B - Business Administration / Economics

International

	Page
Business Administration / Economics	
Development and Acceptability of Tuna as Alternative Processed Food Products **Noel Angelo Cadiz, Edilberto T. Golez III, Danilo, L. Jalong, James Andrew D. Oyo, Benjamin C. Polison, Regine C. Velano, Richelle C. Velano**	1
Development and Acceptability of Blue Crab as Local Delicacies **Javines, Denise Marie D., Oyo, James Andrew D. Lisay, Kent Rigil A., Salazar, Greg Andrew B., Telesforo, Adrian P.**	14
Barangay Health Services and Elderly Well-Being: A Study on Satisfaction **Joel O. Pallen, Yasmin Pascual-Dormido**	28
BSMA Dilemma: Decisions in Pursuing Certified Management Accountant in Lipa City Colleges **Rosalie E. Balhag, Leslie R. Montoya, Kristel Anne C. Palo, Kristine Joy B. Saavedra**	41
Barriers to Implementation of Emergency Response by First Responders **Israel P. Salanga, Yasmin Pascual-Dormido, Mima M. Villanueva**	52
Difficulties Encountered by Consumers in the Operation of Sum-ag Market **Winnie Joy C. Mananap**	65
A Descriptive Analysis of the Campaign Practices of Barangay Election Candidates **Rosinie Z. Distrito, Yasmin Pascual-Dormido**	76
From Waste to Worth: Utilizing Watermelon Rind as an Innovative Plant-based Bacon Substitut **Belman O. Millan Jr., John Mosel Bitonio, Koen Kesler M. Dorado, Jophanie U. Aguinaldo, Raphael Vincent V. Melad**	89
Factors Influencing Patients' Satisfaction with AI-Guided Triage System: A Case Study of Longgang Central Hospital **Lu Dai, Lanthom Jonjoubsong**	103
Research on Human Resource Management of E-commerce Live Streaming Under the Background of Digital Economy: A Case Study of TikTok **Li Chao, Anan Pongtornkulpanich**	112

Page

Business Administration / Economics

Impact of Financial Performance on the Stock Market Price Growth of the Top 10 Commercial Banks in the Philippines from 2019-2023 123

Shaila Mae S. Marcelo

Addressing the Accountancy Faculty Shortage in Quezon Province: Strategies to Inspire Academic Career Path for Accounting Students 139

Dharen Joy P. Merto, Laiza Isabel C. Saturay, Angelyn R. Yara, Bernadette Ann O. de Ocampo, Christian John P. Formaran, Fernando P. Tiu Jr.

An Empirical Study of the Application Artificial Intelligence in the Safety Management of Jiangmen City**:** Taking Yingjia Metal Company as the Case Study 151

Zhao Rujing, Chatcharawan Meesubthong

Factors Influencing the Employability of Chinese Overseas Graduates in Thailand 158

Chengze Liao, Chatcharawan Meesubthong

Exploring Southeast Asian Consumers' Perceptions of Cross-Gender Endorsements in the Health and Beauty Industry 165

Erika Bea C. De Guzman, Panisara Khongathworn, Sarunyapat Atikuntana

Questionnaire on the satisfaction of the quality of life of Chinese international students in Thailand 176

Yizhi Gao, Jie Fu, Jingyan Zhao

Research on the Optimization of Marketing Mix Strategies for SME Traditional Food Processing Enterprises in Jiangxi Province 188

Ziqing Liu, Jingyan Zhao

A Study on Marketing Strategies of Small and Medium-Sized Private Heavy Machinery Rental Enterprises in Thailand 203

Heru Chen, Jingyan Zhao, Jie Fu

A Study on the Compensation Management System of Small and Medium-Sized Modern Logistics Agencies in Shenzhen 216

Ziyu Ou, Jingyan Zhao, Jie Fu

Page

Business Administration / Economics

The Study on Thai University Students' Recognition of Gender Diversity 228

Zhicheng Pan, Jie Fu, Jingyan Zhao

The Current Situation and Countermeasures of Cultural Conflicts Among Chinese Students Studying in the Universities in Thailand 239

Jiaxin Liu, Jie Fu, Salintip Sirisakdiporn

Research on Cross-Cultural Conflict Resolution Strategies Among Chinese International Students in Thailand 253

Daixun Cai, Jingyan Zhao, Jie Fu

Development and Acceptability of Tuna as Alternative Processed Food Products

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Abstract

This study aimed to develop and evaluate the acceptability of tuna-based processed food products tuna tocino, tuna longganisa, and tuna chorizo as alternatives to traditional meat products. A quasi-experimental design was used to assess the relationship between varying levels of tuna meat inclusion (70%, 80%, and 90%) and sensory acceptability. A total of 100 respondents evaluated the products using a 9-point hedonic scale based on taste, texture, aroma, appearance, quality, accuracy, consistency, and overall acceptability. Findings revealed that higher tuna content, particularly the 90% formulation, consistently yielded better sensory ratings for tuna tocino and tuna chorizo. In contrast, tuna longganisa achieved optimal acceptability at 80%, indicating that a balanced combination of tuna and seasonings is more suitable for this product. All products were rated "Likely Very Much" acceptable, with tuna longganisa obtaining the highest overall mean score ($M = 8.21$, $SD = 0.62$), especially in taste. Lower tuna inclusion (70%) generally resulted in reduced texture quality. One-way ANOVA results showed significant differences across formulations ($F(2,297) = 4.87$, $p < 0.01$), particularly in taste and texture. Post-hoc Tukey tests confirmed that 90% tuna formulations were significantly more acceptable than the 70% treatment ($p < 0.05$). No significant differences were found across replications ($p > 0.05$), indicating consistency. Demographic variables had minimal influence on acceptability ($\chi^2 = 2.14$, $p > 0.05$), suggesting broad consumer appeal. Limitations include localized sampling, subjective evaluation, and lack of further product analyses.

Keywords: Hospitality Management, Acceptability and Development, Tuna (thunnini) Quasi-Experimental Research Design, Bacolod City, Philippines.

1. Introduction

The increasing demand for nutritious, affordable, and sustainable food sources has intensified the exploration of alternative raw materials for processed food development. This effort is closely aligned with the goals of the United Nations Sustainable Development Goal 2, which aims to end hunger, improve nutrition, and promote sustainable food systems. Among marine resources, tuna (*Thunnus spp.*) has gained significant attention due to its high protein content, essential nutrients, and wide consumer acceptance. Tuna is recognized as a rich source of omega-3 fatty acids, vitamin B12, selenium, and high-quality protein, all of which contribute to cardiovascular health, cognitive function, and overall well-being (Gafoor & Ismail, 2025; Food and Agriculture Organization, 2024). Its versatility allows it to be utilized in various processed forms such as canned products, sausages, patties, and other ready-to-eat items, making it a promising ingredient for food innovation.

Recent studies have emphasized the growing role of fish-based alternatives in addressing food security challenges and the rising cost of traditional meat products. According to Ikasari et al. (2025), incorporating tuna into processed food formulations not only enhances nutritional value but also maintains desirable sensory attributes comparable to conventional meat products. Similarly, research published in the European Journal of Agriculture and Food Sciences (2026) highlights that fish-based processed foods, when properly formulated, can achieve high consumer acceptability in terms of taste, texture, and overall satisfaction. These findings suggest that tuna-based products can serve as viable substitutes for pork- or beef-based processed foods, particularly in health-conscious and price-sensitive markets.

In addition to nutritional and economic considerations, sustainability has become a critical factor in food product development, supporting the objectives of United Nations Sustainable Development Goal 12. The tuna processing industry generates substantial by-products, including heads, bones, skin, and trimmings, which can account for up to 50–70% of the total fish weight (Honrado et al., 2023). These by-products can be further processed into value-added ingredients such

as fish protein hydrolysates, surimi, and functional food components. This practice supports the principles of a circular economy by minimizing waste and maximizing resource utilization. Moreover, as noted by Aberoumand (2012), transforming fresh tuna into processed products significantly extends shelf life, reduces post-harvest losses, and improves product stability, which are essential factors in ensuring food availability and reducing spoilage.

Consumer acceptability remains a decisive factor in the success of newly developed food products. Sensory attributes such as taste, aroma, texture, and appearance strongly influence purchasing behavior and repeat consumption. Studies by Santos et al. (2024) and Lee and Kim (2025) demonstrate that fish-based sausages and cured products can achieve high levels of consumer acceptance when seasoning, texture, and processing techniques are carefully optimized. These studies further emphasize that balancing flavor intensity with familiarity is key to encouraging consumer adoption of alternative protein products. Hence, systematic sensory evaluation is necessary to determine whether tuna-based formulations meet consumer expectations.

Despite these advancements, several research gaps persist. Most existing studies focus on widely commercialized tuna products such as canned tuna and fish burgers, with limited research on the development of tuna-based alternatives for traditional processed meat products like tocino, longganisa, and chorizo. Furthermore, many studies tend to isolate either formulation or sensory evaluation, rather than integrating both aspects into a comprehensive analysis. There is also a scarcity of localized research within the Philippine context, where food preferences are heavily influenced by cultural taste profiles, including sweetness in tocino, garlicky flavor in longganisa, and the distinct spice profile of chorizo. Additionally, while sustainability and alternative protein sources are widely discussed in global literature, fewer studies translate these concepts into practical, consumer-ready products that are both acceptable and marketable in local settings.

Given these considerations, this study focuses on the development and acceptability of tuna as an alternative processed food product, specifically in the form of tocino, longganisa, and chorizo. It aims to formulate innovative tuna-based products by varying ingredient proportions and to evaluate their sensory characteristics in terms of taste, aroma, texture, and overall acceptability. By integrating product development with sensory evaluation, this study addresses existing research gaps and provides a more holistic understanding of consumer preferences. The findings are expected to contribute to food product innovation, promote the efficient utilization of marine resources, and support the development of healthier, sustainable, and culturally acceptable food alternatives in the Philippine context.

Objectives of the Study

The study aims to develop and investigate the acceptability of tuna as alternative processed food products such as Tuna Tocino, Tuna Longganisa and Tuna Chorizo into the following treatment and replicas:

a. 90% Tuna meat, Condiments and Spices, Sugar and Curing Salt and Flavorings
b. 80% Tuna meat, Condiments and Spices, Sugar and Curing Salt and Flavorings
c. 70% Tuna meat, Condiments and Spices, Sugar and Curing Salt and Flavorings

Specifically, the study aims to answer the following questions.

1. What are the sensory characteristics of Tuna Tocino, Longganisa and Chorizo across all treatment as evaluated 100 respondents in terms of Taste, Texture, Appearance, Aroma, Accuracy, Quality and Consistency?
2. What is the level of acceptability of Tuna Tocino, Longganisa and Chorizo as evaluated by 100 respondents from Bacolod City?
3. Are there significant differences in the sensory characteristics and acceptability levels of the Tuna meat-based products based on the evaluations?

2. Materials and Methods

Materials

The materials used in the development of tuna-based tocino, longganisa, and chorizo play a crucial role in determining the products' sensory qualities, preservation, and overall acceptability. Each ingredient contributes specific functional and sensory properties that influence taste, texture, aroma, and shelf life, making the careful selection and proportioning of materials essential in product formulation.

For tuna tocino, the primary material is tuna meat, which serves as the main protein source and provides the base flavor and texture of the product. Fresh tuna is preferred due to its firm texture and mild flavor, making it adaptable to sweet-cured preparations. Sugar is a key ingredient that imparts the characteristic sweetness associated with tocino, while also contributing to caramelization during cooking, enhancing both color and flavor. Curing salt is included not only to preserve the product but also to develop its distinct cured taste and appealing reddish color. Additionally, condiments and spices such as garlic, pepper, and other seasonings are incorporated to enhance aroma and flavor complexity. Together, these materials create a balance between sweetness, saltiness, and savory notes that define tocino.

In the preparation of tuna longganisa, tuna meat remains the primary ingredient, but the formulation places greater emphasis on flavorings and spices to replicate the distinctive profile of traditional longganisa. Ingredients such as garlic, vinegar, pepper, and sometimes sugar are used to create a savory, slightly tangy, and aromatic product. Flavorings are particularly important in longganisa as they define its regional character and taste identity. Curing salt continues to play a vital role in preservation and flavor enhancement, while also helping maintain product safety. The combination of these materials contributes to the longganisa's juicy texture, garlicky aroma, and well-balanced flavor, making it appealing to consumers accustomed to traditional sausage products.

For tuna chorizo, the materials used focus on achieving a bold, spiced, and slightly tangy flavor profile. Tuna meat again serves as the base, offering a healthier alternative to pork while maintaining a desirable texture. Flavorings such as paprika, garlic, and other spices are essential in developing the rich and smoky taste typically associated with chorizo. Vinegar is a key ingredient that provides acidity, which not only enhances flavor but also acts as a natural preservative by inhibiting microbial growth. The presence of vinegar also contributes to the characteristic tanginess of chorizo, balancing the richness of the spices and tuna. These materials work together to produce a product with a vibrant color, robust aroma, and distinctive taste.

Overall, the materials used in tuna tocino, longganisa, and chorizo are carefully selected to mimic the traditional characteristics of these processed meat products while incorporating tuna as a healthier alternative protein source. The interaction of these ingredients influences not only the sensory attributes but also the safety, shelf life, and marketability of the products. Proper formulation and proportioning of these materials are therefore essential in achieving high consumer acceptability and ensuring the successful development of tuna-based processed food products.

Methods

The study utilized a quasi-experimental research design to examine how variations in product formulation influence the acceptability of tuna-based processed products. Specifically, the dependent variable focused on the level of acceptability in terms of sensory attributes such as taste, aroma, texture, and overall preference, while the independent variable involved differences in formulation, including the proportion of tuna meat, condiments, curing agents, and other ingredients. This design is appropriate as it allows systematic manipulation of product composition while observing corresponding changes in consumer perception, thereby establishing a cause-and-effect relationship between formulation and acceptability.

For the tuna tocino, the three treatments were structured to progressively decrease the proportion of tuna meat while adjusting the levels of condiments, sugar, and curing salt. Treatment A, with the highest tuna content (90%), was expected to deliver a more pronounced natural fish flavor and firmer texture, appealing to consumers who prefer a more authentic tuna taste. In contrast, Treatments B and C reduced the tuna content to 80% and 70%, respectively, while also lowering sweetness and curing components. These modifications were intended to evaluate whether a milder

flavor profile and softer texture would enhance consumer acceptability. The comparison across treatments provides insight into the optimal balance between tuna concentration and seasoning that satisfies consumer preferences without overpowering or diminishing the product's characteristic taste.

In the case of tuna longganisa, the variation in formulation emphasized the interplay between tuna meat and flavorings, along with curing salt levels. Treatment A, which contained the highest proportion of tuna (90%) and flavorings (30%), was designed to produce a robust and savory profile with a distinct longganisa identity. Meanwhile, Treatments B and C gradually reduced both tuna and flavoring content while adjusting curing salt levels, allowing for an assessment of how these changes affect flavor intensity, juiciness, and texture. These variations are crucial in identifying whether consumers favor a stronger, spice-forward taste or a subtler, balanced flavor typical of modified meat products.

For the tuna chorizo, the treatments explored how varying tuna content and flavoring levels, combined with a consistent amount of vinegar, influence the product's sensory characteristics. Treatment A aimed to achieve a bold and rich chorizo flavor with high tuna content and seasoning, while Treatments B and C provided more moderate and milder versions of the product. The inclusion of vinegar across all treatments ensured a consistent tangy profile, enabling a clearer comparison of how reductions in tuna and flavorings impact overall acceptability. This approach highlights the importance of acidity, spice balance, and meat content in developing a chorizo product that aligns with consumer expectations.

Overall, the structured variation across treatments for tuna tocino, longganisa, and chorizo allows for a comprehensive evaluation of how ingredient proportions affect sensory quality and consumer preference. The findings from these comparisons are expected to identify the most acceptable formulation for each product type, providing valuable insights for product development, standardization, and potential commercialization of tuna-based processed foods.

Process

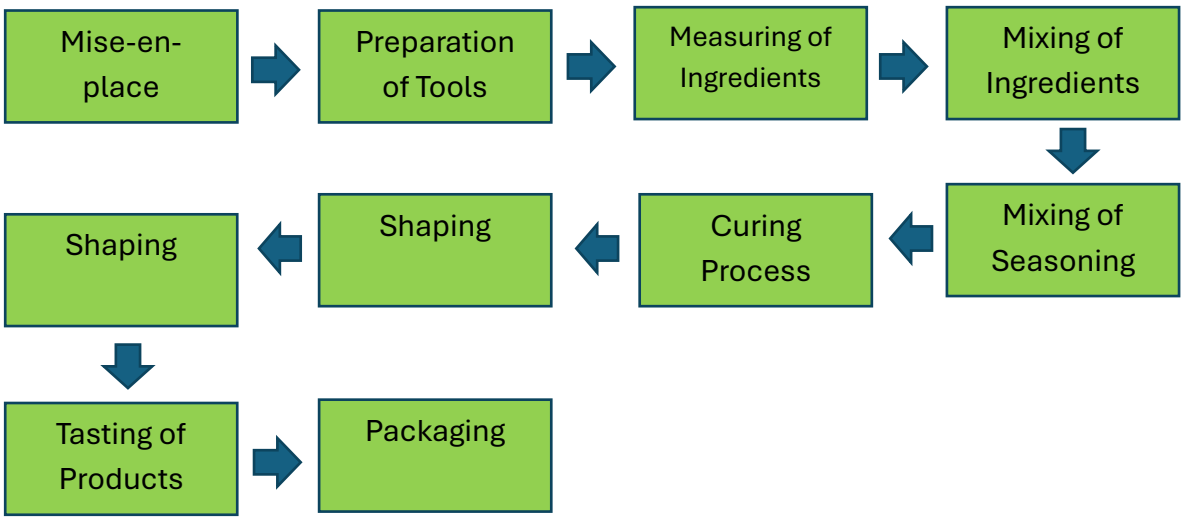

Figure 1. Procedure Cycle Tuna Tocino, Longganisa and Chorizo

Mise En Place. During the preparation of Tuna Tocino, Longganisa and Chorizo, it is important to begin with proper mise-en-place. All ingredients should be carefully gathered and placed in individual bowls to ensure organization and efficiency throughout the process. All ingredients needed must be assemble prior to start the process.

Preparation of Tools. Before starting the preparation of Tuna Tocino, Longganisa and Chorizo, all tools and equipment, such as mixing bowls, spatulas, and baking trays, should be thoroughly washed and properly sanitized to ensure cleanliness, prevent contamination, and maintain food safety standards.

Measuring of Ingredients. Measuring of Ingredients. In preparing the Tuna Tocino, Longganisa and Chorizo, all dry and liquid ingredients must be accurately measured according to the

required amount specified for each treatment. As much as possible tuna will be used grind it must be grind immediately in order to maintain its freshness and process right away.

Mixing of Ingredient. The mixing process is key to achieving the right texture and consistency in Tuna Tocino, Longganisa and Chorizo. Proper mixing ensures even distribution of ingredients and prevents overworking the dough, which can affect texture.

Mixing with Seasoning. After all the dry and liquid ingredients have been carefully measured and mixed, the next process is mixing with seasoning. The blended mixture should be poured or portioned into appropriate mixing bowl and combine all with seasoning and mixed well in order to spread all used seasoning.

Curing Process. As curing needs at least 1 to 2 weeks in order to absorb by the tuna meat all the mixtures used like seasoning and other ingredients used especially in chorizo and longganisa.

Shaping. Shape the seasoned and cured tuna mixture into prescribe shapes for longganisa and chorizo.

Testing of Product. Once the products are baked, they must be tested and evaluated before proceeding to packaging. Testing involves assessing key quality attributes such as texture, flavor, aroma, color, and overall appearance. At the same to determine the appropriate taste of the proper so they can make adjustment if necessary.

Packaging. After testing and ensuring that the products have passed the evaluation stage, the final step is packaging. The baked products should first be allowed to cool completely at room temperature to prevent condensation inside the packaging, which can lead to spoilage or loss of texture.

Survey Design and Distribution

The target population of the study is 100 respondents. A simple random sampling technique was used to select populations which are highly homogenous where the members of the research are randomly selected to participate in the research.

The survey is closed-ended questions to determine the level of sensory characteristics and acceptability of the products as quantitative data, as well as qualitative insights into student comments and suggestions about the product.

While efforts were made to obtain a representative sample, the findings are based on the responses of the surveyed respondents and may not be generalizable to the entire population

Data Collection

Surveys were distributed personally into respective target population. The respondent was given a sample of the product as well as the questionnaire for them to evaluate on their own. The researchers wait until the respondents are done answering the instrument.

Validation and Reliability

The product was examined by 15 experts (Chefs). The validators assessed and commented on the product for the development prior to the conduct of study of the researchers. Obtain the validity score of 7.71 interpreted as *"Likely Very Much Acceptable"* using the Sensory Evaluation tool and .918 interpreted "*Excellent"* using the Cronbach alpha.

Ethical Considerations

The study upholds respect for all participants, ensuring fairness, safety and confidentiality in its approach. The researchers apply the principles of respect, beneficence and justice to maintain high ethical standards. Participation was voluntary, and respondents were assured of confidentiality and anonymity. Informed consent was obtained from all participants

Out of the three (3) replications of the product and treatment, three (3) items stand out because they contain tuna meat as the principal constituent. The 90% treatment for Tuna Tocino included 90% tuna meat, condiments and spices, sugar and salt and flavorings, and, whereas Tuna Longganisa received 80% Tuna meat, condiments and spices, sugar and salt and flavorings and for the Tuna Chorizo received 90% Tuna meat, condiments and spices, sugar and salt and flavorings.

To evaluate and interpret the results of the succeeding tables, the researchers are guided by the 9-point Likert Scale or Hedonic Scale with the corresponding verbal interpretation. Hedonic tests are categorized as consumer-oriented tests. The hedonic test is used to determine the degree of liking for a product. In the hedonic test, category scales range from extremely acceptable to extremely unacceptable. The samples used in these experiments are coded with a three-digit random number and placed in identical sample containers (Rochmawati, 2019).

Scale	Range of Score	Verbal Interpretation
9	8.12 – 9.00	Like Extremely Acceptable
8	7.23 – 8.11	Like Very Much Acceptable
7	6.34 – 7.22	Like Moderately Acceptable
6	5.45 – 6.33	Like Slightly Acceptable
5	4.56 – 5.44	Neither nor Dislike Acceptable
4	3.67 – 4.55	Dislike Slightly Acceptable
3	2.78 – 3.66	Dislike Moderately Acceptable
2	1.89 – 2.77	Dislike Very Much Acceptable
1	1.00 – 1.88	Dislike Extremely Acceptable

3. Result and Discussion

This section describes the findings, presentation, analysis, and interpretation of data obtained in connection with the study's aims. The study's conclusions examine the acceptance of respondents from Tuna Tocino, Longganisa and Chorizo.

Table 1 Level of sensory characteristic of Tuna Tocino, Longganisa and Tuna Chorizo Treatment in terms of Taste, Texture, Appearance, Aroma, Consistency, Quality and Accuracy with different replication by 100 respondents.

Replicate / Treatment	Groupings	SENSORY CHARACTERISTICS						
		Taste	TEXTURE	APPEARANCE	QUALITY	ACCURACY	CONSISTENCY	Overall
Tuna Tocino (90%)	Mean	7.72	7.71	7.58	7.65	7.69	7.71	7.68
	SD	0.900	0.820	0.843	0.892	0.861	0.88	0.573
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Tuna Tocino (80%)	Mean	7.63	7.59	7.62	7.60	7.68	7.68	7.63
	SD	0.837	0.922	0.896	0.853	0.909	0.898	0.54
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Tuna Tocino (70%)	Mean	7.60	7.52	7.67	7.56	7.68	7.69	7.62
	SD	1.035	0.870	0.865	0.998	0.909	0.800	0.586
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Tuna Longganiza(90%)	Mean	7.52	7.51	7.5	7.53	7.6	7.71	7.56
	SD	1.087	0.893	0.948	0.915	0.899	0.924	0.64
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Tuna Longganiza(80%)	Mean	7.58	7.51	7.76	7.55	7.66	7.64	7.62
	SD	0.948	0.959	0.965	0.903	0.844	0.871	0.625
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM

Replicate / Treatment	Groupings	SENSORY CHARACTERISTICS						
		Taste	TEXTURE	APPEARANCE	QUALITY	ACCURACY	CONSISTENCY	Overall
Tuna Longganiza(70%)	Mean	7.47	7.49	7.61	7.54	7.62	7.57	7.55
	SD	0.934	0.969	0.984	0.881	0.826	0.967	0.622
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Tuna Chorizo (90%)	Mean	7.59	7.61	7.73	7.78	7.82	7.68	7.70
	SD	0.911	0.909	1.004	0.836	0.857	0.886	0.574
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Tuna Chorizo (80%)	Mean	7.63	7.46	7.76	7.71	7.65	7.73	7.66
	SD	0.800	0.937	0.986	0.88	0.914	0.92	0.584
	DI	LVM	LVM	LVM	LVM	LVM	LVM	
Tuna Chorizo (70%)	Mean	7.60	7.41	7.64	7.57	7.74	7.69	7.61
	SD	0.816	0.900	0.990	0.832	0.799	0.929	0.568
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM

Legend: LE= Likely Extremely, LVM= Likely Very Much, LM= Likely Moderately, LS= Likely Slightly, NL= Neither Like nor Dislike, DS= Dislikely Slightly, DM, Dislikely Moderately, DVM= Dislikely Very Much, DE= Dislikely Extremely

Table 1 presents the sensory evaluation results of the three developed tuna-based products tuna tocino, tuna longganisa, and tuna chorizo across varying levels of tuna meat inclusion (90%, 80%, and 70%). The evaluation, conducted among 100 respondents using seven sensory attributes (taste, aroma, texture, quality, consistency, accuracy, and overall acceptability), reveals meaningful patterns in consumer preference and product optimization.

Overall, the findings demonstrate that formulations with higher tuna concentration, particularly the 90% treatment (Treatment A), consistently yielded higher sensory ratings for tuna tocino and tuna chorizo. This suggests that increased tuna content enhances the intrinsic sensory properties of the products, such as flavor intensity, product identity, and perceived freshness. This observation aligns with the study of Granato et al. (2021), which emphasized that higher concentrations of primary protein sources in processed meat products significantly improve sensory appeal and consumer acceptability due to stronger flavor profiles and better product familiarity.

Specifically, for tuna tocino, the 90% formulation recorded the highest mean score in taste (M = 7.72, SD = 0.900), interpreted as “Likely Very Much.” This indicates that respondents strongly preferred the flavor characteristics of tocino with higher tuna content, likely due to its richer umami taste and more defined sweetness-salt balance. In contrast, the lowest rating was observed in the texture of the 70% formulation (M = 7.52, SD = 0.870), although still interpreted positively. The relatively lower score suggests that reducing tuna concentration may negatively affect the structural integrity and mouthfeel of the product. This supports findings by Toldrá and Reig (2019), who noted that protein content plays a critical role in determining texture and binding properties in processed meat analogs.

