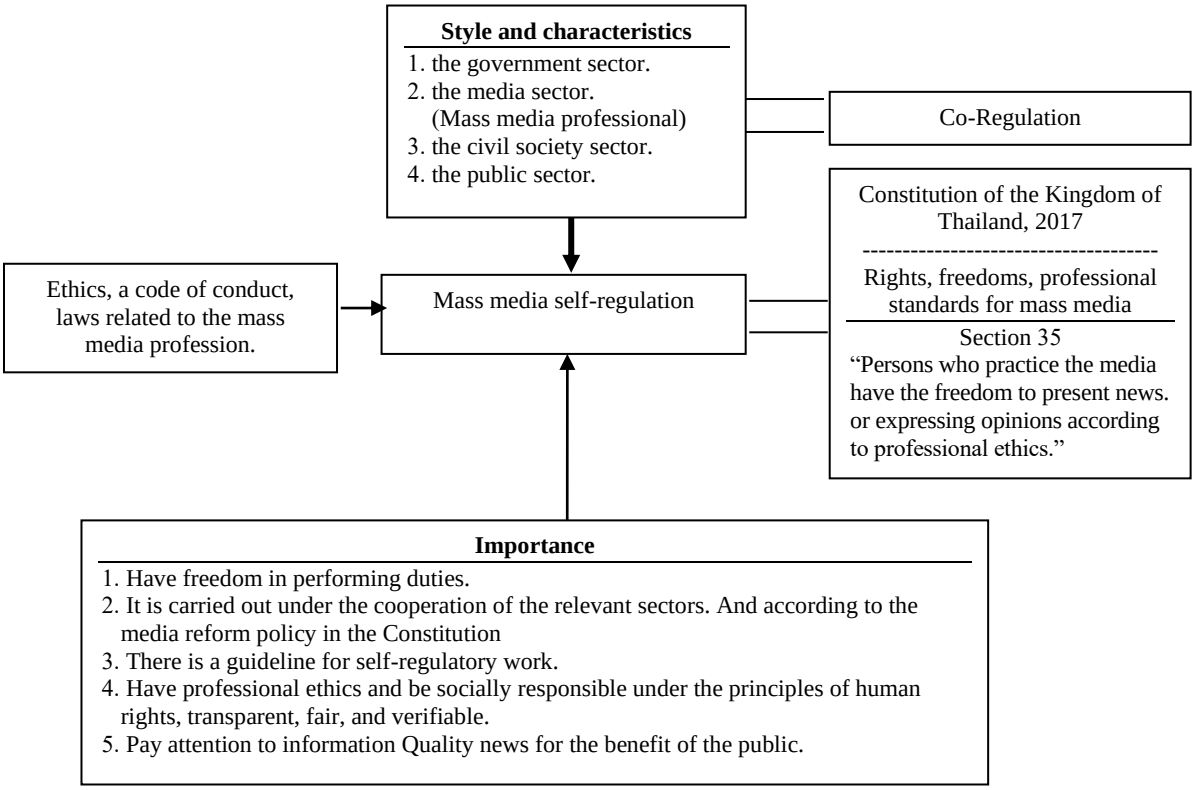

Figure 4. Summarizes the study points obtained from the literature review media regulation.

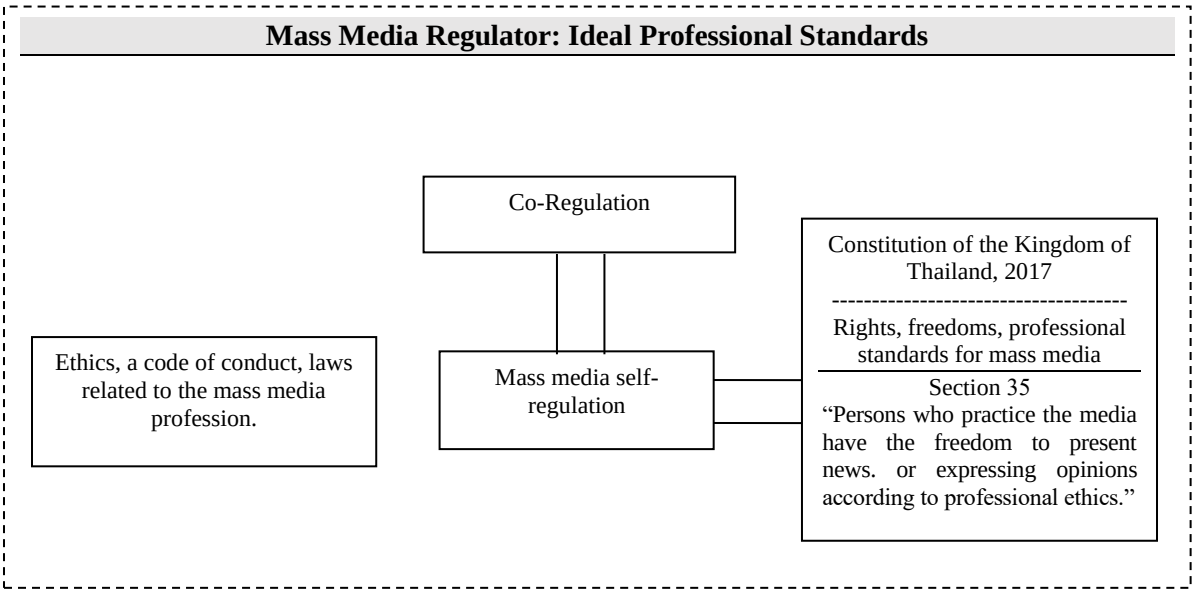

Figure 5. Mass Media Regulator: Ideal Professional Standards.

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FINANCIAL DISTRESS OF THAI LISTED COMPANIES BETWEEN TECHNOLOGY AND CONSUMPTION INDUSTRY

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Abstract

This study aimed to analyze the influence of financial ratios on predicting financial distress with a total of 36 companies in the technology industry. and a total of 36 companies in the consumption industry. on the stock exchange of Thailand (SET) as the sample. We aimed to examine the impact of COVID-19 on the financial distress of those firms by including them for 2 periods: pre-COVID-19 (2016–2018) and during COVID-19 (2019–2021). The study on financial distress is critical as it can lead to bankruptcy, which may adversely affect the economy of the country. The Altman Z-score is used to measure the level of financial distress. The data were analyzed with descriptive statistics and regression. The findings show COVID-19 has a higher impact on the characteristics of firms in the consumption industry than those in the technology industry. During the widespread COVID-19, many businesses worldwide have closed by policy mandate, causing downward demand shifts. However, most businesses adapted new technology to develop business processes to respond to changes in consumer behavior. Therefore, technology firms listed on the SET experienced a lower impact from the COVID-19 epidemic. This study assisted the firm's executives to beware of financial distress and predict it before facing financial problems. They should manage the determinants of financial distress well to increase the Z-score and remain in the "safe zone."

Keywords: Financial Distress, Technology Industry, Consumption Industry

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Introduction

In 2019, a novel corona virus disease was named as COVID-19 was officially detected in Wuhan, China (Chappell 2020). The outbreak of it has spread to all countries and caused economic disruption worldwide. Thailand was the first country outside China that reported a new case of COVID-19 in Bangkok on January 13, 2020 (Kannikar, Debra and Suwat, 2021). Due to rapid spread, since March 2020, tourism businesses and other services in the country had been shut down following government policies. Bangkok and its surrounding provinces locked down, leading to hotel and travel businesses were closed and facing significant business losses (Siwarit, Pimlapass, Kumar and Maswongssa, 2021). Thereafter, most business sectors gradually shut down. This crisis has affected all business sectors both within the country and international business partners.

The financial academic term relating to the firms' failure is financial distress. Financial distress is one of the preceding circumstances, leading a firm to be unable to honor its debt obligation or incapable of conducting economic activities and finally may be get into insolvency. Financial distress problems arise when companies have difficulties paying the financial commitment (Roslan, 2014).

When a company heads to financial distress, the chances of high opportunity to bankruptcy exist and leads to bad reputation of firm. Then, the shareholder may draw back their funds and also it prevents new investors from investing in the company (Khaliq et al., 2014). Financial distress has been examined from various industry perspectives such as small medium enterprises, technology sector, services sector, finance sector and consumption sector, etc. In general, bankruptcy declaration is the end point of a company; therefore, the stakeholders avoid a firm to be bankruptcy.

Financial distress prediction has been an attractive topic amongst researchers to develop finance tools to measure the level of financial distress as a signal sign for the firms before facing financial problems (Roslan, 2014). Because bankruptcy of firm is the end up of firm, this leads to make many problems to stakeholders such as employees in terms of lay-off employment, debtors in terms of non-performing loans, stockholders in terms of no return, and stock market regulators in terms of a lack of supporting regulation for firms (Alifiah, 2014; Bae, 2012). The issue of the financial distress and bankruptcy of firms had been investigated by many scholars for years. For example, Dalila and Mohamed (2021) investigated Malaysian listed companies engaged in financial information fraud during financial distressed after two years of US subprime mortgage crisis and investigate the impact of financial information fraudulence in bankruptcy prediction during 2011 – 2015. Yazdanfar and Ohman investigated the determinants of financial distress among Swedish small and medium-sized enterprises (SMEs) during the global financial crisis and post-crisis periods. The popular financial distress prediction model amongst researchers is called Altman Z-Score Model and developed to the Emerging Market Score Model.

Therefore, researchers intended to investigate the companies listed on the stock exchange of Thailand both in technology sector and consumption sector because of the quite difference business process. Additionally, we aimed to examine the impact of COVID-19 on financial distress of those

firms by including for 2 periods: pre-COVID-19 (2016 – 2018) and during COVID-19 (2019 – 2021) As a result, there were 3 major research questions for the study, consisting of:

1. What is the difference in the percentage of firms with “distress zone” of each sector during pre-COVID-19 and during COVID-19?
2. What are firms’ characteristics impact on financial distress of each sector during pre-COVID-19 and during COVID-19?
3. What are the different major findings between the two business sectors analysis?

The paper is structured as follows: Section 2: review of previous literature; Section 3: methodology and measurement variables used; Section 4: research results; and Section 5: discussion and conclusion.

Review of Literature

Generally, the purpose of a literature review is to analyze critically a segment of a published body of knowledge through summary, classification, and comparison of prior research studies, reviews of related literature, and theoretical articles

The Stock Exchange of Thailand (SET)

The Stock Exchange of Thailand (SET) is the main stock exchange in Thailand. It serves as a crucial platform for various economic and financial activities within the country. It is important in many ways. SET facilitates raising capital for businesses, promoting economic growth, and creating jobs. It provides a platform for the transparent and efficient allocation of resources in the Thai economy. A well-functioning stock market strengthens investor confidence, attracts foreign investment, and boosts the financial sector. The performance of the SET acts as an indicator of Thailand's overall economic health. SET has organized the industry group structure of listed companies. So that companies that operate similar businesses will be in the same category. This will allow investors to compare information. between listed companies and can be used to make appropriate investment decisions. It consists of 8 industries: 1) Agro & Food Industry; 2) Consumer Products; 3) Financials; 4) Industrials; 5) Property & Construction; 6) Resources; 7) Services; and 8) Technology. (The Stock Exchange of Thailand, 2024)

Financial Distress

Financial distress is one of the preceding circumstances that leads a business into insolvency. Business failure and financial distress are common status quos that happen in a competitive market environment. (Kamaluddin et al., 2019) The financial distress problems are an accumulation of mismanagement by the company to run its business operations in the long term. Bankruptcies do not occur suddenly. Rather, it begins with a financial distress warning where companies experience financial difficulties in generating profits or earnings income, which continues to decline from year to year. (Kisman & Krisandi, 2019) When the company experiences financial difficulties, it will be

a consideration for investors, and creditors who will invest may find it difficult to secure financing. They may also find their market value and stock price dropping significantly, resulting in customers cutting back orders. (Yazdanfar & Öhman, 2020) If the company has more bankruptcies, this will cause investors to avoid investing in these companies. This may directly affect the company's performance in the future. Finally The company's creditworthiness is downgraded, making it difficult to obtain further loans or financing.

Financial Distress Model

The popular financial distress model is the Altman Z-Score Model. It was developed in 1968 by Edward Altman (Altman, 1968) The model employed financial data to measure the financial stability of companies. The Z-score model is based on five major financial ratios and its formula is shown in Model 1 below.

Model 1: $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.999X_5$

Where:

Z is the Altman's Z-score

X_1 is the working capital / total assets ratio.

X_2 is the retained earnings / total assets ratio.

X_3 is the earnings before interest and tax / total assets ratio.

X_4 is the market value of equity / total liabilities ratio.

X_5 is the total sales / total assets ratio.

In 1993, Altman improved the predictive ability of his model and made it friendly incorporate with "four key financial variables" and be called the Emerging Market Score Model as shown in Model 2 below. (Altman & Hotchkiss, 1993)

Model 2: $Z = 3.25 + 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$

Where: $X_1 - X_3$ variables are the same.

X4 is the book value of equity / total liabilities.

The interpretation of the Emerging Market Score Model is classified into three outcomes:

EM Z- score $\geq$ 2.99	means the good financial health of firms or "Safe" Zones
1.81 < EM Z- score < 2.99	means the uncertainty of going bankrupt or "Grey" Zones
EM Z- score $\leq$ 1.80	means the high risk of bankruptcy or "Distress" Zones

Effect of Liquidity on financial distress

Liquidity is often measured using the current ratio, which measures the ability of a company to fulfill its short-term liabilities with its current assets. This means that the higher the ratio value, the better the company's ability to meet its current liabilities. (Nurhayati et al., 2017) When the value of the liquidity ratio is high, the company has the ability to meet its short-term debt obligations. (Dirman, 2020) If the company is in liquid condition, it will automatically be able to overcome financial distress.

(Desiyanti et al., 2019; Hanafi et al., 2021; Nurhayati et al., 2017) found that liquidity has a positive effect on financial distress. (Kisman & Krisandi, 2019), in their research, found that liquidity has a negative effect on financial distress.

Effect of Solvency on financial distress

Solvency is used to measure the company's ability to pay all its obligations, both long-term and short-term, if the company is liquidated. The use of these funds will result in the company's obligation to repay the loan principal and interest. (Kisman & Krisandi, 2019) Solvency can be a signal that is sent by the company to investors. This is due to the fact that the greater the activities of companies financed by debt, the greater the possibility of financial distress. (Kamaluddin et al., 2019; Kisman & Krisandi, 2019; Nurhayati et al., 2017; Yazdanfar & Öhman, 2020), their research found that solvency has a positive effect on financial distress. (Desiyanti et al., 2019), in their research, found that solvency has a negative effect on financial distress.

Effect of Firms' size on financial distress

Firm's size describes how many total assets the company has. Larger firms may have a wider range of products or services, which can mitigate the impact of economic downturns or sector-specific issues. This reduces risk and improves financial distress. And they tend to have better access to resources and are more likely to exploit economies of scale to diversify their product range and competitive advantage. Larger firms seem better positioned to overcome financial distress. (Dirman, 2020; Yazdanfar & Öhman, 2020), in their research, found that a firm's size has a positive effect on financial distress.

Effect of Profitability on financial distress

Profitability is the ratio used to assess the ability of a company to generate profits. Profit is one indicator of the company's performance. (Dirman, 2020) Companies with high profitability are less likely to experience financial distress. Profitability could be used as a proxy for return on assets. Profitability shows how capable a company is of using its existing assets to generate profit. (Dirman, 2020; Kisman & Krisandi, 2019; Yazdanfar & Öhman, 2020) in their research found that profitability has a positive effect on financial distress. If the level of profitability of the company is getting higher, it is unlikely that the company will experience financial distress. (Bakar, 2021; Nurhayati et al., 2017), in their research, found that profitability has a negative effect on financial distress.

Effect of Fixed asset efficiency on financial distress

Fixed asset efficiency measures the effectiveness of a company in utilizing its fixed assets. the level of efficiency of resource utilization (Nurhayati et al., 2017). When fixed assets are used efficiently, they generate more revenue per unit of cost, leading to higher profits and improved

operational cash flow. This strengthens the firm's financial position and provides a buffer against financial distress.

Methodology

This comparison study aimed to investigate the financial distress between Thai listed companies in technology sector and those ones in consumption sector. In addition, the determinants of financial distress of the companies in both industries were also examined in the study. The research methodology consisted of three subsections: 1) population and sample size, 2) data collection and variable selection and 3) data analysis. The details of each subsection are explained below.

Population, and sample size

The study focused on Thai listed companies for two sectors: technology sector and consumption sector. Data collection was from the SETSMART during 2016 – 2021. The study excluded unlisted and delisted companies, and companies with unavailable data. Finally, the study included 68 companies as shown in Table 1 below.

Table 1. Thai listed companies in each sector

Industry sector	Number of companies	Number of samples
Consumption	45	32
Technology	45	36
Total	90	68

Data collection and variables usage

Not only studying the financial distress, but researchers also examined the determinants of financial distress. Thus, independent variables of the study included firms' characteristics, consisting of liquidity, solvency, firms' size, profitability, and fixed asset efficiency. All secondary data was obtained from the SETSMART and annual financial statement of each company. Thus, this study employed 408 observations (from 68 firms x 6 years). The definitions of variable, mnemonic and sources of data were shown in Table 2 below.

Table 2. Definitions, mnemonic, and sources of data of each variable

Variables	Mnemonic	Definitions	Sources of data
Dependent variable			
Financial distress	*Zcore*	The Z-score for classifying the level of financial distress of firms.	Employ the Altman's EM-Score Model

Table 2. Definitions, mnemonic, and sources of data of each variable

Variables	Mnemonic	Definitions	Sources of data
Explanatory variables			
1. Liquidity	*Cr*	$\frac{\text{Current asset}}{\text{Current liability}}$	Financial Statements and own calculation
2. Solvency	*Solv*	$\frac{\text{Cash flow from operation}}{\text{Total liability}}$	Financial Statements and own calculation
3. Firms' size	*Size*	ln(Total assets)	Financial Statements and own calculation
4. Profitability	*ROA*	$\frac{\text{Net profits}}{\text{Total assets}}$	Financial Statements and own calculation
5. Fixed asset efficiency	*Eff*	$\frac{\text{Cash flow from operation}}{\text{Net fixed assets}}$	Financial Statements and own calculation

Data analysis

This research employed below.

1. Employ the Altman's EM-Score Model 2 to estimate the Z-core of each company.
2. Descriptive statistics were used for describing the characteristics of data in terms of mean, maximum, minimum and standard deviation.
3. Pearson correlation was used to study the relationship between those variables to check multicollinearity.
4. For inferential statistics, researchers employed multivariate regression in terms of the Fixed effect model.

Researchers separately analyzed the data into two periods: pre-COVID-19 (during 2016–2018) and during COVID-19 (during 2019–2021) for the comparison study.

The model specification of the research was developed below.

$$Zscore_{it} = \beta_0 + \beta_1 Cr_{it} + \beta_2 Solv_{it} + \beta_3 Size_{it} + \beta_4 ROA_{it} + \beta_5 Eff_{it} + \varepsilon_i$$

which $Zcore_{it}$ is financial distress for individual i and t, Cr_{it} is the liquidity for individual i and t, $Solv_{it}$ is the solvency for individual i and t, $Size_{it}$ is the firms' size for individual i and t, ROA_{it} is the profitability for individual i and t, Eff_{it} is the fixed asset efficiency for individual I and t , and ε_i is a random error term.

Research Results

This section showed four major findings from research analysis below.

1. The results of the financial distress or Z-score from the Altman's EM-Score Model were shown in Table 3 below.

Table 3. Frequency and percentage of companies classified by financial distress zone.

Zone	Technology Sector				Consumption sector			
	2016 – 2018		2019 – 2021		2016 – 2018		2019 – 2021	
	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage
Safe	108	100%	106	98.15%	96	100%	96	100%
Grey	0	0%	2	1.85%	0	0%	0	0%
Distress	0	0%	0	0%	0	0%	0	0%
Total	108	100%	108	100%	96	100%	96	100%

Table 3 showed that all firms in the technology sector were in safe zone during pre-COVID-19, but two companies were dropped to gray zone during COVID-19. Whereas all companies in the consumption sector were in safe zone during pre-COVID-19 and during COVID-19. This might be of the nature of consumption business related to daily items for human beings' survival; therefore, the firms still generated incomes during COVID-19.

2. From Table 2, the descriptive statistics results were shown in Table 4.

Table 4. Descriptive statistics of each variable

Variables		Mean	Maximum	Minimum	Standard deviation
Technology Sector					
Dependent variable					
2016 – 2018	*Z-score*	9.812	38.039	3.579	4.225
2019 – 2021	*Z-score*	8.949	17.270	2.547	2.919
Explanatory variables					
2016 – 2018	*Cr*	1.695	5.285	0.405	1.065
	Solv	0.159	1.604	-0.924	0.310
	Size	3.946	5.695	2.714	0.678
	ROA	0.035	0.324	-0.306	0.808
	Eff	0.186	6.185	-7.232	1.787
2019 – 2021	*Cr*	1.656	6.560	0.286	1.244
	Solv	0.168	1.317	-0.596	0.297
	Size	4.035	5.796	2.897	0.656
	ROA	0.036	0.216	-0.152	0.589
	Eff	0.171	10.363	-15.095	2.411

Table 4. Descriptive statistics of each variable

Variables		Mean	Maximum	Minimum	Standard deviation
Consumption Sector					
Dependent variable					
2016 – 2018	*Z-score*	12.422	25.553	5.943	4.244
2019 – 2021	*Z-score*	11.776	23.849	5.218	4.092
Explanatory variables					
2016 – 2018	*Cr*	5.692	144.996	0.700	14.796
	Solv	0.359	3.731	-1.315	0.670
	Size	3.303	4.417	2.586	0.464
	ROA	0.039	0.335	-0.214	0.805
	Eff	0.438	7.543	-4.267	1.346
2019 – 2021	*Cr*	8.208	216.213	0.989	28.880
	Solv	0.205	3.328	-0.878	0.485
	Size	3.301	4.423	2.564	0.455
	ROA	0.013	0.401	-0.343	0.974
	Eff	0.515	16.131	-4.170	2.315

From Table 4, the results show the major findings below.

1. In the technology sector, the means of Z-score between are 9.812 and 8.949 during pre-Covid 19 and during COVID-19, respectively, reflecting being in safe zone. Whereas the means of each independent variables are quite similar between pre-COVID-19 (2016 – 2018) and during COVID-19 (2019 – 2021). The liquidity and solvency are in a range of 1.656 – 1.695 and 0.159 – 0.168 respectively. The firms' size, profitability and fixed asset efficiency are in the range of 3.946 – 4.035, 0.035 – 0.036, and 0.171 – 0.186 respectively.