In the case of tuna longganisa, the 80% formulation obtained the highest overall mean score (M = 7.76, SD = 0.965), indicating that a slightly reduced tuna concentration may provide a more balanced sensory profile for this product type. Interestingly, the 90% formulation received the lowest score in taste (M = 7.47, SD = 0.934), suggesting that excessive tuna content may overpower the characteristic sweet-garlic flavor typically associated with traditional longganisa. This finding is consistent with Delgado-Pando et al. (2020), who reported that optimal formulation in processed

sausages requires a balance between the primary protein and seasoning to maintain product authenticity and consumer preference.

For tuna chorizo, the 90% formulation again demonstrated superior performance, particularly in terms of quality (M = 7.78, SD = 0.836), indicating that respondents perceived it as having better overall product attributes, including appearance, flavor, and consistency. Conversely, the 70% formulation received the lowest rating in texture (M = 7.41, SD = 0.900), reinforcing the pattern that lower tuna content may compromise product firmness and cohesiveness. This observation is supported by Pintado and Delgado-Pando (2021), who highlighted that higher fish protein incorporation enhances gel formation and improves textural characteristics in emulsified meat products.

Collectively, the results suggest that while higher tuna concentration (90%) is generally preferred for tuna tocino and chorizo, a moderate level (80%) is more suitable for tuna longganisa to achieve optimal sensory balance. Despite all treatments being interpreted as "Likely Very Much," the variations in mean scores indicate that formulation adjustments significantly influence consumer perception. These findings underscore the importance of product-specific optimization in developing seafood-based processed products to ensure both sensory quality and market acceptability.

The study implies that product formulation significantly influences consumer acceptability, with optimal tuna concentrations (90% for tocino and chorizo, 80% for longganisa) producing better sensory outcomes. It also highlights the potential of tuna as sustainable and nutritious alternatives to traditional meat products.

Additionally, the findings suggest strong opportunities for local entrepreneurship and value-added processing, particularly in areas like Bacolod City, where marine resources are abundant. The generally high acceptability ratings further indicate that consumers are open to innovative seafood-based products, supporting their market potential. Overall, the study provides a basis for product development, business innovation, and future research in seafood processing.

Table 2 Level of Acceptability of Tuna Tocino, Longganisa and Chorizo as evaluated by the 100 respondents of Bacolod City.

Groupings	Tuna Tocino			Tuna Longganisa			Tuna Chorizo		
	Mean	**SD**	**VI**	**Mean**	**SD**	**VI**	**Mean**	**SD**	**VI**
1. What did you think about our Tuna tocino, longganisa and chorizo?	7.82	0.892	LVM	7.71	1.038	LVM	7.74	0.97	LVM
2. How would you rate the quality of our Tuna tocino, longganisa and chorizo?	7.74	0.949	LVM	7.69	0.825	LVM	7.76	0.955	LVM
3. Was the tuna tocino, longganisa and chorizo tasty and flavorful?	7.78	0.905	LVM	8.44	7.994	LVM	7.76	0.962	LVM
4. Was the tocino, longganisa and chorizo serve fresh?	7.68	1.043	LVM	7.67	0.792	LVM	7.79	0.977	LVM
5. Was the quality of the tocino, longganisa and chorizo excellent?	7.79	0.94	LVM	7.62	0.908	LVM	7.84	0.961	LVM
6. How would you rate the value of the tocino, longganisa and chorizo?	7.85	0.914	LVM	7.63	0.928	LVM	7.71	0.967	LVM
7. Are proper preparation of standard followed?	8.04	0.887	LVM	7.69	1.022	LVM	7.79	1.057	LVM
Total	7.80	0.757	LVM	7.78	1.292	LVM	7.74	0.750	LVM

Legend: LE= Likely Extremely, LVM= Likely Very Much, LM= Likely Moderately, LS= Likely Slightly, NL= Neither Like nor Dislike, DS= Dislikely Slightly, DM, Dislikely Moderately, DVM= Dislikely Very Much, DE= Dislikely Extremely.

The results in table 2 present the developed and level of acceptability of Tuna Tocino, Longganiza and Chorizo as evaluated by 100 respondents from Bacolod City. Overall, the three developed products were rated "Likely Very Much" acceptable, indicating a high level of consumer

acceptance. This finding supports the growing evidence that fish-based processed products can achieve strong market acceptance when sensory attributes are carefully optimized (Ares & Jaeger, 2015; Granato et al., 2020).

Among the products, Tuna Longganisa obtained the highest overall mean score (M = 8.44), suggesting that respondents particularly favored its taste and flavor profile. Taste is widely recognized as the most influential determinant of food acceptability, often outweighing other attributes such as appearance or texture (Deliza & MacFie, 2021). The high rating for Tuna Longganisa implies that the formulation effectively captured the desired flavor characteristics associated with traditional longganisa while incorporating tuna as an alternative protein source. On the other hand, although one item under Tuna Longganisa recorded the lowest mean score (M = 7.62), it still fell within the same descriptive interpretation, indicating consistent acceptability across all evaluated attributes

For Tuna Tocino, the highest-rated item was related to adherence to proper preparation standards (M = 8.04), reflecting respondents' recognition of product quality and consistency. This suggests that standardized processing contributes significantly to consumer trust and perceived product reliability (Santos et al., 2022). Meanwhile, the lowest-rated item freshness (M = 7.68) although still highly acceptable, indicates a potential area for improvement. Freshness perception is a critical quality cue in processed meat products, often influencing repeat purchase intention (Banović et al., 2018).

In the case of Tuna Longganisa, the item on taste and flavor received the highest evaluation (M = 8.44), reinforcing the importance of palatability in driving consumer preference. However, the relatively lower score for perceived quality (M = 7.62) suggests that while the product excels in flavor, further enhancement in texture, appearance, or packaging may strengthen overall quality perception. This aligns with studies emphasizing that product quality is a multidimensional construct influenced by both intrinsic and extrinsic factors (Asioli et al., 2017).

For Tuna Chorizo, the highest-rated attribute was product quality (M = 7.84), indicating that respondents viewed the product as well-developed and acceptable in terms of composition and processing. Conversely, the lowest-rated item related to value (M = 7.71) suggests that respondents may have had slightly lower perceptions of its cost-effectiveness. Perceived value is closely linked to price-quality relationships and can influence consumers' willingness to purchase, even when sensory attributes are favorable (Zeithaml, 1988; updated applications in food marketing: Konuk, 2019).

Overall, the findings imply that while all three tuna-based products are highly acceptable, improvements may still be made in specific aspects such as freshness (Tocino), perceived quality (Longganisa), and value (Chorizo). These refinements could further enhance consumer satisfaction and competitiveness in the processed food market. The consistently high ratings across products highlight the potential of tuna as a viable alternative ingredient in traditional meat products, supporting innovation in the local food industry.

Table 3 Significant differences in the sensory characteristics of Tuna Tocino, Longganisa and Chorizo as rated by the 100 respondents of Bacolod City

Variables	Groupings	Taste	Texture	Appearance	Aroma	Accuracy	Consistency	Overall
Tuna Tocino	Sig.	0.819	0.578	0.695	0.307	0.382	0.918	0.677
	Significance @ 0.05 level	Not Significant						
	Status of Hypothesis	Failed to reject the null hypothesis / Accepted						
Tuna Longganisa	Sig.	0.712	0.982	0.916	0.708	0.426	0.716	0.898
	Significance @ 0.05 level	Not Significant						
	Status of Hypothesis	Failed to reject the null hypothesis / Accepted						
Tuna Chorizo	Sig.	0.941	0.276	0.674	0.207	0.376	0.919	0.519
	Significance @ 0.05	Not Significant						

Variables	Groupings	Taste	Texture	Appearance	Aroma	Accuracy	Consistency	Overall
	level							
	Status of Hypothesis	Failed to reject the null hypothesis / Accepted						

Table 3 presents the test of significant differences in the sensory characteristics of Tuna Tocino, Tuna Longganisa, and Tuna Chorizo across three replications as evaluated by 100 respondents. The overall results reveal that the computed p-values for Tuna Tocino ($p = 0.677$), Tuna Longganisa ($p = 0.898$), and Tuna Chorizo ($p = 0.519$) are all greater than the 0.05 level of significance. This indicates that there are no statistically significant differences among the replications, leading to the decision to fail to reject (or accept) the null hypothesis. This finding suggests that the developed products demonstrate a high level of consistency and stability in their sensory qualities across multiple trials, which is a critical factor in food product development and standardization (Granato et al., 2020).

For Tuna Tocino, the analysis of individual sensory attributes including taste ($p = 0.819$), texture ($p = 0.578$), appearance ($p = 0.695$), aroma ($p = 0.307$), accuracy ($p = 0.382$), and consistency ($p = 0.918$) all yielded p-values greater than 0.05. These results indicate no significant variation across replications, confirming that the product maintains uniform sensory quality. Consistency in sensory attributes is essential in ensuring consumer trust and repeat purchase behavior, as variability in product quality may negatively affect consumer perception (Deliza & MacFie, 2021).

Similarly, Tuna Longganisa exhibited no significant differences across all evaluated sensory variables, including taste ($p = 0.712$), texture ($p = 0.982$), appearance ($p = 0.916$), aroma ($p = 0.708$), accuracy ($p = 0.426$), and consistency ($p = 0.716$). The uniformity of these results indicates that the formulation and processing methods used in producing Tuna Longganisa are reliable and reproducible. This aligns with previous studies emphasizing that product reproducibility is a key determinant of quality assurance in processed food innovation (Santos et al., 2022).

In the case of Tuna Chorizo, all sensory attributes also showed no significant differences, including taste ($p = 0.941$), texture ($p = 0.276$), appearance ($p = 0.674$), aroma ($p = 0.207$), accuracy ($p = 0.376$), and consistency ($p = 0.919$). These findings further reinforce that the product maintains stable sensory characteristics regardless of replication. Such stability is particularly important in product commercialization, where maintaining uniform quality across batches is necessary to meet consumer expectations and industry standards (Ares & Jaeger, 2015).

Overall, the absence of significant differences across replications for all three tuna-based products implies that the preparation procedures, ingredient formulation, and processing techniques are well-controlled and standardized. This consistency not only strengthens the reliability of the study results but also highlights the potential of these products for large-scale production. Moreover, it indicates that the sensory acceptability observed is not due to random variation but reflects the inherent quality of the developed formulations. Ensuring such reproducibility is fundamental in food science, as it supports both product credibility and market competitiveness (Asioli et al., 2017).

Table 4 Significant differences in the level of acceptability of Tuna Tocino, Longganisa and Chorizo, as evaluated by the 100 respondents

Variables	Groupings	Computed t-value	Significance @ 0.05 level	Decision to the null hypothesis
Tuna Tocino	Age	0.031	Significant	Rejected
	Civil Status	0.033		
	Sex	0.365	Not Significant	Accepted
Tuna Longganisa	Age	0.246		
	Civil Status	0.012	Significant	Rejected
	Sex	0.205	Not Significant	Accepted
Tuna Chorizo	Age	0.491		
	Civil Status	0.025	Significant	Rejected
	Sex	0.835	Not Significant	Accepted

Table 4 presents the demographic profile of the 100 respondents from Bacolod City specifically age, civil status, and sex and examines their influence on the acceptability of the developed Tuna (*Thunnus albacares*) Tocino, Longganisa, and Chorizo. The overall analysis indicates that demographic variables did not significantly influence product acceptability, as the majority of computed p-values exceeded the 0.05 level of significance. Thus, the null hypothesis was generally not rejected, suggesting that consumer evaluations of the products were relatively consistent regardless of demographic differences. This finding aligns with previous studies indicating that sensory acceptability, particularly for familiar or culturally adapted food products, is often driven more by intrinsic attributes (e.g., taste, aroma, and texture) than by demographic factors (Ares & Jaeger, 2015; Asioli et al., 2017).

However, a closer examination of specific variables reveals some nuanced results. For Tuna Tocino, age ($p = 0.031$) and civil status ($p = 0.033$) showed statistically significant differences ($p < 0.05$), indicating that these demographic factors influenced respondents' evaluations of the product. This suggests that preferences for tocino may vary across age groups and marital status, possibly due to differences in dietary habits, health considerations, or exposure to traditional food products. In contrast, sex ($p = 0.365$) did not show a significant difference, implying that male and female respondents shared similar perceptions of the product. Studies have shown that age can influence taste preferences and food choices, particularly in processed or reformulated meat products (Banović et al., 2018).

For Tuna Longganisa, civil status ($p = 0.012$) was the only variable that showed a significant difference, leading to the rejection of the null hypothesis for this factor. This may indicate that single and married respondents differ in their evaluation of longganisa, potentially due to variations in consumption patterns, household decision-making, or familiarity with traditional sausage products. Meanwhile, age ($p = 0.246$) and sex ($p = 0.205$) were not significant, reinforcing the idea that these variables do not strongly influence acceptability for this product. This is consistent with research suggesting that while some demographic factors may affect food perception, their impact is often limited compared to sensory quality and product familiarity (Deliza & MacFie, 2021).

In the case of Tuna Chorizo, civil status ($p = 0.025$) again emerged as a significant variable, while age ($p = 0.491$) and sex ($p = 0.835$) did not show significant differences. The recurring significance of civil status across products may reflect differences in lifestyle, purchasing behavior, or exposure to processed food products between single and married individuals. For instance, married individuals may prioritize practicality and family preferences, while single consumers may be more exploratory in food choices (Konuk, 2019).

Overall, although certain demographic variables particularly civil status showed isolated significant effects, the general pattern indicates that the acceptability of the developed tuna-based products is broadly consistent across different demographic groups. This suggests that the products have wide market appeal and are not limited to a specific consumer segment. Such findings are important in food product development, as they indicate the potential for broader commercialization and acceptance in diverse markets. Furthermore, the minimal influence of demographic factors reinforces the importance of optimizing intrinsic sensory qualities, which remain the primary drivers of consumer acceptance (Granato et al., 2020).

4. Discussion

The study evaluated the acceptability of tuna-based processed products, specifically tuna tocino, tuna longganisa, and tuna chorizo, with varying levels of tuna meat inclusion as assessed by 100 respondents. The findings revealed that higher tuna concentration, particularly the 90% formulation, generally resulted in better sensory ratings for tuna tocino and tuna chorizo in terms of taste, quality, and overall acceptability. However, tuna longganisa achieved optimal acceptability at the 80% formulation, indicating that a balanced composition is more appropriate for this product. Lower tuna concentration (70%) tended to negatively affect texture across all products. In terms of overall acceptability, all three products were rated "Likely Very Much," with tuna longganisa receiving the highest mean score, particularly in taste. Tuna tocino showed strong performance in preparation standards but slightly lower ratings in freshness, while tuna chorizo was rated highest in quality but lower in perceived value. The test of significant differences revealed no statistical differences across replications, confirming the consistency and reliability of the product formulations.

Furthermore, demographic variables such as age, sex, and civil status generally did not significantly influence acceptability, although age and civil status showed some significant effects in specific products. Overall, the results indicate high consumer acceptance and consistency of the developed products.

5. Conclusion

Based on the findings, it can be concluded that tuna is a viable alternative ingredient for developing processed food products such as tocino, longganisa, and chorizo, with high levels of consumer acceptability. The study confirms that product formulation plays a critical role in determining sensory quality, with 90% tuna concentration being most suitable for tocino and chorizo, while 80% is optimal for longganisa. The consistently high acceptability ratings indicate strong potential for commercialization and marketability of the products. Moreover, the absence of significant differences across replications demonstrates that the preparation procedures and formulations are stable, reliable, and suitable for standardization. The minimal influence of demographic factors further suggests that the products have broad appeal across different consumer groups, making them promising for wider market adoption.

The improvements be made in specific product attributes, such as enhancing freshness in tuna tocino, improving perceived quality in tuna longganisa, and increasing value perception in tuna chorizo to further strengthen consumer acceptance. The standardized formulations identified in the study should be maintained to ensure consistent quality in large-scale production. The developed products may also be promoted for commercialization, particularly among small and medium enterprises in coastal areas where tuna are readily available. Future research is encouraged to explore additional aspects such as shelf life, packaging, nutritional value, and cost-efficiency to enhance product competitiveness. Furthermore, conducting expanded consumer testing across different locations is recommended to validate the findings and support broader market potential.

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Development and Acceptability of Blue Crab as Local Delicacies

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Abstract

This quasi-experimental study examined the acceptability of incorporating Blue Swimming Crab (Portunus pelagicus) meat an abundant marine resource from Barangay Tomongtong, E.B. Magalona, Negros Occidental into innovative baked products. The study aimed to develop value-added local delicacies by formulating cookies, butterscotch, and macaroons with varying levels of blue crab meat substitution (75%, 50%, and 25%). 100 consumer respondents from the Mangrove Eco-Trail evaluated the products using a 9-point Hedonic Scale, assessing taste, texture, appearance, aroma, consistency, quality, and accuracy. Among expert, macaroons (M = 6.61) and cookies (M = 6.50) received the highest overall mean scores, while consumer respondents rated butterscotch highest (M = 8.13), corresponding to acceptability interpretations from "Likely Moderately" to "Likely Very Much." Notably, the 75% blue crab formulation emerged as the most preferred across all products. Analysis of variance (ANOVA) revealed no significant differences in acceptability based on demographic variables such as age, sex, and civil status, indicating broad market appeal. However, significant differences were observed in specific sensory attributes particularly taste, texture, and aroma across treatment levels for cookies and macaroons. The findings highlight the potential of Blue Swimming Crab meat as a nutritious, marketable, and sustainable ingredient in pastry innovation. Beyond enhancing flavor and sensory appeal, these value-added products support the sustainable utilization of local marine resources and provide opportunities for entrepreneurship in coastal communities. The study contributes to the advancement of food product innovation and offers a practical model for integrating local marine resources into consumer-accepted bakery products.

Keywords: Hospitality Management, Acceptability, Development, Sensory Characteristics, Blue Crab, Experimental Research Design, Municipality of EB Magalona, Philippines.

1. Introduction

The Blue Swimming Crab (BSC, Portunus pelagicus) is a commercially and ecologically important species widely distributed across the Indo-West Pacific, including the coastal waters of the Philippines. Its meat, rich in omega-3 fatty acids, protein, essential amino acids, and minerals, is commonly sold fresh, frozen, or canned, making it a valuable ingredient for both local consumption and international markets (Ajik-Cerbas et al., 2022a; Al Mamun et al., 2024). In the Visayan Sea, encompassing Negros Occidental, BSC supports the livelihoods of thousands of fishers and processors, contributing to both food security and economic stability (Sea, 2025).

Given its nutritional profile and culinary appeal, incorporating BSC into value-added baked goods presents an opportunity for product innovation. The use of blue crab in items such as toasted siopao, muffins, cookies, and other pastries can enhance flavor, extend shelf life, and provide consumers with novel seafood-based products. Despite this potential, research on the commercial viability, sensory acceptance, and marketability of BSC-based baked products remains limited, highlighting a clear research gap.

This study addresses this gap by developing baked products using varying levels of blue crab meat and evaluating them through sensory testing, nutritional analysis, and market feasibility assessment. The results provide insights into consumer preferences, highlighting the most accepted formulations, their nutritional benefits, and potential market demand. Furthermore, this research supports sustainable utilization of local BSC resources, contributes to local food innovation, and offers practical recommendations for commercialization, including packaging, marketing strategies, and integration into local cuisine.

Ultimately, the study underscores the potential of BSC-based baked goods to diversify seafood product offerings, promote local marine resource sustainability in Barangay Tomongtong, and

enhance the gastronomic and economic value of coastal fisheries, positioning these delicacies as viable local specialties for broader market adoption.

Finally, the result of the study is to gain sensory review results showing how well consumers like the product and which versions they prefer. Nutritional analysis data highlighting the health value of the developed products. Market insights and recommendations for commercial production, packaging, and marketing strategies. Contribution to local food innovation by promoting sustainable use of blue crab resources from Barangay Tomongtong and encouraging seafood-based product diversification. And the researchers want to endorse this study to the Municipality of EB Magalona as they use as their main local delicacies.

Objective of the Study

The study aims to develop and investigate the acceptability of Blue Crab as local delicacies, specifically:

1. To develop cookies into the following treatment and replicas:
   d. 75% or 258g of Blue Crabs Meat; 344g Flour and 200g Butter.
   e. 50% or 172g of Blue Crabs Meat; 344g Flour and 200g Butter.
   f. 25% or 86g of Blue Crabs Meat; 344g Flour and 200g Butter.

2. To develop Butterscotch into the following treatment and replicas:
   a. 75% or 187g of Blue Crabs Meat; 250g Flour, 180g Butter, and 300g Sugar
   b. 50% or 125g of Blue Crabs Meat; 250g Flour, 180g Butter, and 300g Sugar
   c. 25% or 62g of Blue Crabs Meat; 250g Flour, 180g Butter, and 300g Sugar

3. To develop Macaroons into the following treatment and replicas:
   a. 75% or 178g of Blue Crabs Meat; 31g Flour, 120g Butter, 170g Desiccated Coconut and 120g Sugar
   b. 50% or 85g of Blue Crabs Meat; 31g Flour, 120g Butter, 170g Desiccated Coconut and 120g Sugar
   c. 25% or 43g of Blue Crabs Meat; 31g Flour, 120g Butter, 170g Desiccated Coconut and 120g Sugar

The research would like to seek answer to the following questions.

1. What are the sensory characteristics of Cookies, Butterscotch, and Macaroons – across all treatment as evaluated 100 respondents in terms of Taste, Texture, Appearance, Aroma, Accuracy, Quality and Consistency?
2. What is the level of acceptability of Cookies, Butterscotch and Macaroons as evaluated by 100 respondents from EB Magalona Negros Occidental?
3. Are there significant differences in the sensory characteristics and acceptability levels of the Blue Crab-based products based on the evaluations?

2. Materials and Methods

Materials

In this research study, Blue Crab (Portunus pelagicus) has been processed into different replication and treatments with the used of tools and equipment in the production into a specific product such as Cookies, Butterscotch and Macaroons, and followed by the proper procedure in preparing various products.

The researchers employ several approaches to develop the three products that is suited with the used of blue crab. Original methods for creating Cookies were a mixture of creaming, sifting and mixing. During the creaming of butter and sugar the researchers make sure the sugar was totally dissolved with butter and change into light yellow color prior the addition of other ingredients. Sifting eliminates lumps from dry materials and aerates them while mixing, allowing the constituents in a batter or combination to be distributed uniformly. Several instruments, including a rubber spatula, whisk, flour sifter, strainer, and other tools were employed to prepare the combination. Furthermore,

the Butterscotch production method is similar to that of Cookies. It was a blend of mixing and molding, but it was included in the mixing and baking process. This process usually involves combining all the ingredients in a mixing bowl and mix well. After incorporating all the ingredients, the product was molded into rectangular pan.

Furthermore, Macaroons consists of sifting, combining, molding, and baking. Macaroons the researcher must pre-heat the oven after that combine all ingredients the in mixing bowl then shape with the use of scooper and bake once it is done shaping into a molder. All baked products must be cool prior of the packing stage.

Likewise, the researcher used the survey questionnaires. Sample products and sensory and acceptability evaluation instrument was used to gather data on the sensory characteristics and level of acceptability regarding blue crab as food products.

Methods

This study utilized a quasi-experimental research design to systematically examine the acceptability of incorporating Blue Swimming Crab (*Portunus pelagicus*) meat into selected value-added baked products. Specifically, three product variants cookies, butterscotch, and macaroons were developed using varying levels of crab meat proportion (75%, 50%, and 25%). The design enabled the researchers to manipulate the proportion of crab meat while maintaining control over other variables, thereby allowing for a clearer assessment of its effect on the sensory acceptability of the finished products.

The study involved two groups of evaluators to ensure both technical and consumer-based perspectives. A panel of fifteen (15) expert evaluators, composed of professionals in food technology and culinary arts, assessed the products based on established sensory criteria. In addition, one hundred (100) consumer respondents were selected from visitors of the Mangrove Eco-Trail in Barangay Tomongtong, E.B. Magalona, Negros Occidental. These respondents were chosen through purposive sampling, with consideration given to their familiarity with seafood products and their willingness to participate. The respondents are the consumer of Mangrove Eco-trail in Brgy. Tomongtong who evaluate the three replicas and treatment of sample product given by the researchers and the respondents were given ample time to answered the evaluation form. Respondents were also given bottled water to cleanse their plate prior of tasting another product to determine the exact taste.

This combination of expert and consumer evaluation strengthened the reliability and validity of the findings, as it captured both professional standards and general consumer preferences. Demographic variables such as age, sex, and civil status were also collected to provide a more comprehensive profile of the respondents and to allow for potential analysis of differences in perception across groups.

To ensure consistency and experimental control throughout the study, the researchers strictly adhered to the culinary principle of *mise-en-place*, or “putting everything in place.” This approach involved the careful preparation, organization, and precise measurement of all ingredients prior to the actual production process. Each component including Blue Swimming Crab meat, flour, sugar, butter, and desiccated coconut was accurately weighed and recorded using standardized measurements. This level of precision minimized variability and ensured that any observed differences in sensory evaluation could be attributed primarily to the varying levels of crab meat substitution rather than inconsistencies in preparation.

Furthermore, the preparation procedures for cookies, butterscotch, and macaroons followed a standardized protocol across all treatments and replications. Strict adherence to recipe specifications, mixing techniques, baking temperatures, and cooking times was maintained to preserve uniformity. Ingredients such as sugar and butter were measured with exactness, and each step of the process was carefully executed to avoid deviations that could affect product quality. By maintaining this high level of procedural control, the study ensured the reliability, replicability, and validity of the experimental outcomes, ultimately providing a sound basis for evaluating the potential of Blue Swimming Crab meat as an innovative ingredient in bakery products.

The formulation of Blue Swimming Crab (Portunus pelagicus) cookies was standardized across three treatment levels, incorporating varying proportions of crab meat at 75% (258g), 50% (172g), and 25% (86g), while maintaining constant amounts of the other ingredients. Each treatment included 344g of all-purpose flour, 200g of unsalted butter, 250g of brown sugar, 2 whole eggs, 5g of

baking soda, 3g of baking powder, 5g of vanilla extract, and 6g of salt. This standardized formulation ensured that any variation in the sensory characteristics of the cookies could be attributed primarily to the differing levels of crab meat incorporation.

In the preparation process, the unsalted butter and brown sugar were first creamed using a stand mixer until a smooth, light, and golden-yellow consistency was achieved, indicating that the sugar was well dissolved and properly aerated. The eggs were then added gradually to the creamed mixture to ensure proper emulsification. In a separate bowl, the dry ingredients, including flour, baking soda, baking powder, and salt, were thoroughly combined and gradually incorporated into the mixture at low speed to prevent overmixing. Subsequently, the measured crab meat corresponding to each treatment level, along with the vanilla extract, was added and mixed gently until all ingredients were uniformly blended. The dough was then allowed to rest for five minutes to facilitate hydration and improve consistency.

After resting, the dough was portioned and molded using a cookie molder or shaped according to preference, ensuring uniform size and thickness for even baking. The prepared dough portions were arranged on baking trays and baked in a preheated oven at 150°C (302°F) for approximately 10 to 15 minutes, or until a light golden-brown color was achieved. The same procedure was consistently applied across all treatment levels to maintain uniformity and reliability in the preparation process, thereby ensuring that the resulting differences in product quality and acceptability could be accurately evaluated. The cookies measure as 15 grams.

The formulation of Blue Swimming Crab (*Portunus pelagicus*) butterscotch was standardized across three treatment levels with varying proportions of crab meat: 75% (187 g), 50% (125 g), and 25% (62 g). All other ingredients were held constant to ensure comparability among treatments. Each formulation consisted of 250 g all-purpose flour, 180 g unsalted butter, 300 g brown sugar, 2 whole eggs, 5 g baking soda, 3 g baking powder, 5 g vanilla extract, and 45 g corn syrup. This controlled formulation allowed the study to isolate the effect of crab meat incorporation on the sensory and overall quality attributes of the butterscotch.

In the preparation process, the unsalted butter and brown sugar were first creamed using a stand mixer until the mixture achieved a smooth, light, and golden-yellow consistency, indicating proper aeration and dissolution of sugar. The eggs were then added gradually to the creamed mixture to ensure proper emulsification and uniform texture. In a separate mixing bowl, the dry ingredients, including all-purpose flour, baking soda, and baking powder, were thoroughly combined. The vanilla extract and corn syrup were then incorporated into the dry mixture along with the pre-measured crab meat corresponding to each treatment level. This combined mixture was gradually added to the creamed butter and sugar mixture at low speed to ensure even blending while preventing overmixing, which could affect the final texture of the product.

Once the batter was fully homogenized, it was transferred into rectangular baking pans that were properly prepared to prevent sticking. The mixture was then allowed to rest for approximately five (5) minutes to promote ingredient hydration and improve batter consistency. After resting, the batter was evenly spread and leveled within the pan to ensure uniform thickness. The product was then baked in a preheated oven at 200°C (392°F) for approximately 15 to 20 minutes, or until the surface developed a characteristic golden-brown color and a firm yet moist texture. After baking, the butterscotch was allowed to cool before being sliced into uniform portions according to the desired size.

The same standardized procedure was strictly followed for all treatment levels (75%, 50%, and 25%) to maintain consistency and experimental control. This ensured that any observed differences in texture, flavor, aroma, and overall acceptability could be attributed primarily to the variation in crab meat content rather than inconsistencies in preparation or processing. 16 slices of butterscotch can produce in 1 recipe.

The formulation of Blue Swimming Crab (Portunus pelagicus) macaroons was systematically developed using three treatment levels with varying proportions of crab meat: 75% (128 g), 50% (85 g), and 25% (43 g). All other ingredients were kept constant to ensure standardization and comparability of results across treatments. Each formulation consisted of 31 g all-purpose flour, 120 g unsalted butter, 67 g white sugar, 4 whole eggs, 4 g baking powder, 5 g vanilla extract, 6 g salt, 170 g desiccated coconut, and 300 g condensed milk. This controlled formulation allowed for the

assessment of the impact of crab meat incorporation on the sensory quality and acceptability of the product.

In the preparation process, the unsalted butter and white sugar were first creamed using a stand mixer until the mixture became light, smooth, and fully incorporated, indicating proper dissolution of sugar and aeration of the base mixture. The eggs were then added gradually to ensure proper emulsification and uniform consistency. Once the mixture was well blended, the dry ingredients flour, baking powder, salt, and desiccated coconut were gradually added together with vanilla extract and condensed milk. The mixture was continuously blended at low speed to achieve a uniform batter while preventing overmixing, which could affect the texture of the final product.

After achieving a homogenous mixture, the pre-measured Blue Swimming Crab meat corresponding to each treatment level (75%, 50%, and 25%) was gently folded into the batter to ensure even distribution without breaking down the crab meat texture. The batter was then portioned using a scoop and shaped into small mounds or balls, depending on the desired form, ensuring uniform size for consistent baking results. The shaped macaroons were placed on a prepared baking tray and baked in a preheated oven at 200°C (392°F) for approximately 15 to 20 minutes, or until they turned golden brown and developed a firm exterior with a moist interior. A recipe of blue crab macaroons can make 55 pieces.

The same standardized procedure was strictly followed across all treatment levels to ensure consistency, reliability, and control of variables. This uniformity in preparation allowed for a valid comparison of sensory attributes such as taste, texture, aroma, and overall acceptability, ensuring that observed differences were primarily due to variations in crab meat incorporation rather than inconsistencies in the preparation process.

Process

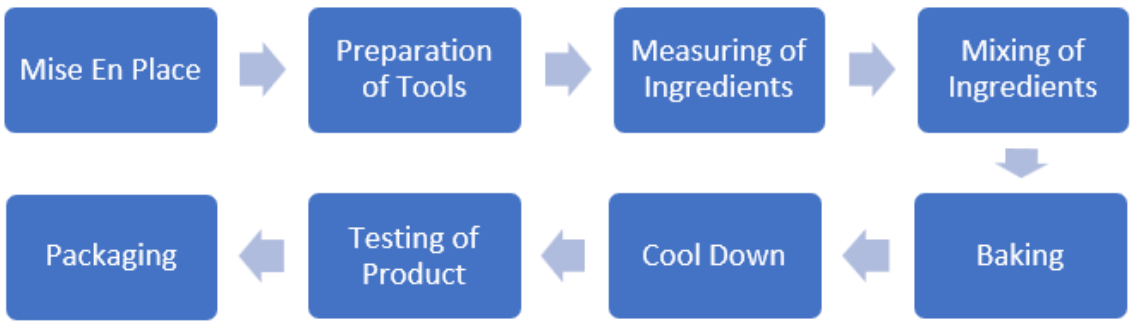

Figure 2. Procedure Cycle Cookies, Butterscotch and Macaroons

Mise En Place. During the preparation of Cookies, Butterscotch, and Macaroons, it is important to begin with proper mise en place. All ingredients should be carefully gathered and placed in individual bowls to ensure organization and efficiency throughout the process.

Preparation of Tools. Before starting the preparation of Cookies, Butterscotch, and Macaroons, all tools and equipment, such as mixing bowls, spatulas, and baking trays, should be thoroughly washed and properly sanitized to ensure cleanliness, prevent contamination, and maintain food safety standards.

Measuring of Ingredients. Measuring of Ingredients. In preparing the Cookies, Butterscotch, and Macaroons, all dry and liquid ingredients must be accurately measured according to the required amount specified for each treatment.

Mixing of Ingredient. The mixing process is key to achieving the right texture and consistency in Cookies Butterscotch, and Macaroons. Proper mixing ensures even distribution of ingredients and prevents overworking the dough, which can affect texture.

Baking. After all the dry and liquid ingredients have been carefully measured and mixed, the next process is baking. The blended mixture should be poured or portioned into appropriate baking pans or trays depending on the product-whether Cookies, Butterscotch, and Macaroons.

Cooling Down. Cooling is a critical step after baking to ensure the desired texture and prevent the products from becoming soggy or falling apart. For Cookies, allow them to cool on the baking sheet for a few minutes before transferring to a wire rack to cool completely.

Testing of Product. Once the products are baked, they must be tested and evaluated before proceeding to packaging. Testing involves assessing key quality attributes such as texture, flavor, aroma, color, and overall appearance.

Packaging. After testing and ensuring that the products have passed the evaluation stage, the final step is packaging. The baked products should first be allowed to cool completely at room temperature to prevent condensation inside the packaging, which can lead to spoilage or loss of texture.

Survey Design and Distribution

The target population of the study is 100 respondents. A purposive sampling technique was used to select populations which are highly homogenous, where the members of the research are randomly selected to participate in the research.

The survey is closed- ended questions to determine the level of sensory characteristics and acceptability of the products as quantitative data, as well as qualitative insights into student comments and suggestions about the product.

While efforts were made to obtain a representative sample, the findings are based on the responses of the surveyed respondents and may not be generalizable to the entire population.

Data Collection

The respondents of the study are the community, the visitors coming in Mangrove Eco-trail Brgy. Tomongtong, respondents were given a sample product such as Blue Crab Cookies, Butterscotch and Macaroons. Surveys were distributed personally into respective target population. Prior the respondents answer the research instruments it was explain first what is the purpose, why the study is conduct and how should be evaluated. As soon as the respondent agree, understand and sign the prior consent and health declaration form signifying that the respondents would like to participate on his or her own freewill. The respondents were given a sample of the product as well as the questionnaire for them to evaluate on their own one by one. At the same time the respondents drink a water after taste each product and rate each product until all products were tasted and evaluated. The researchers were given ample time to review and wait until the respondents are done answering the instrument. Each product was tasted by the respondents of the study palate cleansing was used between samples. Samples were encoded base on the recommendation of the statistician prior for the computation of the data.

Validation and Reliability

The product was examined by 15 experts (Chefs). The validators assessed and commented on the product for the development prior to the conduct of study of the researchers. Obtain the validity score of 6.71 interpreted as Likely Moderately Acceptable using the Sensory Evaluation tool and .900 interpreted Excellent using the Cronbach alpha.

Ethical Considerations

Participation was voluntary, and respondents were assured of confidentiality and anonymity. Informed consent was obtained from all participants

Out of the three (3) replications of the product and treatment, three (3) items stand out because they contain blue crab as the principal constituent. The A treatment for Cookies, Butterscotch and Macaroons included 75% Blue crab, approximately hundred percent-flour, and 60% sugar, whereas Butterscotch received 75% blue crab and 100% four, and 40% butter and Macaroons received 75% blue crab and 100% desiccated coconut and 40% sugar.

To evaluate and interpret the results of the succeeding tables, the researchers are guided by the 9-point Likert Scale or Hedonic Scale with the corresponding interpretation.

Scale	Range of Score	Interpretation
9	8.12 – 9.00	Likely Extremely Acceptable
8	7.23 – 8.11	Likely Very Much Acceptable
7	6.34 – 7.22	Likely Moderately Acceptable
6	5.45 – 6.33	Likely Slightly Acceptable
5	4.56 – 5.44	Neither nor Dislike Acceptable
4	3.67 – 4.55	Dislike Slightly Acceptable
3	2.78 – 3.66	Dislike Moderately Acceptable
2	1.89 – 2.77	Dislike Very Much Acceptable
1	1.00 – 1.88	Dislike Extremely Acceptable

Hedonic tests are categorized as consumer-oriented tests. The hedonic test is used to determine the degree of liking for a product. In the hedonic test, category scales range from extremely acceptable to extremely unacceptable. The samples used in these experiments are coded with a three-digit random number and placed in identical sample containers (Rochmawati, 2019).

3. Result and Discussion

This section describes the findings, presentation, analysis, and interpretation of data obtained in connection with the study's aims. The study's conclusions examine the acceptance of respondents from Cookies, Butterscotch and Macaroons.

Table 1 Level of sensory characteristic of Blue Crab Cookies, Butterscotch and Macaroons Treatment in terms of Taste, Texture, Appearance, Aroma, Consistency, Quality and Accuracy with different replication by 100 respondents.

Replicate / Treatment	Groupings	SENSORY CHARACTERISTICS							
		TASTE	TEXTURE	APPEARANCE	AROMA	CONSISTENCY	QUALITY	ACCURACY	Overall
Cookies (75%)	Mean	8.04	7.89	7.95	7.94	8.02	7.83	7.93	7.94
	SD	1.325	1.294	1.175	1.324	1.214	1.436	1.312	1.128
	DI	LE	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Cookies (50%)	Mean	7.95	7.72	7.85	7.99	7.83	7.86	7.83	7.86
	SD	1.218	1.181	1.077	1.133	1.155	1.083	1.190	0.993
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Cookies (25%)	Mean	7.38	7.15	7.49	7.54	7.44	7.62	7.56	7.45
	SD	1.625	1.500	1.460	1.445	1.493	1.362	1.438	1.260
	DI	LVM	LM	LVM	LVM	LVM	LVM	LVM	LVM
Butterscotch (75%)	Mean	8.27	7.97	8.06	8.08	8.22	8.13	8.09	8.12
	SD	1.033	1.159	1.179	1.269	1.040	1.169	1.190	0.996
	DI	LE	LVM	LVM	LVM	LE	LE	LVM	LE
Butterscotch (50%)	Mean	8.03	7.87	7.90	8.00	8.11	8.05	7.90	7.98
	SD	1.141	1.276	1.133	1.198	1.136	1.242	1.330	1.066
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Butterscotch (25%)	Mean	7.76	7.73	7.81	7.77	7.80	7.84	7.57	7.76
	SD	1.304	1.230	1.212	1.278	1.363	1.261	1.394	1.090
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Macaroons (75%)	Mean	8.23	8.02	8.03	8.12	8.06	7.99	8.04	8.07
	SD	0.908	1.015	1.105	0.967	1.108	1.105	1.063	0.835
	DI	LE	LVM	LVM	LE	LVM	LVM	LVM	LVM
Macaroons (50%)	Mean	7.83	7.69	7.86	7.83	7.88	7.95	7.84	7.84
	SD	1.272	1.261	1.137	1.264	1.157	1.149	1.108	1.020
	DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM	LVM
Macaroons (25%)	Mean	7.51	7.60	7.75	7.53	7.61	7.76	7.73	7.64
	SD	1.514	1.363	1.290	1.374	1.254	1.240	1.213	1.175

DI	LVM	LVM	LVM	LVM	LVM	LVM	LVM	LVM

Legend: LE= Likely Extremely, LVM= Likely Very Much, LM= Likely Moderately, LS= Likely Slightly, NL= Neither Likely nor Dislike, DS= DisLike Slightly, DM, DisLike Moderately, DVM= DisLike Very Much, DE= DisLike Extremely

Table 1 presents the sensory evaluation results of the three developed products Blue Crab Cookies, Butterscotch, and Macaroons across three treatment levels of Blue Swimming Crab (*Portunus pelagicus*) incorporation (75%, 50%, and 25%), as assessed by 100 respondents using seven sensory attributes: taste, aroma, texture, quality, consistency, appearance accuracy, and overall acceptability. The findings consistently indicate that the 75% crab meat formulation (Treatment A) obtained the highest sensory ratings across most evaluated attributes, suggesting that increased crab meat concentration positively influences consumer perception and enhances the overall sensory profile of the products.

For Blue Crab Cookies, the 75% treatment recorded the highest mean score in terms of taste (M = 8.04, SD = 1.325), interpreted as "Likely Extremely," indicating strong consumer preference for a more pronounced crab flavor integrated into the cookie formulation. In contrast, texture in the 25% treatment received the lowest rating (M = 7.15, SD = 1.500), interpreted as "Likely Moderately," suggesting that lower crab incorporation may result in a less desirable structural or mouthfeel experience. These findings align with established consumer behavior theories emphasizing taste as a dominant determinant of food preference and repeat purchase intention, where flavor intensity often drives perceived product value and satisfaction (Hoyer & Stokburger-Sauer, 2011; Ambid et al., 2024).

A similar pattern was observed in Blue Crab Butterscotch, where the 75% treatment achieved the highest mean score for taste (M = 8.27, SD = 1.033), while the 25% treatment again recorded the lowest score in texture (M = 7.73, SD = 1.230). This reinforces the critical role of flavor enhancement in value-added bakery innovation, particularly when integrating non-traditional ingredients such as seafood into confectionery products. The results suggest that higher crab meat inclusion contributes to a more distinctive umami-sweet balance, which enhances palatability and aligns with consumer expectations for novel yet enjoyable sensory experiences (Tyle, 1993; Romo et al., 2024).

For Blue Crab Macaroons, the 75% treatment also received the highest taste rating (M = 8.23, SD = 0.908), interpreted as "Likely Extremely," while the 25% treatment obtained the lowest score (M = 7.51, SD = 1.514), interpreted as "Likely Very Much." Although all treatments still fall within a positive acceptability range, the decline in mean scores at lower crab concentrations indicates that reduced crab content may weaken the distinctive flavor profile that contributes to product uniqueness and consumer appeal. These results further support the principle that sensory satisfaction particularly taste integration is essential in determining the success of innovative food formulations (Mudalal et al., 2025).

Across all three products, taste consistently emerged as the most influential sensory attribute, while texture frequently recorded comparatively lower scores, especially in treatments with reduced crab meat content. This suggests that while flavor enhancement is achieved through higher crab incorporation, structural or textural optimization may require further refinement to achieve balanced product quality. The observed trends indicate that the 75% formulation provides the most favorable balance of sensory attributes, making it the most preferred treatment among respondents.

Finally, the data demonstrate that increasing the concentration of Blue Swimming Crab (*Portunus pelagicus*) significantly enhances sensory acceptability, particularly in terms of taste and overall product appeal. These findings underscore the importance of ingredient concentration optimization in the development of seafood-based bakery innovations. However, they also highlight the need for continued product refinement particularly in texture improvement and structural consistency to ensure that enhanced flavor is matched by equally acceptable physical and sensory quality attributes, thereby supporting both consumer satisfaction and potential commercialization viability.

Table 2 Level of Acceptability of Cookies, Butterscotch and Macaroons as evaluated by the 100 respondents of Mangrove Eco-Trail Barangay Tomongtong EB Magalona.

Groupings	Cookies			Butterscotch			Macaroons		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. What did you think about our Blue Crab Local Delicacies?	7.75	1.452	LVM	7.99	1.087	LVM	7.95	1.298	LVM
2. How would you rate the quality of our Blue Crab Local Delicacies?	7.95	1.298	LVM	8.07	1.066	LVM	7.98	1.247	LVM
3. Was the Blue Crab Local Delicacies tasty and flavorful?	7.97	1.306	LVM	8.17	0.975	LVM	8.02	1.054	LVM
4. Was the Blue Crab Local Delicacies serve fresh?	7.92	1.346	LVM	8.20	0.932	LVM	8.15	1.067	LE
5. Was the quality of the Blue Crab Local Delicacies excellent?	7.94	1.309	LVM	8.16	0.961	LVM	8.05	1.067	LVM
6. How would you rate the value of the Blue Crab Local Delicacies?	7.89	1.136	LVM	8.15	0.978	LVM	8.05	1.029	LVM
7. Are proper preparation of standard followed?	7.96	1.091	LVM	8.19	1.042	LVM	8.18	1.038	LE
Total	7.91	1.102	LVM	8.13	0.897	LVM	8.05	0.994	LVM

Legend: LE= Likely Extremely, LVM= Likely Very Much, LM= Likely Moderately, LS= Likely Slightly, NL= Neither Likely nor Dislike, DS= DisLike Slightly, DM, DisLike Moderately, DVM= DisLike Very Much, DE= DisLike Extremely.

The results presented in Table 2 demonstrate that the developed Blue Crab Cookies, Butterscotch, and Macaroons achieved a high level of consumer acceptability among the 100 respondents from the Mangrove Eco-Trail in Barangay Tomongtong, E.B. Magalona. All three products were consistently rated within the "Likely Very Much" category, indicating strong positive reception and confirming that Blue Swimming Crab (Portunus pelagicus) can be effectively incorporated into bakery products without compromising overall quality. Among the three, Blue Crab Butterscotch obtained the highest overall mean score (M = 8.13, SD = 0.897), suggesting that its formulation achieved the most favorable balance of flavor, texture, and overall sensory appeal. In contrast, Blue Crab Cookies, while obtaining the lowest mean score (M = 7.91, SD = 1.102), still fell within the same high acceptability range, indicating that all products were well-received despite slight variations in consumer preference.

A closer examination of the specific evaluation items reveals important insights into consumer perception. For Blue Crab Cookies, the highest-rated attribute was taste and flavor (M = 7.97, SD = 1.306), reinforcing the earlier finding that flavor remains the primary driver of consumer acceptance. However, the relatively lower score for the general evaluation item (M = 7.75, SD = 1.425) suggests that while taste is strong, other factors such as perceived freshness, texture uniformity, or visual appeal may require further enhancement. This observation highlights the critical role of shelf life and freshness perception in bakery products. As emphasized in food quality literature, shelf life directly affects sensory attributes such as aroma, texture, and overall palatability, which in turn influence consumer satisfaction and repeat purchase behavior. Even minor changes in moisture content or texture over time can significantly alter product perception, making post-production handling and storage equally important as formulation.

For Blue Crab Butterscotch, the highest-rated item was freshness (M = 8.20, SD = 0.932), indicating that respondents strongly perceived the product as freshly prepared and of high quality. This is a notable strength, as freshness is often associated with safety, desirability, and premium value in food products. The consistently high ratings across all items further suggest that butterscotch, as a product category, may be more adaptable to the incorporation of crab meat, possibly due to its dense, moist texture and rich flavor profile that complements the umami characteristics of seafood. The findings also underscore the importance of proper food safety and handling practices. The positive perception of freshness implies that the preparation process adhered to hygienic standards, which is critical in preventing contamination and ensuring product safety. The application of systematic food safety approaches such as Hazard Analysis and Critical Control Point (HACCP) principles plays a

vital role in maintaining consistent quality, controlling risks, and enhancing consumer trust in newly developed food products.

In the case of Blue Crab Macaroons, the highest-rated item was adherence to proper preparation standards (M = 8.18, SD = 1.038), interpreted as "Likely Extremely." This indicates that respondents were able to recognize the quality and consistency of the preparation process, which Like contributed to the product's favorable evaluation. The slightly lower score for general acceptability (M = 7.95, SD = 1.298), while still within a high range, suggests that further refinement may be needed in balancing sweetness, texture, or moisture content. Given the inherently diverse and flexible nature of bakery and confectionery products, macaroons provide a strong platform for innovation; however, achieving the ideal sensory balance remains essential to maximize consumer appeal.

Overall, the results confirm that the three Blue Crab-based bakery products are highly acceptable, with particularly strong performance in taste, freshness, and adherence to preparation standards. These findings reinforce the potential of Blue Swimming Crab (Portunus pelagicus) as a functional and innovative ingredient in pastry applications. At the same time, the slight variations in overall acceptability across products highlight the need for continuous product optimization, particularly in improving texture consistency, shelf stability, and presentation to meet higher consumer expectations and professional standards.

Beyond product development, the study carries broader implications for innovation, sustainability, and local economic development. The successful incorporation of blue crab into bakery products demonstrates an opportunity to diversify the use of marine resources, add value to locally sourced ingredients, and reduce underutilization of seafood. This innovation can support small-scale food enterprises, encourage entrepreneurship in coastal communities, and contribute to livelihood generation in areas such as Barangay Tomongtong. Furthermore, by aligning product development with proper food safety standards and quality control systems, these products have the potential to be scaled for commercialization and introduced to wider markets.

However, the findings not only affirm the high acceptability of Blue Crab Cookies, Butterscotch, and Macaroons but also highlight the importance of integrating sensory quality, food safety, and product innovation. With further refinement and standardization, these products can serve as competitive, sustainable, and marketable delicacies that promote both consumer satisfaction and the economic utilization of locally available marine resources.

Table 3 Significant differences in the sensory characteristics of Cookies, Butterscotch and Macaroons as rated by the 100 respondents of Mangrove Eco-trail Barangay Tomongtong EB Magalona

Variables	**Groupings F**	**Taste 6.535**	**Texture 8.471**	**Appearance 3.759**	**Aroma 3.56**	**Accuracy 5.207**	**Consistency 1.008**	**Quality 2.112**	**Overall 5.39**
Cookies	Sig.	<0.002	<0.000	<0.024	<0.030	<0.006	0.366	0.123	<0.005
	Significance @ 0.05 level	Significant					Not Significant		Significant
	Status of Hypothesis	Reject the null hypothesis					Accept the null hypothesis		Reject
Butter scotch	F	4.799	0.972	1.161	1.661	3.363	1.496	4.05	2.98
	Sig.	<0.009	0.379	0.314	0.192	<0.036	0.226	<0.018	0.052
	Significance @ 0.05 level	Significant	Not Significant			Significant	Not Significant	Significant	Not Significant
	Status of Hypothesis	Reject	Accept the null hypothesis			Reject	Accept	Reject	Accept
Macaroons	F	8.244	3.276	1.429	5.907	3.716	1.11	1.936	4.517
	Sig.	<0.000	<0.039	0.241	<0.003	<0.025	0.331	0.146	<0.012
	Significance @ 0.05 level	Significant		Not Significant	Significant		Not Significant		Significant
	Status of Hypothesis	Reject the null hypothesis		Accept	Reject the null hypothesis		Accept the null hypothesis		Accept

Table 3 presents the test of significant differences in the sensory characteristics of Blue Crab Cookies, Butterscotch, and Macaroons as evaluated by 100 respondents. Overall, the results reveal that variations in sensory attributes exist across treatments and replications, indicating that formulation and processing factors significantly influence product perception. For Blue Crab Cookies, the overall computed p-value ($p = 0.005$) indicates a significant difference among replications, leading to the rejection of the null hypothesis. When examined per sensory attribute, taste ($p = 0.002$), texture ($p = 0.000$), appearance ($p = 0.024$), aroma ($p = 0.030$), accuracy ($p = 0.006$), and overall acceptability ($p = 0.012$) were found to be significant, while consistency ($p = 0.366$) and quality ($p = 0.123$) were not. These findings suggest that while certain sensory dimensions are sensitive to variation in formulation or preparation, other attributes remain relatively stable across replications. This reinforces the idea that sensory evaluation is a multidimensional tool that captures subtle differences in product formulation, particularly in innovative food products incorporating marine ingredients such as Blue Swimming Crab (*Portunus pelagicus*).

For Blue Crab Butterscotch, significant differences were observed in taste ($p = 0.009$), accuracy ($p = 0.036$), and quality ($p = 0.018$), resulting in the rejection of the null hypothesis for these attributes. These findings indicate that variations in ingredient incorporation and processing techniques can noticeably influence key sensory outcomes, particularly flavor perception and product accuracy. The significance of taste and quality further emphasizes the importance of standardized formulation procedures, precise measurement of ingredients, and controlled cooking conditions to ensure consistency across replications. In addition, these results highlight that seafood-based bakery innovations require strict adherence to proper handling and processing practices to maintain desirable sensory properties. The use of fresh and properly handled blue crab is particularly critical, as degradation in raw material quality can directly affect flavor stability, aroma integrity, and overall product safety. This aligns with established food safety principles that emphasize hygienic handling, proper storage conditions, and contamination prevention as essential components of food production systems.