2. In consumption sector, the means of Z-score between are 12.422 and 11.776 during pre-COVID-19 and during COVID-19, respectively, reflecting being in safe zone. For explanatory variable, the result shows that the liquidity is higher from 5.692 to 8.208. This may be because of the higher level of inventory during COVID-19. The solvency reduces from 0.359 – 0.205, implying that the decline of operating cash flows or the increase of total liabilities, or both during COVID-19. Profitability significantly drops from 0.039 to 0.013. Importantly, the fixed asset efficiency increases from 0.438 to 0.515, reflecting the fact that most companies lowered the size of fixed assets because of low demand during COVID-19.

Multicollinearity Analysis

To examine the relationship in a pair of each variable, researchers employed the Pearson correlation matrix to detect a multicollinearity problem before formulating regression models. The correlation results were presented in Table 5 below.

Table 5. The results of the Pearson's correlation

Technology Sector during 2016 – 2018						
	Z	*ROA*	*Solv*	*Size*	*Cr*	*Eff*
Z	1					
ROA	0.131	1				
Solv	0.412**	0.391**	1			
Size	-0.284**	0.216*	0.239*	1		
Cr	0.433**	0.187	0.292**	-0.216*	1	
Eff	-0.050	0.146	0.530**	0.156	-0.092	1
Technology Sector during 2019 – 2021						
	Z	*ROA*	*Solv*	*Size*	*Cr*	*Eff*
Z	1					
ROA	0.309**	1				
Solv	0.411**	0.495**	1			
Size	-0.114	0.198*	0.174	1		
Cr	0.491**	0.170	0.252**	-0.134	1	
Eff	0.149	0.148	0.591**	0.420	0.038	1
Consumption Sector during 2016 – 2018						
	Z	*ROA*	*Solv*	*Size*	*Cr*	*Eff*
Z	1					
ROA	0.280**	1				
Solv	0.588**	0.187	1			
Size	-0.230*	0.001	-0.113	1		
Cr	0.164	-0.089	-0.038	-0.208*	1	
Eff	0.224*	0.239*	0.567**	-0.116	-0.025	1
Consumption Sector during 2019 – 2021						
	Z	*ROA*	*Solv*	*Size*	*Cr*	*Eff*
Z	1					
ROA	0.300**	1				
Solv	0.444**	0.493**	1			
Size	-0.207*	0.046	-0.081	1		
Cr	0.084	-0.139	-0.199	-0.261*	1	
Eff	0.138	0.409**	0.583**	-0.070	-0.061	1

Note: ** and * denote significance at 1%, and 5% levels respectively.

As shown in Table 5, the magnitude of correlations among explanatory variables are in the range 0.025 – 0.591, which is lower than 0.80, implying no multicollinearity problem.

Regression Analysis

The results from the fixed effect regression models were presented in Table 6 below.

Table 6. The results of regression analysis

Variable	**Technology Sector**		**Consumption Sector**	
Year	**2016 – 2018**	**2019 – 2021**	**2016 – 2018**	**2019 – 2021**
Constant	0.818	1.582	1.485	0.939
	*0.00***	*0.00****	*0.00****	*0.00****
ROA	21.525**	15.623**	10.238**	11.817**
	0.00	*0.00*	*0.00*	*0.00*
Solv	4.506**	-0.030	0.466	0.917*
	0.00	*0.56*	*0.168*	*0.91*
Size	2.774	-0.879	-10.134**	-7.65**
	0.08	*0.25*	*0.00*	*0.00*
Cr	0.097	1.096**	0.064**	0.035**
	0.91	*0.00*	*0.00*	*0.00*
Eff	-0.476**	-0.027**	-0.064	-0.057
	0.02	*0.00*	*0.61*	*0.10*
R^2	0.628	0.971	0.935	0.924
F-statistic	5.304**	86.518**	36.905**	18.253**

Note: ** and * denote significance at 1%, and 5% levels respectively

Table 6 reported the results of regression models comparing the determinants of financial distress for the firms in the technology sector and those in the consumption sector during pre-COVID-19 and during COVID-19. The major findings are below.

1. For the technology sector, during pre-COVID-19 the empirical model provides F-test at 1% statistical significance level, reflecting the significance of group effects within the model. The Model adjusted R square is 0.628, implying that the explanatory variables can explain financial distress 62.80%. The ROA and *Solv* provide a positive relationship with Z-score at the statistically significant 1% level. Whereas *Eff* provides a negative relationship with Z-score at the statistically significant 1% level. During 2019-2021 or during the COVID-19 epidemic, the empirical model provides F-test at 1% statistical significance level. The Model adjusted R square is 0.971, implying that the explanatory variables can explain financial distress 97.10%. The ROA still provides a positive relationship with Z-score at the statistically significant 1% level and *Eff* provides a negative relationship with Z-score at the

statistically significant 1% level. Interestingly, *Cr* provides a positive relationship with Z-score at the statistically significant 1% level.

2. For the consumption sector, during pre-COVID-19, the empirical model provides F-test at 1% statistical significance level, reflecting the significance of group effects within the model. The Model adjusted R square is 0.935, implying that the explanatory variables can explain financial distress 93.50%. The ROA and *Cr* provide a positive relationship with Z-score at the statistically significant 1% level. Whereas *Size* provides a negative relationship with Z-score at the statistically significant 1% level. During 2019-2021 or during the COVID-19 epidemic, the empirical model provides F-test at 1% statistical significance level. The Model adjusted R square is 0.924, implying that the explanatory variables can explain financial distress 92.40%. The ROA and *Cr* still provide a positive relationship with Z-score at the statistically significant 1% level and *Size* still provides a negative relationship with Z-score at the statistically significant 1% level. This evidence shows that major explanatory variables impacting on financial distress are the same during pre-COVID-19 and during COVID-19.

Discussion and Conclusions

The study revealed worthy major findings as below:

1. From descriptive statistics analysis, the Z-score of the listed companies in consumption sector were higher than those companies in consumption sector. This might be because of the nature of business process of consumption sector employed lower technology than that one in the technology sector.

2. The majors finding from Table 4 revealed that COVID-19 provides higher impact on the characteristics of firms in the consumption sector than those in the technology sector. During the widespread COVID-19, many businesses in global have closed by policy mandate, downward demand shifts, or other factors (Fairlie, 2021) However, most business adapted new technology to develop business processes to respond to the changes of consumer behavior. Therefore, technology firms listed on the SET gained a lower impact from the COVID-19 epidemic.

3. Interestingly, the ROA was a key factor affecting the financial distress of the firms in both the technology sector and consumption sector, and pre- and during COVID-19. This may be because the profitability was a major source of fund to support financial health of firms, which was associate with Kisman and Krisandi (2019) found a positive relationship of ROA to financial distress of sub-sector wholesale listed on the Indonesia Stock Exchange during 2010-2015 and.

4. The fixed asset efficiency or *Eff* was a key factor impacting on financial distress only the firms in the technology sector. This might be because the technology business related to a huge money for research and development or innovation, leading to significantly increase in high sales from the innovation products. This led to an increase in operating cash flow and a higher Z-score. Whereas a few innovations existed in the firms in the consumption sector.

5. The firms' size was a major variable affecting on financial distress only the firms in the consumption sector. It had a reverse relationship with Z-score because a larger firms' size had complexity structure and lack of agility, these lead to the firm hard to adapt itself when it faced with the rapid business changes. This was in line with Dirman (2020) pointed that in 2016-2018, the larger companies of industrial and chemical manufacturing listed on the Indonesia Stock Exchange, the lower of financial distress.

6. The liquidity or *Cr* of firms in the consumption sector was a key factor impacting on financial distress. This might be because the business cycle of the consumption firms was shorter than technology firms. Thus, net working capital for daily operating must be important for going concern. This implied that the higher liquidity led to a higher Z-score.

This study responded to research questions. The study found that no firms both in the technology sector and the consumption sector were in the distress zone both in pre-COVID-19 and during COVID-19, reflecting that good financial health of firms in both sectors. For the technology firm, the major factors affecting financial distress were profitability and fixed asset efficiency for those two periods. Whereas profitability, firms' size, and liquidity were the major factors affecting financial distress for the consumption firms. Comparing the two sectors, the study found that only profitability was a major factor affecting financial distress for the firms.

This study assisted the firm's executives to beware of financial distress and predict it before facing financial problems. They should well manage the determinants of financial distress to increase the Z-score to remain status in "Safe Zone."

Suggestions

1. The limitation of the study is the use of only two industries. For future research, it can take more industry companies. not limited sample to the technology and consumption industry companies in order to obtain better predictive models.

2. Compare the findings of this study with research on other countries or regions to examine the generalizability of the conclusions. This could shed light on how different economic and cultural contexts influence the impact of COVID-19 on specific industries.

3. Explanatory variables should be added. Integrate environmental, social, and governance (ESG) factors into your analysis of financial distress. Can incorporating sustainability practices enhance a firm's long-term financial health?

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THE INFLUENCE OF SERVICE QUALITY AND SOCIAL MEDIA SEARCH OF TOURIST SATISFACTION TOWARDS TRAVEL AGENCIES IN ZHOUSHAN CITY, ZHEJIANG PROVINCE, EASTERN CHINA

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Abstract

This research aimed to study the influence of service quality of travel agencies and social media searches on Chinese tourists' satisfaction in Zhoushan Zhejiang. This study recommends improving business for travel agencies in Zhoushan Zhejiang—the conceptual framework laid on the SERVQUAL model, social media search model, and expectation confirmation model. The samples were 405 tourists who traveled to Zhoushan Zhejiang, China, and used the top three leading travel agencies. Statistics used to analyze data were descriptive statistics, including Frequencies, Mean, and Standard Deviation, and inferential statistics were Independent Samples t-test, One-way ANOVA, LSD, and Multiple Linear Regression at the statistically significant level of 0.05. The analysis found that most respondents were females, married, 36-45 years old, homemakers, and 5,001-8,000 yuan of monthly income. The hypotheses found that the marital status difference affected tourists' satisfaction in confirming expectations differently. Service quality of travel agencies, including reliability and assurance, and social media search, including information sharing and information search, influences Chinese tourists' satisfaction in Zhoushan Zhejiang. The recommendations to improve travel agencies' business are provided in detail.

Keywords: Travel Agency Service Quality, Social Media Search, Chinese Tourist Satisfaction, Zhoushan Zhejiang, Expectation Confirmation Model

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Introduction

Zhoushan City is located on the eastern coast of Zhejiang Province. It consists of the Zhoushan Islands and coastal land. It has many islands and seaside landscapes, such as Putuo Mountain, Zhujiajian, and Shengsi Islands. Zhoushan is one of the famous places for many Chinese tourists who enjoy beautiful scenery. Travel agencies are an essential part of tourism that provide tourists with various tourism products and services and play an important role in the economic and social development, cultural exchanges, and ecological protection of tourist destinations. With the rapid development of China's economy and society and the continuous improvement of people's living standards, tourism demand is growing continuously, and the tourism consumption structure is also constantly upgraded. Tourists have higher expectations for the service quality of the travel agencies (Mohamed, 2006). Chinese tourists' travel habits are changing, preferring flexible and independent options. This reflects the diverse and personalized preferences of Chinese tourists and the increased expectations for travel agency services. Chinese tourists have high requirements and expectations for the service quality of travel agencies. However, the service quality of many travel agencies is not good enough, causing tourists to be dissatisfied. For example, travel agency services are unreliable, untimely, and unprofessional.

Service quality and customer satisfaction (SQCS) is one of the most popular topics in tourism and hospitality research over the past two decades. Research on service quality and customer satisfaction has increased in the tourism and hospitality fields over the past few decades, focusing on the role of cognitive and psychological factors in tourist satisfaction (San & Del, 2008). However, Shyju, Singh, Kokkranikal, Bharadwaj, Rai, and Antony (2023) proposed a new model to study SQCS. The application of artificial intelligence, extensive data analysis, and machine learning in SQCS marks the development of information technology-assisted research in examining and analyzing customer satisfaction. Jashi (2013) believes that social network consumers have the opportunity to share their opinions about travel destinations and service quality with millions of consumers. Thematic network analysis of SQCS publications shows that destination loyalty, customer value, customer experience, and emotions are essential topics SQCS research covers in tourism and hospitality (Singh, 2023).

Social media searches have a strong influence on Chinese tourists' travel decisions. Chinese tourists obtain or share travel information through social media platforms to reduce risks and increase trust. Social media searches can affect all stages of travel decision-making. However, there are also some issues and challenges, such as the quality and authenticity of information, information overload and conflict, information security and privacy. Travel agencies should offer top-notch, expert, secure, and expedient services while capitalizing on social media benefits to give tourists access to more information, engagement, and memorable experiences (Lange-Faria et al., 2012).

Hence, researching the effects of service quality components and social media inquiries on group tourists' satisfaction with travel companies can provide remedies to cater to the novel kind of Chinese globetrotters. Hence, researching the effects of service quality components and social media

inquiries on group tourists' satisfaction with travel companies can provide remedies to cater to the novel kind of Chinese globetrotters.

Research Hypotheses

H1: The difference in demographic factors, including gender, age, monthly income, marital status, and occupation, affect Chinese tourists' satisfaction in Zhoushan Zhejiang differently.

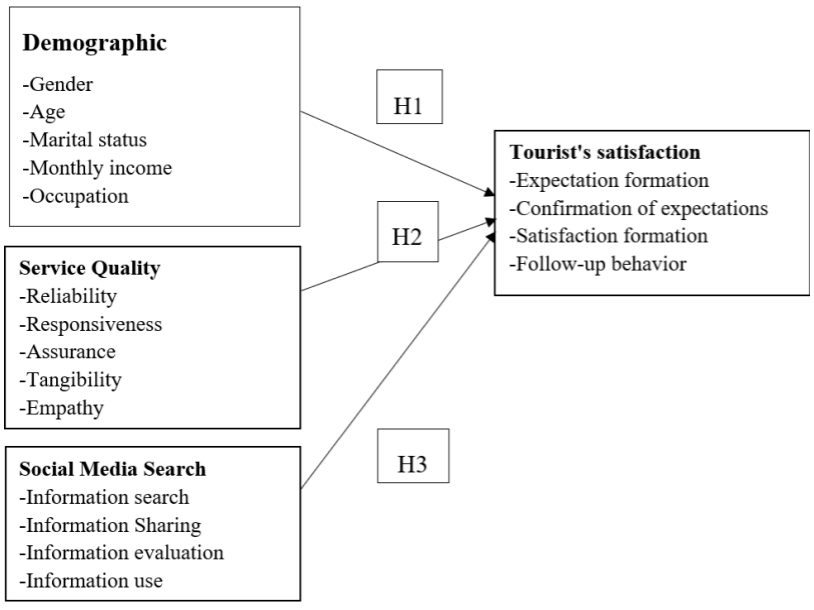
H2: Service quality of travel agencies influences Chinese tourists' satisfaction in Zhoushan Zhejiang

H3: Social media search influences Chinese tourists' satisfaction in Zhoushan Zhejiang

Research Objectives

1. To study the influence of service quality of travel agencies on Chinese tourists' satisfaction in Zhoushan Zhejiang.
2. To study the influence of social media search on Chinese tourists' satisfaction in Zhoushan Zhejiang.
3. To provide recommendations to improve business for travel agencies in Zhoushan Zhejiang.

Research Framework



Review of Literature

Service Quality

SERVQUAL is a service quality measurement and management tool that uses a multiple-item scale to assess customer perceptions of service quality in various services and retail businesses. The

scale is composed of five constructs previously from service quality: Tangibles, Reliability, Responsiveness, Assurance, and Empathy (Lovelock & Wirtz, 2004; Parasuraman, Zeithaml, & Berry, 2013). These constructs are based on the gap between customers' expectations and experience, which could be negative or positive if the expectation is higher than the experience or less than or equal to the experience, respectively. Several types of research have been performed about the influence of service quality on user satisfaction in the tourism business. Masrurul (2019) found a good relationship between service quality dimensions and customer satisfaction. Surahman, Yasa, and Wahyuni (2020) found that high service quality increases customer loyalty through customer satisfaction. Park & Jeong (2019) stated that among the factors related to tourism, service quality in tourism has received increasing academic attention, e.g., research papers have been published in academic journals that utilize SERVQUAL, the most representative model for measuring service quality (Meesala & Paul, 2018; Rauch, Collins, Nale, & Barr, 2019).

However, the focus on tourism service quality has not yet been satisfactorily or comprehensively reviewed. In the last few years, several researchers have concentrated on E-service quality information technology tools such as machine learning and extensive data analysis that are increasingly being used to measure service quality attributes (Kim & Chung, 2020; Kwon et al., 2020; Lee et al., 2020; Prentice et al., 2020; and Ying et al., 2020). In this study, the SERVQUAL model proposed by Parasuraman et al. (1988) was used to categorize the service quality factors into five dimensions, i.e., Reliability, Responsiveness, Assurance, Tangibility, and Caring, and these five dimensions

Service quality factors for this study refer to the various elements affecting service quality, which can usually be divided into objective and subjective. The objective aspect refers to the service elements that can be controlled and improved by the service provider, such as service facilities, service personnel, and service processes; the subjective aspect refers to the feelings and evaluations of the service recipients about the service, such as service expectations, service perceptions, and service satisfaction. Researchers have proposed different methods of dividing service quality factors according to different research purposes and objects. In this study, were explained as follows:

1. Reliability refers to the travel agency's ability to provide accurate and trustworthy services at the time and in the manner promised, e.g., on-time departure, scheduled itinerary, and at the agreed price.

2. Responsiveness refers to the travel agent's ability to respond to travelers' needs and problems promptly and effectively, such as providing advice, resolving complaints, and handling emergencies.

3. Assurance: It refers to the travel agency's ability to provide professional and reputable services that make travelers feel safe and secure, such as possessing qualification certificates, providing insurance, and complying with laws and regulations.

4. Tangibility: It refers to the travel agency's ability to provide suitable facilities, equipment, and personnel image, such as comfortable vehicles, complete equipment, and neat clothing.

5. Empathy: It refers to the travel agency's ability to reflect personalized attention and respect for travelers, such as understanding travelers' needs, providing personalized services, and establishing friendly relationships.

Social media search

Social media search is composed of several constituent elements, and different researchers have proposed different approaches to the composition of social media search based on different research purposes and research objects. This study adopts the social media search model proposed by Castronovo and Huang (2012), categorizing social media search into four dimensions.

1. Information search refers to users' access to information about destinations, attractions, hotels, and transportation through social media platforms, such as browsing travel tips, checking travel information, and subscribing to travel public numbers. (Wang and Yan, 2022)
2. Information Sharing: It refers to users posting or forwarding information about tourism through social media platforms, such as publishing travel logs, uploading travel photos, and recommending travel products. (Arica et al.,2022)
3. Information evaluation: Users give feedback or comments on tourism-related information through social media platforms, such as liking, favoriting, rating, and leaving comments. (Cheung et al., 2022)
4. Information use refers to the use of information about tourism by users through social media platforms to make decisions or take actions, such as booking hotels, purchasing air tickets, and participating in activities. (Arica et al., 2022)

In addition to Castronovo and Huang's (2012) model, several other models also delineate and measure social media search. For example, zhang and Gretzel (2010) analyzed the role of social media in online travel information search from the perspective of search engines. The results show that social media accounted for a significant proportion of the search results, indicating that search engines are likely to direct travelers to social media sites. The results expend to the different types of social media sites performed differently under different destination names, e.g., Wikipedia was more common under the name of a large city, while YouTube was more common under the name of a natural landscape. They argue that these findings confirm the growing importance of social media in the online travel space. It also provides travelers with more information options and decision-making bases, and tour operators with more market opportunities and competitive challenges.

Tourists' satisfaction

Tourism information retrieval refers to the behavior of tourists to obtain tourism-related information through various channels and methods during the tourism process. The content, channels,

and methods of tourism information retrieval are constantly changing with the development of society and technology. Social media applications have become an essential platform for tourists to obtain and share tourism information. Social media applications refer to network applications that use Internet technology and are user-centered to realize information exchange and social relationship building between users, including social networks, blogs, Weibo, WeChat, forums, video websites, picture websites, and Q&A websites. For this study, users' satisfaction deployed the expectation confirmation model (Oliver, 1980), which is composed of four stages:

1. Expectation formation refers to tourists having certain expectations about tourism products and services before traveling.
2. Expectation confirmation refers to tourists' evaluation of tourism products and services during travel and comparing the gap between their actual experience and expected expectations.
3. Satisfaction formation refers to tourists evaluating tourism products and services after traveling.
4. Follow-up behavior refers to a series of behaviors produced by tourists after traveling, including loyalty, word-of-mouth, and repeat purchase intention.

Methodology

This study adopted quantitative research. The population of this study was a nonfinite number of tourists who travel to Zhoushan, Zhejiang—China, from the top three travel agencies. The sample size was determined at a 95% confidence level with a sampling error within 5% from Yamane's formula (1967). The sampling method used for this study was a stratified random sampling method to guarantee data distribution. One hundred thirty-five samples were collected from the top three travel agencies, totaling 405 samples for this study. Data was collected using the following steps: Firstly, the structured questionnaire survey was designed and distributed online through www.wjx.cn. Secondly, the questionnaire link from the online survey platform was sent to target samples by travel agencies. Thirdly, the link to the questionnaire on the online survey platform was sent to tourists, who cooperated to share the link with their friends and family.

The questionnaire was customized based on the research framework (see Figure 1), and the questions included both checklists and 5-point Likert scale question types. The measurement of tourists' satisfaction is based on the SERVOUAL model (Lorekock & Wirz 2004, Parasuraman Zeithaml & Berry, 2013), the social media search model (Castronovo & Huang 2012), and the expectation confirmation model (Oliver, 1980). The SERVQUAL model includes reliability, responsiveness, assurance, tangibility, and empathy. The social media search model includes information search, sharing, evaluation, and use. The exception confirmation model includes expectation formation, confirmation of expectations, satisfaction formation, and follow-up behavior. The reliability test for the questionnaire was performed using Cronbach's alpha coefficient with a

value of 0.796. The content validity of the questionnaire was determined by using the index of item objective congruence (IOC), and all questions selected had IOC values greater than 0.5. The data analysis statistics were descriptive statistics, including frequency, percentage, mean, and standard deviation, and inferential statistics, including independent sample t-test, one-way ANOVA, LSD, and multiple linear regression.

Research Results

Descriptive Statistics

Most tourists are female, accounting for 57.5%, and tourists are between 36 and 45, accounting for 34.1%. 63% of tourists are married, and most of their tourism income is between 5,001-8,000 yuan. Moreover, their occupations are mainly homemakers and merchants, accounting for nearly 22.5%.

Table 1 shows the frequency and percentage of service quality, social media searches, and tourist satisfaction. In terms of service quality, the results indicate that the mean value of the overview of service quality is 3.36, which is moderate, and the standard deviation is 1.000. In detail consideration, tangibility is also at a moderate level, with a mean value of 3.39, accounting for the highest-ranking level in the group.