In the case of Blue Crab Macaroons, significant differences were found in taste ($p = 0.000$), texture ($p = 0.039$), aroma ($p = 0.003$), accuracy ($p = 0.025$), and overall acceptability ($p = 0.012$). However, appearance ($p = 0.241$), consistency ($p = 0.331$), and quality ($p = 0.146$) were not statistically significant, indicating that these attributes remained relatively uniform across replications. These results suggest that while certain sensory characteristics are influenced by formulation differences, the macaroons maintain a generally stable structural and visual quality. This stability is particularly important for confectionery products, where consistency and appearance often serve as primary indicators of product quality. The findings further reinforce that sensory evaluation remains a reliable method for assessing freshness, formulation integrity, and consumer acceptability in seafood-enhanced bakery products.

Finally, the results of Table 3 highlight the critical role of ingredient quality, processing consistency, and proper handling in influencing the sensory characteristics of Blue Crab Cookies, Butterscotch, and Macaroons. Variations in taste, texture, and aroma across treatments emphasize that even minor changes in formulation or preparation can significantly affect consumer perception. Therefore, maintaining strict control over ingredient quality particularly the freshness of Blue Swimming Crab (*Portunus pelagicus*) is essential to achieving consistent sensory outcomes and ensuring product safety and acceptability.

Beyond statistical significance, the findings underscore important practical implications for product development and commercialization. The high acceptability levels, combined with generally stable sensory performance across key attributes, indicate strong potential for these products in local and niche markets. At the same time, the presence of significant differences in certain sensory dimensions suggests the need for further refinement in standardizing preparation procedures, improving process control, and optimizing formulation ratios to enhance product uniformity.

Ultimately, the study demonstrates that Blue Swimming Crab-based bakery products possess both innovation value and commercial promise. By adhering to strict food safety standards, ensuring raw material quality, and refining production techniques, these products can be further developed into consistent, market-ready delicacies. Moreover, their successful development supports broader goals of sustainable resource utilization, local economic empowerment, and culinary innovation, positioning

them as viable value-added products that can contribute to both community livelihood development and the diversification of the local food industry.

Table 4 Significant differences in the level of acceptability of Cookies, Butterscotch, and Macaroons as evaluated by the 100 respondents

Variables	Groupings	Computed p-value	Significant @ 0 .05 Level	Decision to Hypothesis
Cookies	Age	0.370	Not Significant	Failed to reject hypothesis
	Civil Status	0.297	Not Significant	
	Sex	0.691	Not Significant	
Butterscotch	Age	0.941	Not Significant	
	Civil Status	0.086	Not Significant	
	Sex	0.075	Not Significant	
Macaroons	Age	0.885	Not Significant	
	Civil Status	0.271	Not Significant	
	Sex	0.326	Not Significant	

Table 4 presents the demographic profile of the 100 respondents from the Mangrove Eco-Trail in Barangay Tomongtong, E.B. Magalona, including age, civil status, and sex, and examines their potential influence on the acceptability of the developed Blue Swimming Crab (*Portunus pelagicus*) Cookies, Butterscotch, and Macaroons. The results revealed that none of the demographic variables had a statistically significant effect on product acceptability, as all computed p-values were greater than the 0.05 level of significance. This leads to the failure to reject the null hypothesis, indicating that respondents' evaluations of the products are not influenced by their demographic characteristics.

This finding suggests that consumer acceptance of the developed blue crab-based delicacies is generally uniform across different age groups, genders, and civil status categories. In other words, the sensory experience provided by the products appears to transcend demographic differences, reinforcing the idea that acceptance is primarily driven by intrinsic product qualities rather than personal or social background. This supports the broader understanding in food product development that sensory attributes particularly taste, aroma, texture, freshness, and overall palatability are the dominant determinants of consumer preference, especially for novel or innovative food formulations.

The results are consistent with prior studies, such as Panganiban et al. (2025), which similarly found that demographic factors often do not significantly influence acceptance of newly developed protein-enriched or value-added food products when sensory quality is well-executed. This reinforces the notion that when a product successfully meets basic sensory expectations, it tends to achieve cross-demographic appeal, reducing the need for highly segmented marketing strategies at the early stages of product introduction.

From a practical standpoint, the absence of significant demographic differences strengthens the commercial viability of the developed products. It implies that Blue Crab Cookies, Butterscotch, and Macaroons have a broad and inclusive market potential, making them suitable for mass consumer targeting rather than niche demographic positioning. This broad acceptability is particularly advantageous for small-scale food enterprises and community-based producers, as it simplifies marketing strategies and expands potential customer reach.

Furthermore, the findings highlight that product success is largely dependent on formulation quality and sensory optimization rather than consumer demographic segmentation. This underscores the importance of continued refinement in recipe standardization, ingredient quality control, and processing consistency to maintain high levels of acceptability across diverse consumer groups. The consistent positive response across all demographics also suggests that the incorporation of Blue Swimming Crab (*Portunus pelagicus*) does not create demographic-based preference barriers, further supporting its feasibility as a mainstream ingredient in bakery innovation.

Overall, Table 4 reinforces the conclusion that the developed blue crab-based bakery products possess universal appeal, with acceptability driven primarily by sensory satisfaction rather than demographic influence. This enhances their potential for wider commercialization, supports inclusive market penetration, and strengthens their role as innovative, value-added products that can contribute to local food industry development and sustainable resource utilization.

4. Discussion

The findings of this study collectively demonstrate that Blue Swimming Crab (*Portunus pelagicus*) can be successfully utilized as a functional ingredient in bakery and confectionery products, specifically Cookies, Butterscotch, and Macaroons, without compromising consumer acceptability. Across all tables, results consistently indicate high sensory ratings, significant effects of formulation on specific attributes, and broad demographic neutrality in consumer acceptance. These patterns provide a strong basis for understanding both the sensory behavior of crab-based bakery innovations and their potential for commercialization.

In terms of sensory evaluation (Tables 1 and 2), the results reveal that higher levels of crab meat incorporation, particularly the 75% treatment, generally produced more favorable sensory responses, especially in taste. This suggests that Blue Swimming Crab contributes a distinctive flavor profile that enhances the overall palatability of baked products. The consistent dominance of taste across all product categories highlights its role as the primary determinant of acceptability, aligning with established literature that emphasizes flavor as the most influential factor in food preference. However, the slightly lower ratings observed in texture and overall acceptability for some treatments indicate that while flavor enhancement is achieved, structural refinement and balance of ingredients remain important areas for improvement.

The significant differences identified in Table 3 further reinforce the influence of formulation and processing variables on sensory outcomes. Variations in taste, aroma, texture, and appearance across treatments suggest that even minor changes in crab meat concentration or preparation technique can meaningfully affect consumer perception. This underscores the importance of standardization in ingredient measurement, mixing procedures, and cooking conditions to ensure consistency in product quality. At the same time, the stability observed in certain attributes such as consistency and appearance in some products indicates that not all sensory dimensions are equally sensitive to formulation changes, highlighting the complexity of sensory interactions in seafood-based bakery products.

Meanwhile, Table 4 demonstrates that demographic variables such as age, sex, and civil status do not significantly influence product acceptability. This finding is particularly important because it suggests that the developed products possess universal appeal, with acceptance driven primarily by intrinsic sensory qualities rather than consumer background. This reinforces the idea that when a product achieves strong sensory performance, it can transcend demographic boundaries and appeal to a wide consumer base. As a result, the products demonstrate strong potential for broad market distribution without the need for highly segmented marketing strategies.

Taken together, the results of the study highlight several key implications. First, Blue Swimming Crab (*Portunus pelagicus*) is a viable ingredient for value-added bakery innovation, particularly when properly formulated to enhance flavor without negatively affecting texture and overall quality. Second, sensory acceptability is highly dependent on careful control of formulation ratios and preparation techniques, emphasizing the need for standardized procedures in product development. Third, the absence of demographic influence supports the commercial feasibility of these products in diverse consumer markets.

Beyond sensory and statistical findings, the study also highlights broader implications for food innovation and sustainability. The successful integration of blue crab into commonly consumed bakery products promotes value addition to locally available marine resources and supports diversification in the food industry. This can contribute to local economic development by creating opportunities for small-scale enterprises, encouraging culinary entrepreneurship, and enhancing the market value of underutilized seafood resources.

In conclusion, the study demonstrates that Blue Crab Cookies, Butterscotch, and Macaroons are highly acceptable across consumers, with strong sensory performance and broad demographic appeal. While the products show promising potential for commercialization, continued refinement in texture optimization, formulation balance, and process standardization is necessary to further enhance product quality. Overall, the findings establish a strong foundation for the development of innovative, sustainable, and market-ready seafood-based bakery products that can contribute to both culinary advancement and local economic growth.

5. Conclusion

This study successfully demonstrated the development and sensory evaluation of value-added bakery products Blue Crab Cookies, Butterscotch, and Macaroons utilizing Blue Swimming Crab (Portunus pelagicus) as a key innovative ingredient. Based on the findings, all three products were generally rated as highly acceptable by the 100 respondents, indicating strong consumer approval and confirming the feasibility of incorporating blue crab meat into baked and confectionery items without compromising overall product quality.

Among the treatment levels, the 75% crab meat formulation consistently obtained the highest sensory ratings, particularly in taste, suggesting that higher levels of crab incorporation enhance flavor acceptability and contribute positively to overall sensory appeal. However, variations in texture and other sensory attributes indicate that formulation balance and processing techniques play a crucial role in achieving optimal product quality. The statistical results further confirmed that significant differences exist in selected sensory attributes across treatments, emphasizing the importance of controlled formulation and standardized preparation procedures in product development.

In addition, the study revealed that demographic factors such as age, sex, and civil status do not significantly influence the acceptability of the products. This indicates that consumer preference is primarily driven by intrinsic sensory qualities rather than personal characteristics, suggesting a broad and universal market potential for the developed products.

Overall, the findings conclude that Blue Crab Cookies, Butterscotch, and Macaroons are highly acceptable and have strong potential for commercialization. The successful utilization of Blue Swimming Crab (Portunus pelagicus) highlights its viability as a value-added ingredient that can support food innovation, promote sustainable use of marine resources, and contribute to local economic development. However, further refinement in texture, formulation consistency, and processing methods is recommended to enhance product quality and ensure long-term market competitiveness.

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Barangay Health Services and Elderly Well-Being: A Study on Satisfaction

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Abstract

This study examined the level of satisfaction of senior citizens with barangay health care services in a highly urbanized city in Negros Island Region. The study evaluated satisfaction with medical services, livelihood support, financial assistance, and community engagement. A descriptive research design was employed, using survey data collected from senior citizens aged 60 and above. The SERVQUAL model was used as an evaluative framework focusing on accessibility, availability, affordability, responsiveness, and empathy in service delivery. Respondents were profiled according to sex, civil status, highest educational attainment, and length of residency. Findings indicate varying levels of satisfaction across service dimensions, suggesting that while certain aspects of barangay health services are positively perceived, gaps remain in accessibility, financial support mechanisms, and information dissemination. Differences in satisfaction were also observed when respondents were grouped according to demographic variables. The study underscores the need for targeted enhancement strategies in barangay health care delivery systems. The findings contribute to improving local governance and the delivery of public health services for aging populations in urban settings in the Philippines.

Keywords: Senior citizens; barangay health services; service quality; health service quality; public health administration

1. Introduction

Population aging is rapidly reshaping health systems worldwide, placing increasing pressure on primary care services to deliver accessible, responsive, and equitable healthcare for older adults. The World Health Organization (WHO, 2015; 2021) emphasizes that health systems must transition toward integrated, people-centered care models to effectively respond to the complex and long-term needs of aging populations. In this context, patient satisfaction has become a critical indicator of health system performance, particularly in community-based health services where older adults first access care.

As populations age, understanding the quality and effectiveness of health care services for senior citizens becomes essential. Older adults frequently experience multi-morbidity, functional decline, and increased dependence on primary health systems, especially in highly urbanized settings where service demand is high and health resources are unevenly distributed. Recent global evidence highlights that satisfaction with health care services is strongly influenced by accessibility, communication quality, and continuity of care, which are central to sustaining trust in health systems (Kruk et al., 2018). These dimensions are particularly relevant in community-level health service delivery, where interpersonal interactions between providers and patients significantly shape perceived quality of care.

In the Southeast Asian region, health systems face similar challenges brought about by rapid urbanization and demographic aging. Studies in countries such as Indonesia and Vietnam show that elderly satisfaction with affordability of care, responsiveness of health personnel, and clarity of health communication (Nguyen et al., 2019). ASEAN health policy reports further emphasize that despite improvements in primary health care infrastructure, gaps remain in geriatric-friendly service delivery, particularly in urban poor and densely populated areas where demand for public health services is highest.

In the Philippine setting, barangay health centers serve as the frontier of the public health system, especially for senior citizens who rely heavily on local government services. However, recent studies indicate persistent challenges in service delivery quality, particularly in accessibility, responsiveness, and health education. For instance, findings from recent local research highlight that senior citizens' satisfaction is influenced not only by medical services but also by livelihood support, financial assistance, and community engagement initiatives integrated at the barangay level. Similarly,

the World Health Organization (2015) data show that accessible and continuous community-based services improve satisfaction and well-being among older adults.

Despite these developments, structural and operational constraints remain evident in many Philippine local government units. Studies conducted in urban and semi-urban barangays reveal that while basic health services are available, issues such as inadequate staffing, limited health education programs, and inconsistent service delivery continue to affect user satisfaction (Magtuod & Tonog, 2025). In highly urbanized cities, these challenges are further compounded by transportation barriers, financial constraints, and uneven awareness of senior citizen health benefits under Republic Act No. 9994, otherwise known as the Expanded Senior Citizens Act of 2010. This study aligns with the United Nations Sustainable Development 3, which aims to ensure healthy lives and promote well-being for all at all ages, particularly by strengthening access to quality and equitable health care services for vulnerable populations such as senior citizens.

Barangay health care services are expected to address not only the medical needs of senior citizens but also their broader social and economic concerns through integrated community-based programs. However, gaps in service delivery and uneven implementation of local health policies highlight the need for a more systematic assessment of senior citizens' satisfaction.

2. Literature Review

Aging is shaped by intersecting social, cultural, and environmental factors that influence health outcomes and access to services (Garbaccio et al., 2018). These dynamics are evident across urban and rural settings, where disparities in infrastructure, mobility, and service availability result in varied experiences among older adults. At the global level, health systems continue to face challenges in responding to the increasing demands of aging populations, particularly as older persons are more likely to experience chronic conditions, functional limitations, and greater dependence on primary health care services (World Health Organization, 2021). These conditions highlight the importance of assessing patient satisfaction as an indicator of how effectively health systems address the needs of older populations.

Recent international and regional studies further highlight that the increasing proportion of older adults requires a shift toward community-based and integrated care systems. In China, for instance, rapid population aging and declining family-based care have led to the expansion of community care services as a more sustainable model for elderly support (Hu, 2019). These services combine medical and non-medical support within the community, allowing older adults to receive care while maintaining independence. However, despite these developments, issues such as underutilization and low satisfaction persist, largely due to gaps in service quality, accessibility, and responsiveness. Similarly, studies across developing countries show that satisfaction among older adults is strongly influenced by affordability, availability of services, and the quality of interactions with healthcare providers, indicating the need for continuous improvement in community health systems.

In the Philippines, the growing elderly population presents significant implications for healthcare delivery and social protection systems. Data from the United Nations (2019) indicate a steady increase in the number of senior citizens, with projections showing continued growth in the coming decades. Filipino older adults commonly experience both communicable and non-communicable diseases, alongside challenges such as limited access to healthcare, inadequate medical resources, and financial constraints (Carandang et al., 2019). While legislative measures such as Republic Act No. 9994 and related policies provide benefits, including healthcare discounts and insurance coverage, studies suggest that gaps remain in implementation, accessibility, and awareness at the community level. These limitations affect not only service utilization but also overall satisfaction with barangay health care services.

Moreover, empirical evidence further suggests that satisfaction among senior citizens is influenced by multiple interrelated factors, including accessibility of services, quality of care, social support, and demographic characteristics. Studies in local settings reveal proximity to health facilities. Availability of healthcare personnel and adequacy of resources significantly shape satisfaction levels. Additionally, social connectedness and community engagement play a crucial role, as elderly individuals who experience stronger social support tend to report higher satisfaction and well-being. Conversely, financial limitations and higher expectations, often associated with educational

attainment, can lead to dissatisfaction when services do not meet perceived standards. These findings underscore the need for comprehensive, community-based interventions that address not only medical needs but also the social and economic dimensions of aging, ultimately improving the quality of life of senior citizens.

3. Theoretical Framework

This study is anchored on the Health Care Quality Framework developed by Donabedian (1988), which postulates that patient satisfaction is shaped by three interrelated components: structure, process, and outcomes of care. In the context of barangay health services, structure refers to the availability of resources such as facilities, equipment, and personnel; process involves the manner in which care is delivered, including responsiveness, communication, and interpersonal relations; while outcomes reflect the perceived effectiveness of services as experienced by senior citizens. Complementing this is the SERVQUAL model proposed by Parasuraman et al. (1988), which evaluates service quality across five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. These models collectively provide a comprehensive lens for assessing how service delivery conditions influence satisfaction levels among elderly clients in community-based health systems.

To further contextualize the experiences of senior citizens, this study also draws from Maslow's (1943) Hierarchy of Needs and Social Support Theory of Cohen and Wills (1985). Maslow's framework explains that access to health care services fulfills fundamental physiological and safety needs, which are essential for achieving overall well-being and life satisfaction in old age. Meanwhile, Social Support Theory emphasizes the role of interpersonal relationships, community engagement, and emotional support in shaping health perceptions and satisfaction outcomes (Cohen & Wills, 1985). For senior citizens, whose health conditions and social circumstances are often interconnected, these theories highlight that satisfaction extends beyond clinical care to include psychosocial and community dimensions. These theoretical perspectives provide a multidimensional understanding of how medical, livelihood, financial, and community engagement factors influence the overall satisfaction of senior citizens with barangay health care services.

4. Objectives

This study examined the Level of Senior Citizens' Satisfaction with Barangay Health Care Services in a highly urbanized city in Negros Island Region in the Philippines.

Specifically, this study aims to:

a. to determine the level of senior citizens' satisfaction with barangay health care services in medical services, livelihood support, financial assistance, and community engagement, and
b. Test whether there is a significant difference in the level of senior citizens' satisfaction with barangay health care services when grouped and compared according to sex, civil status, highest educational attainment, and length of residency.

5. Materials and Methods

5.1 Research Design

The research utilized a descriptive-comparative research design to investigate the senior citizens' satisfaction with barangay health care services in a highly urbanized city.

5.2 Respondents

This study surveyed 348 senior citizens selected through purposive sampling from 12 puroks or sitios in the barangay. The total population of senior citizens was 2,962. Slovin's Formula was used to determine the ideal sample size for the study.

Table 1. Demographic Distribution of the Respondents

Purok	Sample (n)	Percentage (%)
A	29	8.33
B	29	8.33
C	29	8.33
D	29	8.33
E	29	8.33
F	29	8.33
G	29	8.33
H	29	8.33
I	29	8.33
J	29	8.33
K	29	8.33
L	29	8.33
Total	348	100

Variables	Categories	Frequency	Percentage
Sex	Male	162	46.60
	Female	186	53.40
Civil Status	Single	160	46.00
	Married	188	54.00
Highest Educational Attainment	Lower (High School Level)	193	55.40
	Higher (College Level)	155	44.60
Length of Residency	Shorter (less than a year)	255	73.30
	Longer (1 year and beyond)	93	26.70

Table 1 indicates that 186 (53.40%), or the majority of senior citizens surveyed, were female, whereas,162 (46.60%) were male. In terms of civil status, the majority, or 188 (54.00%) were married, while 160 (46.00%) were single. On the other hand, more than 55.4 percent (193) had lower educational attainment (high school level), while the remaining 155 (44.60) had higher levels of education (college).

5.3 Research Instrument

A researcher-made questionnaire which underwent rigorous validity and reliability evaluations, was used to measure senior citizens' satisfaction with the barangay health care services in a highly urbanized city. The survey questionnaire comprised two sections: Part I: this segment focused on gathering respondents' demographic data, encompassing their sex, civil status, and highest educational attainment. Part II is the core of the data gathering instrument that was aimed at evaluating the level of senior citizens' satisfaction with barangay health care services across four key areas: medical services, livelihood support, financial assistance, and community engagement. Respondents were instructed to rate each item using a numerical scale alongside corresponding

descriptions. Scores ranged from 1 to 5, with 5 indicating 5 for “always”, 4 for “often”, 3 for “sometimes”, 2 for “rarely”, and one for “never”.

The questionnaire’s validity was meticulously established through face and content validation by a panel of three experts. These validators included a City Councilor who chairs the Sangguniang Panlungsod Committee on Senior Citizens, the head of the Office for Senior Citizens Affairs (OSCA), and a graduate school professor and expert statistician.

In line with the criteria outlined by Carter V. Good and Douglas E. Scates, the obtained validity index of 4.56, interpreted as excellent, affirmed the instrument’s validity. The data gathering instrument underwent pilot testing with thirty (30) senior citizens from three (3) small communities (purok), each contributing ten respondents to ensure reliability. A coefficient value of 0.974, interpreted as excellent, affirmed the instrument’s reliability.

5.4 Data Gathering Procedure

After establishing the validity and reliability of the research instrument, the researcher obtained permission from the punong barangay or community leader of the selected puroks to conduct the study. Upon approval, the researcher met with the respondents, explained the study’s purpose, and provided instructions on completing the questionnaire objectively and honestly, ensuring the confidentiality of the data. The researcher assisted the respondents in filling out the survey questionnaire and personally collected the instrument afterward, ensuring the completeness and accuracy of the answers before forwarding the data for analysis. The gathered data were then categorized, tabulated, and prepared for subsequent statistical analysis.

Informed consent was obtained from participants, who were fully made aware of the research procedures and risks, ensuring their complete understanding. Furthermore, various safeguards were implemented to minimize harm, particularly for vulnerable participants on sensitive topics. Regarding confidentiality, participants were assured that identifying information would remain undisclosed to those not directly involved in the study, and stringent anonymity standards were upheld throughout the research process.

5.5 Statistical Treatment and Data

This study utilized descriptive and analytical approaches in data analysis. Statistical Package for the Social Sciences (SPSS) was used to generate the necessary statistics for data analysis to assess the level of senior citizens’ satisfaction with barangay health care services in a highly urbanized city in the areas of medical services, livelihood support, financial assistance, and community engagement. The Mann-Whitney U Test was conducted to determine if there is a significant difference in the level of senior citizens’ satisfaction with barangay health care services when grouped according to their sex, civil status, and highest educational attainment.

6. Results and Discussions

Table 2 The level of satisfaction of senior citizens with barangay health care services in medical services

Items	Mean	Interpretation
As a senior citizen, I...		
1. can easily coordinate and communicate with Barangay Health Workers regarding medical concerns and needs	3.23	Moderate Level
2. get checked and assessed physically every time I have medical concerns	3.21	Moderate Level
3. am given free medicine and vitamins whenever I need them	3.32	Moderate Level
4. am provided with adequate maintenance medications	3.19	Moderate Level
5. am informed of whatever health benefits and programs are available for senior citizens	3.25	Moderate Level
6. have access to emergency assistance and	3.33	Moderate Level

Items	Mean	Interpretation
medical alert systems		
7. always feel safe, secure, and supported by our barangay workers	3.18	Moderate Level
8. am motivated and strongly encouraged to participate in activities and programs to help senior citizens stay active, engaged, and healthy	3.24	Moderate Level
Overall Mean	**3.25**	**Moderate Level**

Table 2 presents the level of satisfaction of senior citizens with barangay health care services in medical services. The findings reveal an overall mean score of 3.25, indicating a moderate level of satisfaction among the respondents within this context. This suggests that while basic medical services are being delivered at the barangay level, there are still notable gaps that may affect the overall health care experience of senior citizens.

Respondents reported high satisfaction with access to emergency assistance and the availability of medical alert systems. These findings imply that barangay health services are relatively responsive in addressing urgent medical needs. However, the lowest level of satisfaction was observed in the area of support extended by barangay health workers in helping senior citizens feel safe and secure. This indicates a possible limitation in the provision of continuous care, emotional support, and patient engagement, which are essential components of quality health care for the elderly.

These findings are consistent with the study of Moghadasi et al. (2022), which identified multiple barriers affecting elderly healthcare experiences, including individual, systemic, environmental, and social factors. In particular, the study highlighted the lack of adequate and consistent medical support systems for older adults within community settings. The present findings likewise suggest that while emergency response mechanisms are in place, more sustained and patient-centered approaches, such as proactive follow-ups and personalized care, remain limited at the barangay level.

Furthermore, the results underscore the need to strengthen not only the technical delivery of medical services but also the interpersonal and supportive roles of barangay health workers. Enhancing training programs on elderly care, improving patient communication, and fostering a more supportive care environment may help increase the sense of safety and overall satisfaction among senior citizens.

Table 3 The level of satisfaction of senior citizens with barangay health care services in livelihood support

Items	Mean	Interpretation
As a senior citizen, I...		
1. am regularly informed of livelihood opportunities available for senior citizens when there are any.	3.22	Moderate Level
2. am invited to participate in Barangay programs about livelihood opportunities for senior citizens.	3.26	Moderate Level
3. can easily approach any barangay worker to ask about possible income-generating projects for older people.	3.09	Moderate Level
4. am provided with assistance to senior citizens anytime it is available	3.15	Moderate Level
5. am given priority in waiting lines to receive barangay services alongside PWDs and heavily pregnant women	3.41	Moderate Level
6. am involved in programs tapping my skills to maintain a dignified image even in old age	3.16	Moderate Level
7. am included in training and income-generating initiatives for older populations	3.10	Moderate Level

Items	Mean	Interpretation
8. am motivated to participate in volunteer work and mentoring programs to keep me feeling valid and worthy, even in old age	3.13	Moderate Level
Overall Mean	**3.19**	**Moderate Level**

Table 3 illustrates the level of satisfaction of senior citizens with barangay health care services in terms of livelihood support. The data show an overall mean score of 3.19, indicating a moderate level of satisfaction in this domain. This suggests that while some support mechanisms are present, they may not be consistently experienced or fully responsive to the livelihood needs of senior citizens.

Among the indicators, respondents reported high satisfaction with the priority given to older adults in waiting lines when accessing services or assistance. This reflects a degree of compliance with policies that recognize the special needs and privileges of senior citizens. However, the lowest satisfaction rating was given to the approachability of barangay employees in relation to possible income-generating projects for older members of the community. This points to a gap in engagement and communication regarding livelihood opportunities, which are essential in promoting active aging and financial independence.