For social media searches, the results indicate that the mean value of the overview of social media searches is 3.39, which is moderate, and the standard deviation is 1.025. In detail consideration, information evaluation is also at a moderate level, with a mean value of 3.34, accounting for the highest-ranking level in the group.

For tourists' satisfaction, the results indicate that the mean value of the overview of tourists' satisfaction is 3.48, which is moderate and has a standard deviation of 1.004. In detail consideration, expectation formation is also at the moderate level, with a mean value of 3.40, accounting for the highest-ranking level in the group.

Table 1. Frequency, mean, and SD of service quality, social media searches, and tourists' satisfaction

	Level of Opinion								
Service quality	**1**	**2**	**3**	**4**	**5**	**Mean**	**SD**	**Meaning**	**Rank**
Reliability	3	93	137	101	71	3.36	1.042	Moderate	4
Responsiveness	5	92	142	103	63	3.31	1.028	Moderate	5
Assurance	2	91	128	101	77	3.38	1.062	Moderate	3
Tangibility	5	81	150	90	79	3.39	1.051	Moderate	1
Empathy	7	90	127	103	78	3.38	1.083	Moderate	2
Overview of Service Quality	-	87	150	100	68	3.36	1.000	Moderate	

Table 1. Frequency, mean, and SD of service quality, social media searches, and tourists' satisfaction (Cont.)

	Level of Opinion								
social media searches	**1**	**2**	**3**	**4**	**5**	**Mean**	**SD**	**Meaning**	**Rank**
Information search	3	113	118	100	71	3.30	1.080	Moderate	3
Information Sharing	5	98	145	89	68	3.29	1.050	Moderate	4
Information evaluation	7	96	131	95	76	3.34	1.086	Moderate	1
Information use	3	112	125	84	81	3.32	1.103	Moderate	2
Overview of social media searches	-	89	142	99	75	3.39	1.025	Moderate	
Tourist's satisfaction	**1**	**2**	**3**	**4**	**5**	**Mean**	**SD**	**Meaning**	**Rank**
Expectation formation	2	102	105	125	71	3.40	1.061	Moderate	1
Confirmation of expectations	2	94	133	105	71	3.37	1.039	Moderate	2
Satisfaction formation	3	92	141	97	72	3.35	1.042	Moderate	4
Follow-up behavior	5	94	106	106	74	3.37	1.068	Moderate	3
Overview of Tourist's satisfaction	-	77	134	118	76	3.48	1.004	Moderate	

Inferential Statistics

Inferential statistics were used to test hypotheses. Table 2 summarizes the testing results for hypothesis 1. The results show that the difference in marital status affects tourists' satisfaction in Zhoushan Zhejiang differently ($F(2,402) = 4.035$, $p = 0.018^*$). Meanwhile, the difference in gender, age, monthly income, and occupation has not affected tourists' satisfaction differently at the statistically significant level of 0.05.

Table 2. Independent Sample t-test and One-way ANOVA were used to analyze data

Demographic	**Expectation Formation**	**Confirmation of Expectation**	**Satisfaction Formation**	**Follow-up Behavior**	**Tourists' satisfaction**
Gender	-	-	-	-	-
Age	-	-	-	-	-
Monthly income	-	-	-	-	-
Marital status	-	$F(2,402) = 4.035$, $p = 0.018^*$	-	-	-
Occupation	-	-	-	-	-

Table 3 provides a post-hoc analysis using LSD for the multiple comparisons of the different marital status group that affects the Confirmation of Expectations of Chinese tourists' satisfaction in Zhoushan Zhejiang. The result demonstrates that the tourists' single status group has a lower mean than the married status group (-0.261) with a significant value of 0.019.

Table 3. The multiple comparisons of the different marital status group that affects the Confirmation of Expectations of Chinese tourists' satisfaction in Zhoushan Zhejiang

Marital status group	Mean Difference (I-J) Group J			
	$\bar{X}$	Single	Married	Divorced
Group I		3.21	3.47	3.00
Single	3.21	-	-0.261	0.214
			(.019)*	(.399)
Married	3.47		-	0.475
				(.054)
Divorced	3.00			-

Table 4 demonstrates the testing results for hypotheses 2 and 3 using multiple linear regression with stepwise model. The result indicates that service quality in reliability and assurance of travel agencies influences Chinese tourists' satisfaction in Zhoushan Zhejiang with a 25.5% ability to predict, and the multiple regression coefficient value (R) was 0.259.

Social media search in information sharing and information search influences Chinese tourists' satisfaction in Zhoushan Zhejiang with a 21.6% ability to predict, and the multiple regression coefficient value (R) was 0.220. The forecasting equations for analysis results are provided in Table 5.

Table 4. Regression analysis to predict the influence of service quality on tourists' satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Dubin-Watson
Service quality[a]	.509	0.259	0.255	0.866	2.125
Social media searches[b]	.469	0.220	0.216	0.889	2.114

[a] *Predictors: (Constant), Reliability, Assurance*

[b] *Predictors: (Constant), Information Sharing, Information Search*

Table 5. Summary of service quality and social media search influences influence Chinese tourists' satisfaction in Zhoushan Zhejiang

Hypotheses	Forecasting Equations
H2: Service quality of travel agencies influences Chinese tourists' satisfaction in Zhoushan Zhejiang	$\hat{Y}_T = 1.761 + 0.291X_1 + 0.219X_3$ *X_1 = Reliability, X_3 = Assurance*
H3: Social media search influences Chinese tourists' satisfaction in Zhoushan Zhejiang	$\hat{Y}_T = 1.956 + 0.264X_2 + 0.198X_1$ *X_1 = Information Sharing, X_2 = Information Search*

Discussion and Conclusions

The findings found that service quality in terms of reliability and assurance affects tourist satisfaction, which is consistent with the study conducted by Al-Ababneh (2013) that service quality affects tourist satisfaction in terms of destination facilities, accessibility, and attractiveness degree has a direct impact. However, research by Kerdpitak and Heuer (2016) found that tourist trust, personal relationships, and facility quality affect tourist satisfaction. Four indicators can judge tourist satisfaction: 1) come back again, 2) tell others, 3) always praise, and 4) without any blame.

Research has found that social media searches influence tourist satisfaction regarding information seeking and sharing. Travel agents can leverage social media searches to provide rich information. As supported by Xiang and Gretzel (2010), search engines are an essential bridge between users and social media websites because users may discover and access social media websites through search engines.

Search engines can also be an excellent tool for eWOM strategy. Electronic Word-of-Mouth is consumer-generated, consumption-related communication that employs digital tools and is directed primarily to other consumers (Rosario, Valck & Sotgiu, 2020). Consumers share their product and service experiences in virtual communities without geographical boundaries (Verma & Yadap, 2021). The results from this study emphasized that information search and information sharing influence tourists' satisfaction; travel agencies can take advantage of reaching unlimited customers/tourists through virtual communities without geographical boundaries.

Recommendation

1. Travel agencies should improve all aspects of service quality, mainly to ensure that services are accurate, timely, consistent, professional, and safe to meet or exceed tourists' expectations and increase tourist satisfaction and loyalty.

2. Travel agencies should use social media searches to increase tourist trust and loyalty. Travel agencies should publish information about destinations, attractions, hotels, and transportation on social media platforms to make it easier for tourists to obtain information. Travel agencies should also actively respond to tourists' comments, suggestions, and complaints to improve tourist participation and satisfaction.

3. Travel agencies should provide more personalized services based on tourists' different characteristics and needs to meet their diverse expectations.

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FACTORS INFLUENCING THE INTENTION TO USE VIDEO CONFERENCE PLATFORMS OF WORKERS AT FINANCIAL INSTITUTIONS IN SHANGHAI, CHINA

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Abstract

This study explores the acceptance and usage intention of video conferencing software within Chinese financial institutions in Shanghai, China. It utilized the Technology Acceptance Model (TAM) framework and combined the variables of Perceived Usefulness and Perceived Ease of Use. The sample size was 403 employees working in the Shanghai, China financial institute. The statistics used to analyze data were descriptive statistics, including frequency, percentage, mean, and standard deviation; inferential statistics was multiple linear regression at the statistical significance level of 0.05. The finding supported the previous study that perceived usefulness and ease of use influenced the attitude toward using video conferencing platforms, and the attitude toward using video conferencing platforms influenced the intention to use video conferencing platforms in the Chinese financial institute in Shanghai, China.

Keywords: Video Conferencing, Technology Acceptance Model, Perceived Usefulness, Perceived Ease Of Use, Attitude Toward Use, Intention To Use

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Introduction

With the development and popularization of information technology, video conferencing has become an essential form of communication and collaboration in today's society. The video conferencing market in China has also proliferated. In 2020, the video conferencing market in China achieved a scale of USD 950 million, marking an 18.9% year-on-year increase. The cloud conferencing market witnessed a 29.4% year-on-year growth, reaching USD 260 million. Furthermore, IDC predicts that by the year 2024, the video conferencing market in China will exceed ¥10 billion RMB（$13.6632 billion), with the cloud conferencing sector contributing to nearly 40% of the total market share (Jinliang Zhang, 2023). During the pandemic, video conferencing has become an essential tool for remote working. Download and usage volumes for various video conferencing platforms have increased significantly in China.

Table 1. ranking list of downloads of China's video conference platform

Platform Name	Ranking
Tencent Meeting	1
DingTalk	2
Enterprise WeChat	3
Youdao Cloud Meet	4
Small fish	5

Source: IDC China, 2023,https://www.mydown.com/jhfl/sphy/?f=bdf_434321

Table 1 indicates that the most widely used video conferencing platforms in China, including Tencent Meeting, DingTalk, Enterprise WeChat, Youdao Cloud Meeting, and Small Fish, are easy to connect. These platforms have played an essential role in promoting the application of video conferencing, but there are also some problems and deficiencies. For example, Tencent Meeting requires logging in to a Tencent account, which poses a certain barrier to users who are not familiar with Tencent products, and the functionality of the mobile side is relatively limited; DingTalk video conferencing requires logging in with a DingTalk account, and conference time is restricted. These issues have affected the user experience of video conferencing platforms in China to varying degrees.

Compared with mainstream foreign video conferencing platforms such as Zoom, Webex, and Microsoft Teams, video conferencing platforms independently developed in China still have performance, functionality, and stability gaps, directly affecting users' willingness to use them. For example, Zoom provides a wealth of conference features that are easy to use and were extremely popular during the pandemic. However, Chinese video conferencing platforms have problems such as an unfriendly interface, incomplete features, and poor device compatibility. These problems urgently need to be addressed.

This study seeks to employ the Technology Acceptance Model (TAM) as its foundational framework, integrating variables such as perceived usefulness and perceived ease of use to discern the pivotal factors influencing Chinese users' intention to embrace video conferencing platforms. Grasping these factors bears potential relevance to various stakeholders in China's video conferencing sector. This research might offer platform developers an initial understanding of user requirements and challenges. The results could potentially act as a guide for selecting apt video conferencing tools for enterprises and organizations, contingent on the study's outcomes. Moreover, should the study underscore positive determinants that enhance the adoption of video conferencing, it might pave the way for amplifying remote work and collaboration practices in China, possibly ushering in expansive societal and economic advantages.

Research Objectives

1. To explore the acceptance of video conferencing platforms within Chinese financial institutions in Shanghai, China.
2. To explore the intention to use video conferencing platforms within Chinese financial institutions in Shanghai, China.

Research Hypotheses

H1: Perceived usefulness, including functionality, efficiency, and effectiveness, influences Chinese users' attitudes toward their intention to use video conferencing platforms.

H2: Perceived ease of use, including learnability, operability, and adaptability, influences Chinese users' attitudes toward the intention to use video conferencing platforms.

H3: Attitude toward use significantly affects Chinese users' intention to adopt video conferencing platforms.

Research Framework

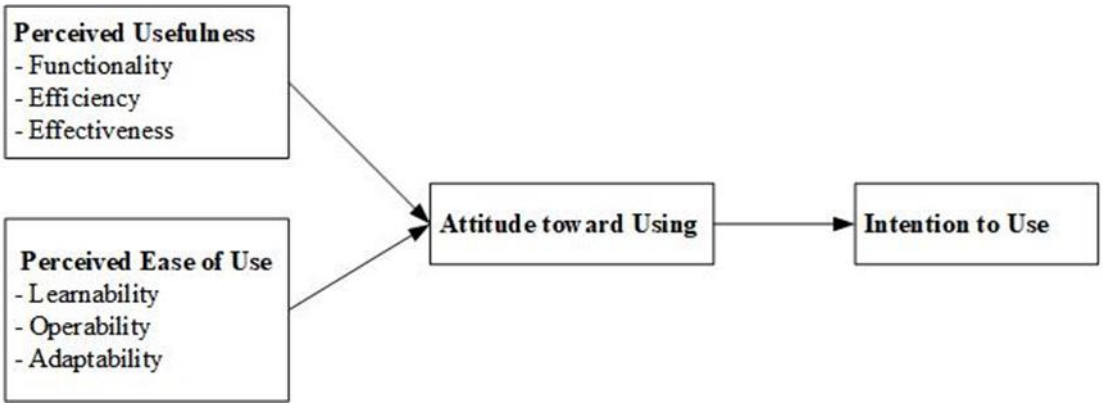

Figure 1. Conceptual Framework

The Technology Acceptance Model (TAM) was developed by Fred Davis in 1989. The model was created to explain and predict users' acceptance and adoption of new information technology and systems.

Review of literature

Technology Acceptance Model

The Technology Acceptance Model (TAM) is one of the most widely used theoretical frameworks for understanding users' acceptance and adoption of new technologies. Initially proposed by Davis in 1989, TAM was later extended and refined by various researchers, making it a fundamental model in technology adoption. TAM focuses on users' attitudes toward using technology and their behavioral intentions, providing valuable insights into the factors that influence technology adoption (Davis, 1989). According to TAM, users' behavioral intentions to adopt technology are shaped by two key factors: Perceived Usefulness (PU) and (PEOU)

TAM posits that users' attitudes toward using technology, influenced by perceived usefulness and ease of use, directly impact their behavioral intentions. Moreover, TAM suggests that system usage behavior is highly related to users' behavioral intentions (Davis, 1989). Since its introduction, the TAM has undergone several modifications and extensions to address various limitations and to enhance its applicability to different contexts. Researchers have explored the influence of additional variables and integrated TAM with other theories to create more comprehensive models.

In the context of video conference platforms, TAM provides valuable insights into users' intentions to adopt and use such technologies. Perceived usefulness plays a crucial role, as users are likely to adopt video conferencing if they perceive it as a valuable tool for communication, collaboration, and remote work. Additionally, perceived ease of use is essential, as users will be more willing to adopt the technology if they find it easy to navigate and operate. Studies on video conference platforms have consistently found that perceived usefulness and ease of use influence users' attitudes and intentions to use the technology.

Perceived Usefulness

Perceived Usefulness is a pivotal construct in technology acceptance research, with roots in the Technology Acceptance Model (TAM) proposed by Davis (1989). It represents users' beliefs regarding how much a technology can enhance their performance in accomplishing specific tasks or certain goals. There are 3 sub-dimensions of perceived usefulness as follows.

1. **Functionality** delves into the user's perceptions of the features and capabilities offered by video conference platforms. These features may include real-time video and audio communication, screen sharing, document collaboration, recording options, virtual backgrounds, and interactive chat features. The availability of these functionalities can significantly impact users' perceived usefulness of the platform.

2. **Efficiency** pertains to users' perceptions of the platform's ability to streamline communication and task completion processes, ultimately saving time and effort. Users' perception of the platform's efficiency is closely linked to the ease of use and the degree of integration it offers with other productivity tools and applications.

3. **Effectiveness** assesses users' perceptions of the platform's ability to deliver successful and reliable communication outcomes. Users' evaluation of the platform's effectiveness is influenced by factors such as audio and video quality, stability of the connection, and the platform's responsiveness to user inputs.

Perceived Ease of Use

Perceived Ease of Use is a crucial construct in technology acceptance and adoption. It refers to the extent to which users believe that using technology will be effortless and free from complexity. A technology perceived as easy to use is more likely to be adopted and embraced by users. In video conference platforms, users' perceptions of ease of use play a significant role in determining their willingness to use the technology for virtual communication and collaboration (Karahanna & Straub, 1999).

1. **Learnability** pertains to users' perceptions of how easy it is to learn how to use a video conference platform. A highly learnable platform allows users to quickly grasp its functionalities and navigate its features with minimal effort. The importance of learnability is particularly relevant in the case of video conference platforms, as users often need to adapt to new communication tools and features rapidly.

2. **Operability** focuses on users' perceptions of how easy it is to operate the video conference platform during actual use. A highly operable platform enables users to perform tasks and execute actions effortlessly without encountering confusing or convoluted steps.

3. **Adaptability** focuses on users' perceptions of the platform's flexibility and adaptability to their preferences and needs. A highly adaptable video conference platform allows users to customize their settings, interface layout, and other features according to their preferences.

Attitude toward using

Attitude toward using is critical in technology adoption, as it directly influences individuals' intentions to use a particular technology. It refers to users' overall evaluation and emotional response to using a technology or system, which significantly shapes their behavioral intentions and actual usage behavior. In the context of video conference platforms, users' attitudes toward using these tools can significantly impact their willingness to adopt and engage in virtual communication and collaboration.

Intention to Use

Intention to Use is one of the key constructs in technology adoption and acceptance, which refers to individuals' planned behavior and willingness to use a specific technology, in this case, video

conference platforms in China. Understanding users' intentions is crucial as it strongly predicts their actual usage behavior (Davis, 1989).

Users' attitudes toward video conference platforms significantly influence their intentions. Positive attitudes, shaped by perceived usefulness and ease of use, are more likely to lead to higher intentions to adopt the technology. Researchers have consistently found a strong positive correlation between attitudes and intentions regarding technology adoption (Venkatesh et al., 2003).

The compatibility of video conference platforms with users' work tasks and workflows is a critical factor influencing their intentions. Users are more likely to intend to use a technology that aligns well with their job requirements and enhances their work efficiency. On the contrary, if the platform is perceived as incompatible or disruptive to their work processes, intentions to use it may be lower.

Methodology

The population in this study is an infinite number of employees who use video conference platforms for online meetings as part of their jobs in financial institutes in Shanghai, China. The sample size was determined at a 95% confidence level with a sampling error within 5% from Cochran's formula (1977). The sampling method was convenience sampling method. Data was collected using the following steps: The structured questionnaire survey was designed and distributed online through "wjx.com." Secondly, the questionnaire link from the online survey platform was sent to the target samples.

The questionnaire was customized based on the research framework (see Figure 1), and the questions included both checklists and 5-point Likert scale question types. The reliability test for the questionnaire was performed using Cronbach's alpha coefficient with a value of 0.826. The content validity of the questionnaire was determined by using the index of item objective congruence (IOC), and all questions selected had IOC values greater than 0.5. The data analysis statistics were descriptive statistics, including frequency, percentage, mean, and standard deviation, and inferential statistics, including independent sample t-test, one-way ANOVA, LSD, and multiple linear regression.

Research Results

Descriptive Statistics

Most respondents are female, accounting for 55.8%; the age group is between 41 and 50, representing 35.7% of the samples. 78.9% of jobs are operational and use video conferencing platforms several times per month. Overall, this analysis provides insights into the demographic characteristics of samples.

Table 2 demonstrates the descriptive statistics on the opinion level of perceived usefulness, perceived ease of use, attitude toward using, and intention to use video conferencing platforms. All variables' opinion levels are reasonable, with mean values of 3.27, 3.01, and 3.48, respectively.

Table 2. Descriptive statistics of perceived usefulness, perceived ease of use, attitude toward using, and intention to use video conferencing platforms

	1	2	3	4	5	Mean	SD	Meaning	Rank
Perceived Usefulness (PU)									
Functionality	21	90	22	182	88	3.56	1.202	Good	3
Efficiency	6	93	6	203	95	3.71	1.109	Good	2
Effectiveness	16	56	23	206	102	3.80	1.089	Good	1
Overview of PU	8	35	81	228	51	3.69	.872	Good	
Perceived Ease of Use (PEOU)									
Learnability	14	84	0	198	107	3.74	1.089	Good	1
Operability	26	73	10	189	105	3.68	1.221	Good	3
Adaptability	12	93	9	183	106	3.69	1.176	Good	2
Overview of PEOU	12	34	71	226	60	3.71	.923	Good	
Attitude toward Using	14	86	6	159	138	3.80	1.219	Good	
Intention to Use	20	79	11	168	125	3.74	1.227	Good	

Inferential Statistics

Inferential statistics were used to test hypotheses. Table 3 summarizes the analysis results and forecasting equations for each hypothesis.

Hypotheses	**Forecasting Equations**
H1: Perceived usefulness influences Chinese users' attitudes toward using video conferencing platforms.	$Y_{T1} = .792 + .286X_1 + .235X_2 + .267X_3$ X_1 = Functionality X_2 = Efficiency X_3 = Effectiveness
H2: Perceived ease of use influences Chinese users' attitudes toward using video conferencing platforms.	$Y_{T1} = .766 + .235X_1 + .280X_2 + .276X_3$ X_1 = Learnability X_2 = Operability X_3 = Adaptability
H3: Attitude toward using influences Chinese users' intention to use video conferencing platforms.	$Y_{T2} = 1.401 + .620X_1$ X_1 = Intention to use video conferencing platforms

Discussion and Recommendation

Prior studies have extensively examined the constructs of *Perceived Usefulness* and *Perceived Ease of Use* within the framework of the Technology Acceptance Model, particularly in the context of video conferencing platforms (Hai & Khoa, 2021). Despite these insights, there remains a lack of research on the factors influencing employees' intentions to utilize video conferencing platforms in Shanghai's financial institutions. This gap is critical, as the unique socio-economic environment of China's financial sector may present distinct challenges and user expectations.

This research delves deeply into video conferencing platforms' continuous development and increasing importance. Based on previous related analyses and regression analysis results, it is evident that variables such as *functionality, efficiency, effectiveness, learnability, operability, and adaptability* are significantly positively correlated with users' attitudes and intentions to use video conferencing platforms. Faced with the potential trend of future hybrid working models, improving and optimizing video conferencing platforms become even more crucial. Among them, the correlation coefficient of *operability* is the highest, suggesting that issues related to *operability* should be highly prioritized. This paper suggests improvements from the following three major aspects:

Firstly, for platform developers, optimizing the technical performance and functionality of the platforms is vitally important. The stability of the platforms and the interaction interface should be further strengthened to reduce technical faults and issues during video conferences and enhance the user experience. For instance, introducing more advanced video and audio processing technology can effectively enhance video conference audio and video quality. Additionally, to enhance the platforms's compatibility and interoperability with other popular office applications, deep cooperation with the developers of these office applications should be sought to jointly develop integrated solutions or open APIs, allowing other developers to integrate video conference features into their applications easily.

Secondly, strengthening education and training for users is another crucial aspect. By establishing a comprehensive online help and tutorial system, users can more easily grasp various functions and operation skills of the video conferencing platforms. For example, establishing a continuously updated online learning platform on China's TikTok, offering various tutorials, FAQs, and example demonstrations, can assist users in quickly and effectively mastering the platform's use. Simultaneously, regular online or offline training and communication activities allow users to learn and inquire directly from experts.

Thirdly, to ensure that users can easily browse and operate Chinese video conference platforms without confusion, the interface should undergo localization optimization, offering straightforward, concise, and intuitive interface design and navigation and multi-language support to ensure users of different languages can use it conveniently. For new users, interactive guides and tutorials can be designed to familiarize them with the basic operations and functions of the platforms. Regularly collecting user feedback and optimizing the platforms based on user suggestions and opinions ensure the platforms maintain user-friendly design and excellent user experience.

In light of the findings from this study, it is imperative to juxtapose these insights with prior research to draw a comprehensive understanding of the dynamics at play in adopting video conferencing platforms, particularly in the context of Shanghai's financial institutions. This research echoes the sentiments of Camilleri and Falzon (2021), who emphasized the significance of interactive engagement and facilitating conditions in enhancing the user experience with video conferencing technologies. This parallel underscores the importance of functionality, efficiency, and effectiveness in fostering positive attitudes toward video conferencing platforms, as identified in this study.

Similarly, Edwards and Joe (2022) explore learners' experiences in video-conference classrooms through the Extended Technology Acceptance Model, which offers a pertinent comparative perspective. Their findings of positive perceptions towards video conferencing regarding collaboration and instructor presence resonate with this study's emphasis on operability and adaptability. This correlation suggests that these factors are universally crucial in shaping user attitudes towards video conferencing platforms, regardless of the context.

Moreover, Nguyen, Pho, Luong, and Cao (2021) explore Vietnamese students' acceptance of video conferencing tools during the COVID-19 pandemic and provide valuable insights into the factors influencing the acceptance of these tools. Their findings align with this study's focus on Shanghai's financial institutions, highlighting the universal applicability of factors like functionality and ease of use in determining the acceptance of video conferencing tools.

In conclusion, by continuously optimizing platform performance and enhancing user support, video conferencing platforms will better serve various users (not limited to financial enterprises in Shanghai), meeting their increasingly diverse and high-standard communication needs, thereby playing a more significant role in the future information society.

Practical Significance and Insights

This research provides specific and practical suggestions and strategies for platform developers and businesses regarding optimizing and improving video conferencing platforms. By continuously enhancing platform performance and improving the stability and quality of the interaction interface, technical issues during video conferences can be reduced, further enhancing user satisfaction and efficiency. Additionally, by strengthening user education and training, users can more quickly and effectively master video conferencing platforms, enhancing their work efficiency and collaborative capabilities.

The insights of this research offer a deep understanding and comprehensive analysis of the current use of video conferencing platforms, assisting relevant personnel in better-grasping market and user trends and thereby making more informed and effective decisions. By better understanding user needs and issues, platform developers and enterprises can improve products and services more precisely, thus better meeting user and market demands.

In summary, the practical significance and insights of this research provide valuable references and guidance for optimizing and improving video conferencing platforms but also offer essential strategies and methods for enterprises and organizations to utilize video conferencing platforms to enhance communication and collaboration effectively.

Limitations of the Study

Despite meticulous efforts to ensure thoroughness and detail, this study is subject to certain limitations. Firstly, due to resource and time constraints, this research primarily focuses on some major video conferencing platforms and does not cover all the available platforms, which may impact the generalizability of the research results. Secondly, despite our in-depth survey and analysis of users from three banks in the Shanghai area, the limited sample size may not fully represent all video conferencing platform users. Additionally, this study is mainly based on users' self-reported data, which could introduce subjective bias, affecting the objectivity and accuracy of the research. Concerning specific technical issues and optimization strategies for video conferencing platforms, this research did not conduct detailed technical analysis and experimental verification, posing another limitation to the study. Future research can expand the sample size, cover more video conferencing platforms, and conduct additional experiments and technical analysis. Adding independent variables such as perceived risk and trust theory is also feasible to provide more comprehensive and accurate research results and recommendations.

Future Research Direction

1. Conduct more extensive and in-depth surveys to cover more types and sizes of organizations across all provinces in China. Increasing the diversity of samples can help better understand the specific needs and expectations of different user groups for video conferencing platforms. Additionally, by conducting more detailed technical analysis and experimental verification, the performance and features of video conferencing platforms can be more accurately assessed and optimized.

2. Explore the applicability and effects of video conferencing platforms in different industries and application scenarios. This includes an in-depth analysis of the platforms's use in specific industries, such as K-12 education, healthcare, or media companies, to determine their advantages and limitations in these fields. The research can also investigate the integration and interoperability of video conferencing platforms with other collaboration tools and platforms, such as project management tools or document-sharing platforms.

3. Considering users' security and privacy issues. Data security and privacy protection are important considerations for many users when choosing video conferencing platforms. Therefore, exploring these platforms' security and privacy protection features and how to strengthen these features further will be important directions for future research.

In summary, future research should adopt more comprehensive and diverse methods and perspectives to conduct in-depth and meticulous research on various aspects of video conferencing platforms to serve different types of users and organizations better and meet their growing and diversified communication and needs.

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FACTORS INFLUENCE ON EMPLOYEE'S JOB PERFORMANCE IN CHINESE STATE-OWNED TELECOMMUNICATION ENTERPRISES

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Daranee Pimchangthong[1*]

Abstract

The objectives of this study were to 1) explore the effect of demographic data on the employee's job performance, 2) examine the influence of *Workplace Loneliness, Affective Commitment and Proactive Personality* on employee's job performance, and 3) provide insights and recommendations for enhancing employee's job performance and well-being within the Chinese state-owned telecommunication enterprises. The study adopted a quantitative research design utilizing online questionnaires distributed to employees who work in telecommunication enterprise in Kunming, China. At the statistical significant level of 0.05, descriptive statistics such as frequency, percentage, mean, and standard deviation were employed to analyze data, as were inferential statistics such as Independent Sample t-test, One-way ANOVA, LSD, and Multiple Linear Regression. The results showed that job level affected task performance while monthly income affected job performance. Workplace loneliness and effective commitment influenced task performance with the multiple regression coefficient value (R) was 0.181. Workplace loneliness influnced employees' relationship performance and task performance in telecommunications enterprise in Kunming, China with the multiple regression coefficient value (R) were 0.167 and 0.185 respectively. On this basis some suggestion were made.

Keywords: Workplace Loneliness, Affective Commitment, Proactive Personality, Job Performance

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Introduction

With the advancement of globalization and technological development, the modern work environment has become increasingly complex and has imposed greater work pressure on employees. In recent years, China Telecom's revenue has grown steadily. In 2022, China's telecom business revenue will total 1.47 trillion yuan, an increase of 8.09% over the previous year. The total business volume of China Telecom has grown rapidly. In 2022, calculated at the previous year's price, China's telecom business volume will reach 1.7 trillion yuan, a year-on-year increase of 13.33%. (National Bureau of Statistics of China, 2022). In Chinese state-owned telecommunications enterprises, employees face similar challenges to those in other types of companies, including highly competitive markets, rapidly changing technology, and business demands. However, the unique organizational structure and management system of state-owned enterprises in China may also have a specific impact on employees' work conditions.

In recent years, with the rise of remote work, there have been significant changes in employees' work patterns and environments. One extensively discussed issue in the work environment is workplace loneliness (Zhang, 2022). Although remote work offers many advantages, such as flexible work hours and the freedom to choose work locations, it may also lead to increased feelings of loneliness, anxiety, and lack of control (Jin, 2021). The lack of effective communication and collaboration in remote work may result in increased distractions and reduced focus, such as interruptions from family members and temptations of social media, negatively impacting work efficiency and quality. Additionally, work-related anxieties can affect employees' personal lives and health, leading to serious psychological issues.

Work occupies a significant portion of an individual's life, and if employees cannot cope with the complex and varied interpersonal relationships in the workplace, they are more likely to experience loneliness (Ruan & Chen, 2022). Workplace loneliness, as a negative emotion in the workplace, can be harmful to both individuals and organizations. Since individuals have limited resources, including psychological, emotional, and cognitive aspects, when employees feel lonely in the workplace, they may experience depletion of negative emotions, which can affect their job performance (Xu & Lin, 2021).

Becker (1960) introduced the concept of affective commitment and defined it as a psychological contract between employees and organizations. As employees work in an organization for an extended period, their increasing commitment to the organization makes them less willing to leave easily. When employees feel lonely in the organization, their attention to work may decrease, and job performance may suffer. According to the Job Demands-Resources Model (Bakker & Demerouti, 2007), all job characteristics can be classified as job demands or job resources. Job demands refer to negative factors that consume individuals, while job resources are the opposite. Since workplace loneliness is a negative emotion in the workplace, when individual resources are depleted,

affective commitment also decreases. With the decline in affective commitment, job performance will also decrease.

Proactivity refers to an individual's tendency to take action to change their external environment without being constrained by internal feelings and circumstances (Liu, 2010). It is the result of an individual's cognitive and internalized values and is reflected in aspects such as belongingness, pride, and loyalty. Enhancing employees' proactivity not only contributes to personal development and work enthusiasm but also better serves the organization to achieve better performance. An employee's workplace loneliness can affect the extent of proactivity, and fostering an employee's proactivity may help alleviate this effect. By enhancing an employee's proactivity, even if they feel lonely at work, they will still strive to perform their duties. According to the Emotion Event Theory (Frijda, 1986), when employees perceive an enhancement in their proactivity, it can have a positive impact on their work. Highly proactive employees can regulate and transform negative emotions, adapt positively to challenges and difficulties at work, and improve self-adaptation in their environment. In the context of China's unique situation, excessive proactivity may not always be beneficial, making it necessary to study the relationship between workplace proactivity and job performance. By adopting various methods to enhance employees' proactivity, job performance may be improved.

However, there is currently a lack of in-depth research on the impact of affective commitment, workplace loneliness, and proactivity on employee job performance in Chinese state-owned telecommunications enterprises, as well as the potential factors and mechanisms involved. Therefore, this study selects employees from Chinese state-owned telecommunications companies as the survey sample to analyze the relationships between affective commitment, workplace loneliness, and proactivity with job performance, aiming to explore their impact on job performance.

Research Hypotheses

H_1: The difference in demographic variables including gender, age, educational level, years of working, job level, and monthly income affect difference level of employee’s job performance.

H_2: Affective Commitment, Workplace Loneliness, and Proactive Personality influence employee’s job performance.

Research Objectives

1) To explore the effect of demographic data on the employee’s job performance.

2) To examine the influence of workplace loneliness, affective commitment and proactive personality on employee’s job performance.

3) To provide insights and recommendations for enhancing employee’s job performance and well-being within the Chinese state-owned telecommunication in enterprises.

Research Framework

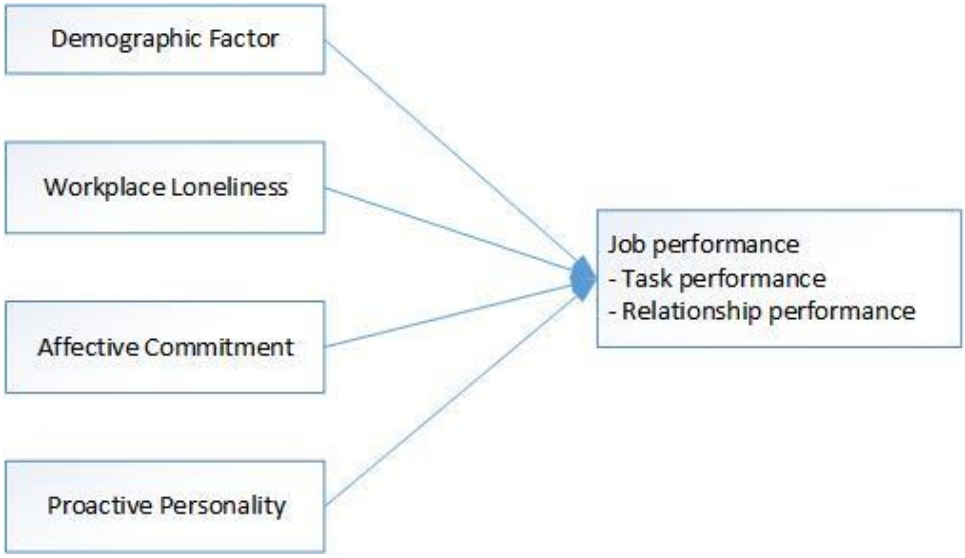

Figure 1. Conceptual Framework

Review of literature

Workplace Loneliness

Workplace loneliness is defined as the feeling of loneliness experienced by individuals in the workplace, which is no different from ordinary loneliness. Gumbert and Boyd (1984) first proposed the concept of workplace loneliness, suggesting that it is a feeling resulting from the lack of support and contact at work, on a personal or social level. Managers and employees in small companies often experience loneliness in their work, as they lack avenues to share emotions and experiences. Wright (2005) redefined workplace loneliness through extensive surveys, characterizing it as the distress arising from a lack of positive interpersonal relationships among employees in the work environment. Moreover, excessive social contact or mismatched interpersonal relationships can also lead to distress similar to loneliness. When individuals desire to improve the quality of their social relationships rather than merely seeking more connections, workplace loneliness may arise. Muyan et al. (2015) found that loneliness is a subjective experience, indicating that individuals feel disconnected and isolated from their environment or social networks, leading to a range of negative emotions, such as anxiety and depression. He et al. (2020) demonstrated through related research that workplace loneliness refers to the negative emotions experienced by employees when they perceive a gap between their interpersonal relationships and ideals in the workplace, which they are unable to resolve, resulting in a sense of alienation, isolation, and lack of social support from others.

Emotional Commitment

Meyer and Allen (1991) demonstrated that emotional commitment is the degree of individual emotional attachment and involvement with the organization. It refers to the extent to which individuals

identify with the organization's values, goals, and interests. Individuals who identify with the organization, its goals, and interests due to their values are willing to continue staying in the organization and make extra efforts to support the organization's interests. This type of commitment is usually based on trust and loyalty towards the organization. The higher the level of emotional attachment to the organization, the more inclined employees are to actively work towards achieving its goals. Management personnel often consider emotional commitment as a primary factor to measure the current relationship between employees and the organization. Ling, Zhang & Fang (2000) pointed out that employees' preference for working in a company is often rooted in emotional commitment. This usually means that employees genuinely recognize the company, are willing to strive for the company's development, and are less likely to leave the organization. This "emotion" is an intrinsic psychological tendency that not only helps employees realize their self-worth and enhances their sense of belonging but also establishes a strong relationship between employees and the organization.

Proactive Personality

Bateman & Crant (1993) defined proactive personality as "individuals' tendency to exert persistent efforts to affect their environment in a direction they desire." Seibert, Crant & Kraimer (1999) defined as "a positive, proactive personality trait that enables individuals to influence and control their surrounding environment. Individuals with proactive personality tend to seek and create new opportunities, possess foresight and long-term vision, develop plans, and take action to achieve their goals. They also tend to maintain optimism and confidence when facing difficulties and challenges, overcoming obstacles and achieving objectives through their actions and efforts." Liu, Long & Zhu (2007) described that proactive personality is "not an independent personality theory but rather a stable proactive behavioral tendency. Individuals with proactive personality are more inclined to take proactive actions and utilize resources to acquire more career opportunities and success." As research progressed, proactive personality has been studied with different structural models such as single-dimensional, three-dimensional, and five-dimensional models, mainly based on the measurement tools and analysis methods used by different researchers in their studies. Currently available proactive personality scales have mostly been developed and tested based on foreign cultural backgrounds and tested subjects, which might require modifications and validations to achieve good reliability and validity in cross-cultural research.In this study, the proactive personality of the participants was measured using the translated and adapted version of the proactive personality scale developed by Ye and Ling (2007) in the Chinese context, which was based on Bateman and Crant's (1993) scale.

Affective Commitment

Affective commitment theory is a theory in organizational behavior aimed at explaining employees' emotional attachment and identification with the organization, (Meyer & Allen, 1991). Affective commitment refers to the strong emotional attachment and dependence that employees have

towards the organization. Employees with affective commitment are more willing to put effort into the organization and are willing to stay in the organization for the long term. Affective commitment emphasizes employees' emotional involvement with the organization, not just because of job satisfaction or external rewards, but based on their identification and emotional attachment to the organization.

This study involves the relationship between employee emotional states (workplace loneliness) and job performance within organizations. Affective commitment theory provides a theoretical framework to help explain the degree of employee involvement in their work and the impact of emotional attachment on job performance. If employees have a high level of affective commitment to the organization, they may be more inclined to put in more effort, thereby enhancing job performance.

Job Performance

With the continuous development of the global economy and the rise of the knowledge economy, employee job performance has become one of the key factors for organizational competitiveness and sustainable development. Therefore, research on this issue remains an important topic in both the academic and practical fields. Scholars still hold different views on the concept of job performance such as Campbell (1990) pointed out three aspects of job performance: behaviors, goal relevance, and relevance degree. Scotter, Dusen & Worthen (1996) explored two distinct dimensions of job performance: interpersonal facilitation and job dedication. Task performance refers to behaviors that go beyond the formal requirements of a job and contribute to the overall functioning of an organization. Relationship performance involves actions that improve the work environment by aiding colleagues, providing support, and fostering teamwork.

Methodology

This study adopted quantitative research. The population in this study is 1925 employees who work in a telecommunications enterprise in Kunming, China (Baidu, 2023). The population consists of operational-level employees, front-line managers, and middle-level managers from state-owned telecommunications enterprises in China, covering employees at different levels and positions. The sample size was determined at a 95% confidence level with a sampling error within 5% from Yamane's formula (1967), making 350 samples. Data collection was performed using the following steps: Firstly, the structured questionnaire survey was designed and distributed online through “Questionnaire Star." Secondly, the questionnaire link from the online survey platform was sent to target samples.

The questionnaire was customized based on the research framework (see Figure 1), and the questions include both check lists and 5-point Likert scale question types. The reliability test for the questionnaire was performed using Cronbach's alpha coefficient with a value of 0.743. The content validity of the questionnaire was determined by using the index of item objective congruence (IOC),

and all questions selected had IOC values greater than 0.5. The statistics used to analyze the data were descriptive statistics, including frequency, percentage, mean, and standard deviation; and inferential statistics, including independent sample t-test, one-way ANOVA, LSD, and multiple linear regression.

Research Results

Descriptive Statistics

The majority of the respondents are female, accounting for 60.57%, age group is between 20 and 30 years old, representing 52.86% of the samples 63.14% are married, and in the aspect of educational level, the Bachelor's degree group is the largest (62.86%). Concerning years of working in the enterprise, the largest group are working for 1-5 years (44.86%). Regarding monthly income, the majority of employees are middle-level manager (46.6%), and have a monthly income in the range of 5000-10000RMB (49.71%). Overall, this analysis provides insights into the demographic characteristics of employees in the state-owned telecommunications company, Kunming, China.

Table 1 demonstrates the descriptive statistics on workplace loneliness, affective commitment, proactivity personality, task performance, and relationship performance. The opinion level of workplace loneliness, affective commitment, and proactivity personality are at a moderate level, with mean values of 3.27, 3.01, and 3.48, respectively.

The opinion level of task performance and relationship performance are at a good and moderate level, with mean values of 3.75 and 3.49, respectively.

Table 1. The Descriptive Statistics of Loneliness in the workplace

	1	2	3	4	5	Mean	SD	Meaning	Rank
Loneliness	30	111	25	101	83	3.27	1.352	Moderate	4
Affective Commitment	20	111	81	120	18	3.01	1.047	Moderate	5
Proactivity Personality	0	64	79	182	25	3.48	0.872	Moderate	3
Task Performance	28	36	42	132	112	3.75	1.231	Good	1
Relationship Performance	41	44	34	164	67	3.49	1.262	Moderate	2

Inferential Statistics

Inferential statistics were used to test hypotheses. Table 2 summarizes the analysis results for hypothesis 1. The results show that: the difference in Job level affects employee's task performance in telecommunications enterprise in Kunming, China differently ($F(2,347) = 2.820$, $p = 0.041^*$). While the difference in monthly income affects employee's job performance in telecommunications enterprise in Kunming, China differently ($F(4,345) = 3.394$, $p = 0.035^*$) at the statistically significant level of 0.05.

Table 2. Independent sample t-test and One-way ANOVA analysis results

Demographic	Job Performance	Task Performance	Relationship Performance
Gender	-	-	-
Age	-	-	-
Marital Status	-	-	-
Educational Level	-	-	-
Years of Working	-	-	-
Job level	-	✓	-
Monthely Income	✓	-	-

- *no different effects at the statistical significant of 0.05*

✓ *have different effects at the statistical significant of 0.05*

Table 3 demonstrates the testing results for hypothesis 2 using multiple linear regression with stepwise model. The result indicates that workplace loneliness and affective commitment influences employees' task performance in telecommunications enterprise in Kunming, China with the multiple regression coefficient value (R) was 0.181. Workplace loneliness influnces employees' relationship performance and task performance in telecommunications enterprise in Kunming, China with the multiple regression coefficient value (R) was 0.167 and 0.185 respectively. The forecasting equations for analysis results provided in Table 4. The results indicate that workplace loneliness influenced relationship performance and job prformance in the opposite direction.

Table 3. Summary of the influence of workplace loneliness, emotional commitment and active personality on performance of employees in Chinese state-owned telecommunication enterprises

Employees' performance	R	R Square	Adjusted R Square	Std. Error of the Estimate
Task Performance	0.181	0.033	0.027	1.214
Relationship Performance	0.167	0.028	0.025	1.246
Job Performance	0.185	0.034	0.031	0.996

Predictors: (Constant), affective commitment, workplace loneliness, and proactive personality

Table 4. Summary of the forecasting equations for employees' performance in Chinese state-owned telecommunication enterprises

Employees' performance	Forecasting Equations
Task Performance	$\hat{Y}_1 = 3.689 - 0.110\ X_1 + 0.141X_2$
Relationship Performance	$\hat{Y}_2 = 4.001 - 0.156X_1$
Job Performance	$\hat{Y}_T = 4.299 - 1.38X_1$

X_1 = workplace loneliness, X_2 = affective commitment

Discussion and Conclusion

Overall, the analysis provides insights into the demographic characteristics of the respondents who are employees of the state-owned telecommunications company in Kunming, China. Most of the respondents are female, aged between 20 and 30 years old, married, have a bachelor's degree of educational level, have worked in the enterprise for 1–5 years, have a job level of middle-level manager, and have a monthly income in the range of 5000–10000 RMB.