The findings imply that senior citizens may be underrepresented in livelihood-related initiatives or insufficiently informed about available programs. It is also possible that barangay personnel may lack adequate awareness or training in facilitating inclusive, age-sensitive livelihood support, which could contribute to feelings of neglect or limited participation among older adults. These results partially contrast with the findings of Alcazar (2025), which reported that senior citizens were generally satisfied with the delivery and accessibility of government support services. The variation in findings may be attributed to differences in local implementation, program availability, or levels of community engagement across settings.

The results highlight the need for barangays to strengthen outreach and communication strategies related to livelihood programs for senior citizens. Enhancing the visibility of income-generating opportunities, ensuring staff approachability, and developing age-appropriate livelihood initiatives can improve both participation and satisfaction. Such efforts may also contribute to empowering senior citizens as active contributors to community development rather than passive recipients of services.

Table 4 The level of satisfaction of senior citizens with barangay health care services in financial assistance

Items	Mean	Interpretation
As a senior citizen, I...		
1. get regularly informed by barangay workers about assistance or similar services whenever they are available	3.28	Moderate Level
2. can easily access our barangay center to ask about government programs supporting senior citizens	3.24	Moderate Level
3. am receiving efficient service whenever senior citizens are called to receive social pensions	3.26	Moderate Level
4. get help filling out forms and signing the needed documents whenever I need to do so	3.17	Moderate Level
5. am provided with proper accommodation like comfortable chairs and tables and well-lit and ventilated rooms or areas whenever senior citizens are called to issue national or local monetary gifts	3.30	Moderate Level
6. am aware of the centenarian benefits	3.23	Moderate Level

Items	Mean	Interpretation
7. received financial assistance through a social pension, and received mine promptly	3.00	Moderate Level
8. promptly receive pension, benefits, and similar monetary aid to senior citizens	3.26	Moderate Level
Overall Mean	**3.22**	**Moderate Level**

Table 4 presents the level of satisfaction of senior citizens with barangay health care services in terms of financial support. The results show an overall mean score of 3.22, indicating a moderate level of satisfaction in this domain. This suggests that while financial assistance mechanisms are present, their delivery may not be fully consistent or responsive to the expectations of senior citizens.

Respondents expressed high satisfaction with the barangay's provision of designated receiving and waiting areas for senior citizens invited to avail of national or local monetary assistance. This reflects an effort to accommodate older adults and provide a more organized and accessible service environment. However, the lowest level of satisfaction was recorded in relation to the schedule of release of financial assistance, particularly social pension benefits. This indicates concerns regarding timeliness and reliability in the distribution process.

The findings imply possible inefficiencies in service delivery, particularly in the administration and release of social pension. It may also suggest gaps in beneficiary identification and documentation, where some qualified senior citizens are not consistently included in official lists, thereby limiting their access to financial support. Such issues can significantly affect perceptions of fairness and trust in local service delivery systems.

These results are consistent with the findings of the Coalition of Services of the Elderly (2016), which identified ongoing challenges in the verification and identification of indigent senior citizens at the local level. The study noted the absence of clear and uniform guidelines in interpreting eligibility criteria under Republic Act No. 9994, leading to inconsistencies in implementation. When not adequately addressed, these gaps may contribute to increased dissatisfaction among eligible senior citizens who are unable to access the benefits intended for them.

The findings underscore the need to strengthen coordination mechanisms, improve beneficiary validation systems, and ensure more transparent and predictable schedules for the release of financial assistance. Enhancing these aspects may improve both the efficiency of service delivery and the overall satisfaction of senior citizens with barangay-level financial support programs.

Table 5 The level of satisfaction of senior citizens with barangay health care services in community engagement

Items	Mean	Interpretation
As a senior citizen, I...		
1. am greeted warmly and attended to by barangay workers whenever I seek social or emotional assistance	3.28	Moderate Level
2. can freely approach the barangay workers about any community problem or issue involving family or neighbors	3.29	Moderate Level
3. am asked to join barangay programs promoting camaraderie and fun among senior citizens	3.30	Moderate Level
4. receive the necessary seminars, training, communication, and education about social participation in our area	3.10	Moderate Level
5. have access to leisure and recreational stations or areas near me where I can get away from feeling lonely and isolated	3.05	Moderate Level
6. am encouraged to participate in community development	3.17	Moderate Level

Items	Mean	Interpretation
7. understood that I can still contribute to nation-building by mentoring the younger generations through symposia and empowering activities initiated by the barangay	3.14	Moderate Level
8. am made aware of my rights and protection from abuse, neglect, and exploitation	3.36	Moderate Level
Overall Mean	**3.21**	**Moderate Level**

Table 5 presents the level of satisfaction of senior citizens with barangay health care services in terms of community engagement, with an overall mean score of 3.21,
indicating a moderate level of satisfaction in this domain. This suggests that while efforts toward community inclusion exist, they may not be consistently experienced or fully responsive to the diverse needs of senior citizens.

Senior adult community members expressed high satisfaction with being recognized by the community as individuals who can contribute to nation-building,
particularly through mentoring younger members in symposia and other empowering activities. This reflects a positive perception of the role of senior citizens as active participants in community life. However, the lowest level of satisfaction was observed in access to leisure and recreational facilities or programs provided by the barangay. This indicates a gap in the availability and inclusivity of activities that promote social interaction, well-being, and quality of life among older adults.

The responses suggest a scarcity, if not a lack, of structured programs at the barangay level that specifically address the leisure needs of senior citizens, which may lead to reduced participation and dissatisfaction. These findings are consistent with the study of Manzano and Cornell (2021), which identified several barriers to participation in recreational activities among older adults. The study emphasized that program design must take into account age-related physical limitations, noting that many senior citizens tend to prefer mentally engaging and low-impact activities that provide enjoyment without excessive physical exertion.

Research findings highlight the need for barangay units to develop more inclusive and age-appropriate community engagement initiatives. This may include expanding access to recreational spaces, diversifying activity options, and designing programs that balance physical, social, and cognitive engagement. Strengthening these aspects can enhance not only participation but also the overall well-being and satisfaction of senior citizens within the community.

Table 6 The significant differences in the level of satisfaction of senior citizens with barangay health care services when grouped and compared according to sex, civil status, and highest educational attainment

Area	Variable	Category	N	Mann Whitney U	p-value		Interpretation
Medical Services				13417.000	0.245		*Not Significant*
Livelihood Support	Sex	Male		13673.500	0.380		*Not Significant*
Financial Assistance		Female		13967.500	0.580		*Not Significant*
Community Engagement				13289.500	0.193		*Not Significant*
Medical Services				13617.500	0.361	0.05	*Not Significant*

Livelihood Support			13676.000	0.396	*Not Significant*
Financial Assistance	Civil Status	Single Married	13707.500	0.416	*Not Significant*
Community Engagement			14186.500	0.776	*Not Significant*
Medical Services			13986.000	0.675	*Not Significant*
Livelihood Support			14358.000	0.995	*Not significant*
Financial Assistance	Highest Educational Attainment	Lower Higher	13590.000	0.392	*Not Significant*
Community Engagement			13308.500	0.242	*Not Significant*
Medical Services			10306.000	0.183	*Not Significant*
Livelihood Support			9680.500	0.035	*Significant*
Financial Assistance	Length of Residency	Shorter Longer	9015.000	0.003	*Significant*
Community Engagement			9143.000	0.005	*Significant*

The data indicate no significant differences in the level of satisfaction of senior citizens with barangay health care services in medical services, livelihood support, financial assistance, and community engagement when respondents are categorized by their sex, civil status, and highest educational attainment. This suggests that barangay healthcare services are generally delivered in an equitable manner across these demographic characteristics, with no particular group experiencing a clear advantage or disadvantage in service access or quality.

However, a significant difference was noted in respondents' level of satisfaction with barangay healthcare services, particularly in livelihood support, financial assistance and community engagement when senior adult community members are grouped according to length of residency. Senior citizens who have resided in the barangay for one year or more reported higher levels of satisfaction compared to those who have lived in the community for less than a year. This finding indicates that familiarity with the community, as well as the duration of exposure to barangay programs and services, plays a crucial role in shaping perceptions of satisfaction.

This variation may be attributed to several factors. Long-term residents are more likely to have established social networks, stronger relationships with barangay officials, and greater awareness of available programs and services. In contrast, newer residents may experience.

In contrast, newer residents may experience challenges in accessing information, integrating into community activities, or building trust with local service providers. As a result, they may perceive community engagement efforts as less accessible or less responsive to their needs.

These findings highlight that while service provision may be structurally equitable, experiential differences still exist based on levels of community integration. This supports the notion that satisfaction is not solely determined by service availability but also by the degree of social inclusion and connectedness within the community. Similar observations have been noted in local studies, such as Santos and Dela Cruz (2023), which emphasize the importance of community integration and information accessibility in shaping citizen satisfaction with local services.

The results underscore the need for barangay units to adopt more inclusive and targeted engagement strategies, particularly for newly relocated senior citizens. Strengthening onboarding mechanisms, improving information dissemination, and establishing peer support or buddy systems may help facilitate smoother integration into community programs. Regular monitoring of participation rates and feedback from newer residents can also ensure that services remain accessible and responsive to all segments of the senior population.

7. Conclusion

Ensuring that senior citizens receive responsive, accessible, and meaningful health services at the community level remains a pressing concern in rapidly urbanizing settings. As the elderly population continues to grow, the effectiveness of barangay health care services becomes not only a matter of service delivery but also of dignity, inclusion, and quality of life.

The findings revealed a moderate level of satisfaction across all domains, suggesting that while essential services are in place, they are not consistently meeting the expectations and evolving needs of senior citizens. In terms of medical services, respondents appreciated the availability of emergency assistance and alert systems, reflecting a capacity to respond to urgent needs. However, lower satisfaction in terms of sustained support and sense of security points to the need for more continuous, patient-centered care.

In livelihood support, although priority is given to senior citizens in accessing services, there appears to be limited engagement in income-generating opportunities. This indicates a gap not only in program availability but also in communication and inclusivity. Similarly, financial assistance services demonstrate both strengths and limitations: while systems for distribution are present, issues related to the timeliness and consistency of social pension release remain a concern, affecting perceptions of reliability and fairness among beneficiaries.

With regard to community engagement, senior citizens value their role as contributors to society, particularly through mentoring and participation in community activities. However, dissatisfaction with access to leisure and recreational opportunities suggests that current programs may not be sufficiently aligned with their physical capabilities and preferences. This underscores the need for more inclusive and age-appropriate initiatives that support active and meaningful aging.

The study further revealed that satisfaction levels did not significantly differ when respondents were grouped according to sex, civil status, and educational attainment, indicating a generally equitable delivery of services. However, a significant difference was observed based on length of residency, with long-term residents reporting higher satisfaction in livelihood support, financial assistance and community engagement. This finding highlights the importance of social integration, familiarity with services, and access to information in shaping the experiences of senior citizens within the community.

The findings emphasize the need to strengthen both the delivery and inclusivity of barangay health care services. Enhancing communication, improving access to programs, ensuring timely and transparent service provision, and developing more responsive community engagement strategies are essential steps toward improving satisfaction. In doing so, this study contributes to the broader goal of promoting inclusive and equitable health systems, in line with the United Nations Sustainable Development Goal 3, which seeks to ensure healthy lives and promote well-being for all at all ages. Strengthening barangay-level health services is therefore not only a local concern but also a meaningful step toward achieving global health and development targets.

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It is hoped that this research will contribute, in its own way, to advancing the United Nations Sustainable Development Goal 3 and to promoting inclusive and responsive health services for all, especially senior citizens.

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BSMA Dilemma: Decisions in Pursuing Certified Management Accountant in Lipa City Colleges

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Abstract

This study aims to uncover the decisions in pursuing a Certified Management Accountant examination of the management accounting students in Lipa City Colleges. Specifically, it aims to know the factors influencing management accounting students' decisions in pursuing CMA examinations in terms of personal, social, financial, and mental factors. Quantitative type of research was used in this study. Since the current study is about identifying the factors that influence the decisions of management accounting students, a descriptive type of research was used as the research design of this study. The study sourced data from 35 third- and fourth-year students. Total population sampling was used in this study. Findings revealed that personal, social, financial, and mental factors influence their decisions, with age significantly impacting personal factors. Management accounting students are encouraged to pursue the Certified Management Accountant (CMA) examination for career advancement. Engage in summarizing key concepts, teaching others, and participating in CMA-related activities for preparation. Attend workshops, seminars, and networking events to gain insights and connect with industry professionals. Additionally, consider collaborating with educational institutions and professional organizations for additional support.

Keywords: management accounting, certified management accountant, decision-making

1. Introduction

Aspiring management accounting students have different motivations, considerations, and perceptions regarding their interest in pursuing a professional qualification in management accounting. TROA Certified Public Accountant (CPA), Certified Management Accountant (CMA), Certified Tax Technician (CTT), Certified Internal Auditor (CIA), and other certifications are examples of careers in accounting. There are numerous benefits to being a CMA. They possess the intellectual, technical, interpersonal, personal, communication, and business management skills needed for management roles (Asriyati & Amran, 2020). As business management partners, internal consultants, organizational educators, and information decision support specialists, they also significantly impact organizations. Nonetheless, the Institute of Management Accountants (IMA) claims they addressed the dearth of management accountants in accounting, which significantly influences how organizations make decisions, report their finances, and develop their strategic plans.

The need for highly advanced training and specialized certification in accounting has increased the demand for Certified Management Accounting. The belief that public financial managers' certification will improve public management quality is another result of pursuing quality in public administration. Since accounting graduates are seen as future business leaders, employers have higher expectations for them than just technical proficiency. One way to guarantee quality in public management is through the certification and credentialing of financial managers.

A record 11,530 new members have joined the Institute of Certified Management Accountants or ICMA, which represents an increase of 89% compared to last year. Forty-nine thousand eight hundred sixty-two additional applicants joined the CMA program over the same period, a 26% increase over the previous year. Furthermore, the United States' new candidate growth rate is increasing by nearly 12% annually, primarily due to the effective integrated campaign of the Institute of Management Associates and other efforts. Since the program began almost 50 years ago, more than 75,000 professionals have obtained the CMA certification. This contrasts with roughly 60,000 CMAs after the 2017–2018 fiscal year.

Obtaining certifications in accounting affects students in a variety of ways (Parasian et al., 2023). It can deepen their comprehension of accounting ideas and principles, heightening their desire to work in the field (Hammour, 2018). Certification can also improve students' chances of landing a

job and advancing their careers. Nonetheless, several factors influencing students' decisions to pursue specific accounting certifications still make some students nervous about taking the certification exam.

This study aims to uncover the factors influencing management accounting students' decisions to pursue the Certified Management Accountant Examination after graduation. The findings of this study will help organizations, future CMAs, and students who will take management accounting to consider the factors that will affect their decisions (Dalci & Ozyapıci, 2018). Moreover, plan of actions for management accounting students to encourage them to take the CMA examination will be expected as an output of this research.

2. Objectives

This study aims to determine the factors influencing management accounting students' decisions to pursue CMA examination after their graduation. It will specifically seek to answer the following questions:

1. What is the demographic profile of the respondents according to:
    1.1. age, and
    1.2. sex?
2. What extent do the factors influence the decision making of the management accounting students in pursuing CMA Examination in terms of:
    2.1. personal,
    2.2. social,
    2.3. financial, and
    2.4. mental?
3. Is there a significant relationship between the demographic profile and the factors influencing the decision making of the management accounting students in pursuing CMA Examination?
4. What plan of actions should be proposed to encourage management accounting students to take the CMA Examination?

3. Materials and Methods

This part of the study explains the reason for the methodology to be utilized in the study. It includes research design, the participants, instrumentation, data procedure, ethical consideration, and data analysis.

3.1 Research Design

This study was a quantitative type of research that, according to Mohajan (2020), is a research methodology that collects and analyzes numerical data to answer research questions. Producing numerical data is used to quantify attitudes, views, actions, and other specific factors and extrapolate findings from a broader sample population.

In order to identify and characterize the elements influencing management accounting students' decisions to pursue Certified Management Accounting, the researchers employed descriptive research in this study. The researchers' objectives are gathering the demographic profile and determining the degree to which the determinants affect the decision to pursue CMA.

3.2 Participants

The study's participants were thirty-five students from management accounting students in Lipa City Colleges. Total population sampling was the method of sampling used in this study. According to Crossman (2018), total population sampling is a when a group whose members all have a particular attribute or entire group of interest is researched. It functions well in scenarios where the population is manageable, such as in a clearly defined subset of a larger population.

3.3 Instruments

In this study, the researchers used a self-made survey questionnaire to gather and collect data. The questionnaire was made based on the researchers' readings and previous studies. The questionnaire was divided into two (2) sections: the first contains the respondent's information, such as their age and gender. The second portion discusses the variables influencing the management accounting students' decision-making, which were personal, social, financial, and mental.

3.4 Procedure

The information was gathered in the 2023–2024 academic year. The researchers decided on the dates for organizing and delivering the surveys. A formal letter was made for approval and support to carry out this study. This section of the study demonstrated the methodical approach to collecting pertinent data and information required for this investigation.

In order to collect the data above, the researchers drafted a letter requesting permission to conduct the study, which was signed by the officer-in-charge of the College of Business and Accountancy and the research adviser.

A certificate of research validation was obtained by the researchers, along with a survey questionnaire proposal. After distributing the self-made survey questions to the participants, the researchers take their consent into account. The goal and reasoning for the study were explained to participants during the data-gathering process. The information needed for the participants to grant their informed permission was delivered in printed form for ethical and data privacy concerns.

The researchers gave the respondents enough time to answer the survey questionnaire. The researchers politely thanked the respondents for their participation after completing the survey. The researchers gathered and counted the data before analyzing it. After thoroughly examining each questionnaire, statistical processing, interpretation, and analysis were performed on the data obtained from the participants' answers.

3.5 Ethical Considerations

The researchers adhered to all relevant ethical standards regarding the information that would be gathered. All participants' personal and professional information is kept private and handled with discretion because of their anonymity. During data collection, all participants are given informed consent and receive complete details about the purpose and benefits of the study, as well as their right to discontinue participation at any time without facing any repercussions. The information to be collected will only be utilized in this study and will be appropriately disposed of once it is finished.

4. Results

This part of the study shows the presentation, analysis and interpretation of the data gathered from the questionnaires voluntarily answered by the respondents.

4.1 Demographic Profile of the Respondents.

Table 1 shows the demographic profile of the respondents.

Table 1 Demographic Profile of the Respondents

Profile	Frequency	Percentage	Rank
Age			
18 - 22	31	88.57	1
23 - 27	3	8.57	2
28 - 32	0	0.00	4
33 and above	1	2.86	3
Total	**35**	**100**	
Sex			
Female	31	88.57	1
Male	4	11.43	2
Total	**35**	**100**	

As seen in Table 1, out of 35 total Management Accounting student-respondents, 31 of them or 88.57% at rank 1 were from the age range of 18 - 22 years old whereas one or 2.86% at rank 3 was 33 years old and above.

4.2 Factors Influencing the Decision Making of the Management Accounting Students in Pursuing CMA Examination.

Tables 2-5 reveal the factors that influencing the decision making of the management accounting students in pursuing CMA examination.**2.1. In Terms of Personal.**

Table 2 Factors Influencing the Decision Making of the Management Accounting Students in Pursuing CMA Examination in Terms of Personal

Items	Weighted Mean	Interpretation	Rank
I believe that…			
1. professional management accountants will have better opportunities for promotions to high-level positions in a company.	4.54	Strongly Agree	7
2. CMA certification will lead me to better career opportunities.	4.77	Strongly Agree	1
3. professional titles are highly and internationally recognized.	4.57	Strongly Agree	6
4. CMA certification will improve my job prospects.	4.66	Strongly Agree	3
5. obtaining a CMA certification will enhance my professional credibility.	4.74	Strongly Agree	2
6. CMA certification will improve my knowledge and skills in management accounting.	4.63	Strongly Agree	4
7. obtaining CMA will improve me a sense of profession accomplishment and pride in my professional achievements.	4.60	Strongly Agree	5
8. I am prepared to undertake the examination with assurance.	4.09	Agree	10
9. the demand for CMA-certified professionals in the job market influences my decision to pursue the certification.	4.29	Strongly Agree	8
10. I consider this profession as an in-demand course.	4.14	Agree	9
Composite Mean	**4.50**	**Strongly Agree**	

As revealed in Table 2, the respondents strongly agreed and believed that CMA certification would lead them to better career opportunities, with the highest weighted mean of 4.77 and the highest rank of 1. This means that they see the CMA certification as a highly esteemed management accounting title renowned worldwide for its relevance and rigor, thus affecting the respondents' decision to take the examination after graduation. It has also been found that the CMA certification significantly raises university teaching and research standards. These findings demonstrate the importance of professional certification in enhancing employment opportunities and fostering professional development (Xu, 2019).

4.3 In Terms of Social

Table 3 Factors Influencing the Decision Making of the Management Accounting Students in Pursuing CMA Examination in Terms of Social

Items	Weighted Mean	Interpretation	Rank
I believe that…			
1. my family encourage me to take the examination.	3.74	Agree	7
2. I have read articles from the internet about successful management accountants and that inspired me to take the examination too.	4.09	Agree	1
3. I was inspired/ advised by my professors to take the examination.	3.83	Agree	5
4. I intend to sit for the examination due to its association with my family business.	3.09	Moderately Agree	9
5. the environment is a factor in my examination preparation.	3.89	Agree	3
6. I am surrounded by peers that motivated me to take the examination.	3.91	Agree	2
7. my parents/ relatives took the same career that I will pursue.	2.69	Moderately Agree	10
8. if I will take the examination, my family and friends will be satisfied.	3.34	Moderately Agree	8
9. seeing the number of passers who took CMA exam affects my decision in taking the exam.	3.80	Strongly Agree	6
10. the school I attended gave me insights about being a CMA which motivated me to take the examination.	3.86	Agree	4
Composite Mean	**3.62**	**Agree**	

As given in Table 3, the respondents strongly agreed and believed that they had read articles from the internet about successful management accountants, and that inspired them to take the examination too, which garnered the highest weighted mean of 4.09 and the highest rank of 1. This means that successful management accountants' stories can influence a student's decision to take the examination. With this, successful CMAs give the students the urge and boost their confidence to pursue the examination.

4.4 In Terms of Financial

Table 4 Factors Influencing the Decision Making of the Management Accounting Students in Pursuing CMA Examination in Terms of Financial

Items	Weighted Mean	Interpretation	Rank
I believe that…			
1. obtaining a CMA certification will increase my earning potential.	4.54	Strongly Agree	1
2. I consider the cost of the examination in my financial planning.	4.37	Strongly Agree	2
3. I am financially supported by my parents/ family to take the examination.	4.00	Agree	5
4. financial resources needed for CMA certification is a worthwhile investment in future career.	4.14	Agree	4

Items	Weighted Mean	Interpretation	Rank
5. I ponder about the source of short-term borrowings or loans to finance review.	3.37	Moderately Agree	9
6. I am financially capable to pay my expenses if I need to retake the examination.	3.09	Moderately Agree	10
7. I consider the financial costs associated with CMA preparation and examination as a barrier.	3.74	Agree	8
8. financial rewards influence my motivation to pursue CMA certification.	3.86	Agree	7
9. I did my research to find a good and budget friendly review center.	3.89	Agree	6
10. I will prioritize saving for my examination fee through employment	4.20	Strongly Agree	3
Composite Mean	**3.92**	**Agree**	

As shown in Table 4, respondents strongly agreed and believed that obtaining a CMA certification would boost their earning potential, with the greatest weighted mean of 4.09 and the highest rank of 1. Furthermore, this qualification broadens knowledge of management accounting, which can lead to more responsible tasks with greater pay. Becoming a CMA increases earning opportunities and improves professional and financial abilities, making certification an ideal starting point.

4.5 In Terms of Mental

Table 5 Factors Influencing the Decision Making of the Management Accounting Students in Pursuing CMA Examination in Terms of Mental

Items	Weighted Mean	Interpretation	Rank
I believe that…			
1. emotional issues limit my ability to concentrate to take the CMA examination.	3.91	Agree	4
2. lack of moral support or appropriate assistance from loved ones can affect my decision to take the examination.	3.97	Agree	3
3. pursuing a CMA certification may give high levels of stress and burnout due to the demands of the program.	3.54	Agree	10
4. being demotivated can influence my pursuit of the CMA certification.	3.69	Agree	8
5. the CMA exam is a rigorous test of knowledge and skills, which can cause anxiety for students.	3.66	Agree	9
6. CMA exam preparation can be challenging since it requires a significant amount of time and effort.	4.26	Strongly Agree	1
7. having no confidence in my abilities significantly impacts my pursuit of the CMA certification.	3.80	Agree	6.5
8. receiving negative feedback on exam performance can be demotivating and negatively impact mental health.	3.83	Agree	5

Items	Weighted Mean	Interpretation	Rank
9. I am extremely anxious about the potential results of the examination.	3.80	Agree	6.5
10. balancing the CMA exam preparation with other responsibilities can be difficult and lead to stress	4.09	Agree	2
Composite Mean	**3.85**	**Agree**	

As revealed in Table 5, the respondents strongly agreed and believed that CMA exam preparation can be challenging since it requires a significant amount of time and effort, which got the highest weighted mean of 4.26 and the highest rank of 1. Thus, candidates frequently underestimate how strict the test will be and could only succeed if they are well-prepared, affecting their decision to take the examination.

4.6 Relationship Between the Profile of the Management Accounting Students Respondents and the Factors Influencing their Decision Making in Pursuing CMA Examination.

Table 6 Relationship Between the Profile of the Management Accounting Students Respondents and the Factors Influencing their Decision Making in Pursuing CMA Examination

Variables	r-value	p-value	Decision	Interpretation
Age				
Personal	0.36	0.03365	Reject Ho	Significant
Social	0.20	0.24935	Failed to Reject Ho	Not Significant
Financial	0.20	0.24935	Failed to Reject Ho	Not Significant
Mental	0.21	0.22597	Failed to Reject Ho	Not Significant
Sex				
Personal	0.06	0.73206	Failed to Reject Ho	Not Significant
Social	0.08	0.64779	Failed to Reject Ho	Not Significant
Financial	0.14	0.42248	Failed to Reject Ho	Not Significant
Mental	0.04	0.42248	Failed to Reject Ho	Not Significant

As reported in Table 6, when the responses of the Management Accounting student-respondents on the factors influencing their decision-making in pursuing the CMA Examination were compared to their ages, the computed r-value of 0.36 for personal has a corresponding p-value of less than 0.05, thus rejecting the hypothesis. This means that age can play a role in a student's decision to pursue the CMA examination, potentially influencing their career trajectory and job satisfaction.

4.7 What plan of actions should be proposed to encourage management accounting students to take the CMA examination?

Table 7 shows the Management Accounting Students' Plan of Action that were proposed in this study.