In terms of task performance, most of the respondents' opinions were at a good level due to their ability to complete tasks on time and in an efficient manner, which are all internal factors that can be controlled. For relationship performance, the analysis result was at a moderate level due to the nature of relationship performance and the fact that part of it involved an external factor that cannot be controlled.

The difference in gender, age, marital status, educational level, year of working, and job level had not differently affected in employees' job performance, task performance, and relationship performance. The difference in Job level affects employee's task performance in telecommunications enterprise in Kunming, China differently which comply with Chen (2019) & Wang (2020) and it could affect employee turnover rate. The difference in montly income affects employee's job performance in telecommunications enterprise in Kunming, China differently.

Workplace loneliness and affective commitment influences employees' task performance in telecommunications enterprise in Kunming, China. Workplace loneliness influnces employees' relationship performance and task performance in telecommunications enterprise in Kunming, China. The results of forecasting equation indicate that workplace loneliness influenced relationship performance and job prformance in the opposite direction. It means that when workplace loneliness increase relationship performance and job performance decrease.

Implication for Practice

The findings have several practical implications for the management and human resources practices within Chinese state-owned telecommunications companies:

Promoting Affective Commitment: Companies can benefit from implementing strategies that foster affective commitment among employees. This includes creating a positive and supportive work environment, promoting a sense of belonging, and ensuring that employees are emotionally engaged with the organization. Training programs and initiatives that enhance employees' commitment can be valuable.

Addressing Workplace Loneliness: To improve job performance, organizations should take measures to reduce workplace loneliness. This can be achieved through team-building activities, regular communication, and support networks. Encouraging social interaction, both in and out of the workplace, can help employee's combat loneliness and enhance their well-being and performance.

Proactive Personality Development: Companies can identify employees with proactive personality traits and develop training programs that encourage and enhance these characteristics. Proactive individuals tend to take initiative and show innovation in their roles, which can lead to improved job performance.

Tailoring HR Practices: Understanding the demographic factors that influence job performance, such as gender, age, and monthly income, can help organizations tailor their human resources practices to meet the specific needs of different employee groups. This might involve creating flexible policies or providing targeted support to address individual differences.

Performance Appraisals: Companies can include affective commitment, workplace loneliness, and proactive personality as considerations in performance appraisals. This can help in identifying areas for improvement and developing personalized strategies to enhance job performance.

Employee Well-being Programs: To mitigate workplace loneliness, organizations can introduce well-being programs that provide social support and encourage employees to maintain a healthy work-life balance. Such programs can contribute to better mental health and, in turn, higher job performance.

Recommendation for future research

Affective Commitment

Enhance Employee Engagement Programs: The organization should invest in initiatives aimed at enhancing employee engagement and strengthening their emotional connection to the company. Regular feedback sessions, recognition programs, and opportunities for employees to voice their opinions and concerns can foster a sense of belonging and commitment. Additionally, creating a positive work environment that aligns with employees' values and aspirations can further strengthen their commitment.

Provide Career Development Opportunities: Offering career development pathways and opportunities for skill growth can boost employees' commitment. The organization should invest in training, mentorship, and advancement programs that help employees see a clear future within the company. Clearly communicating the potential for growth and advancement can motivate employees to stay committed to their roles.

Promote Work-Life Balance: Encouraging a healthy work-life balance is crucial for enhancing Affective Commitment. The organization should implement policies that support flexible work arrangements, provide mental health resources, and promote employee well-being. When employees feel their personal lives are valued and respected, they are more likely to remain committed to their work.

Workplace Loneliness

Foster a Collaborative Culture: To combat workplace loneliness, the organization should foster a culture of collaboration and social interaction. Encouraging teamwork, group projects, and open communication channels can create a sense of belonging. Organize regular team-building activities, social events, and peer recognition programs to strengthen interpersonal relationships among employees.

Implement Mentorship Programs: Establishing mentorship programs can provide employees with a support system and a sense of connection. Experienced employees can mentor newer ones, helping them integrate into the workplace and feel less isolated. Mentorship programs not only reduce loneliness but also facilitate knowledge transfer and skill development.

Create Comfortable Spaces: Designing comfortable and inviting workspaces can have a positive impact on reducing loneliness. Provide common areas where employees can relax, chat, and collaborate informally. Consider flexible seating arrangements and breakout rooms to encourage spontaneous interactions among colleagues.

Limitation of Study

Sample Size and Selection: The sample size of 350 participants, while significant, may not fully represent the diversity of employees within state-owned telecommunications companies. A larger and more diverse sample could yield more robust results.

Cross-Sectional Design: This study relies on cross-sectional data, which provides a snapshot of relationships at a single point in time. Longitudinal data would offer a better understanding of how these variables change over time and affect job performance.

Generalizability: The results may not be universally applicable to all types of telecommunication companies. Differences between state-owned and private enterprises, as well as variations in company size and structure, could influence the relationships studied.

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PERCEIVED QUALITY AND PERCEIVED VALUE INFLUENCE ON BRAND LOYALTY TOWARD LUXURY HOTEL IN KUNMING, YUNNAN, CHINA

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Abstract

This research investigates the determinants of brand loyalty in Kunming's luxury hotels and offers strategies to augment the sector's market presence based on demographic insights. Amidst a burgeoning global tourism industry prioritizing personalized experiences, Kunming's unique climate and scenery have elevated its appeal to tourists and business travelers, subsequently spurring growth in the luxury hotel market, as evidenced by rising hotel numbers, tourism revenue, and regional GDP from 2018 to 2022. Facing challenges from the pandemic and stiff market competition, the study focuses on the effects of age, gender, education, and income on brand loyalty. The goal is to aid Kunming's upscale hotels in tailoring services, enhancing appeal, curtailing customer attrition, and securing a market edge. The study uses quantitative methods to analyze data from 400 patrons across three premier hotels. Findings indicate that brand loyalty is significantly affected by age, income, and profession, with the elderly and affluent displaying greater loyalty and students and government workers comparatively more loyal than other professional groups. These outcomes provide a basis for targeted, strategic interventions in the luxury hotel industry.

Keywords: Luxury Hotels, Brand Loyalty, Demographic Factors, Perceived Quality, Perceived Value, Kunming

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Introduction

The rapid development of the global international tourism industry has significantly impacted the hotel market's competitive landscape. Nowadays, hotel consumers are concerned with the functional value of hotel products and services, emphasizing personalized experiences and the emotional value derived from the service (Zhang et al., 2022). This trend has prompted the hotel industry to adapt to evolving customer demands and provide personalized services continually. Kunming, the capital of China's Yunnan province, boasts stunning natural landscapes and a pleasant climate, attracting many tourists and business travelers.

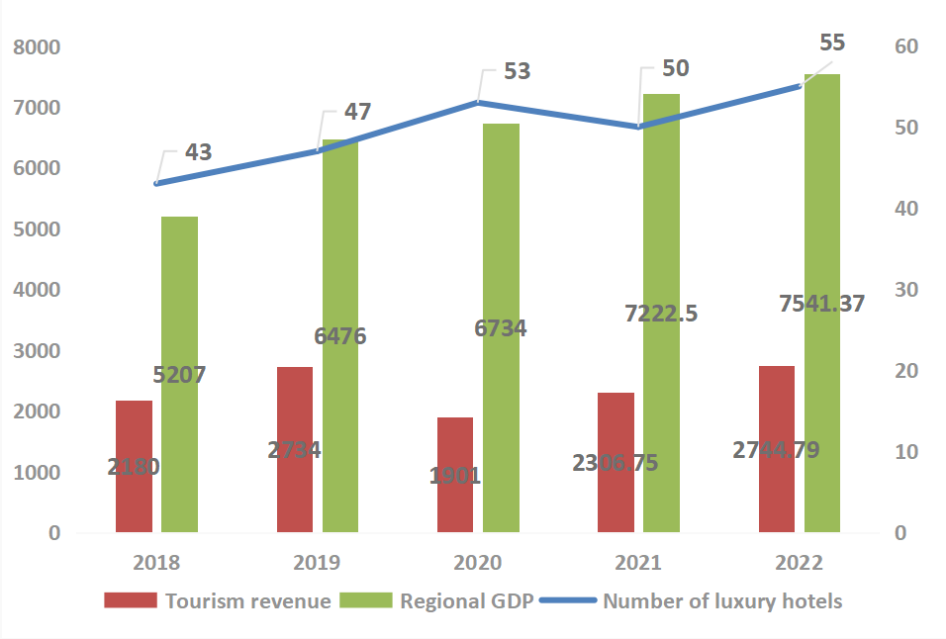

Figure 1. Kunming Luxury Hotel Statistics chart

The statistics presented in Figure 1 reveal that from 2018 to 2022, there has been an upward trajectory in the metrics related to Kunming's luxury hotel sector, tourism earnings, and the regional Gross Domestic Product (GDP). This trend underscores sustained growth and development within the city's luxury hotel sector, the broader tourism industry, and the local economy.

The luxury hotel industry in Kunming faces challenges such as intense market competition and disruptions caused by the pandemic. To address these challenges and gain a competitive advantage, luxury hotels must understand the factors influencing brand loyalty among different demographic groups. This study aims to explore these factors and provide strategic recommendations for Kunming's luxury hotel industry to cater to the needs of different customer segments, enhance brand attractiveness, reduce customer churn, and gain a competitive edge in the market. The research findings will be valuable for hotel operators as they can understand how different demographic variables affect customer brand loyalty. This knowledge will enable them to formulate more targeted strategies and provide services that align with customer expectations, ultimately enhancing brand attractiveness. Additionally, the research will contribute to a deeper understanding of Kunming's market dynamics, facilitating more

informed market positioning and customer segmentation strategies, which are critical for expanding market share and revenue.

The significance of this research is multifaceted. Firstly, it enables hotel operators to understand better how different demographic variables affect customer brand loyalty, helping them formulate more targeted strategies and provide services that align with customer expectations, ultimately enhancing brand attractiveness. Secondly, the research contributes to a deeper understanding of the dynamics of the Kunming market, facilitating more informed market positioning and customer segmentation strategies, which are critical for expanding market share and revenue. Most importantly, by elevating brand loyalty, the research aids in reducing customer churn, lowering marketing and advertising costs, increasing customer retention rates, and creating a more stable and sustainable operating environment for luxury hotels. Additionally, it enhances brand reputation, improves market positioning, and enhances the feasibility of pricing strategies. The research provides valuable insights into luxury hotels (Hyun & Perdue, 2017).

Research Questions

The research questions are as follows:

1. How do demographics affect brand loyalty toward luxury hotels in Kunming?
2. How does perceived quality affect brand loyalty toward luxury hotels in Kunming?
3. How does perceived value affect brand loyalty toward luxury hotels in Kunming?

Research Objectives

1. To study the influence of Demographic Factors on Brand Loyalty toward Luxury Hotels in Kunming, Yunnan, China.

2. To study the influence of Perceived Quality on Brand Loyalty toward Luxury Hotels in Kunming, Yunnan, China.

3. To study the influence of Perceived Value on Brand Loyalty toward Luxury Hotels in Kunming, Yunnan, China.

Literature Review

Perceived Quality

The SERVQUAL model, introduced by Parasuraman et al. in 1988, is a widely recognized framework for assessing service quality. Measuring and evaluating service quality encompasses five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy. This model emphasizes that these dimensions and their expectations influence customers' perceptions of service quality. Additionally, the Service Quality Gap Model, proposed by Parasuraman et al. in 1988, suggests that potential gaps in service quality can exist at various stages in the service delivery process. These gaps may occur between customer expectations and management perceptions, between management

perceptions and service specifications, and between service specifications and service delivery. Understanding and addressing these gaps is crucial for delivering high-quality service and enhancing customer satisfaction and loyalty.

Perceived quality plays a pivotal role in shaping consumer perceptions and behaviors. The Expectancy-Disconfirmation Theory of Yüksel & Yüksel (2008)posits that consumers evaluate products or services based on their expectations and perceptions of performance. When perceived quality exceeds initial expectations, it leads to greater satisfaction and, consequently, brand loyalty. Zeithaml, Berry, and Parasuraman (1985) conducted an influential study highlighting the influence of perceived quality on customer satisfaction and loyalty. Their research findings emphasize the importance of perceived quality in fostering brand loyalty.

Perceived Value

Perceived Value refers to the perceived benefits customers believe they receive compared to the costs or sacrifices of acquiring a product or service. The Value-Percept Disparity Model is a key theory related to perceived value (Zeithaml, 1988). This model posits that perceived value results from comparing perceived benefits and costs. Brands that offer higher perceived value are more likely to secure customer loyalty. Researchers have emphasized the importance of perceived value in influencing customer decisions and loyalty (Sweeney & Soutar, 2001). Brand Capability Value is related to the perception of a brand's ability to deliver on its promises and meet customer needs. While there may not be a specific theory directly related to Brand Capability Value, the concept aligns with the broader idea of brand credibility and trust. According to the Source Credibility Theory (Hovland & Weiss, 1951), consumers are likelier to trust and be loyal to brands they perceive as credible and trustworthy. In brand loyalty, the perception of a brand's capabilities can significantly influence consumer behavior (Erdem & Swait, 2004).

Brand Loyalty

Research on perceived value has led to the development of various theories, but scholars generally agree that perceived value is a subjective feeling of consumers. It arises from the comparison and balance between perceived value and perceived risk. Cai (2022) studied consumer perceived value theory and examined the relationship between government incentive policies and the purchase intention of electric vehicles. The research employed quantitative analysis and focused on the impact mechanisms of government incentive policies on purchase intentions. The study emphasized the mediating role of perceived value in the relationship between government incentive policies and purchase intentions, offering insights into the electric vehicle market. Zhao et al. (2023) studied the adaptability of ecological compensation for rural households based on perceived value theory. The research used quantitative analysis and focused on the mediating role of perceived value in the adaptability of ecological compensation for rural households. The study provided theoretical support for formulating and

implementing rural ecological compensation policies. Wang (2021) studied rural public cultural service satisfaction based on perceived value theory. The research used quantitative analysis and examined the relationship between factors affecting public cultural service satisfaction and perceived value. The study found that perceived value plays an intermediary role in public cultural service satisfaction, offering suggestions for optimizing rural public cultural services. In the hotel industry, perceived value is defined based on quality, price, social, aesthetics, functionality, and experience, as described and quantified by Sweeney and Soutar (2001). This division facilitates quantitative analysis.

Methodology

The primary purpose of this study is to explore the various factors influencing brand loyalty toward luxury hotels in Kunming, Yunnan, China. Specific attention is given to demographic characteristics, perceived quality, and value. The research employs a cross-sectional survey design to collect data related to individual characteristics and their purchasing behaviors. Subsequently, an analysis is conducted on the impact of demographic factors, perceived quality, and perceived value on brand loyalty. The study comprises a sample of individuals from diverse demographic backgrounds, including gender, marital status, number of children, age, educational background, and monthly income. Research data will be collected through an online questionnaire survey.

The population for this study comprises customers who visit luxury hotels in Kunming, Yunnan Province, China. The sample size will be determined using a convenient sampling method and will include a diverse range of customer groups from various demographic and background profiles. Therefore, the population for this study is considered to be infinite. Four hundred samples, drawn from three different hotels will be selected for this study.

Hypotheses

H1: Demographic factors generate Differences in Brand Loyalty toward Luxury Hotels in Kunming, Yunnan, China.

H2: Perceived Quality Influence on Brand Loyalty toward Luxury Hotels in Kunming, Yunnan, China.

H3: Perceived Value Influence on Brand Loyalty toward Luxury Hotels in Kunming, Yunnan, China.

Descriptive statistics were used to analyze data, including Frequency, Percentage, Mean, and Standard Deviation, and inferential statistics, including Independent Samples t-test, One-way ANOVA, LSD, Simple Linear Regression, and Multiple Linear Regression.

Research Framework

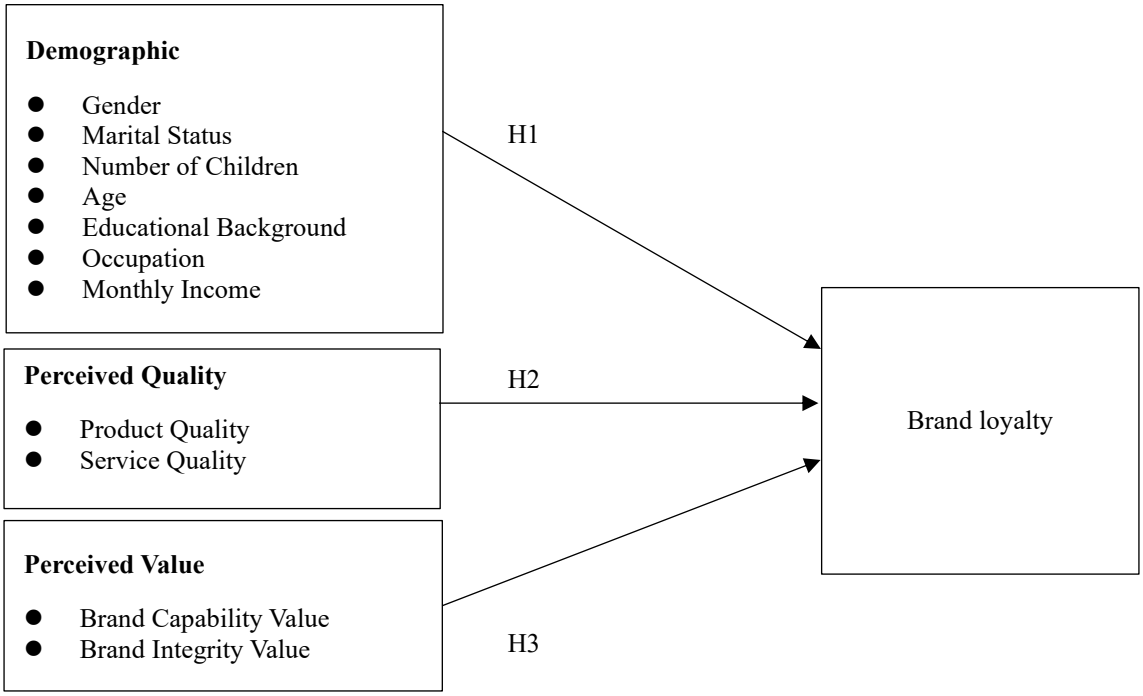

Figure 2. Conceptual Framework

Research Results

Descriptive Statistics

Demographic Factors: According to the survey data, out of 400 respondents, 69% are male and 31% are female. Regarding marital status, 29% are single, 37.5% are married, and 33.5% are divorced. Regarding the number of children, 23% have none, 32% have one child, and 45% have two or more children. Regarding age distribution, only 5% are under 20 years old, 15% are between 21 and 30 years old, 45.5% are between 31 and 40 years old, 28.75% are between 41 and 50, and 10.25% are over 50. Educationally, 28.75% have a high school education or lower, 37.75% have an associate degree, 23% have a bachelor's degree, and 10.5% have a master's degree or higher. In terms of monthly income, 1% earn less than CNY 5,000, 10% earn between CNY 5,001 to 7,000, 25.25% earn between CNY 7,001 to 10,000, 57.25% earn between CNY 10,001 to 15,000, and 6.5% earn more than CNY 15,000. Professionally, students make up 1.25%, government officials 13.75%, private company employees 22.75%, business owners 47.5%, and others 14.75%.

Table 1. The Frequency and Percent Frequency Classified by Demographic Factor

	Frequency	Percent
Gender		
Male	276	69.00
Female	124	31.00
Total	400	100.00

Table 2. The Frequency and Percent Frequency Classified by Demographic Factor (Cont.)

	Frequency	Percent
Marital Status		
Single	116	29.00
Married	150	37.50
Divorce	134	33.50
Total	400	100.00
Number of Children		
None	92	23.00
1	128	32.00
2 and more	180	45.00
Total	400	100.00
Age		
Not more than 20 years old	2	0.5
21-30 years old	60	15.00
31- 40 years old	182	45.50
41 - 50 years old	115	28.75
Above 50 years old	41	10.25
Total	400	100.00
Educational Background		
High school or below	115	28.75
Associated degree	151	37.75
Bachelor's degree	92	23.00
Master's degree or above	42	10.50
Total	400	100.00
Occupation		
Student	5	1.25
Government Officer	55	13.75
Private Company Worker	91	22.75
Business Owner	190	47.50
Others	59	14.75
Total	400	100.00
Monthly Income		
Not more than CNY 5,000	4	1.00
CNY 5,001 - CNY 7,000	40	10.00
CNY 7,001 - CNY 10,000	101	25.25
CNY 10,001 - CNY 15,000	229	57.25
Above CNY 15,000	26	6.50
Total	400	100.00

Perceived Quality： Product Quality is more important than Service Quality since the former enjoys a mean of 3.57 compared to 3.41 for the latter. Regarding Product Quality, the researcher believes branded hotels usually focus on the quality of facilities, and decor is the most essential aspect, with a mean of about 3.68. For Service Quality, the most important aspect is that this hotel brand can provide one with personalized services with a mean of 3.52. Overall, the Perceived Quality is recorded as about 3.49, which is neutral.

Table 2. The Descriptive Statistics of Perceived Quality

Items	Strength Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	Rank
Product Quality						**3.572**	**0.85**	
I believe that branded hotels usually focus on the quality of facilities and decor.	1 0.3%	55 13.8%	101 25.3%	159 39.8%	84 21.0%	3.68	0.97	1
I believe that branded hotels value cleanliness and hygiene in guest rooms and public areas.	6 1.5%	54 13.5%	145 36.3%	139 34.8%	56 14.0%	3.46	0.94	3
I believe that branded hotels typically offer a variety of dining options.	12 3.0%	58 14.5%	85 21.3%	216 54.0%	29 7.3%	3.48	0.93	2
I choose to purchase healthier drink products.	4 1.0%	67 16.8%	140 35.0%	171 42.8%	18 4.5%	3.33	0.84	4
Service Quality						**3.412**	**0.83**	
I believe that the employees of this hotel brand are well-groomed and have a good image.	39 9.8%	51 12.8%	117 29.3%	53 13.3%	140 35.0%	3.51	1.34	2
I believe that the service attitude of this brand of hotel is good.	3 0.8%	40 10.0%	137 34.3%	193 48.3%	27 6.8%	3.50	0.79	3
I believe this hotel brand can quickly provide the services I need.	5 1.3%	36 9.0%	140 35.0%	202 50.5%	17 4.3%	3.48	0.77	5
I believe that this brand of hotel can provide me with personalized services.	2 0.5%	61 15.3%	97 24.3%	208 52.0%	32 8.0%	3.52	0.86	1
I believe that the employees of this brand of hotel are polite.	9 2.3%	75 18.8%	109 27.3%	123 30.8%	84 21.0%	3.50	1.09	3
Overall						**3.492**	**.794**	

Perceived Value： Brand Integrity Value, with a mean of 3.642, is more critical than Brand Capability Value, with a mean of 3.507. Regarding Brand Capability Value, "I believe that the hotel facilities and equipment are well-equipped and have practical value", which is the most essential aspect, with a mean of about 3.70. For Brand Integrity Value, the most critical aspect is that The brand actively seeks customer feedback and incorporates their suggestions into its product/service offerings, with a mean of 3.655. Overall, the Perceived Value is about 3.58, at the agreed level.