Table 7 Management Accounting Students' Plan of Action

Key Results Area	Objectives	Activities	Time Frame	Indicator of Success
Social	To encourage students to actively engage with peers, mentors, and industry professionals to enhance their preparation and success in the CMA examination,	Guest Speaker Sessions/ Seminars	Quarterly	Improved motivation and engagement levels among participants in leveraging social networks for exam preparation and establishment of a supportive network of aspiring CMAs for continued professional development beyond the exam.
Mental	Equip management accounting students with effective strategies to manage stress and reduce test anxiety during their preparation for the CMA examination.	Relaxation Techniques Workshops and Peer Support Formation	Quarterly	Enhanced time management skills leading to more efficient study habits and establishment of a supportive network among participants through peer support groups, fostering mutual encouragement and motivation.
Financial	To educate management accounting students about potential job salaries, career prospects, and costs associated with the certification.	Seminar on Job Market Trends and Workshop on Exam Preparation.	Semi-annually	Increased awareness among students about job opportunities and salary prospects, and enhanced understanding of certification examination costs.
Personal	To equip management accounting students with the necessary skills, knowledge, and resources through collaboration and partnership with review centers for CMA.	Professional Certification Support and Partnership	Annually	Offer resources and assistance to students interested in pursuing professional certifications. This collaboration and partnership will help students to gain and access more resources for the preparation for the examination.

The plan aims to encourage students to invest in their professional development. Careful consideration has been given to the important benefits that certification offers individuals in this field, and plans have been developed to encourage management accounting students to take the Certified Management Accountant Exam.

The plan also aims to encourage students to become involved in the certification process through hosting educational sessions with experts from the CMA. In addition, it enables students to gain valuable insight, support, and practical knowledge, ultimately enhancing their preparation and success in the CMA examination and positioning them for success in their future careers.

5. Discussion

In terms of the respondents' sexes, female made the highest frequency count of 31 or 88.57% at rank 1 while four or 11.43% at rank 2 were male.

This means that they see the CMA certification as a highly esteemed management accounting title renowned worldwide for its relevance and rigor, thus affecting the respondents' decision to take

the examination after graduation. It has also been found that the CMA certification significantly raises university teaching and research standards. These findings demonstrate the importance of professional certification in enhancing employment opportunities and fostering professional development (Xu, 2019). Accounting students often view the accounting profession as credible, which may influence their decision to pursue professional qualifications (Saat, 2018).

The composite mean of 3.62 affirmed that the respondents agreed on social factors that influenced their decision-making in pursuing the CMA Examination. Articles about successful management accountants often include insights into their strategies, challenges faced, and lessons learned. Students may find practical tips and advice that they can apply to their own academic and professional pursuits. Graduates are more focused on developing their professional skills and building a successful career path. They become less influenced by peers and more concerned with their own growth and advancement. These results show that social factors, such as subjective norms and social influence, are crucial to a student's decision to pursue professional certification.

Salaries for Certified Management Accountants vary by local and global region, but CMAs consistently earn more than non-CMAs (Wiley et al., 2019). In the Americas, students report that having a CMA designation gives them leverage in salary negotiations. CMA certification provides the foundation for high-level executive skills, which has substantially moved respondents' careers forward once they qualify. Other aspects noted in the survey were that benefits such as bonuses, share options, and more senior positions were given to CMAs (VIVA Financial, 2023).

The composite mean of 3.92 signified that the respondents agreed on financial factors influencing their decision-making in pursuing the CMA Examination. The result illustrates that financial preparation is required for the CMA examination. Pursuing professional certifications frequently requires careful consideration of various aspects, including financial preparation. Furthermore, the financial investment in CMA preparation is more than just an expense; it is an investment in career progression. The knowledge and skills developed during the preparation process are significant assets that can improve a candidate's professional talents and lead to new chances in management accounting.

The composite mean of 3.85 deduced that the respondents agreed on mental factors influencing their decision-making in pursuing the CMA Examination. The result implies that the CMA examination requires mental preparation, which includes building confidence through a positive outlook, productive study habits, time management abilities, and stress-reduction strategies. Mental health should be considered while deciding whether to take the CMA exam because it can significantly impact well-being and performance. Professionals and students in medicine are especially susceptible to mental health problems (Abdullah, 2019). Additionally, early identification and intervention can be facilitated by the application of intelligent technologies (Li, 2021). Additionally, determining the psychological characteristics needed for risk decision-making may help decision-makers make better decisions by getting them to consider their advantages and disadvantages in the context of their psychological characteristics. Studies show that when people are motivated by a need for courage, they are more inclined to take chances while making important life decisions (Gal & Rucker, 2020).

When the responses of the Management Accounting student-respondents on the factors influencing their decision-making in pursuing the CMA Examination were compared to their sexes, the computed r-values 0.06 for personal, 0.08 for social, 0.14 for financial, and 0.04 for mental have proven that no significant relationships existed when compared to their sexes. This means that sex does not influence students' decision to pursue the CMA exam; instead, they are more influenced by their interests, career goals, and the perceived benefits of obtaining the certification.

6. Conclusion

Based on the results of this study, it was concluded that most of the respondents were female and belonged to the young adulthood stage. The management accounting student-respondents strongly agreed that personal factors significantly influenced their decision to pursue the Certified Management Accountant (CMA) examination, while they also agreed that social, financial, and mental factors played a role in shaping their decisions.

Furthermore, the study revealed that age has a significant relationship with personal factors influencing the decision to take the CMA examination, but it has no significant relationship with

social, financial, and mental factors. In addition, sex showed no significant relationship with any of the influencing factors, including personal, social, financial, and mental aspects. Based on these findings, a Plan of Action for Management Accounting students was proposed to encourage and support them in pursuing the CMA examination.

Recommendations for Further Studies

The main objective of this study is to explore the factors that influence the students' decision making for CMA. Further studies are needed to understand better the benefits and consequences of CMA. Research may investigate the effect of CMA certification on students' academic performance, career progression, and professional skill development. Besides, a study on the long-term benefits of CMA in various sectors and its role in the improvement of managerial skills would be a great addition. Qualitative methods such as interviews or case studies may provide a better understanding of students' experiences and views of CMA.

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Barriers to Implementation of Emergency Response by First Responders

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Abstract

Effective emergency response at the barangay level is a profound necessity to minimize the impact of disasters and protect lives and property. This study identified the barriers to implementing emergency response among first responders in a highly urbanized city in the Central Philippines during Calendar Year 2023. Specifically, it examined barriers related to coordination and communication, training, and information and education campaigns. It determined whether significant differences existed when respondents were grouped according to age, sex, and length of service. The study employed a descriptive research design, involving 205 Barangay Disaster Risk Reduction and Management Office (BDRRMO) implementers selected through purposive sampling from 41 barangays. Data were collected using a validated, self-developed questionnaire and analyzed using frequencies, percentages, means, and the Mann-Whitney U test at the 0.05 level of significance. Results revealed that respondents experienced a moderate level of barriers in coordination and communication (M = 3.44), training (M = 3.35), and information and education campaigns (M = 3.36). The most prominent challenges included clustering of barangays to avoid duplication of responses and prevent wastage of government resources, limited coordination mechanisms, inadequate refresher and capability-building training, and insufficient communication infrastructure and alternative telecommunication systems. Statistical analysis further revealed no significant differences in barriers to implementation levels when respondents were grouped by age, sex, or length of service ($p > 0.05$). The findings suggest that the identified barriers are common across all demographic groups and reflect systemic issues affecting emergency response implementation. The study recommends strengthening inter-agency coordination, conducting continuous training programs, investing in modern communication technologies, and expanding disaster information and education campaigns to improve the effectiveness and resilience of barangay emergency response systems.

Keywords: Barriers to implementation; Emergency response; First responders; Descriptive research

1. Introduction

The United Nations Office for Disaster Risk Reduction (UNDRR) defines disasters as serious disruptions to the functioning of communities resulting from hazardous events interacting with conditions of exposure, vulnerability, and capacity. These events cause significant human, economic, and environmental losses that hinder sustainable development (World Bank, 2020). Given this context, effective emergency management systems are essential for minimizing casualties, reducing property damage, and ensuring the continuity of critical services.

Emergency response refers to the immediate and systematic actions undertaken to minimize the adverse effects of emergencies on people, property, and the environment (Mishra, 2019). (3) Effective emergency management is not limited to responding during disasters but encompasses a continuous cycle of risk reduction, preparedness, response, and recovery (McEntire, 2021).

Given the increasing frequency and complexity of disasters, the effectiveness of emergency management largely depends on how well institutions coordinate and respond during crises. Effective emergency response depends on coordination among government agencies, healthcare institutions, and first responders. Collaboration improves communication, resource sharing, and operational efficiency during emergencies (Kapucu & Garayev, 2011). It is also worth adding that interagency communication is critical in ensuring timely and organized response operations (Kapucu, 2006).

Huang, Wang, and Lin (2010) pointed out that another barrier in emergency response is resource limitations. Emergency response agencies often face shortages of staffing, equipment, vehicles, medical supplies, and financial support. Resource constraints may delay emergency operations and reduce the quality of services provided. According to Farahmandnia (2025),

insufficient funding and inadequate logistics systems can prevent emergency organizations from effectively implementing response plans.

The effectiveness of emergency response, however, depends largely on the preparedness and capability of first responders. Studies have consistently emphasized that successful emergency management requires strong interagency coordination, effective communication systems, adequate resources, and continuous capacity building.

In the Philippines, this cycle is institutionalized through Republic Act No. 10121, otherwise known as the Philippine Disaster Risk Reduction and Management Act of 2010, which provides a comprehensive framework for disaster risk reduction and management. The law mandates national government agencies and local government units to develop proactive, community-based disaster preparedness, response, mitigation, and recovery programs through coordinated efforts among various stakeholders.

The Philippine Senate Policy Brief (2017) cited a limited workforce, limited technical knowledge and understanding, limited financial resources, and a lack of technology, such as a multi-hazard early warning system, as reasons for the limited capacity of line agencies and local governments to assume DRRM activities.

Despite the existence of comprehensive disaster management policies, several studies reveal persistent implementation challenges. Although many local government units demonstrate substantial compliance with disaster risk reduction policies, barriers related to institutional capacity, funding, technical expertise, fragmented governance structures, and ineffective communication continue to impede emergency response operations (Yusay III & Caelian, 2022; Eleorda, 2025).

These challenges became even more apparent during the COVID-19 pandemic, which exposed the limitations of existing emergency management systems and highlighted the need for integrated, adaptive response mechanisms capable of addressing multiple hazards simultaneously (Salindo et al., 2024; Potutan & Arakida, 2021).

In highly urbanized cities, emergency response becomes even more complex due to dense populations, growing infrastructure demands, traffic congestion, overlapping jurisdictions, and the need for rapid interagency coordination. Bacolod City has experienced various natural disasters and public health emergencies that have disrupted communities and essential services, underscoring the need for resilient, adaptive disaster management practices (Su, 2025). Furthermore, response time remains a critical indicator of emergency service effectiveness since delays in emergency medical interventions significantly increase morbidity and mortality rates (Cabral et al., 2018; Elkbuli et al., 2021). These realities underscore the importance of understanding the operational conditions under which first responders perform their duties.

Although previous studies have extensively examined disaster preparedness, emergency management frameworks, and coordination mechanisms, limited empirical evidence exists regarding the specific implementation barriers experienced by first responders in highly urbanized cities. Much of the existing literature focuses on policy compliance, organizational structures, or response outcomes rather than the practical operational, organizational, logistical, communication, and training-related challenges encountered by frontline responders during actual emergencies. Consequently, a significant knowledge gap remains between established emergency response policies and their practical implementation in local settings.

To address this gap, the present study is anchored on Robert Heath's 4R Theory of Crisis Management (1998), which provides a comprehensive framework for understanding emergency management through four interconnected phases: Reduction, Readiness, Response, and Recovery. The theory emphasizes that effective emergency management extends beyond disaster response and requires continuous efforts to reduce risks, prepare responders and communities, implement coordinated emergency operations, and facilitate post-disaster recovery. The 4R Theory further suggests that successful emergency management depends on effective coordination and communication, adequate training and preparedness, sufficient resources, and continuous information and education campaigns. As such, the theory provides an appropriate lens for examining the implementation barriers faced by first responders in highly urbanized environments, where emergency operations require rapid decision-making, efficient resource mobilization, and strong interagency collaboration.

Guided by the principles of Disaster Risk Reduction and Management and the 4R Theory of Crisis Management, this study aims to determine the implementation barriers encountered by first responders in a highly urbanized city. Specifically, it seeks to identify operational, organizational, communication, training, and resource-related challenges affecting the implementation of emergency response and to develop recommendations to strengthen emergency preparedness and response systems.

The findings are expected to contribute to the enhancement of local disaster risk reduction and management programs while supporting the achievement of the United Nations Sustainable Development Goal 11 (Sustainable Cities and Communities) by promoting disaster resilience and SDG 16 (Peace, Justice, and Strong Institutions) by strengthening responsive, accountable, and effective emergency response institutions.

2. Objectives

This study aimed to determine the barriers to implementation of emergency response by first responders in a highly urbanized city in the central Philippines during Calendar Year 2023. Specifically, this study sought to answer the following questions: (a) What are the barriers to implementation of emergency response along (i) coordination and communication, (ii) training, and information, and (iii) education campaigns?; (b) Is there a significant difference in the barriers to implementation of emergency response when first responders are grouped and compared according to the age, sex, and length of service?; and (c) what recommendations should be formulated?

3. Materials and Methods

Research Design This study employed the descriptive research design to determine the barriers to implementation to emergency response in a highly urbanized city.

According to Singh (2023), Descriptive research is a methodological approach that seeks to depict the characteristics of a phenomenon or subject under investigation. In scientific inquiry, it serves as a foundational tool for researchers aiming to observe, record, and analyze the intricate details of a particular topic. This method provides a rich and detailed account that aids in understanding, categorizing, and interpreting the subject matter.

The descriptive design is appropriate for this study because it measures the level of implementation barriers in emergency response in the specified areas and whether significant differences in implementation barriers exist between categories.

Respondents The respondents were the two hundred five (205) barangay implementers of the Barangay Disaster Risk and Reduction Mitigation Office (BDRRMO). There were 41 barangays surveyed with five (5) implementers for each barangay. The sample was determined through purposive sampling. Hassan (2024) described purposive sampling as a non-probability sampling technique in which researchers deliberately select participants based on their knowledge, relevance, or expertise regarding the research topic.

Instrument This study used a self-developed questionnaire and underwent validity and reliability testing.

Part I of the questionnaire covered respondents' profiles, including age, sex, and length of service. Part II is the proper questionnaire that collects data on implementation barriers to emergency response in the areas of coordination and communication, training, information, and education campaigns, with ten (10) items for each area.

The respondents were asked to rate each item using the following numerical scores and descriptions: 5 (Always), 4 (Often), 3 (Sometimes), 2 (Rarely), and 1 (Almost Never).

Data Gathering Procedure After establishing the validity and reliability of the data-gathering instrument, the researcher sent letters to the local chief executives involved in the study requesting permission to administer it. Upon approval, the researcher met with the respondents and explained the purpose of the study, providing instructions on completing the questionnaire objectively and honestly.

The researcher guided the respondents in completing the survey questionnaires and personally retrieved the research instruments afterward. The data gathered were then categorized, tabulated, and prepared for subsequent statistical treatment.

Statistical Treatment and Data The study employed a descriptive-analytical approach to its data. A descriptive-analytical scheme was used to determine the respondents' profiles in terms of age, sex, and length of service, using frequency counts and percentage distributions as statistical tools.

A descriptive-analytical scheme was also used to determine the level of implementation barriers to emergency response in terms of coordination and communication, training, and information and education campaigns, using the mean as a statistical tool.

On the other hand, a comparative-analytical scheme was used to determine whether there was a significant difference in the level of implementation barriers to emergency response across age, sex, and length of service groups. The Mann-Whitney U test was used for comparison, and a significance level of 0.05 was used to accept or reject the null hypothesis.

Ethical Consideration This research paper strived to minimize the risk of harm to its target respondents. On the onset, informed consent was obtained. Ethical considerations were strictly observed throughout the study, including access to and confidentiality of information, as well as the protection of anonymity and data. All data stored after the study's completion will be discarded with due care to prevent unauthorized access or use in the future.

4. Results

Table 1 Profile of Respondents

Variables	Categories	Frequency	Percentage
Age	Younger (below 40 years old)	112	54.60
	Older (40 years old and above)	93	45.40
Sex	Male	97	47.30
	Female	108	52.70
Length of Service	Shorter (less than 6 years)	112	54.6
	Longer (6 years and more)	93	45.4
Total		**205**	**100**

Table 1 presents the frequency and percentage distributions of 205 emergency first responders by age, sex, and length of service. The data shows that 112, or the majority (54.60%), of respondents were aged below 40 years old, and 93, or 45.40%, were aged 40 years old and above. This implies that younger members of the community are more inclined to volunteer as emergency responders, as citizens in this age group are more motivated to participate in volunteerism than their older counterparts. This finding aligns with the comparative study by Diaz (2025), which found that younger adults were more involved in environmental and disaster-related volunteer initiatives than older adults, largely driven by motivations such as skill development, social connection, and community participation. Similarly, the study of Francis and Jones (2012) showed that career and learning opportunities, personal growth, and active engagement in meaningful social roles frequently inspire younger volunteers.

In terms of sex, it was revealed that 108 first responders (52.70) were women. This implies that women are generally more inclined to work as emergency responders. According to Ekşi, Altay, and Gümüşsoy (2022), women are key factors in tackling damage and increasing available social resilience to disasters. Adding that women can use special attributes such as motherhood, which is socio-culturally defined and taught as an advantage, for the common good of society.

Meanwhile, 112 (54.6%) have been involved in emergency response work for a shorter period (less than 6 years), while 93 (54%) have been in service for a longer period (6 years or more). This implies that majority of those in active emergency response service are relatively new because of the high turnover rates since a significant number of responders discontinue their service for reasons like the lack of relevant skills, which keeps them from performing well, which agrees with Fuentes and

Yaneza (2021) on the necessity for barangays to implement capability-building programs for barangay rescue teams as per the mandate of Republic Act 10121 and continued funding for trainings and seminars to capacitate emergency responders and further encourage and motivate them to actively and consistently perform their duties.

Table 2 Barriers to Implementation Experienced by Emergency Responders along Coordination and Communication

Area		
A. Coordination and Communication	**Mean**	**Interpretation**
As an emergency first-responder, I have difficulty in…		
4. Clustering of barangays into four (central, north, east, south) to avoid duplication of responses and prevent wastage of government resources.	3.56	High Level
1. Regulates first responders and those solely engaged in enforcement, crime prevention and security who assist in disaster risk reduction and management.	3.55	High Level
3. Coordinating with the Barangay DRRM Task Force for disaster assessment and monitoring with DRRMO and member committees during disasters and emergencies.	3.50	High Level
6. Dispatching teams in every emergency and regulating responses performed by all accredited emergency and disaster response groups for a well-coordinated initiative.	3.50	High Level
2. Implementing prescribed ambulance route and speed limit (40 km/h) in coordination with PNP/TMU/BTAO	3.46	Moderate Level
9. Establishing a Medical and Emergency Response Center (MERC) that shall be the only agency to answer emergency calls from the “911 number” and shall dispatch emergency response teams by coordinating with volunteer groups or government agencies.	3.43	Moderate Level
5. Reducing response time to 10 minutes.	3.37	Moderate Level
7. Issuing mobilization order among accredited responders prior to performing responses outside the jurisdiction of the LGU.	3.34	Moderate Level
10. Making and maintaining a digital database for MERC that stores important information in every distress call, information will be stored for 5 years.	3.34	Moderate Level
8. Submitting updated digital or hard copy of inventory of accredited personnel, available vehicles, equipment and logistical support by accredited responders.	3.33	Moderate Level
Overall Mean	**3.44**	**Moderate Level**

Table 2 shows that the responders experienced barriers in coordination and communications at a moderate level, with a mean score of 3.44. Top 3 barriers experienced by responders include (a) clustering of barangays into four (central, north, east, south) to avoid duplication of responses and prevent wastage of government resources (mean: 3.56), (b) regulating first responders and those solely engaged in enforcement, crime prevention and security who assist in disaster risk reduction and management (mean: 3.55) and (c) coordinating with the Barangay DRRM Task Force for disaster

assessment and monitoring with DRRMO and member committees during disasters and emergencies and dispatching teams in every emergency and regulating responses performed by all accredited emergency and disaster response groups for a well-coordinated initiative both with a mean of 3.50.

The result implies that barangay first responders are technologically challenged, which is the reason why they are unable to meet this requirement, which can only be accomplished through the utilization of modern digital technology, thus highlighting the need to educate and train them on how to utilize technology and increase their computer literacy in order to increase work efficiency, which agrees with Sakurai and Murayama (2019) who discussed the use of information technology in different disaster management stages such as disaster response and recovery. The research findings highlight the critical role of information systems in recording, exchanging, and processing information, and emphasize how a combination of roles can enhance system performance.

Table 3 Barriers to Implementation Experienced by Emergency Responders along Training

Area		
B. Training	**Mean**	**Interpretation**
As an emergency first-responder, I have difficulty in…		
1. Holding regular refresher training sessions for staff and support groups.	3.47	Moderate Level
3. Updating skills of first responders.	3.43	Moderate Level
5. Providing up-to-date seminars on new practices and standard operating procedures for a more efficient emergency response.	3.43	Moderate Level
4. Standardizing the training program for all emergency first responders (public and private).	3.38	Moderate Level
2. Equipping all emergency first on-scene responders with specific trainings to be able to attend to specific needs of victims.	3.36	Moderate Level
10. Holding capability building workshops and drills to reduce emergency response time.	3.36	Moderate Level
7. Enhancing skills in handling media and utilizing both traditional and new media in educating and informing the public about the goings-on during emergencies.	3.32	Moderate Level
9. Strictly observing and complying to the guidelines on barangay clustering for smooth flow of instructions and coordination of activities.	3.29	Moderate Level
8. Conducting workshops and seminars to reskill and upskill government, private and barangay volunteers.	3.28	Moderate Level
6. Holding simulation drills and other trainings involving community members and stakeholders.	3.23	Moderate Level
Overall Mean	**3.35**	**Moderate Level**

As shown in Table 3, the respondents experienced barriers to training at a moderate level, with a mean score of 3.35. The top barrier reported by responders is the need to hold regular refresher training sessions for staff and support groups, with a mean score of 3.47. Second in the list are updating skills of first responders and providing up-to-date seminars on new practices and standard operating procedures for a more efficient emergency response, both with a mean score of 3.43. Coming third is standardizing the training program for all emergency first responders (public and private) at a moderate level (mean: 3:38).

This implication in the highest mean score obtained by item number 1 is the challenge in being able to organize refresher trainings due to limited resources and getting different sectors to collaborate and provide support to emergency respondents and disaster preparedness activities, which remains a big challenge, which agrees with Bajracharya and Hastings (2020), who point out that the conduct of trainings and similar endeavors requires a significant amount or budget for their conduct and affects many sectors. This problem often stems from a lack of collaboration and low engagement among implementers and stakeholders.

Table 4 Barriers to Implementation Experienced by Emergency Responders along Information and Education Campaign

Area		
C. Information and Education Campaign	**Mean**	**Interpretation**
As an emergency first-responder, I have difficulty in…		
4. Having and using an independent telecommunications system, backed up by alternative communication links such as microwave and satellite systems	3.43	Moderate Level
9. Issuing a mobilization order thru an electronic ticket, text message or phone call should there be a need for accredited responders to prior to performing responses outside of the LGU when immediate response is necessary	3.41	Moderate Level
2. Accommodating, informing and taking direction from central government crisis management structures.	3.38	Moderate Level
3. Fully-equipping generic operations areas, offices and meeting/conference facilities	3.38	Moderate Level
1. Efficiently collecting, analyzing and disseminating information.	3.36	Moderate Level
6. Disseminating updated hotline numbers (active landlines) in strategic areas in the city and in barangays via social media and conventional means	3.36	Moderate Level
10. Utilizing social media and websites in providing public advisories, warnings and updates in relation to emergency response and disaster prevention	3.33	Moderate Level
5. Disseminating information-education campaign materials in barangays via social media, leaflets or information board (4m X 4m); aggressive barangay disaster information drive	3.32	Moderate Level
8. Properly communicating and coordinating with responding units, DRRM and barangays during emergencies for quick and smooth response	3.32	Moderate Level
7. Regularly conducting disaster preparedness seminars and drills for community members, schools and various sectors	3.30	Moderate Level
Overall Mean	**3.36**	**Moderate Level**

Table 4 shows that the responders experienced barriers in the information and education campaign at a moderate level, with a mean score of 3.36. Among the barriers, the following emerged as the top three: First is having and using an independent telecommunications system, backed up by alternative communication links such as microwave and satellite systems (mean: 3.43); second is issuing a mobilization order thru an electronic ticket, text message or phone call should there be a need for accredited responders to prior to performing responses outside of the LGU when immediate response is necessary (mean: 3.41); and third are accommodating, informing and taking direction

from central government crisis management structures and fully-equipping generic operations areas, offices and meeting/conference facilities, both at moderate level (mean 3.38)

This finding reveals that although respondents recognize the importance of maintaining an independent telecommunications system supported by alternative communication links such as microwave and satellite systems, implementation remains only at a moderate level due to resource limitations, including insufficient funding, a lack of advanced communication equipment, and limited technical infrastructure.

The report by the Asian Disaster Preparedness Center (2007) reinforces this condition, emphasizing that constraints stemming from a lack of equipment, trained personnel, and institutional support are common in emergency communication systems in disaster-prone communities.

Table 5 Difference in the Level of Implementation Barriers to Emergency Response in the Area Coordination and Communication

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	112	95.91	4414.000	0.060	0.05	Not Significant
	Older	93	111.54				
Sex	Male	97	101.86	5127.000	0.793		Not Significant
	Female	108	104.03				
Length of Service	Shorter	112	106.19	4851.000	0.397		Not Significant
	Longer	93	99.16				

Table 5 presents data on the difference in the Level of Implementation Barriers to Emergency Response in area coordination and Communication.

Tabulated statistical data clearly show p-values of 0.060, 0.793, and 0.397 for variables age, sex and length of service, respectively, all of which are higher than the significance level of 0.05, which means that there is no significant difference in the level of implementation barriers to emergency response in the area of Coordination and Communication when grouped and compared according to variables age, sex and length of Service. Therefore, the null hypothesis is accepted. “Not significant” results do not mean the absence of a difficulty or difficulties in the said area. It simply means that the categories do not vary against the study variables.

Bharosa, Lee, and Janssen (2010) provides an overview of relevant obstacles and challenges in the area of coordination and communication related to emergency response, citing that while respondents of the study agree that sharing information is important for the attainment of their goals, the extent to which information is being shared among organizations is often limited by factors that can be attributed to the community, agency, and individual. The study further found that relief workers were more often concerned with receiving information from others than with providing it to others who might benefit. Giving incentives for sharing information and for understanding each other’s work processes and the usability of information systems was found to positively affect information sharing and coordination.

Table 6 Difference in the Level of Implementation Barriers to Emergency Response in the Area Training

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	112	98.31	4683.000	0.213	0.05	Not Significant
	Older	93	108.65				
Sex	Male	97	106.63	4886.000	0.405		Not Significant
	Female	108	99.74				
Length of Service	Shorter	112	98.84	4742.000	0.269		Not Significant
	Longer	93	108.01				

Table 6 presents the data showing the difference in the Level of Implementation Barriers to Emergency Response in the area of Training.

Based on the results in the table, the p-values for all three variables are 0.213, 0.405, and 0.269, all higher than the significance level of 0.05, meaning there is no significant difference in the level of implementation barriers to emergency response in the area Training when grouped and compared according to variables Age, Sex, and Length of Service. Therefore, the null hypothesis is accepted.

Tolentino's (2021) study reveals that the majority of respondents who attended training or seminars on disaster risk reduction and management reported a highly practiced level of preparedness, management, and mitigation, while their disaster response and recovery were at the practiced level. In general, the overall level of practice of DRRM in schools is at the practiced level. It was also found that there is no significant relationship between the profile and respondents' practice levels.

Table 7 Difference in the Level of Implementation Barriers to Emergency Response in the Area Information and Education Campaign

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	112	99.55	4822.000	0.360	0.05	Not Significant
	Older	93	107.15				
Sex	Male	97	105.29	5015.500	0.599		Not Significant
	Female	108	100.94				
Length of Service	Shorter	112	97.81	4627.000	0.168		Not Significant
	Longer	93	109.25				

Table 7 breaks down data on the Differences in the level of implementation barriers to Emergency Response in the area of Information and education campaigns.

Still, there is no significant difference in the level of difficulties encountered by barangay emergency respondents in the area of Information and education campaign when grouped and compared according to the variables age, sex, and length of Service because the p-values of all three variables are 0.360, 0.599, and 0.168, which are all higher than the significance level, which is 0.05. Therefore, the null hypothesis is accepted.

Torani et al. (2019) reviewed the importance of continuing education and the effects of different education methods on disaster risk reduction and preparedness, even for vulnerable people, as they aim to equip individuals and groups with the knowledge and skills to take the necessary actions to reduce vulnerability and casualties. Additionally, the results reveal that no method of educating vulnerable sectors is superior to others, and that when respondents are well-trained and well-educated, they can better protect themselves and others.

5. Discussion

The study revealed moderate levels of implementation barriers to emergency response among first responders in a highly urbanized city, in the areas of coordination and communication, training, and information and education campaigns.

Among the areas, coordination and communication got the highest overall mean, indicating inter-agency collaboration, operational alignment, and communication systems remain the major concerns in emergency response implementation. Clustering barangays to avoid duplication of responses and waste of government resources remained the major concern. The finding implies that coordination mechanisms among barangays and responding agencies may still lack standardized procedures, delineation of responsibilities, and synchronized command structures.

It is recommended that the local government units strengthen inter-agency coordination by institutionalizing standardized emergency response protocols, clearly defining the roles and responsibilities of responding agencies, and adopting a unified incident command system. Barangay clustering strategies should be reviewed and optimized to improve resource allocation, eliminate duplication of efforts, and ensure synchronized emergency operations. Regular multi-agency coordination meetings and simulation exercises are likewise recommended to enhance collaboration and operational readiness.

In the area of training, the overall rating reveals a moderate level of implementation barrier. Holding regular refresher training sessions for staff and support groups was the most prominent implementation barrier. This finding may mean that training opportunities are available but may not have been consistently or comprehensively undertaken to sustain preparedness among the responders. There is a need for continuous professional development in emergency response as the environment evolves, with updated competencies, technical skills, and operational familiarity becoming essential.

The Local Disaster Risk Reduction and Management Office (LDRRMO) should develop and implement a comprehensive continuing capability-building program that includes regular refresher courses, simulation drills, competency assessments, and specialized emergency response training. Partnerships with national government agencies, academic institutions, and emergency management organizations may be established to provide updated training modules, certifications, and best practices that enhance responders' competencies and preparedness.

Regarding information and education campaigns, a moderate level of barrier to implementation was experienced, with having and using an independent telecommunications system backed up by alternative communication links, such as microwave and satellite systems, being a distinct barrier. The finding recognized the need for an independent telecommunications system and for disseminating emergency-related information to stakeholders. The responders realized the value of reliable communication and public awareness. They realize that information dissemination is critical during emergencies and for preventive measures, and that improving communication platforms, digital technologies, and community awareness campaigns will increase public participation in emergency response.

Local government units should invest in resilient, redundant emergency communication systems, including backup radio networks, satellite communications, microwave systems, and other interoperable technologies to ensure uninterrupted communication during disasters. Furthermore, information and education campaigns should be strengthened through multi-platform dissemination strategies, community-based awareness programs, regular emergency drills, and the use of digital and social media platforms to increase public preparedness and participation in disaster response activities.

Since no significant differences in the level of implementation barriers were observed across age, sex, and length of service, this may imply that barriers experienced by first responders are

common across demographic groups. Thus, interventions should focus on organizational improvement within the local government units rather than on specific demographic categories.

The findings imply that, regardless of age, sex, or length of service, first responders experience similar implementation constraints; hence, interventions should focus more on the operations of local government units, in addition to addressing the needs of specific demographic groups.

6. Conclusion

Implementation barriers to emergency response encountered by first responders are moderate across coordination and communication, training, and information and education campaigns.

Among these areas of implementation, barriers to coordination and communication emerged as the most challenging, particularly in barangay clustering and inter-agency response management. Training and information dissemination also presented moderate challenges, suggesting the need for sustained capability-building initiatives. Information and education campaigns necessitate a stronger communication infrastructure and technological support.

It is interesting to note that there are no significant differences in the level of implementation barriers to emergency response among responders across age, sex, and length of service groups. This finding means that the implementation barriers encountered are systemic and shared across different responder profiles. Thus, improving emergency response implementation requires organizational reforms, enhanced coordination systems, upgraded communication technology, and continuous training opportunities rather than demographic-specific interventions.

This study recommends strengthening emergency response frameworks; hence, future research may examine factors such as funding availability, leadership effectiveness, disaster preparedness strategies, and technological readiness. The findings of this study may also serve as a foundation for developing strategies to boost the overall effectiveness, coordination, and readiness of emergency response systems in disaster-prone areas.

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Difficulties Encountered by Consumers in the Operation of Sum-ag Market

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Abstract

This study examined the difficulties encountered by 250 consumers in the operation of Sum-ag Market, focusing on the wet market, dry goods, and vegetable sections. A descriptive research design was employed using purposive sampling to select consumers with actual buying experience in the market (Singh, 2023; Nikolopoulou, 2022). Data were collected using a validated self-developed questionnaire that was pilot-tested with 30 respondents from another public market prior to the actual survey. Frequency counts, percentages, means, and the Mann–Whitney U test were used to analyze the data at the 0.05 level of significance. The findings revealed a moderate level of difficulty across the three market sections. Food safety concerns were more evident in the wet market, rental affordability and fire safety were major concerns in the dry goods section, while product availability and sanitation influenced consumers' perceptions in the vegetable section. The study recommends strengthening sanitation programs, fire safety measures, and waste management practices in support of the Sustainable Development Goals. A limitation of the study is that it focused only on consumers from one public market using purposive sampling; therefore, the findings should be interpreted within this context.

Keywords: Consumer Difficulties; Public Market Operations; Sanitation; Food Safety; Service Quality; Wet Market

1. Introduction

Wet markets have long served as vital centers of trade, culture, and community interaction, particularly in Asia and Africa, where they contribute to food security, urban resilience, and local economic development (Yuan, Si, & Zhong, 2026). In the Philippines, public wet markets, locally known as palengke, have historically functioned as the primary centers for trading fresh agricultural and fishery products (Carmen et al., 2020).

As facilitators of small-scale entrepreneurship, traditional markets provide consumers with affordable prices, fresh products, and opportunities to bargain, making them highly competitive despite the expansion of supermarkets (Rath, 2020; Yaqin, Ambarwati, & Hermawan, 2023). Their continued success depends not only on product availability but also on sanitation, accessibility, food safety, and efficient market management.

In Bacolod City, Sum-ag Market serves surrounding communities by providing fresh fish, meat, vegetables, fruits, and dry goods. Despite its importance, the market continues to experience operational challenges including inadequate waste management, drainage problems, flooding, limited water supply, and sanitation concerns, all of which may affect consumers' shopping experiences and perceptions.

This study is anchored on Consumer Behavior Theory, which explains that purchasing decisions are influenced by consumers' perceptions and experiences, and Service Quality Theory, which emphasizes that customer satisfaction depends on the quality of services and facilities provided. Previous studies have shown that sanitation, food safety, and consumer trust significantly influence purchasing behavior in traditional markets (Paulino et al., 2025), while effective environmental sanitation contributes to healthier and safer market environments (Arthur & Imoro, 2021).

The study likewise supports Sustainable Development Goals 2, 3, 8, 11, and 12 by promoting food safety, public health, sustainable market operations, and responsible waste management (United Nations, n.d.). Despite the importance of public markets, few studies have examined consumers' operational difficulties in satellite public markets in Bacolod City. This research therefore seeks to fill this gap by assessing consumer experiences in the wet market, dry goods, and vegetable sections of Sum-ag Market.

2. Objectives

Generally, this study determined the level of difficulties encountered by the respondents in the operation of the Sum-ag Market.

Specifically, it aimed to:

1. Describe the respondents according to age, sex, civil status, highest educational attainment, and average family monthly income
2. Determine the level of difficulties encountered in the wet market, dry goods section, and vegetables section.
3. Determine whether significant differences exist in the level of difficulties encountered when respondents are grouped according to the identified variables.

3. Review and Related Literature

Consumer Behavior and Public Markets

Consumer Behavior Theory explains that purchasing decisions are influenced by consumers' perceptions, previous experiences, and evaluation of product quality, safety, convenience, and the shopping environment. In traditional public markets, consumers continuously assess sanitation, accessibility, product freshness, and vendor practices before making purchasing decisions. Positive shopping experiences strengthen consumer confidence and loyalty, whereas poor market conditions reduce customer satisfaction (Paulino et al., 2025).

Service Quality in Traditional Markets

Service Quality Theory emphasizes that customer satisfaction depends on the extent to which services meet or exceed consumer expectations. In public markets, cleanliness, physical facilities, responsiveness of market personnel, accessibility, and safety significantly influence consumers' perceptions of service quality. Effective market management therefore contributes to improved customer satisfaction and sustainable market operations (Arthur & Imoro, 2021).

Empirical Literature

Recent studies have consistently shown that sanitation, food safety, waste management, and market organization influence consumer trust in traditional markets. Paulino et al. (2025) found that food safety compliance significantly affects consumer purchasing behavior in wet markets. Arthur and Imoro (2021) emphasized that proper sanitation practices and waste management are essential in maintaining hygienic market environments. Hsu, Wu, and Liao (2025) further reported that adequate fire safety facilities and emergency preparedness are necessary to protect both vendors and consumers. Likewise, Villanueva and Gomez (2025) concluded that operational practices in public markets influence stakeholder satisfaction, while Padura and Baena (2026) highlighted the importance of proper waste management in public markets.

Research Gap

Although previous studies have examined sanitation, consumer satisfaction, and market operations, limited empirical research has specifically investigated the operational difficulties encountered by consumers in satellite public markets in Bacolod City. This study therefore addresses this gap by examining consumer experiences in the wet market, dry goods, and vegetable sections of Sum-ag Market while comparing perceptions according to selected demographic characteristics.

4. Materials and methods

Research Design

This study employed a descriptive research design because it sought to describe the existing conditions and operational difficulties experienced by consumers in Sum-ag Market without manipulating any variables (Singh, 2023).

Respondents and Sampling

The respondents consisted of 250 consumers selected through purposive sampling. Purposive sampling was appropriate because respondents possessed firsthand buying experience relevant to the objectives of the study (Nikolopoulou, 2022). Inclusion criteria included consumers who were at least 18 years old, had recently purchased products from Sum-ag Market, and voluntarily agreed to participate. Individuals who had no buying experience in the market or declined participation were excluded..

Research Instruments

A validated self-developed questionnaire served as the primary research instrument. Part I gathered demographic information, while Part II contained thirty indicators equally distributed across the wet market, dry goods section, and vegetable section using a five-point Likert scale. The questionnaire underwent expert validation and was pilot-tested among 30 consumers from another public market before actual data collection.

Data Gathering Procedure

Permission to conduct the study was obtained from the market administrator. Respondents were informed of the purpose of the study, voluntarily participated, and completed the questionnaire. Responses were encoded and analyzed using the Statistical Package for the Social Sciences (SPSS).

Statistical Treatment

Frequency counts and percentages were used to describe respondent profiles. Mean determined the level of difficulties encountered by consumers, while the Mann–Whitney U test determined significant differences at the 0.05 level of significance.

Research Ethics

The study observed ethical research standards by ensuring voluntary participation, informed consent, anonymity, confidentiality, and respondents' right to withdraw without penalty. Personal information was protected in accordance with Republic Act No. 10173, otherwise known as the Data Privacy Act of 2012.

5. Results

Table 1 Profile of the Respondents

Variable	**Category**	***f***	***%***
Age	Younger (below 36 years old)	134	53.6
	Older (36 years old and above)	116	46.4
Sex	Male	124	49.6
	Female	126	50.4
Civil Status	Single	90	36.0
	Married	160	64.0
Highest Educational Attainment	High school	145	58.0
	College	105	42.0
Average Family Monthly Income	Lower (below Php 12,000)	121	48.4
	Higher (Php 12,000 and above)	129	51.6
Total		**250**	**100**

Table 1 presents the results on objective 1 which sought to determine the profile of the 250 respondents according to variables. The respondents comprised of 116 or 46.4% of respondents were ages 36 years and above and were considered to belong to the older group, while 134 or 53.6% were ages 36 years and below were considered younger. Almost more than half of respondents were younger. With regards to sex, 126 or 50.4% were female and 124 or 49.6% were male respondents.

For the respondents' civil status, 160 or 64% were married while 90 or 36.0% were single. Most of the respondents' highest educational attainment was dominated by high school graduate respondents of 145 or 58.0%, whereas 105 or 42.0% are college graduates. As to average family

monthly income, 129 or 51.6% of the respondents considered to have higher income of 12,001 and above while 121 or 48.4% considered to have lower income of 12,000 and below.

Based on the study, most consumers were below 36 years old, female, and married. In terms of educational attainment, most has achieved high school level education and has a higher average family monthly income.

Table 2 Level of Difficulties Encountered by Respondents in the Operation of Sum-ag Market in the Area of Wet Market

Items/Issues	Mean	Interpretation
1. Presence of "bagsakan" area and central collection stations for wastes.	3.24	Moderate
2. Cleanliness of the passageways, alleys and spaces for individual stalls	2.90	Moderate
3. Have ample water for cleaning purposes.	2.51	Low
4. Public toilets have adequate lavatories, at least one for men and one for females.	2.50	Low
5. "Keep our premises clean" signs are posted in the entrance and passageway	2.24	Low
6. Meat products are inspected according to local ordinance	3.17	Moderate
7. Fresh and live fish and marine products which are safe for consumption.	3.28	Moderate
8. Meat vendors have their own garbage can.	2.86	Moderate
9. Fish and marine products are not harmful.	3.37	Moderate
10. There is efficient storage for meat and poultry products.	3.04	Moderate
Overall Mean	**2.91**	**Moderate**

Table 2 presents the data to determine the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of the wet market which sought to answer the objective 2.

When taken per item, item 9 reached a highest computed mean of 3.37, interpreted as "moderate level", which states "Fish and marine products are not harmful." However, Item 5 got the evaluation of "low level", which was the lowest, with a computed mean of 2.24, which states, "Keep our premises clean" signs are posted in the entrance and passage ways. The table reveals that the over-all mean of 2.91 in the area of the wet market was observed as "moderate level."

The findings imply that consumer experience a moderate level of difficulty in the wet market operations of Sum-ag Market, particularly in relation to cleanliness and safety practices. Although respondents moderately agreed that fish and marine products are not harmful, the low rating for the visibility of cleanliness reminder signs suggests that sanitation communication and environmental management may still be lacking.

This denotes a need for market administrators to reinforce cleanliness campaigns, improve signage prominence, and maintain sanitation standards to enhance consumer confidence and reduce perceived risks in the wet market area.

This finding aligns with the study of Paulino et al. (2025), which found that food safety practices and consumer perception of hygiene significantly influences purchasing behavior in wet markets. When customers believe that vendors and market spaces are hygienic, secure, and adhere to food safety regulations, they are more inclined to trust them and purchased goods. This affirms that transparent sanitation procedures and hygiene communication boost consumer confidence and increase market satisfaction.

Table 3 Level of Difficulties Encountered by Respondents in the Operation of Sum-ag Market in the Area of Dry Goods Section

Items/Issues	Mean	Interpretation
1. Facilities for sanitation and maintenance are provided.	2.88	Moderate
2. Rental fees are reasonable.	3.71	High
3. Foods that require no cooking are wrapped and enclosed in containers for preservation of freshness.	3.10	Moderate
4. There is appropriate storage for perishable goods.	3.03	Moderate
5. There are adequate firefighting extinguishers.	2.19	Low
6. Issuance of cash ticket to transient vendors.	3.57	High
7. Dispensing and serving of liquor inside the market is not allowed.	2.37	Low
8. Presence of loose animals inside the market.	3.62	High

Items/Issues	Mean	Interpretation
9. There is construction of living quarters.	2.29	Low
10. There is an available parking area.	2.28	Low
Overall Mean	**2.91**	**Moderate**

In the area of dry goods section, as shown in Table 3, when taken as per item, for Item 2, obtained the evaluation of "high level", with a highest computed mean of 3.71, it states, rental fees are reasonable. However, Item 5 got the lowest mean of 2.19, which is interpreted as "low level", it states, there are adequate firefighting extinguishers. The data shows that over-all, the dry goods were observed at a "moderate level" with an overall mean of 2.91.

This implies that the dry goods section had a moderate difficulty in relation to the market operation. While respondents highly agreed that rental fees are reasonable, the low rating for the adequacy of firefighting extinguishers suggests concerns about safety preparedness within the market. This indicates that safety infrastructure requires improvement regardless of the satisfactory economic aspects of market operation. Market management should prioritize the installation and maintenance of fire safety equipment to ensure a safer environment for both vendors and consumers, which improves overall operational efficiency and public confidence.

Markets with inadequate firefighting facilities may face increased vulnerability to accidents, operational disruptions, and threats to consumer and vendor safety. As stated by Hsu, Wu, and Liao (2025), vendors in traditional markets are usually located in booths with simple partitions. They often store large quantities of flammable materials, cardboard boxes, and numerous other items. The electrical usage within the vicinity is high and the network is complex. So, when a fire occurs, it is likely to produce a large amount of dense smoke. This can be further aggravated by narrow escape and evacuation routes, causing panic among people trying to escape and can easily lead to loss of life. In addition, the Republic Act No. 9514, also known as the Fire Code of the Philippines, mandates that public and commercial establishments maintain sufficient fire prevention and suppression equipment to reduce fire risks and ensure compliance with safety standards.

The study of Mubita, Milupi, and Kalimaposo (2023) stresses that effective fire safety management in markets requires a combination of proactive measures and emergency preparedness. Proactive measures include regular assessments, proper storage of flammable materials, regular electrical systems maintenance, and fire safety equipment installation. On the other hand, emergency preparedness strategies include creation of emergency evacuation plans, establishment of communication protocols, and training of market staff on fire safety procedures.

Table 4 Level of Difficulties Encountered by Respondents in the Operation of Sum-ag Market in the Area of Vegetable Section

Items/Issues	Mean	Interpretation
1. Adequate garbage bins for rotted vegetables are provided.	2.91	Moderate
2. Weighing scales are safeguarded by market officials.	2.71	Moderate
3. Stalls are assigned in accordance to the nature of merchandise.	3.28	Moderate
4. Vegetables and fruits are available.	3.73	High
5. Market entrance fees are imposed to transient vendors	3.62	High
6. Peddlers and hawkers occupy the designated places far from market aisles and sidewalks.	3.45	High
7. Vegetables are sold fresh and clean.	3.14	Moderate
8. There is sufficient water supply for vegetables	2.80	Moderate
9. Revocation of lease of market stall is mandated if payment is not made.	3.62	High
10. "No littering signs" are visibly posted	2.06	Low
Overall Mean	**3.13**	**Moderate**

Table 4 presents the area of vegetable section, when taken per item, for the items which were evaluated as "high level", the highest was on item 4 with a computed mean of 3.73. This item was

about the availability of vegetables and fruits. However, Item 10, which states "no littering signs" are visibly posted, got the lowest evaluation of "low level", with a computed mean of 2.06.

The data shows that the computed over-all mean of 3.13 which is interpreted as "moderate level." This implies that the vegetable section of Sum-ag Market operates at a moderate level, indicating an average consumer experience in terms of product availability and market environment. The high mean for the availability of vegetables and fruits suggests that consumer perceive the section as adequately supplied, which supports convenience and satisfaction in purchasing fresh produce. However, the low mean for the visibility of “No Littering” signs indicates a weaknesses in cleanliness promotion and environmental management. This suggests that while product availability is a strength of the vegetable section, market administrators should enhance waste management awareness and sanitation signage to maintain cleanliness and enhance the overall shopping environment.

A study by Arthur and Imoro (2021) found that proper sanitation practices, waste management, and hygiene promotion are essential in maintaining hygienic market conditions. It is identified that poor drainage systems, inadequate waste bins, littering, and poor wastewater handling contributes as major sanitation challenges in public markets. It is also worth noting that environmental education, visible hygiene reminders, and improved waste management facilities are necessary to promote cleanliness and protect public health in market environments.

The study highlights that proper sanitation practices, waste management, and visible cleanliness reminders are essential in maintaining hygienic market conditions. The Republic Act No. 9003, or the Ecological Solid Waste Management Act of 2000, supports the strong need for proper waste disposal and environmental cleanliness in public spaces, requiring local establishments to promote waste reduction and maintain sanitary surroundings.

Table 5 Differences in the Level of Difficulties Encountered in the area of Wet Market when grouped and compared according to the variables

Variable	**Category**	**Mean**	**Mann Whitney U**	***p*- value**	**Sig level**	**Interpretation**
Age	Younger	2.86	7016.0	0.184	0.05	Not Significant
	Older	2.97				
Sex	Male	2.93	7613.0	0.727		Not Significant
	Female	2.90				
Civil Status	Single	2.95	6433.0	0.161		Not Significant
	Married	2.89				
Educational Attainment	High School	2.92	7536.0	0.892		Not Significant
	College	2.90				
Average Income	Lower	2.98	6768.0	0.069		Not Significant
	Higher	2.85				

Table 5 presents the comparative analyses of the level of difficulty encountered by consumers in the Operation of Sum-ag Market in the area of Wet Market according to variables.

On Age, the computed p-value obtained 0.184 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of the wet market when they are grouped and compared according to age. Therefore, the hypothesis is accepted.

On Sex, the computed p-value obtained 0.727 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of the wet market when they are grouped and compared according to sex. Therefore, the hypothesis is accepted.

On Civil Status, the computed p-value obtained 0.161 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of the wet market when they are grouped and compared according to civil status. Therefore, the hypothesis is accepted.

On Highest Educational Attainment, the computed p-value obtained 0.892 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of the wet market when they are grouped and compared according to highest educational attainment. Therefore, the hypothesis is accepted.

On Average Family Monthly Income, the computed p-value obtained 0.069 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of the wet market when they are grouped and compared according to average family monthly income. Therefore, the hypothesis is accepted.

The findings imply that consumers' perceived level of difficulties encountered in the wet market operations do not significantly vary across demographic characteristics such as age, sex, civil status, educational attainment, and average family monthly income. Since all computed p-values are greater than the 0.05 level of significance, the results suggest that consumers share relatively similar experiences and concerns regardless of their personal background. This points that the operational conditions, sanitation, accessibility, and services in the wet market are experienced uniformly by the consumer population.

The results of the study is supported by Padura and Baena's (2026), which stated that public market waste management in Pamplona, Negros Oriental, found no significant relationship between respondents' perceived understanding, observed practices, and problems in solid waste management and their age, sex, or highest educational attainment. This supports validity to the assumption that difficulties with operation in public markets might be encountered in similar circumstances regardless of a participant's demographic background.

Table 6 Differences in the Level of Difficulties Encountered in the area of Dry Goods Section when grouped and compared according to the variables

Variable	**Category**	**Mean**	**Mann Whitney U**	***p*- value**	**Sig level**	**Interpretation**
Age	Younger	2.88	7467.0	0.592	0.05	Not Significant
	Older	2.94				
Sex	Male	2.91	7657.5	0.786		Not Significant
	Female	2.90				
Civil Status	Single	2.94	6339.5	0.116		Not Significant
	Married	2.89				
Educational Attainment	High School	2.92	7471.5	0.802		Not Significant
	College	2.88				
Average Income	Lower	2.95	7256.0	0.336		Not Significant
	Higher	2.87				

Table 6 presents the comparative analyses of the level of difficulty encountered by consumers in the Operation of Sum-ag Market in the area of Dry Goods Section according to variables.

On Age, the computed p-value obtained 0.592 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of dry goods when they are grouped and compared according to age. Therefore, the hypothesis is accepted.

On Sex, the computed p-value obtained 0.786 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of dry goods when they are grouped and compared according to sex. Therefore, the hypothesis is accepted.

On Civil Status, the computed p-value obtained 0.116 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of dry goods when they are grouped and compared according to civil status. Therefore, the hypothesis is accepted.

On Highest Educational Attainment, the computed p-value obtained 0.802 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of dry goods when they are grouped and compared according to highest educational attainment. Therefore, the hypothesis is accepted.

On Average Family Monthly Income, the computed p-value obtained 0.336 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of dry goods when they are grouped and compared according to average family monthly income. Therefore, the hypothesis is accepted.

The results show that age, sex, civil status, educational attainment, and average family monthly income do not significantly affect the level of difficulties encountered by consumers at the dry goods section. Regardless if their demographic profile, consumers have comparable views and observations on how the dry goods section operates because all calculated p-valued were greater than the level of significance. This affirms that all consumer groups share identical concerns about the market dynamics, security, ease of access, and service standards.

Similar to the study of Villanueva and Gomez (2025), they discovered that when grouped based on demographic variables, stall owners' satisfaction with public market operations did not differ significantly. According to their findings, all participants regardless of age, sex, or educational background generally face operational difficulties in public markets in a similar manner. This supports an assumption that difficulties pertaining to the market are structural.