Table 3. The Descriptive Statistics of Perceived Value

Items	Strength Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	Rank
Brand Capability Value						**3.507**	**0.813**	
The hotel facilities and equipment are well-equipped and have practical value.	38 9.5%	32 8.0%	104 26.0%	64 16.0%	162 40.5%	3.70	1.325	1
I believe the staff members have high professional qualifications and provide excellent service.	5 1.3%	32 8.0%	105 26.3%	196 49.0%	62 15.5%	3.69	0.871	2
Staying at this brand of hotel is worth the money.	6 1.5%	69 17.3%	125 31.3%	150 37.5%	50 12.5%	3.42	0.965	4
Staying at this brand of hotel makes me feel happy.	2 0.5%	63 15.8%	168 42.0%	132 33.0%	35 8.8%	3.33	0.863	5
Staying at this brand of hotel gives me a sense of spiritual gain.	10 2.5%	48 12.0%	129 32.3%	166 41.5%	47 11.8%	3.48	0.936	3
The experience of staying at this hotel brand is novel, enjoyable, and comfortable.	54 13.5%	116 29.0%	77 19.3%	74 18.5%	79 19.8%	3.02	1.345	6
Brand Integrity Value						**3.642**	**0.725**	
The brand has a strong distribution network that makes it easy for customers to access its products/and services.	28 7.0%	84 21.0%	77 19.3%	123 30.8%	88 22.0%	3.398	1.234	3
The brand actively seeks customer feedback and incorporates their suggestions into its product/service offerings.	5 1.3%	37 9.3%	82 20.5%	243 60.8%	33 8.3%	3.655	0.808	1

Table 3. The Descriptive Statistics of Perceived Value

Items	Strength Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	Rank
The brand demonstrates a commitment to sustainability and corporate social responsibility initiatives.	5 1.3%	55 13.8%	91 22.8%	190 47.5%	59 14.8%	3.608	0.941	2
The brand has won awards or recognition for its excellence in the industry.	2 0.5%	60 15.0%	182 45.5%	115 28.8%	41 10.3%	3.333	0.871	4
Overall						**3.575**	**0.617**	

Brand Loyalty: Brand Loyalty data provides valuable insights into respondents' perceptions of loyalty towards the hotel brand. Regarding Brand Loyalty, "I am willing to pay a higher price for this hotel brand compared to other hotel brands" is as important as I feel disappointed when I cannot stay there—the average is about 3.675. In summary, while most respondents show certain loyalty and preference towards this hotel brand, some still hold different opinions. Therefore, the hotel can continue strengthening its image, improving service quality, and further meeting consumer needs to enhance its loyalty and market share. Overall, Brand Loyalty is scored as about 3.52, at the agreed level.

Table 4. The Descriptive Statistics of Brand Loyalty

Items	Strength Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	Rank
In general, this hotel brand is my first choice.	4 1.00%	40 10.00%	101 25.30%	229 57.30%	26 6.50%	3.583	0.797	3
I am willing to pay more for this hotel brand than other hotels.	37 9.30%	38 9.50%	88 22.00%	92 23.00%	145 36.30%	3.675	1.301	1
I feel disappointed when I cannot stay at this hotel brand.	1 0.30%	55 13.80%	101 25.30%	159 39.80%	84 21.00%	3.675	0.965	1
Even if the price increases, I would still choose this hotel brand.	6 1.50%	54 13.50%	145 36.30%	139 34.80%	56 14.00%	3.463	0.944	6
I often recommend this hotel brand to family and friends.	12 3.00%	58 14.50%	85 21.30%	216 54.00%	29 7.30%	3.480	0.931	5
I frequently stay updated with information about this hotel brand.	4 1.00%	67 16.80%	140 35.00%	171 42.80%	18 4.50%	3.330	0.841	7
I choose this hotel brand when the need arises.	39 9.80%	72 18.00%	117 29.30%	67 16.80%	105 26.30%	3.318	1.3	8

Table 4. The Descriptive Statistics of Brand Loyalty (Cont.)

Items	Strength Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	Rank
I often praise this hotel brand in front of others.	3 0.80%	40 10.00%	137 34.30%	193 48.30%	27 6.80%	3.503	0.795	4
Overall						**3.518**	**0.785**	

Inferential Statistics

Hypothesis 1: Differences in Demographic Factors Generate Differences in Brand Loyalty toward luxury hotels.

Differences in Gender Generate Differences in Brand Loyalty Toward Luxury Hotel.

Table 5. The Independent Samples t-test of the Gender Factor

Items	Gender	N	Mean	S.D.	t-value	p-value
Consumer Purchase Intention	Male	398	0.0838	0.324	1.647	0.2
	Female	223.5810	0.0838	0.336		

According to the results of the Independent Samples t-test in Table 5, it is evident that the p-value of Gender is about 0.2, which is much higher than the critical value of 0.05. Therefore, the H0 cannot be rejected, meaning that differences in Gender generate no differences in Brand Loyalty.

Differences in Marital Status Generate Differences in Brand Loyalty Toward Luxury Hotel.

Table 6. The One-way ANOVA of Marital Status

Brand Loyalty Scale		Sum of Squares	df	Mean Square	F	Sig.
Marital Status	Between Groups	0.159	2	0.08	0.129	0.879
	Within Groups	245.718	397	0.619		
	Total	245.878	399			

The results obtained from Table 6 suggest that the p-value of Marital Status is about 0.879, much higher than the critical value of 0.05. Therefore, the H0 cannot be rejected, meaning that differences in Marital Status generate no differences in Brand Loyalty.

Differences in Number of Children Differences in Brand Loyalty toward Luxury Hotel

Table 7. The One-Way ANOVA of the Number of Children

Brand Loyalty Scale		Sum of Squares	df	Mean Square	F	Sig.
Number of Children	Between Groups	0.3	2	0.15	0.243	0.785
	Within Groups	245.577	397	0.619		
	Total	245.877	399			

Regarding Table 7, the p-value of Educational Background is about 0.785, much higher than the critical value of 0.05. Therefore, the H0 cannot be rejected, meaning that differences in the Number of Children generate no differences in Brand Loyalty.

Age differences generate differences in brand loyalty toward luxury hotels.

Table 8. The One-way ANOVA of the Age

Brand Loyalty Scale		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	76.316	4	19.079	44.446	0.000
	Within Groups	169.561	395	0.429		
	Total	245.878	399			

It is evident from Table 8 that the p-value of Age is approximately 0.000, much lower than the critical value of 0.05. Therefore, the H0 is rejected, meaning that differences in Age generate differences in Brand Loyalty.

Differences in Educational Background Differences in Brand Loyalty Toward luxury hotel

Table 9. The One-Way ANOVA of the Educational Background

Brand Loyalty Scale		Sum of Squares	df	Mean Square	F	Sig.
Educational Background	Between Groups	1.16	3	0.387	0.626	0.599
	Within Groups	244.717	396	0.618		
	Total	245.877	399			

Concerning Table 9, the p-value of Educational Background is about 0.599, which is much higher than the critical value of 0.05. Therefore, the H0 cannot be rejected, meaning that differences in Educational Background generate no differences in Brand Loyalty.

Differences in Monthly Income Generate Differences in Brand Loyalty Toward luxury hotel.

Table 10. The One-way ANOVA of Monthly Income

Brand Loyalty Scale		Sum of Squares	df	Mean Square	F	Sig.
Monthly Income	Between Groups	84.721	4	21.18	51.913	0.000
	Within Groups	161.157	395	0.408		
	Total	245.878	399			

It is evident from Table 10 that the p-value of Monthly Income is approximately 0.000, which is much lower than the critical value of 0.05. Therefore, the H0 is rejected, meaning that the difference in Monthly Income generates differences in Brand Loyalty.

Differences in Occupation Differences in Brand Loyalty Toward Luxury Hotel

Table 11. The One-Way ANOVA of the Occupation

Brand Loyalty Scale		Sum of Squares	df	Mean Square	F	Sig.
Occupation	Between Groups	70.461	4	17.615	39.666	0.000
	Within Groups	175.417	395	0.444		
	Total	245.878	399			

It can be seen from Table 11 that the p-value of Occupation is approximately 0.000, which is much lower than the critical value of 0.05. Therefore, the H0 is rejected, meaning that differences in Occupation generate differences in Brand Loyalty.

Hypothesis 2: Perceived Quality Influence on Brand Loyalty Toward Luxury Hotel

Table 12. The Multiple Linear Regression Analysis of Brand Loyalty Toward Luxury Hotel Classified by Perceived Quality

Model		Coefficient			t	p-value
		Unstandardized Coefficients		Standardized		
		B	Std. Error	Coefficients Beta		
1	Constant	0.517	0.070		7.433	0.000
	Product Quality	0.840	0.019	0.912	44.361	0.000
2	Constant	0.210	0.072		2.926	0.004
	Product Quality	0.746	0.020	0.810	37.194	0.000
	Service Quality	0.188	0.021	0.199	9.145	0.000

Dependent Variable： Brand Loyalty Scale

$$Y = 0.21 + 0.746X_1 + 0.188X_2 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

$$\text{Adjust } R^2 = 0.860$$

It can be seen from Table 12 that product quality is the most important factor influencing brand loyalty, evidenced by the coefficient of approximately 0.746 compared to 0.188 for service quality. The Adjusted R2 is about 0.860, which means that all these 2 factors, namely, Product Quality and Service Quality, have impacted Brand Loyalty by about 86.00 percent.

Hypothesis 3: Perceived Value Influence on Brand Loyalty Toward Luxury Hotel

Table 13 The Multiple Linear Regression Analysis of Brand Loyalty Toward Luxury Hotel Classified by Perceived Value Scale

Model		Coefficient			t	p-value
		Unstandardized Coefficients		Standardized		
		B	Std. Error	Coefficients Beta		
1	Constant	1.937	0.154		12.576	0.000
	Brand Capability Value	0.451	0.043	0.467	10.533	0.000
2	Constant	1.180	0.199		5.928	0.000
	Brand Capability Value	0.381	0.043	0.395	8.883	0.000
	Brand Integrity Value	0.275	0.048	0.254	5.701	0.000

Dependent Variable： Brand Loyalty Scale

$$Y = 1.180 + 0.381X_1 + 0.275X_2 \quad \text{.....(2)}$$

Adjust $R^2 = 0.274$

It can be seen from Table 13 that the Brand Capability Value is the most critical factor influencing Brand Loyalty, as evidenced by the coefficient of approximately 0.381 compared to 0.275 of Brand Integrity Value. The Adjusted R2 is about 0.274, meaning that all these 2 factors, namely, the Brand Capability Value and the Brand Integrity Value, have impacted Brand Loyalty by about 27.40 percent.

Conclusions

The presented text describes the results of hypothesis testing related to the impact of demographic factors on brand loyalty toward luxury hotels. Here is a summary of the key findings:

Differences in Demographic Factors Generate Differences in Brand Loyalty Toward Luxury Hotels: Based on the results of the hypothesis testing, the study reveals significant differences in brand loyalty toward luxury hotels. Specifically, gender, marital status, number of children, and educational background do not lead to significant variations in brand loyalty. However, significant differences are observed in brand loyalty concerning age, monthly income, and occupation. Respondents in older age groups and with higher income levels demonstrate higher brand loyalty. Notably, distinct occupational categories, especially students and government officers, exhibit significantly higher brand loyalty than others. These findings provide targeted insights for formulating marketing strategies, enabling better alignment with the diverse factors influencing brand loyalty among different demographic segments.

Perceived Quality Influence on Brand Loyalty Toward Luxury Hotel: This reveals that product quality has a more substantial impact on brand loyalty, with a coefficient of approximately 0.746,

compared to the coefficient of 0.188 for service quality. The Adjusted R2 value of 0.860 suggests that Product Quality and Service Quality jointly account for approximately 86.00 percent of the variance in Brand Loyalty. In conclusion, the study highlights the significant role of perceived quality, particularly product quality, in shaping brand loyalty toward luxury hotels.

Perceived Value Scale Influence on Brand Loyalty toward Luxury Hotel: reveals that Brand Capability Value has a more substantial impact on Brand Loyalty, with a coefficient of approximately 0.381, compared to the coefficient of 0.275 for Brand Integrity Value. The Adjusted R2 value of 0.274 suggests that Brand Capability Value and Brand Integrity Value jointly account for about 27.40 percent of the variance in Brand Loyalty. In conclusion, the study highlights perceived value's significant role in shaping brand loyalty toward luxury hotels, particularly Brand Capability Value.

Discussion

The findings of this study align with and are supported by existing literature on consumer behavior and brand loyalty within the hospitality industry. Several fundamental studies have contributed valuable insights that corroborate the observed differences in brand loyalty based on demographic factors. Age and Brand Loyalty: The positive correlation between age and brand loyalty is consistent with the research conducted by Kang, J. (2018), which examined consumer behavior in the luxury hospitality sector. They found that older consumers tend to develop stronger emotional connections with luxury brands, resulting in higher levels of loyalty. Income Influence on Brand Loyalty: The impact of monthly income on brand loyalty is reinforced by the work of Costa et al. (2021), who explored the role of income in shaping consumer loyalty. Their findings emphasized that higher income levels often lead to increased brand loyalty, as consumers with more significant financial means seek premium experiences and are willing to invest in luxury offerings. Occupation and Brand Loyalty: The higher brand loyalty observed among students and government officers is supported by the research conducted by Chang, W. J. (2020). Their study highlighted the significance of occupation in influencing consumer preferences in the hospitality industry, with certain occupational groups exhibiting stronger loyalty due to specific service expectations and lifestyle choices. By integrating these insights from past research, the current study gains a broader context and strengthens the validity of its findings. The convergence of results across multiple studies underscores the robustness of the observed relationships between demographic factors and brand loyalty in the luxury hotel sector.

The conclusions drawn from the study align with existing literature that emphasizes the critical role of perceived quality in shaping brand loyalty, especially in the context of luxury services. Previous research by Kim, S. S., Choe, J. Y. J., & Petrick, J. F. (2018) highlights the significance of brand perceptions and quality in influencing consumer loyalty. Kim, S. S., Choe, J. Y. J., & Petrick, J. F. (2018) argue that a strong brand, often associated with superior quality, fosters customer loyalty by creating positive brand associations. Walls, A., Okumus, F., Wang, Y., & Kwun, D. J. W. (2011) In discussing these results, it is crucial to acknowledge the dynamic nature of the luxury hotel industry

and changing consumer preferences. Previous studies by Jain, S., & Shankar, A. (2022) stress the evolving nature of luxury consumption and the need for luxury brands to adapt to shifting consumer expectations. In conclusion, the current study's findings echo established literature on brand loyalty and perceived quality and contribute valuable insights into the specific context of luxury hotels. Building on the foundation laid by previous researchers, this study provides a nuanced understanding of the factors influencing brand loyalty in the luxury hospitality sector, offering practical implications for industry practitioners and marketers.

The findings from the study align with existing literature, such as the work of Wilkins, H., Merrilees, B., & Herington, C. (2009), which explored the determinants of hotel loyalty. This study resonates with the findings regarding the influence of perceived value on brand loyalty toward luxury hotels, particularly highlighting the distinct impacts of Brand Capability Value and Brand Integrity Value. This alignment enriches the understanding of the factors influencing brand loyalty. Additionally, the research correlates with the insights of Yin, C. K., & Shen, H. (2017), who emphasized that brand loyalty is often driven by consumers' perceptions of a brand's unique attributes, including distinctive capabilities. Shen's concept of brand equity further supports the idea that solid brand associations, such as unique capabilities, contribute significantly to a brand's overall value. This alignment with established literature strengthens the credibility of the study's conclusions and provides a valuable foundation for future research in brand loyalty. This aligns with the idea that the dimensions of perceived value, as captured by Brand Capability and Brand Integrity, play a significant role in shaping brand loyalty but may not account for the entirety of the loyalty construct.

In conclusion, the study's nuanced exploration of perceived value components, supported by insights from established literature, provides a robust foundation for understanding the dynamics of brand loyalty in the luxury hotel industry. The emphasis on unique capabilities, rooted in previous conceptualizations of brand equity, offers practical implications for luxury hotel managers seeking to enhance customer loyalty in a competitive market. Acknowledging integrity's role further enriches the strategic considerations, contributing to a comprehensive understanding of perceived value's impact on brand loyalty.

Recommendation

Enhancement of Product Quality and Service: Luxury hotels should prioritize improving product quality, including providing top-notch facilities, ensuring cleanliness and comfort, and offering unique and memorable experiences to guests. Also, although the impact of service quality on brand loyalty is relatively minor, it still holds significance. Hence, hotels should focus on delivering quality customer service, including responding promptly and effectively to queries and complaints, providing personalized services, and having well-trained and courteous staff.

Strengthening Brand Capability and Improving Brand Integrity: The research also points out the importance of brand capability value in shaping brand loyalty. Luxury hotels should strive to

strengthen their brand image by consistently delivering on their promises, showcasing their expertise and reliability, and differentiating themselves from competitors. Even though the research did not find a significant impact of brand integrity value on brand loyalty, it still shapes the brand's overall perception. Therefore, luxury hotels should work on upholding their integrity by being transparent, ethical, and responsible in their business operations.

Regular Market Research, Customer Engagement, and Employee Training: By conducting regular market research to understand customer expectations and perceptions of quality and value, adjustments can be made to product and service offerings and the overall brand image. Engaging with customers regularly through different channels can better understand their needs and expectations, which can also help build stronger relationships and enhance brand loyalty. Moreover, investing in regular training and development programs for employees can improve service quality and enable them to understand better and meet customer expectations.

In-Depth Perceived Value Analysis: A more granular analysis of perceived value components, particularly Brand Capability Value and Brand Integrity Value, is essential for future research. Researchers should aim to identify specific attributes or features within these perceived value dimensions that exert the most decisive influence on brand loyalty. This in-depth analysis can involve qualitative methods, such as interviews or focus groups, to capture nuanced consumer perceptions. Understanding the elements that contribute most significantly to perceived value will enable luxury hotels to tailor their offerings and communication strategies effectively. This recommendation emphasizes the importance of a nuanced understanding of perceived value in shaping brand loyalty in the luxury hotel sector.

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THE FACTORS IMPACTING ON CUSTOMER LOYALTY IN COSMETIC PRODUCTS IN CHINA

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Abstract

The cosmetics industry in China has experienced remarkable growth, with online marketing playing a pivotal role in influencing consumer loyalty. This study delves into the intricate relationships between online marketing, consumer demand, and consumer loyalty, focusing on the Xinshuijing Orchid Box produced by Yunnan Keyan Pharmaceutical Biotechnology Co., Ltd. With the industry's projected valuation of $580 billion by 2027, understanding the impact of online marketing on consumer loyalty is critical for brand success. The research model encompasses demographic factors, consumer demand, online marketing strategy, product price, product characteristics, and word-of-mouth. Through a quantitative approach involving an online questionnaire survey targeting Chinese consumers, the study seeks to examine the impact of demographic variables on consumer loyalty and to investigate how online marketing strategies influence loyalty. The research also aims to explore the effects of consumer demand matching, product price, product characteristics, and consumer word-of-mouth on consumer loyalty within the marketing strategy of the Xinshuijing Orchid Box. The findings reveal intriguing insights into the demographic profile of Chinese consumers. Notably, a slightly higher percentage of female respondents are married, with the majority falling within the 30 to 40-year age range. In terms of education, a significant proportion hold bachelor's degrees, and the service industry commands the highest occupational share. Moreover, the majority of respondents belong to the income bracket of less than 5,000 yuan monthly. Analyses of gender, marital status, age, education, occupation, and income provide valuable insights into their potential influences on consumer loyalty and online marketing responsiveness. The research also investigates the links between consumer demand, product pricing, product characteristics, word-of-mouth, and consumer loyalty. The study employs statistical techniques such as the Independent Samples t-test and One-Way Analysis of Variance (ANOVA) for hypothesis testing. The findings shed light on the complex relationship between online marketing tactics, consumer demand, and resulting loyalty patterns in the cosmetics market. With a projected valuation of $580 billion by 2027, this research contributes actionable insights for marketers and business strategists operating in China's vibrant and competitive cosmetics market. Understanding the impact of online marketing on consumer loyalty is crucial for brand success, and this study provides valuable insights in this regard.

Keywords: Cosmetics Industry, Online Marketing, Consumer Loyalty, Demographic Factors

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Introduction

The cosmetics industry in China has experienced significant growth, with online marketing playing a crucial role in influencing consumer loyalty. As the industry continues to expand, understanding the impact of online marketing on consumer loyalty is essential for providing valuable insights into brand development. This study aims to explore the relationships between brand online marketing and consumer loyalty in the cosmetics industry, with a specific focus on the Xinshuijing Orchid Box produced by Yunnan Keyan Pharmaceutical Biotechnology Co., Ltd.

The rapid growth of the cosmetics industry in China has been driven by the increasing adoption of online marketing strategies. The use of e-commerce platforms, influencer partnerships, and social media advertising has transformed the way consumers discover, evaluate, and purchase cosmetics. The industry's trajectory is evidenced by its projected valuation of $580 billion by 2027, according to McKinsey & Company. In the post-epidemic era, capturing and retaining consumers' attention has become increasingly critical for brands, particularly in the face of intensifying market competition. Therefore, understanding the impact of internet marketing on consumer loyalty has become more vital than ever.

The research aims to address several key questions. First, it seeks to determine how cosmetic marketing strategies influence consumer loyalty. Additionally, the study will investigate the predominant network marketing strategies used in the Xinshuijing Orchid Box, manufactured by Yunnan Keyan Pharmaceutical Biotechnology Co., Ltd. The research also aims to examine the effects of consumer demand matching, product price, product characteristics, and consumer word-of-mouth on consumer loyalty within the marketing strategy of the Xinshuijing Orchid Box.

The study proposes several hypotheses based on the research questions. It posits that demographic factors generate differences in consumer loyalty in the cosmetic market and that consumer demand significantly influences consumer loyalty. Furthermore, the study postulates that the online marketing strategy employed by brands directly affects consumer loyalty, and that there's a combined impact of consumer demand and online marketing strategy on consumer loyalty.

The research model encompasses demographic factors, consumer demand, online marketing strategy, product price, product characteristics, and word-of-mouth. By examining these variables, the study aims to elucidate the complex relationship between online marketing tactics, consumer demand, and resulting loyalty patterns in the cosmetics market, offering insightful guidance for companies navigating the digital era. In conclusion, as China's cosmetics industry continues to grow, understanding the impact of online marketing on consumer loyalty is crucial for brand success. This study delves into the intricate relationships between online marketing, consumer demand, and consumer loyalty, aiming to address important research questions and hypotheses. The findings are expected to provide actionable insights for marketers and business strategists operating in the vibrant and competitive cosmetics market in China.

Literature Review

The influence of demographic factors on customer loyalty is undeniably a critical aspect that must be taken into consideration at every stage of the purchasing cycle, particularly within the context of online marketing. Factors such as gender, marital status, age, education, occupation, and monthly income wield considerable influence over consumer behavior and brand loyalty. It is essential to understand the impact of these demographic variables on the dynamics of online marketing in order to develop effective strategies that resonate with target audiences.

When it comes to gender, studies have shown that women and men have differing decision-making processes. Women tend to engage in more intricate and comprehensive decision-making methods, carefully considering various aspects before making a purchase, while men tend to be more selective in their decision-making. Furthermore, the marital status of the consumer can significantly impact their purchasing behavior. Married individuals may be more inclined to invest in family-oriented products and services, leading to certain predilections in brand loyalty. Age is another demographic variable that plays a crucial role in influencing consumer preferences in online marketing. Younger age groups, such as millennials and Gen Z, may exhibit greater engagement with social media and digital content, thus requiring tailored marketing approaches.

Educational attainment is a powerful variable that shapes consumer behavior, particularly in relation to environmentally friendly practices, which may significantly influence brand loyalty. Similarly, occupation and income levels also play a pivotal role in determining consumer behavior and brand loyalty. These factors impact the purchasing power and social standing of individuals, thereby shaping their preferences and loyalty towards brands.

In the realm of online marketing strategy, consumer demand, product pricing, product characteristics, and word-of-mouth communication are vital elements that must be carefully considered. Product pricing serves as a critical signaling mechanism that can influence consumer behavior and quality assessment. Competitive pricing coupled with satisfactory services can contribute to enhanced brand loyalty. Additionally, the unique characteristics of a product, such as limited edition items or exclusive offerings, can imbue it with psychological value and impact consumer purchase intentions. Furthermore, the power of word-of-mouth, particularly in the form of online reviews and social media mentions, cannot be overstated in its ability to significantly shape consumer loyalty.

Ultimately, consumer loyalty hinges on the degree of preference and perceived differentiation of a product or service. Throughout the consumer buying cycle, which includes understanding the product, initial investment, post-purchase evaluation, repurchase intention, and eventual repurchase, strong brand loyalty is cultivated when there is a clear preference for a product and a distinct differentiation from competitors. Moderate loyalty may be observed when there is no strong preference but some differentiation. Conversely, when consumers strongly prefer a product but perceive minimal differentiation, their loyalty may extend to multiple products.

Given the ever-evolving and intensely competitive landscape of the digital marketplace, there is an increasingly urgent need for a comprehensive understanding and accurate forecasting of customer demands. Online marketers must be vigilant and adaptive, tailoring their strategies to align with the intricate interplay of demographic factors, consumer demand, and effective online marketing approaches to foster and sustain consumer loyalty in the digital sphere.

Research Methodology

Based on previous research and the case investigation of Yunnan Keyan Pharmaceutical Biotechnology Co., Ltd., this study adopts an online questionnaire survey to conduct quantitative research. The collected data will be analysed using SPSS 26.0. The research model includes investigating the demographic characteristics of the sample, network marketing cognition, and the degree of consumer loyalty through frequency analysis, descriptive statistical analysis, and regression analysis.

The population consists of Chinese consumers who have purchased cosmetic products online, considered as an infinite population. The required sample consists of 400 consumers of Chinese nationality who have experienced boxed consumption of Xinshuijing orchids produced by Yunnan Keyan Pharmaceutical Biotechnology Co., Ltd.

An online survey was conducted by a Chinese survey agency, Questioner Star, from September 1, 2023, to December 31, 2023, targeting Chinese consumers' awareness of the network marketing strategy of Xin Shui Jing Orchid Boxes and their loyalty. After excluding incomplete data, 400 complete responses will be used for analysis.

The research instrument consists of a multi-item Likert scale questionnaire measuring variables such as consumer demand matching, product price, product characteristics, word-of-mouth, and consumer loyalty. Demographic factors including gender, marital status, age, occupation, education level, and average monthly income are also investigated. Factor analysis is used to verify the validity and reliability of the measured variables.

Data will undergo a cleaning procedure to ensure validity and reliability. Descriptive statistics will be used to summarise the data, and statistical techniques such as the Independent Samples t-test and One-Way Analysis of Variance (ANOVA) will be employed for hypothesis testing. The analysis will investigate the effect of gender on customer loyalty using the Independent Samples t-test and explore customer loyalty differences based on demographic factors using the One-Way ANOVA.

By employing these methodologies, the study aims to provide an in-depth analysis of the relationship between online marketing strategies and consumer loyalty for cosmetic products, focusing on the case of Xin Shui Jing Orchid Boxes produced by Yunnan Keyan Pharmaceutical Biotechnology Co., Ltd.

Result of the Research

1. The Demographic Factor

Table 1. The Frequency and Percent Frequency Classified by Demographic Factor

Items	Classification	Frequency	% Frequency
1.Gender	Male	188	47.00
	Female	212	53.00
2.Marital Status	Single	87	21.75
	Married	294	73.50
	Divorced	19	4.75
3.Age	Under 20 Years Old	33	8.25
	20 but less than 30 Years Old	56	14.00
	30 but less than 40 Years Old	213	53.25
	40 but less than 50 Years Old	87	21.75
	50 Years Old and More	11	2.75
4.Educational Level	Junior High School	51	12.75
	Senior High School	92	23.00
	Bachelor Degree	147	36.75
	Master Degree	72	18.00
	Higher than Master Degree	38	9.50
5.Occupation	Service Industry	128	32.00
	Business and Management	44	11.00
	Technology	86	21.50
	Finance	52	13.00
	Art	33	8.25
	Student	43	10.75
	Others	14	3.50
6.Monthly Income	Less than 5,000 RMB	144	36.0
	5,000 but less than 10,000 RMB	81	20.25
	10,000 but less than 15,000 RMB	117	29.25
	15,000 but less than 20,000 RMB	37	9.25
	20,000 RMB and more	21	5.25
	Total	400	100.00

Table 1. reveals a demographic snapshot of the respondents. Notably, 53.00% are female, slightly outnumbering the 47.00% who are male. Turning to marital status, a significant 73.50% are married, while 21.75% and 4.75% are single and divorced, respectively. Age-wise, the majority falls within the 30 to 40-year range, constituting about 53.25% of the respondents. The 40 to 50-year bracket follows at 20.00%, while those aged 20 to 30 and under 20 make up 14.00% and 8.25%, respectively. A mere 2.75% are aged 50 and above. Educationally, a substantial 36.75% hold bachelor's degrees, with Senior High School, Master's Degree, and Junior High School trailing at approximately 23.00%,

18.00%, and 12.75%, respectively. Only 9.50% have pursued education beyond a master's degree. Occupationally, the service industry commands the highest share at 32.00%, with technology and finance following closely at 21.50% and 13.00%, respectively. Business management, student, and art occupations hover around 11.00%, 10.75%, and 8.25%, while only 3.50% fall into other categories. In terms of monthly income, a substantial 36.00% earn less than 5,000 yuan, while 29.50% fall within the 10,000 to 15,000 yuan range. Those earning 5,000 to 10,000 yuan and 15,000 to 20,000 yuan represent 20.25% and 9.25%, respectively. A modest 5.25% report monthly incomes of 20,000 yuan and above.

1.1 Gender

The roughly equal number of men (188) and women (212) participants provides a gender viewpoint. This balance may allow comparisons of gender attitudes and behaviors toward beauty products and marketing. Gender-related prejudices and consumer responses to cosmetic sector marketing methods are better assessed.

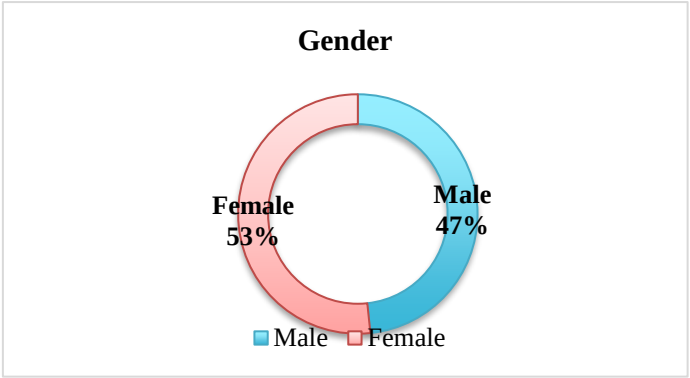

Figure 1. Gender

1.2 Marital Status

This study's 294 married participants may imply a more stable life stage. Less representation of singles and divorced may make it tougher to understand their behaviors and interests.

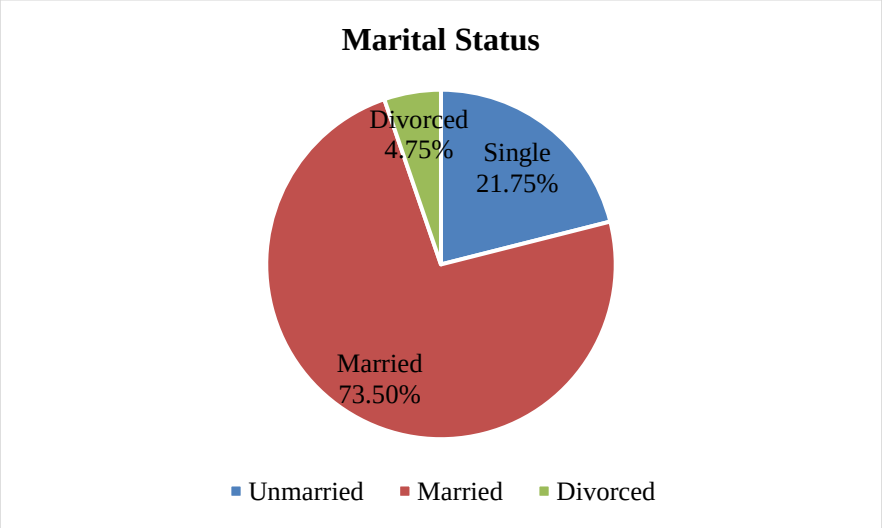

Figure 2. Marital Status

1.3 Age

The majority of respondents are between 30 and 40, suggesting a demographic with careers and children. Life stage may affect this age group's buying behavior. The dearth of representatives from under-20, 50, and other age groups may make it harder to understand their cosmetics business demands and behaviors.

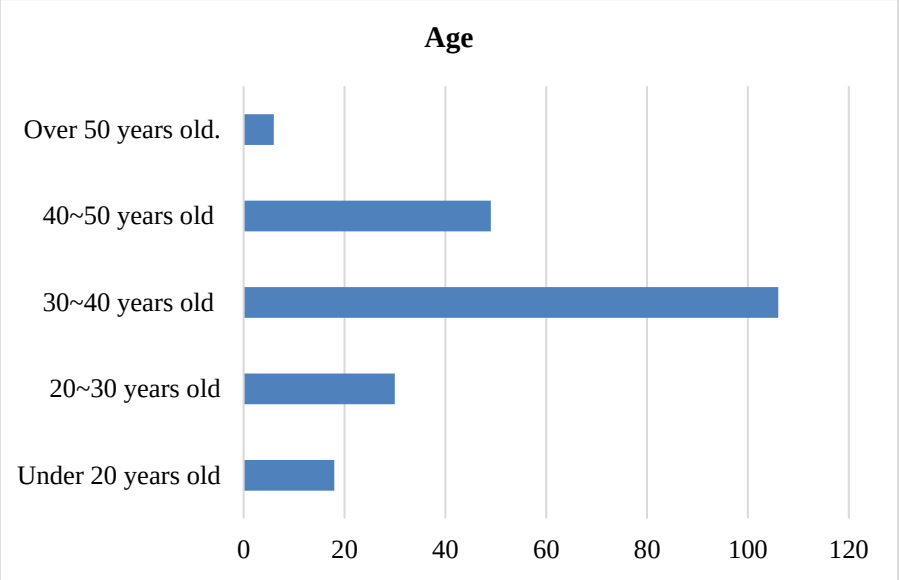

Figure 3. Age

1.4 Educational Level

The distribution of educational attainment leans toward higher education, with 36.75% of people enrolled in or completed undergraduate or 27.50% postgraduate courses. This demographic may have more disposable income or different values and interests while buying cosmetics. Due to the smaller number of junior and senior high school graduates, it may be difficult to grasp their purchasing patterns and preferences.

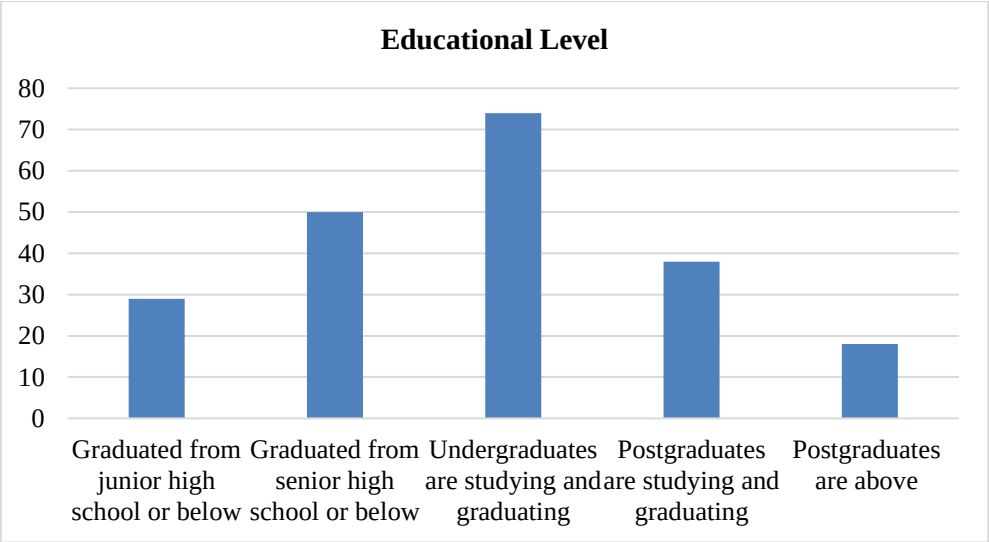

Figure 4. Educational Level

1.5 Occupation

The majority of respondents work in the service sector, thus they may have public interactions that influence their cosmetics preferences. Other industries like technology, banking, and business indicate lifestyle and economic factors that may influence cosmetics purchases.

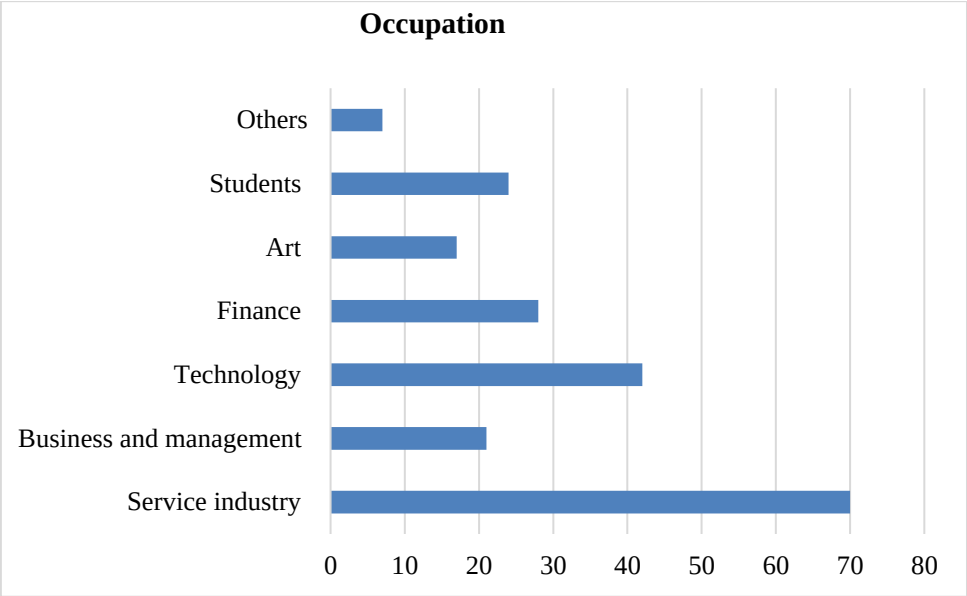

Figure 5. Occupation

1.6 Monthly Income

Most make less than 5,000 Yuan, therefore they probably can't afford cosmetics. A middle-class demographic is indicated by falling representation as income rises. Cosmetics price sensitivity and projected value may be affected by income.

Figure 6. Monthly income

1.2 Consumer Demand

Table 2. Percent Frequency of Consumer Demand

Items	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree
The product is very suitable for my needs.	3.00%	5.75%	9.25%	30.00%	52.00%
The product can solve my skin problem.	4.50%	7.75%	17.25%	34.50%	36.00%
The product is the cosmetic I need.	3.75%	5.25%	14.50%	36.50%	40.00%

Table 2. shows that consumers like the Xin Shui Jing Orchid Box's fit and skin-care efficacy. Most respondents (82.00%) agree or strongly agree that the product meets their needs. Around 70.50% believe the product can address their skin issues. Additionally, 76.50% of respondents partly think that this cosmetic is what they need. This passionate response suggests that the Xin Shui Jing Orchid Box meets customer demand and may suit respondents' skin care needs.

Table 3. Standard Deviation and Arithmetic Mean of Consumer Demand

Items	Standard Deviation	Arithmetic Mean	Mean Rank	Meaning
The product is very suitable for my needs.	1.032	4.22	1	Agree
The product can solve my skin problem.	1.114	3.90	3	Agree
The product is the cosmetic I need.	1.046	4.04	2	Agree
Consumer Demand	0.92478	4.05	-	Agree

Table 3. shows that the product is very suitable for my needs is the most important reason with a mean of 4.22, followed by the product is the cosmetic I need and the product can solve my skin problem with mean scores of 4.04 and 3.90, respectively. The mean score of Consumer Demand is 4.05, which is agreeable.

1.3 Online Marketing Strategy

Online marketing strategy includes product price, characteristics, and word-of-mouth. These traits are detailed below.

Table 4. Standard Deviation and Arithmetic Mean of Online Marketing Strategy

Items	Standard Deviation	Arithmetic Mean	Mean Rank	Meaning
Product Price	1.06869	3.58	3	Agree
Product Characteristics	0.89008	3.93	1	Agree
Word-of-Mouth	0.89430	3.80	2	Agree
Online Marketing Strategy	0.67079	3.77	-	Agree

Table 4. shows that Product Characteristics is the most important element with a mean of 3.93, followed by Word-of-Mouth and Product Price with 3.80 and 3.58, respectively. The average Online Marketing Strategy score is 3.77, which is agreeable.

1.3.1 Product Price

Table 5. Absolute Frequency and Percent Frequency of Product Price

Items	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree
The price is very reasonable.	7.25%	11.25%	13.75%	39.50%	28.25%
The price is very affordable.	8.25%	15.50%	20.50%	35.75%	20.00%
The price is accorded with my expectation	8.00%	11.50%	18.25%	38.25%	24.00%

In Table 4.5, 67.75% of respondents agree and strongly that the Xin Shui Jing Orchid Box's pricing is extremely acceptable and in line with their expectations (62.25%), yet 55.75% agree and firmly that it is affordable. This suggests that while customers think the price is fair, some may still struggle to afford it. The three statements' differing levels of agreement suggest that price perception may be complicated, influenced by personal finances or values.

Table 6. Standard Deviation and Arithmetic Mean of Product Price

Items	Standard Deviation	Arithmetic Mean	Mean Rank	Meaning
The price is very reasonable.	1.199	3.70	1	Agree
The price is very affordable.	1.206	3.44	3	Moderate
The price is accorded with my expectation	1.198	3.59	2	Agree
Product Price	1.06869	3.58	-	Agree

Table 6 shows that the price is very reasonable is the most important reason with a mean of 3.70, followed by the price is accorded with my expectation and the price is very affordable with mean scores of 3.59 and 3.44, respectively. Overall, the mean score of Product Price is 3.58, which is agreeable.

1.3.2 Product Characteristics

Table 7. Absolute Frequency and Percent Frequency of Product Characteristics

Items	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree
The product is very attractive to me.	2.50%	4.50%	15.00%	36.50%	41.50%
The quality of product suits me very well.	4.75%	9.50%	19.75%	35.75%	30.25%
The product is very safe for the skin.	3.25%	8.00%	14.75%	42.00%	32.00

Table 7 shows that respondents liked the Xin Shui Jing Orchid Box's features. Most people think the product is appealing (78.00%), suits them well (66.00%), and is skin-safe (74.00%). Although there are modest discrepancies in agreement across the three claims, the overall positive leaning implies consumers like the product's qualities. The product looks to have communicated its benefits and safety to consumers, which is crucial in cosmetics. The safety and efficacy are promising.

Table 8. Standard Deviation and Arithmetic Mean of Product Characteristics

Items	Standard Deviation	Arithmetic Mean	Mean Rank	Meaning
The product is very attractive to me.	0.981	4.10	1	Agree
The quality of product suits me very well.	1.122	3.77	3	Agree
The product is very safe for the skin.	1.037	3.92	2	Agree
Product Characteristics	0.89008	3.93	-	Agree

According to Table 4.8, the most important factor is that the product is appealing, followed by its safety for the skin and its quality, which suit me well. Overall, Product Characteristics scores average 3.93, which is agreeable.

Summary

According to the preceding study, the Independent Sample t-test shows that gender does not affect consumer loyalty. The One-way ANOVA data show that Marital Status, Age, and Educational Level affect Consumer Loyalty, while Occupation and Monthly Income do not. Consumer Demand affects Consumer Loyalty. In the Online Marketing Strategy, Product Price, Product Characteristics, and Word-of-mouth affect Consumer Loyalty. Both Consumer Demand and Online Marketing Strategy show that Consumer Demand, Product Price, Product Characteristics, and Word-of-mouth effect Consumer Loyalty. Table 4.9 shows these observations.

Table 9. The Summary Results of Hypothesis Testing

	Not Reject H0	Reject H0
Hypothesis 1		
1.1 Gender	√	
1.2 Marital Status		√
1.3 Age		√
1.4 Educational Level		√
1.5 Occupation	√	
1.6 Monthly Income	√	
Hypothesis 2		
Consumer Demand		√
Hypothesis 3		
1. Product Price		√
2.Product Characteristics		√
3. Word-of-Mouth		√
Hypothesis 4		
1. Consumer Demand		√
2. Product Price		√
3. Product Characteristics		√
4. Word-of-Mouth		√

Discussion

The Effect of Online Marketing Strategy on Consumer Loyalty

Most respondents recommended and used the product as their top cosmetics choice. Leninkumar (2017) found a link between consumer pleasure and loyalty. A product's endorsement or first choice demonstrates consumer satisfaction, which is key to loyalty? The reliability test findings support the conclusions. This homogeneity is crucial to the findings' trustworthiness and decision-making relevance. Correlation analysis, including the KMO measure and Bartlett's Test of Sphericity, confirms factor analysis eligibility. The significant chi-square and KMO values prove the data is valid for the research, ensuring that the results are supported by evidence.

Gilitwala and Nag (2021) confirm the findings on cosmetic marketing tactics' effects on consumer loyalty and the challenges of attracting and retaining consumers online, emphasizing trust and perceived value. Word-of-mouth endorsements of the Xin Shui Jing Orchid Box can boost consumer loyalty and confidence. Gomes et al. (2020) examined how brand image and consumer satisfaction affected value. Similar to the Xin Shui Jing Orchid Box, the product's perceived benefits, as shown by its positive reputation, increase its perceived value, boosting brand image and satisfaction..

Implementation of Marketing Strategies

The validity test results that reveal consumer sentiments may be linked to the company's focus on consumer needs. Similarly, the study questionnaire sought to capture complicated customer preferences. This may involve surveys, market research, or consumer feedback loops. Additionally, correlation analysis emphasizes the need of meeting consumer demand. The Xin Shui Jing Orchid Box addresses customer skin issues. This supports the premise that addressing consumer demand builds loyalty. Regression analysis supports the idea that marketing that meets consumer needs boosts loyalty. In an experiment, The Xin Shui Jing Orchid Box increased customer loyalty by focusing on customer needs. The research's high beta and R-square scores may indicate the company's consumer-focused success. This supports Sun (2022), which indicates that a product's ability to meet consumer demand directly affects its value and the brand's reputation and satisfaction. Empirical research informs the Xin Shui Jing Orchid Box's marketing plans, which emphasize consumer demand to promote brand reputation, satisfaction, and loyalty. This strongly supports the product's promotion.

Factors on Consumer Loyalty in the Marketing Strategy of Xinshuijing Orchid Box

Table 8 examined gender and consumer loyalty using an Independent Samples t-test. On average, women scored 3.6498 and men 3.7274 for loyalty, although this difference was not statistically significant ($p=0.388$). Thus, gender does not affect loyalty in this group. The One-Way ANOVA shows that Marital Status, Age, Educational Level, Occupation, and Monthly Income affect Consumer Loyalty with p-values of 0.013, 0.001, and 0.027, respectively. Occupation and Monthly did not affect consumer loyalty due to their p-values of 0.076 and 0.107, respectively.

Men and women scored similarly in loyalty, according to the survey. Customer behavior often varies by gender. Contrary to traditional marketing, which divides techniques by gender. Narang and Sharma (2021) discovered that age, marital status, educational attainment, occupation, and average monthly income did not significantly correlate with loyalty scores when marketers customize their offerings. This is especially thought-provoking for marketers who invest heavily in demographic lines to categorize their customers. Thus, these findings suggest client loyalty may vary. It suggests that non-demographic factors like product quality, brand values, customer service, and personal experiences may affect loyalty more. Brands may need to focus more on universal value propositions than demographic ones.

Table 3a shows the Xin Shui Jing Orchid Box's effectiveness. The product satisfied consumer demand because 83% of respondents stated it met their needs and 70% indicated it treats their skin issues. This congruence builds trust and product value since people are loyal to brands that match their needs. How well the product meets customer wants, treats skin issues, and is considered as a necessary cosmetic product affects consumer loyalty.

Consumer demand matching is crucial in cosmetics marketing, because consumer tastes and desires are highly powerful. By meeting consumer needs, the Xin Shui Jing Orchid Box's marketing

strategy successfully leveraged this concept. Bowen and Chen (2001) stressed that consumer loyalty and satisfaction assist meet demand. In cosmetics, Leninkumar (2017) stressed that meeting consumer demand greatly affects consumer loyalty. Given the positive response to the Xin Shui Jing Orchid Box, the corporation could boost loyalty by offering loyalty programs or awards to loyal customers.

Like the Xin Shui Jing Orchid Box case, Shi (2020) examined how brand image and consumer satisfaction effect loyalty and perceived value. The product's ability to meet consumer demand boosts brand image and loyalty. Shi (2020) found that consumers like the Xin Shui Jing Orchid Box, boosting the brand's reputation. The data clearly validates the Xin Shui Jing Orchid Box's consumer-focused marketing strategy. Due to its ability to satisfy and address skin concerns, the product has a good market position and is likely to retain customers. Evidence from the literature shows that brand image, trust, and satisfaction determine consumer loyalty.

Table 4a shows purchasers' opinions on Xin Shui Jing Orchid Box price. Though 68% think the price is fair and 62% think it meets expectations, only 56% think it is cheap. This mismatch suggests that while buyers may value a product based on its price, the real cost may deter some. Gefen (2002), which inspired this, revealed how expensive it is to acquire and retain online customers. Even while the Xin Shui Jing Orchid Box may be a good bargain, the price may deter some buyers, especially online where comparisons are easier. Consumer pleasure, brand image, and loyalty are linked, according to Upamannyu and Bhakar (2014). Value, including price, can effect brand perception and consumer loyalty. Even if a product meets consumer needs but is expensive, it might affect the brand's reputation and consumer happiness. The effect of perceived value on consumer loyalty was examined by Chung et al. (2015). Product value is based on perceived benefits and cost. As indicated in the previous section, the Xin Shui Jing Orchid Box appears helpful in addressing consumer wants, but the decreasing agreement on affordability may be affecting its entire perceived worth.

The Xin Shui Jing Orchid Box pricing perceptions match Yi et al. (2021)'s consumer loyalty and satisfaction findings. The Xin Shui Jing Orchid Box case shows how pricing assumptions can affect happiness. If a large percentage of customers find the product unaffordable, their satisfaction and loyalty may decrease. Additionally, Gomes and Jeive (2018) stressed how trust impacts loyalty. However, if consumers perceive the product is pricey, loyalty and confidence may decline (Yi et al., 2021). Trust in a product may also be connected with pricing, since buyers are more likely to trust a brand that offers value. Thus, the findings show different opinions on the Xin Shui Jing Orchid Box price. Although the product's price is fair and expected, some consumers worry about its affordability. According to the research, pricing, as a component in perceived value, can affect brand image, satisfaction, trust, and consumer loyalty. Marketers must balance pricing, perceived value, and affordability to build customer loyalty.

Table 5a shows product characteristics considerably impact aspects. In the cosmetics industry, a product's qualities can influence a consumer's purchase and loyalty. Xin Shui Jing Orchid Box's effects, quality, and safety were positively accepted by its target demographic. Significantly, 78% of

respondents found the product's effects fascinating, 66% think its quality is suitable, and 74% think it's skin-friendly. These positive impressions support the literature's link between consumer loyalty and satisfaction. Bowen and Chen (2001) found a direct relationship between hotel customer loyalty and satisfaction. If consumers like the cosmetics' features, they'll be more loyal to the brand. Chung et al. (2015) stressed trust's impact on loyalty. Trust in cosmetics is linked to efficacy and safety. The Xin Shui Jing Orchid Box's skin-safe reputation shows great confidence. Additionally, Yi et al. (2021) noted that brand image and perceived value affect consumer loyalty. A product's value is often based on its costs and benefits. The Xin Shui Jing Orchid Box's aesthetics, craftsmanship, and safety boost its value. These perceived values boost the product's brand image and consumer loyalty.

Sun (2022) agrees with the Xin Shui Jing Orchid Box findings. Brand image, consumer satisfaction, and perceived value affected consumer loyalty in the study. Consumer satisfaction, brand image, and loyalty improve with perceived value. Similar to the Xin Shui Jing Orchid Box, the product's perceived outcomes, quality, and safety affect its entire perceived worth, brand image, and consumer satisfaction. Gomes et al. (2020) also stressed the need of rewarding consumer tiers to foster loyalty. Given the positive response to the Xin Shui Jing Orchid Box, marketers should recognize and reward loyal customers to build loyalty. The data shows that the Xin Shui Jing Orchid Box's product attributes affect consumer perceptions, satisfaction, trust, and loyalty. The investigation shows that product attributes, especially in cosmetics, might affect brand impression, value, and loyalty. These traits must be consistently delivered by marketers to build customer loyalty.

Consumer word-of-mouth (WOM) has long been known to influence perceptions, choices, and loyalty. Table 4.6a shows consumer opinions about the Xin Shui Jing Orchid Box. Significantly, 73% of respondents believed consumers liked the product. Additionally, 59% receive positive product reviews. Influencers (sometimes called "red persons") and other consumers' suggestions drop to 68% agreement. Even if the product is well-respected, it may be able to improve its influencer endorsements. The Gefen (2002) study highlighted the challenges of obtaining and retaining internet customers. Online reviews and endorsements are crucial for shaping customer choices in the digital age. Simay et al. (2023) claim positive WOM boosts trust. In the case of the Xin Shui Jing Orchid Box, its good reputation and frequent compliments may indicate its great quality, efficacy, and safety. This positive WOM may boost consumer faith in the products. Brand loyalty, consumer satisfaction, and brand image are linked, according to Simay et al. (2023). Brand perception is heavily influenced by WOM, or consumer satisfaction. Brand image is stronger for products with good reputations and reviews. A good brand reputation may boost loyalty.

Through brand image and satisfaction, Man and Rahman (2019) examined how perceived value affects consumer loyalty. WOM shows perceived value from the outside. A product with a good reputation and frequent praise is more likely to be liked by consumers. This perceived value may affect brand satisfaction and image, which boost loyalty. Consumer loyalty and satisfaction were also stressed by Gomes et al. (2020). As an indicator of customer happiness, positive WOM can boost loyalty. If most

customers like a product and hear nice things about it, it can build loyalty. Marketers struggle to keep product promises to sustain WOM and consumer loyalty (Abd Aziz & Ngah, 2019). Therefore, markets must maintain favorable WOM, which can boost a brand's image and consumer loyalty. Thus, brand reputation can improve.

Conclusion

Most respondents are married women under 40. They prefer bachelor degrees and service jobs, but their monthly income is under 5,000 yuan. In the Online Marketing Strategy, Consumer Demand is most important, followed by Product Characteristics, Word-of-Mouth, and Price. The average Online Marketing Strategy score is 3.84, which is agreeable.

China's cosmetics industry is developing rapidly. The digital age and internet marketing have made consumer loyalty knowledge essential. The Yunnan Keyan Pharmaceutical Biotechnology Co., Ltd. Xin Shui Jing Orchid Box study illuminates internet marketing and consumer loyalty. Cosmetics managers should conduct the following:

Cosmetic companies should invest in advanced data analytics and CRM technologies to understand consumer preferences. Analysing purchase histories, online interactions, and comments can help companies tailor marketing messages to specific consumers (Ma & Yang, 2018). Personalized marketing may boost customer satisfaction by tailoring items and promotions to specific needs and likes. Brand loyalty may increase. For instance, if a customer frequently buys moisturisers, the company may give them offers on new ones or hydrating skincare. Customized marketing extends beyond product recommendations. It may also involve customised shopping (Gomes et al., 2020). Augmented reality virtual try-ons let customers examine makeup on their skin tone. Businesses can use machine learning algorithms to prescribe skincare regimens based on skin types, issues, and goals. Personalised advertising can also foster community. Brands may create member clubs or loyalty programmes to offer customized beauty advice, early access to new products, or discounts based on past sales.

Cosmetic companies could use tiered pricing or product lines for different income groups. Even while luxury items may appeal to consumers willing to spend more for perceived benefits, this ensures that budget-conscious consumers have options (Lee et al., 2018). Loyalty schemes or reward systems can also be used to make returning customers feel valued. Periodic competition and market research can also help organizations understand their price position and make the necessary changes to ensure they are offering a competitive and perceived value. By segmenting the market by income, cosmetic companies can tailor products to each category (Abd Aziz & Ngah, 2019). Luxury lines may emphasize exclusivity and quality, whereas budget lines may emphasize value. Branding methods vary by product line. Budget brands may use user feedback to build trust, whereas luxury lines may use influencers or celebrities.

Cosmetic companies should aggressively collaborate with brand-aligned influencers. Long-term influencer relationships can yield more genuine endorsements, which customers trust (Lee et al.,

2018). Businesses must also compensate satisfied customers for posting positive reviews online. User reviews, before-and-after photos, and other UGC may build consumer loyalty and trust (Ma & Yang, 2018). In today's digital market, internet reviews can impact a consumer's purchase decision as much as a friend or family member's recommendation. Management of online reputation and active WOM promotion should be a focus.

The beauty industry is changing, and online marketing affects consumer perception and brand loyalty. Cosmetic companies can strengthen their customer bases by focusing on personalized marketing, pricing reviews, and positive word-of-mouth. As the market becomes competitive, these strategies can ensure industry growth and success.

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FORECAST THE USE OF TRAVEL WEBSITES USING THE THEORY OF PLANNED BEHAVIOR

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Abstract

In the context of artificial intelligence (AI), this article explores the application of the Theory of Planned Behavior (TPB) to forecast travel website usage. A survey involving 120 respondents who utilized both websites and chatbots was conducted. The questionnaire, tailored to incorporate both TPB and AI elements, facilitated the collection of comprehensive data. To examine the collected data, statistical techniques such as multiple regression, correlation, and descriptive analysis were used. The results demonstrate the applicability of TPB in this research, as evidenced by the regression equation: $Y=0.07+0.46A+0.36S+0.16CB$, with a robust R^2 of 0.66. These results highlight how well TPB comprehends and forecasts user behavior in the context of AI-driven travel website usage.

Keywords: TPB, Travel Website, Artificial Intelligence, AI

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Introduction

In recent years, the travel industry has experienced a significant transformation, driven by the proliferation of online booking platforms and travel websites (Law et al., 2010). These platforms have become indispensable sources of information and booking services for travelers, offering a convenient and accessible means to plan trips and secure reservations (Berne et al., 2012). However, in the face of a multitude of travel websites, it is imperative for website owners and developers to comprehend the factors shaping user behavior and website usage (Amaro & Duarte, 2015). This understanding is vital for enhancing user experience and attracting a larger audience.

Crucial to this endeavor is the identification of key factors influencing the usage of travel websites, which is fundamental for grasping user preferences and refining website design and functionality (Law et al., 2009). Armed with this knowledge, website owners and developers can craft a more user-friendly and captivating experience, leading to augmented website traffic, heightened conversion rates, and increased customer satisfaction (Amaro & Duarte, 2015).

In the realm of travel website behavior, the Theory of Planned Behavior (TPB) offers valuable insights, enabling the prediction of users' intentions to visit, engage with, and make bookings through these platforms. By comprehending the determinants of these intentions, website owners and developers can formulate and implement strategies to enrich user experience, boost website traffic, and enhance conversion rates.

Review of Literature

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) stands as a widely embraced social psychological model designed to elucidate and foresee human behavior (Ajzen, 1991). It posits that an individual's intention to engage in a particular behavior is the pivotal factor determining whether they will indeed act upon it. This intention is, in turn, shaped by three principal components: attitude toward the behavior, subjective norms, and perceived behavioral control (PBC).

Attitude toward the behavior: This concept relates to an individual's holistic appraisal of the contemplated behavior, whether it is positively or negatively inclined. When applied to travel websites, a favorable attitude can be swayed by factors such as the perceived utility of the website, ease of navigation, and the quality of information available (Han & Kim, 2010).

Subjective norms: These encompass an individual's perception of the social pressure to either perform or abstain from a specific behavior. In the context of travel websites, these norms could be influenced by endorsements from friends and family, online reviews, and the sway of social media influencers (Hsu & Huang, 2012).

Perceived behavioral control: This pertains to an individual's sense of their own capability to undertake the intended behavior. Concerning travel websites, PBC might be influenced by factors like

familiarity with online booking processes, technological confidence, and the accessibility of support resources (Amaro & Duarte, 2015).

By gauging these three TPB components, researchers and website developers can gain profound insights into the forces affecting users' intentions to interact with travel websites. This valuable information can then serve as a basis for crafting interventions and strategies aimed at enhancing user experience and amplifying website utilization.

For example, if research reveals that perceived behavioral control significantly predicts travel website usage, website developers can concentrate their efforts on enhancing website usability, providing explicit instructions, and ensuring accessible customer support. Similarly, if subjective norms are identified as influential, marketing endeavors can prioritize social media campaigns, influencer collaborations, and encouraging user-generated reviews.

Travel Website

The internet has orchestrated a paradigm shift in the way we plan and book our journeys, and travel websites have evolved into indispensable tools for navigating the expansive terrain of destinations, accommodations, and transportation options (Xiang & Gretzel, 2010). These digital platforms have not only transformed the travel industry but have also bestowed upon travelers an unprecedented level of ease and convenience in exploring the world. In this essay, we will delve into the significance of travel websites, dissecting their essential features, benefits, and the impact they've had on the travel sector.

Travel websites encompass a diverse array of features, meticulously crafted to cater to the multifaceted needs of contemporary travelers. These features can be broadly categorized into four main areas:

Information and Inspiration: Travel websites serve as exhaustive repositories of information, furnishing detailed descriptions of destinations, attractions, accommodations, and transportation options. They frequently showcase captivating images and videos, kindling the wanderlust within travelers and motivating them to explore new horizons (Law et al., 2010).

Planning and Booking: Travel websites have streamlined the intricacies of travel planning and booking. Users can effortlessly compare prices, check availability, and secure reservations for flights, hotels, rental cars, and tours. Moreover, they often feature exclusive deals and packages, ensuring travelers have access to cost-effective options (Buhalis & Law, 2008).

Personalization and Customization: Many travel websites employ sophisticated personalization algorithms that tailor recommendations and search results based on individual preferences, travel history, and budget constraints. This personalized approach not only elevates the user experience but also facilitates well-informed decision-making (Xiang & Gretzel, 2010).

Community and Reviews: Travel websites foster a sense of community by incorporating user reviews, ratings, and discussion forums. These features offer valuable insights into the

experiences of fellow travelers, enabling users to make informed choices and steer clear of potential pitfalls (Law et al., 2010)

Methodology

Population: The research targets individuals who utilize internet websites for various activities, including gaming, entertainment, and more.

Sample: The research sample is derived from the population using a purposive random sampling method. The selection criterion for the sample is individuals belonging to the Gen-Z demographic, with a total of 120 respondents. For each variable in the study, a sample size of 30 respondents is employed (Creswell, 2013) (Kothari, 2004) (Portney & Watkins, 2015) (Tabachnick, & Fidell, 2007).

Questionnaire: The questionnaire utilized in this research is based on the Theory of Planned Behavior and encompasses four key constructs: attitude, subjective norms, perceived behavioral control, and behavioral intention.

Research Results

The result of this research presents in three sections including: descriptive statistics, reliability analysis with Cronbach alpha and multiple regression analysis respectively. The first part of this result show in the next table:

Table 1. Descriptive of each variable in MRA

Variable	Average	Standard Deviation
Attitude	4.315	.597
Subject norm	4.065	.708
Control behavior	4.063	.785
Behavioral Intention	4.165	.704

The average values (means) for the four variables (Attitude, Subject Norm, Control Behavior, and Behavioral Intention) fall between around 4.063 and 4.315.

The standard deviations exhibit variability across each variable, indicating distinct degrees of dispersion or spread around the mean. Notably, lower standard deviations (e.g., Attitude) point to relatively less variability, whereas higher standard deviations (e.g., Control Behavior) imply a greater degree of variability in the dataset.

The second part of the results reveals that all variables are suitable for Multiple Regression Analysis. The correlation analysis table is presented as follows:

Table 2. Correlation Analysis

Variable	2. Subject norm	3. Control behavior	4. Behavioral Intention
1. Attitude	.666**	.501**	.720**
2. Subject norm		.667**	.742**
3. Control behavior			.615**
4. Behavioral Intention			

*p < .05. **p < .01.

In terms of attitude, there exists a positive and moderately strong correlation (0.666) between Attitude and Subject Norm, a positive and moderately strong correlation (0.501) with Control Behavior, and a positive and strong correlation (0.720) with Behavioral Intention.

Concerning subject norm, there is a positive and moderately strong correlation (0.667) with Control Behavior and a positive and strong correlation (0.742) between Subject Norm and Behavioral Intention.

Additionally, a positive and moderately strong correlation (0.615) is observed between Control Behavior and Behavioral Intention.

Table 3. Summary of Multiple Regression Analyses for Variables Predicting (n = 120)

Variable	B	SE. B	t
Constant	0.07	0.29	.24
Attitude	0.46	0.09	5.32**
Subject norm	0.36	0.08	4.30**
Control behavior	0.16	0.06	2.41*
R^2		.66	
R^2 *adjust*		.65	
F		74.78**	

*p < .05. **p < .01.

The regression equation is expressed as follows:

$$Y = 0.07+0.46A+0.36S+0.16\times CB$$

Where:

Y is the Behavioral Intention.

A is Attitude

S is Subject Norm

CB is Control Behavior

Each coefficient is accompanied by a corresponding t-value, signifying the statistical significance of each predictor.

With an R^2 value of 0.66, the model elucidates 66% of the variance in the behavioral intention variable.

The F-statistic of 74.78 is statistically significant, underscoring the overall effectiveness of the model fit.

Discussion and Conclusions

The multiple regression analysis conducted on Behavioral Intention (Y) with Attitude (A), Subject Norm (S), and Control Behavior (CB) provides a comprehensive understanding of the influential factors shaping individuals' intentions. The regression equation Y = 0.07+0.46A+0.36S+0.16CB reveals noteworthy insights, indicating that positive shifts in Attitude, Subject Norm, and Control Behavior are associated with an increase in Behavioral Intention. With a robust R^2 value of 0.66, the model demonstrates significant explanatory power, suggesting that the included variables collectively contribute to explaining 66% of the variance in Behavioral Intention. These findings hold practical implications, empowering decision-makers to tailor interventions that target specific determinants—such as attitudes and perceived control—to positively influence Behavioral Intention. However, acknowledging potential limitations is essential, and ongoing refinement and additional analyses are warranted to enhance the model's precision and applicability.

The regression analysis aligns seamlessly with the Theory of Planned Behavior (TPB), illustrating the contributions of Attitude, Subject Norm, and Control Behavior in predicting Behavioral Intention. These insights offer valuable guidance for designing interventions and strategies grounded in TPB principles. Key approaches may include the modification of attitudes, addressing social norms, and enhancing perceived control. By implementing these strategies, stakeholders can effectively influence and gain a deeper understanding of Behavioral Intention, fostering more targeted and impactful interventions in diverse contexts.

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