Table 7 Differences in the Level of Difficulties Encountered in the area of Vegetables Section when grouped and compared according to the variables

Variable	**Category**	**Mean**	**Mann Whitney U**	***p*- value**	**Sig level**	**Interpretation**
Age	Younger	3.08	6828.5	0.097	0.05	Not Significant
	Older	3.19				
Sex	Male	3.19	6698.5	0.050		Significant
	Female	3.05				
Civil Status	Single	3.16	6732.0	0.392		Not Significant
	Married	3.12				
Educational Attainment	High School	3.16	7207.0	0.471		Not Significant
	College	3.10				
Average Income	Lower	3.14	7780.0	0.966		Not Significant

Table 6 presents the comparative analyses of the level of difficulty encountered by consumers in the Operation of Sum-ag Market in the area of Vegetables Section according to variables.

On Age, the computed p-value obtained 0.097 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of vegetables section when they are grouped and compared according to age. Therefore, the hypothesis is accepted.

On Sex, the computed p-value obtained 0.050 which is equal to 0.05 level of significance. Further, the results indicated that there is significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of vegetables section when they are grouped and compared according to sex. Therefore, the hypothesis is rejected.

On Civil Status, the computed p-value obtained 0.392 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of vegetables section when they are grouped and compared according to civil status. Therefore, the hypothesis is accepted.

On Highest Educational Attainment, the computed p-value obtained 0.471 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of

vegetables section when they are grouped and compared according to highest educational attainment. Therefore, the hypothesis is accepted.

On Average Family Monthly Income, the computed p-value obtained 0.966 which is greater than 0.05 level of significance. Further, the results indicated that there is no significant difference in the level of difficulties encountered by the consumer in the operation of Sum-ag Market in the area of vegetables section when they are grouped and compared according to average family monthly income. Therefore, the hypothesis is accepted.

The findings suggest that consumers' perceived level of difficulties encountered in the vegetables section of Sum-ag Market are generally consistent across age, civil status, educational attainment, and average family monthly income, as shown by p-values greater than the 0.05 level of significance. This implies that most demographic groups share similar experiences regarding the operation, cleanliness, accessibility, and product availability within the vegetables section. However, the significant difference observed according to sex indicates that male and female consumers may perceive or experience difficulties differently in this market area.

This study aligns with the findings of Iton (2015) found that male and female consumers differed in how they evaluated attributes to fresh produce markets. Cleanliness of the retail environment and quality of produce were identified as highly important factors, with gender differences influencing perceptions of presentation, accessibility, and shopping convenience.

6. Results and Discussion

The findings revealed that consumers experienced a moderate level of difficulty in the operation of Sum-ag Market across the wet market (overall mean = 2.91), dry goods section (overall mean = 2.91), and vegetable section (overall mean = 3.13). These findings indicate that sanitation, food safety, accessibility, product availability, and market management remain important determinants of consumer satisfaction. Similar findings were reported by Paulino et al. (2025), who emphasized that food safety compliance and consumers' perceptions of hygiene significantly influence purchasing behavior in wet markets.

In the wet market, concerns regarding the safety of fish and marine products received the highest ratings, while the visibility of cleanliness reminders received the lowest ratings. This suggests that consumers place greater importance on food safety than on visual sanitation reminders. These findings support Paulino et al. (2025), who reported that hygienic practices increase consumer confidence, and are likewise consistent with SDGs 3 and 11 promoting public health and safe public spaces (United Nations, n.d.).

In the dry goods section, respondents identified rental affordability and fire safety preparedness as important concerns. The limited availability of firefighting equipment highlights the need for stronger implementation of Republic Act No. 9514 (Revised Fire Code of the Philippines). Hsu, Wu, and Liao (2025) emphasized that traditional public markets require adequate fire safety infrastructure and emergency preparedness because of their vulnerability to fire hazards.

In the vegetable section, product availability received favorable responses while environmental cleanliness remained an area requiring improvement. Proper waste management and visible sanitation reminders contribute to healthier market environments (Arthur & Imoro, 2021) and support Republic Act No. 9003, the Ecological Solid Waste Management Act of 2000.

Comparative Analysis

The Mann–Whitney U test revealed no significant differences in consumers' perceived difficulties according to age, civil status, educational attainment, and average family monthly income. A significant difference was observed only according to sex in the vegetable section ($p = 0.050$). These findings indicate that operational improvements would generally benefit all consumers regardless of demographic profile. Similar findings were reported by Villanueva and Gomez (2025), who observed that stakeholder perceptions of public market operations generally did not differ across demographic characteristics.

7. Conclusion

The study concludes that consumers generally encounter a moderate level of difficulty in the operation of Sum-ag Market. Food safety, sanitation, waste management, rental affordability, fire

safety, and product availability remain the principal operational concerns. Although most demographic variables did not significantly influence consumers' perceptions, sex significantly affected responses in the vegetable section. The findings emphasize the importance of continuous operational improvements that support consumer welfare and sustainable market management.

Recommendations

Based on the findings of the study, several recommendations are proposed for key shareholders.

The City Administrator should strengthen sanitation policies, drainage improvement, waste segregation, and regular market inspections to support SDGs 11 and 12 (United Nations, n.d.).

The Bureau of Fire Protection should conduct regular inspections, provide adequate firefighting equipment, and implement continuous fire safety training in accordance with Republic Act No. 9514 and the recommendations of Hsu et al. (2025).

Market administrators should ensure the continuous display of cleanliness reminders, proper waste disposal facilities, and strict implementation of Republic Act No. 9003 to promote environmental sanitation (Arthur & Imoro, 2021).

Stall owners should maintain hygienic selling areas, practice proper waste segregation, and comply with market regulations to improve consumer confidence (Paulino et al., 2025).

Future researchers should replicate this study in other public markets using probability sampling techniques and additional operational variables to improve the generalizability of findings.

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A Descriptive Analysis of the Campaign Practices of Barangay Election Candidates

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Abstract

This study quantitatively examines the campaign practices of political candidates in the 2025 Barangay Elections with the objective of strengthening electoral integrity. Utilizing a descriptive research design, data were gathered from 355 registered voters across eight villages. Demographic profiles were considered in terms of age, sex, and civil status. A majority of respondents were below 45 years old, representing an electorate highly exposed to both traditional and digital campaign strategies. Findings reveal that premature campaigning remains pervasive, with the wearing of campaign apparel, particularly T-shirts bearing candidates' names and images, emerging as the most dominant practice across demographic groups. Campaign strategies were further characterized by the distribution of material goods such as shirts, bags, food, and drinks, alongside excessive media exposure. Vote buying and selling also persisted in varied forms, ranging from direct cash inducements to logistical support such as voter transportation. Younger and single voters reported greater exposure to direct inducements and covert tactics, while older and married voters emphasized logistical support. Research findings reveal barangay elections continue to be driven by visibility-oriented and clientelistic practices with candidates tailoring strategies to specific voter profiles. To address these challenges, it is recommended that the Commission on Elections implement stricter monitoring and sanctions against premature campaigning, regulation of media exposure and oversized paraphernalia, intensified enforcement against vote buying, and targeted voter education initiatives.

Keywords: Campaign practices; barangay elections; electoral integrity; vote buying; politician clientelism

1. Introduction

Philippine election laws such as Republic Act 9006, known as the Fair Elections Act, Republic Act 6646, and Batas Pambansa Blg. 881, form the core framework designed to safeguard free, orderly, and credible elections (Senate Electoral Tribunal, 2023). These statutes set boundaries on campaign conduct, regulate propaganda materials, and promote ethical voter engagement. More recent measures, including Senate Resolution 2079, have attempted to respond to evolving campaign practices (An Act Amending Republic Act 9006, 2023). Yet, despite these safeguards, premature campaigning and vote buying remain widespread, revealing a persistent gap between the intent of policy and the realities of practice.

Premature campaigning, understood as electioneering outside the legally prescribed campaign period, remains one of the most contentious issues in Philippine elections. Legal loopholes, most notably those created by the Penera v COMELEC ruling, have enabled aspirants to engage in extensive pre-campaign promotion without penalty, weakening the spirit of electoral law (Respicio & Co., 2024; AJA Law, 2025).

At the barangay level, these practices are particularly pronounced, where visibility and clientelism continue to dominate campaign strategies. Guelos (2024) likewise observed that patronage politics and clientelism are deeply embedded in local governance. This shapes electoral behavior even among younger leaders. These findings underscore the persistence of transactional practices in grassroots elections and underscores the need for closer empirical scrutiny of their deterrent effect.

Vote buying continues to intensify the challenges facing grassroots elections. Studies show that poorer voters are often the primary targets, with inducements ranging from basic goods such as food and clothing to direct cash payments (Canare et al., 2018). These exchanges are not isolated acts but form part of broader systems of patronage and clientelism that shape local political behavior. Even with stronger enforcement efforts in recent years, such as COMELEC's "Kontra Bigay" campaign during the 2025 Barangay and Sangguniang Kabataan Elections, reports of violations remain widespread (Jaymalin, 2023; Presidential Communications Office, 2023).

The persistence of these practices puts in question the effectiveness of existing election laws and COMELEC resolutions in curbing misconduct among local candidates. Although national and municipal elections often receive greater scholarly attention, barangay contests remain underexplored despite their critical role in shaping democratic behavior at the community level (Coupeau, 2026).

This study seeks to address that gap by examining the campaign practices of barangay election candidates and situating the findings within broader discussions on electoral integrity and democratic consolidation.

2. Literature Review

Good governance and ethical political conduct remain vital to sustaining democractic institutions and building public trust at the grassroots level. Yet, premature campaigning and vote buying continue to challenge the integrity of Philippine elections despite repeated regulatory reforms. The Commission on Elections (COMELEC, 2019; 2022) has issued resolutions to curb practices such as campaigning outside the official period and vote buying, but enforcement gaps persist. The Penera v. COMELEC ruling (2009) further complicated regulation by decriminalizing many forms of early campaining, creating loopholes that candidates have widely exploited.

Looking beyond the Philippines, comparative studies highlight how clientelism and money politics remain resilient across Southeast Asia. Hicken, Aspinall, and Weiss (2019) point to weak party institutions, poverty, and personalistic leadership styles as factors that sustain clientelistic practices in the region. Cheeseman and Klaas (2018) likewise document how electoral manipulation, including vote buying, intimidation, and media exploitation, undermines accountability even in hybrid regimes. These perspectives situate the Philippine experience within broader patterns of electoral vulnerability.

Foreign research also sheds light on the influence of campaign visibility and material inducements on voter behavior.Rahman and Idris (2021) found that promotional materials such as posters and giveaways significantly shape voter recognition and familiarity in Malaysian local elections. Similarly, Lee and Oh (2019) showed that oversized campaign visuals can trigger bandwagon effects among younger voters in South Korea and Taiwan. These findings resonate with Philippine barangay elections, where campaign paraphernalia and premature displays remain common despite restrictions (COMELEC, 2021). Local scholarship reinforces this picture: Brillantes and Fernandez (2018) emphasize transparency and accountability as key to public confidence. Atienza (2021) notes that vote buying endures due to weak enforcement and cultural acceptance. Together, these studies underscore the policy-practice gap that continues to shape barangay elections.

Demographic shifts and digital engagement further complicate the landscape. An RSIS International study (2023) reported that more than 81% of Gen Z voters in the Philippines use social media daily, exposing them to digitally mediated campaigns that heighten candidate visbility. Stromback et al. (2024) found that youth engagement surges during campaign periods, reflecting generational responsiveness to online mobilization. These trends suggest that barangay elections, often overlooked in political behavior research, are shaped by both entrenched clientelistic practices and emerging digital strategies, reinforcing the need for closer empirical analysis at the community level.

3. Theoretical Framework

The research, anchored on Practice Theory which conceptualizes social practices as the primary units of analysis, allowing campaign behaviors, routines, and interactions of candidates and supporters to be examined within broader political contexts (Apps, Beckman, & Bennet, 2019). Complementing this theory is Symbolic Interactionism which provides a lens to interpret meanings and social interactions underlying campaign practices, emphasizing how symbols, language, and communication shape voter perceptions and normalize or reject certain tactics (Carter & Fuller, 2015). These frameworks integrate structural and interpretive dimensions: Practice Theory enables the quantitative measurement of patterned behaviors, while Symbolic Interactionism captures the symbolic meanings voters attach to practices such as premature campaigning and vote buying.

Framing the study within the United Nations Sustainable Development Goal 16 (Peace, Justice, and Strong Institutions) underscores the importance of ethical governance, transparency, and institutional accountability. Recent empirical studies highlight how disinformation, vote buying, and weak enforcement mechanisms erode electoral trust and institutional legitimacy in the Philippines (Arugay & Baquisal, 2022; Guiral, 2026). By documenting campaign practices and voter perceptions,

this study contributes evidence-based recommendations to strengthen compliance, enforcement, and citizen participation, thereby supporting both local democratic resilience and the global agenda of accountable governance.

4. Objectives

This study investigated the level of campaign practices of barangay election candidates in a highly-urbanized city in the Philippines.

Specifically, this study aims to:

a. determine the level of campaign practices of barangay election candidates in premature campaign, campaign strategies, and vote buying/vote selling, and
b. test whether there is a significant difference in the level of campaign practices of barangay election candidates when grouped and compared according to age, sex, and civil status

5. Materials and Methods

The study employed a descriptive-comparative research design to examine the campaign practices of barangay election candidates in a highly-urbanized city.

5.1. Respondents

From a total voter population of 4.630 across 37 puroks or small villages, the study surveyed 355 registered voters drawn from eight (8) puroks located near the barangay's people's hall. The sample included male and female residents, both single and married individuals, and voters with diverse educational backgrounds. A stratified random sampling method was used. The population was divided into strata based on shared characteristics such as income age, sex, and civil status. The statistician then determined the number of respondents per purok proportionate to its voter population: Purok A (39), Purok B (27, Purok C (16), Purok D (41), Purok E (33), Purok F (72), Purok G (64), and Purok H (63), comprising a total of 355 respondents.

Table 1. Demographic Distribution of the Respondents

Organization	**Population** (N)	**Sample** (n)	**Percentage** (%)
A	512	39	11.06
B	354	27	7.65
C	209	16	4.51
D	537	41	11.60
E	435	33	9.40
F	931	72	20.11
G	838	64	18.10
H	814	63	17.58
Total	**4,360**	**355**	**100**

Variables	**Categories**	**Frequency**	**Percentage**
Age	Younger (below 45 years old)	214	60.28
	Older (45 years old and above)	141	39.70
Sex	Male	148	41.69
	Female	207	58.31

Civil Status	Single	203	57.18
	Married	152	52.82

Table 1 indicates that of 355 registered voters surveyed, the majority or 241(60.28%) were younger or below 45 years old, while the remaining 141 (39.70%) were older or 45 years old and above. In terms of sex, 207 or 58.31% were females, while 148 or 41.69% were males. Regarding civil status, the majority or 203 (57.18%) were single, while the remaining 152 or 52.82% were married community members.

5.2 Research Instrument

A researcher-made survey questionnaire was used to examine the level of campaign practices of barangay election candidates. The questionnaire consisted of two parts: Part I gathered respondents' demographic profiles, such as age, sex, and civil status, while Part II measured the level of campaign practices in premature campaigning, campaign strategies, and vote buying/vote selling, with ten (10) items per domain, for a total of thirty (30) items. Responses were rated on a five-point Likert scale, ranging from 1 to 5, with 5 indicating as always, 4 for often, 3 for sometimes, 2 for rarely, and one for almost never.

The questionnaire's validity was meticulously established through face and content validation by a panel of three experts. The validators included an elections officer of a city who is also a lawyer and a Master in Public Management, a graduate school professor who is also an expert statistician, and a seasoned public administrator and a part-time professor in the School of Graduate Studies. The obtained validity score of 4.88 interpreted as excellent, affirms the instrument's validity, in line with the criteria by Carter V. Good and Douglas E. Scates. Moreover, the instrument underwent pilot testing with thirty (30) registered voters from three puroks, each contributing ten (10) respondents to ensure reliability. The respondents were not part of the actual survey sample size. A coefficient value of 0.967, interpreted as excellent, affirmed the instrument's reliability.

5.3 Data Gathering Procedure

After establishing the validity and reliability of the research instrument, the study followed a structured data gathering procedure to examine the level of campaign practices of barangay election candidates. Formal letters of permission were sent to the purok chairpersons where the pilot and actual surveys were conducted. Upon approval, the researchers met with respondents to explain the purpose of the study, the contents of the questionnaire, and the procedures for accomplishing it. In compliance with ethical research standards, respondents were assured of the confidentiality and anonymity of their responses. The researchers personally administered and retrieved the accomplished questionnaires to ensure completeness and accuracy. Collected data were then categorized, tabulated, and prepared for statistical analysis.

5.4. Statistical Treatment and Data

This study utilized descriptive and analytical approaches in data analysis. Statistical Package for the Social Sciences (SPSS) was used to generate the necessary statistics for data analysis.

To assess the level of campaign practices of barangay election candidates in the areas of premature campaign, campaign strategies, and vote buying/vote selling. The Mann-Whitney U Test was conducted to determine if there is a significant difference in the level of campaign practices of barangay election candidates when grouped according to their age, sex, and civil status.

6. Results and Discussion

Table 2 The level of campaign practices of barangay election candidates in premature campaign

Items	Mean	Interpretation
As a registered voter, I have witnessed/experienced/encountered…		
1. direct or indirect solicitation of votes, pledges, or support for or against a candidate	4.08	High Level
2. political candidates alongside five of his/her campaign staff wearing a T-shirt bearing the candidate's name and photo before the campaign period	4.41	High Level
3. airing of advertisements over television or radio programs prior to the start of the campaign period (before November 20, 2025)	3.90	High Level
4. placement or streaming of advertisements of political candidates on social media before the campaign period (before November 20, 2025)	3.88	High Level
5. formation of organizations, associations, clubs, committees, or other groups of persons to solicit votes and/or undertake any campaign for or against a candidate	4.20	High Level
6. posting of campaign materials on public streets before the start of the campaign period (before November 20, 2025)	4.20	High Level
7. political candidates promoting their advocacies through various platforms before the campaign period	4.22	High Level
8. publishing or distributing campaign literature or materials designed to support or oppose the election of any candidate	3.95	High Level
9. holding of political caucuses, conferences, meetings, rallies, parades, or other similar assemblies, soliciting votes, and/or undertaking any campaign or propaganda for or against any candidate	4.05	High Level
10. Political candidates making speeches, announcements, or commentaries, or holding interviews for or against the election of any candidate for public office	3.92	High Level
Overall Mean	**4.08**	**High Level**

Table 2 illustrates the level of campaign practices of barangay election candidates, with an overall mean score of 4.08, indicating a high level of campaign practices in premature campaigns. This suggests that activities associated with early campaigning were widely observed in the study domain.

Among indicators, posting or streaming political advertisements on social media before the official campaign period (November 20 - 29, 2025) registered the lowest mean score of 3.88, while wearing T-shirts displaying a candidate's name and image prior to the campaign period recorded the highest mean of 4.41. Both were still interpreted as high-level practices. These results indicate that the use of branded clothing and strategies aimed at increasing early visibility are commonly employed by candidates to enhance name recall even before the formal campaign period begins.

Such practices make it difficult to distinguish between simple personal visibility and actual political solicitation, thereby complicating the enforcement of campaign regulations. As noted by

Coronel (2022), contemporary political marketing heavily relies on visibility and repeated messaging, where even small public exposures can gradually influence voter perceptions. This supports observations by the Commission on Elections (2022) and Teehankee and Calimbahin (2016), who argue that premature campaigning often takes advantage of legal gaps that permit early exposure without clearly defined penalties.

The findings underscore the need for stricter COMELEC monitoring and clearer enforcement guidelines at the community level, including documentation mechanisms for pre-campaign activities.

Table 3 The level of campaign practices of barangay election candidates in campaign strategies

Items	Mean	Interpretation
As a registered voter, I have witnessed/experienced/encountered…		
1. individual posters in common poster areas exceeding 2X3 feet	4.01	High Level
2. billboards, posters, and tarpaulins exceeding 2X3 feet	3.74	High Level
3. election campaign or propaganda materials that violate gender sensitivity principles, or are obscene, or otherwise constitute Republic Act. No. 9710 or the Magna Carta of Women	3.86	High Level
4. posters or tarpaulins that do not bear the words "Political advertisement paid for/by ___," or "Printed free of charge,: as may be applicable	3.80	High Level
5. posters or tarpaulins bearing the images of candidates, whether individually, by group, or of the whole slate, which exceed 2X3 feet	3.95	High Level
6. name calling or mudslinging to discredit a political candidate during media interviews	3.80	High Level
7. too frequent and unnecessary guesting or interviewing of an incumbent official seeking re-election or a political candidate in a TV or radio program	4.07	High Level
8. posters with single letters of names of political candidates, having a maximum size of 2X3 feet, assembled to form a size exceeding 2X3 feet, or other similar means of grouping such posters that tend to circumvent the size limitation	3.96	High Level
9. giving of T-shirts, ballers, bags, sunvisors, hats, or caps, umbrellas, handkerchiefs, ballpens, fans, food, drinks, and transportation by candidates or their supporters during and after the campaign	4.03	High Level
10. political candidates alongside five of his or her campaign staff wearing T-shirts bearing the candidates' name and photo only, during the campaign	3.94	High Level
Overall Mean	**3.92**	**High Level**

Table 3 presents the level of campaign practices of barangay election candidates in terms of campaign strategies. The overall mean score is 3.92, suggesting a high level of campaign practices in the said domain.

Among the indicators, the use of billboards, posters, and tarpaulins exceeding 2x3 feet received the lowest mean of 3.74, while the distribution of campaign materials and in-kind benefits such as T-shirts, fans, umbrellas, food, drinks, and transportation obtained the highest mean of 4.03, both indicating a high level of practice.

These findings suggest that material inducements remain central to campaign strategies even at the barangay level. Candidates continue to rely on tangible giveaways to generate goodwill,
strengthen voter connection, and enhance name recall. These blur the boundary between legitimate campaigning and indirect vote buying.

This finding supports Munoz (2018), who observed that the distribution of non-monetary goods during campaigns remains an effective clientelistic tool for signaling generosity and cultivating loyalty, particularly where party systems are weak. Van Ham and Lindberg (2015) noted that such practices persist in various democracies because they influence undecided voters and reinforce existing patronage networks.

The continued use of these traditional campaign strategies in Philippine barangay elections mirrors a wider global trend: in grassroots political settings, in-person interactions and tangible campaign materials still operate alongside and at times, take precedence over digital methods. The high men scores for materials-based incentives in this study suggest that, despite advances in technology, clientelistic and personalized campaigning remain firmly rooted in local electoral practices.

Table 4 The level of campaign practices of barangay election candidates in vote buying/vote selling

Items	Mean	Interpretation
As a registered voter, I have witnessed/experienced/encountered…		
1. being offered/receiving assistance (financial or otherwise) during the campaign period (November 20-29, 2025)	3.65	High Level
2. distribution of coins, money bills, cash cards, pay envelopes, tokens, or anything of value, together with sample ballots or other campaign materials	3.47	High Level
3. being offered or promised something value in exchange for my vote	3.59	High Level
4. a long queue of people or registered voters to receive money, discounts, insurance, health cards, grocery items, etc.	3.63	High Level
5. house-to-house campaign that involve distributing money, discount cards, grocery items, and other valuable items to votes	3.57	High Level
6. conduct bingo games, talent shows, or other similar activities that involve the distribution of prizes by political candidates or their supporters, or any person, wherein the names of candidates or the photos of candidates were mentioned and shown, respectively	3.61	High Level
7. gathering or transporting two or more registered voters to an area before and during election day purposely for the distribution of money, or anything valuable and/or sample ballots, or filled out ballots	3.65	High Level
8. posters with single letters of names of political candidates, having a maximum size of 2X3 feet, assembled to form a size exceeding 2X3 feet, or other similar means of grouping such posters that tend to circumvent the size limitation	3.57	High Level
9. possession of a voter or political candidate's supporter of blank official ballots on election day	3.62	High Level
10. provision of meals to registered voters on election day	3.55	
Overall Mean	**3.59**	**High Level**

Table 4 presents the campaign practices of barangay election candidates in terms of vote buying and vote selling, with an overall mean of 3.59, suggesting a high level of campaign practices in this domain. The finding indicates that activities involving material or financial inducements remain prevalent during local elections.

While the provision of meals to registered voters on election day obtained the lowest mean, the gathering and transporting of voters for the distribution of money, valuables, or sample ballots recorded the highest rating. Both indicators still fall within a high level of campaign practices. These findings suggest that logistical and financial assistance continue to serve as dominant strategies for

influencing voter behavior, reflecting the persistence of resource-based political engagement in barangay-level contests.

These practices highlight the continuing influence of patronage politics, where tangible benefits tend to outweigh issue-based appeals, despite the prohibition of vote buying under Omnibus Election Code of the Philippines. As noted by Hicken et al. (2018) and Muñoz (2018), vote buying persists in contexts where material needs are pressing and accountability mechanisms are weak. More recent studies further emphasize that such practices are embedded in localized political networks and are often normalized as part of electoral participation, particularly in low-income communities (Khemani, 2017; Nichter, 2018).

The findings underscore the need for stronger enforcement and civic education to address the cultural acceptance of vote buying and selling. Enhanced monitoring mechanisms and voter awareness programs could help shift electoral participation from transactional to programmatic engagement at the community level.

Table 5 Significant differences in the level of campaign practices of barangay election candidates when grouped and compared according to age, sex, and civil status.

Area	Variable	Category	N	Mann Whitney U	p-value	Interpretation
Premature Campaign	Age	Younger		13889.00	0.204	*Not Significant*
		Older				
Campaign Strategies				11629.500	0.000	*Significant*
Vote Buying/Vote Selling				12800.500	0.015	*Significant*
Premature Campaign	Sex	Male		15250.000	0.943	*Not Significant*
Campaign Strategies				14761.500	0.557	*Not Significant*
		Female				
Vote Buying/Vote Selling				15190.000	0.893	*Not Significant*
				12193..500	0.001	

Premature Campaign					*Significant*
Campaign Strategies	Civil Status	Single	14271.500	0.224	*Not significant*
		Married	13404.500	0.034	*Significant*
Vote Buying/Vote Selling					

No significant differences were noted in the level of campaign practices of barangay election candidates in the domain premature campaign when grouped and compared according to the variables age and sex. The results indicate no significant differences across age (p=0.204) and sex (p=0.943), suggesting that these demographic variables do not substantially influence respondents' perceptions of early campaign activities. This observation is consistent with studies highlighting how the pervasiveness of premature campaigning in both community and digital spaces can render certain demographic factors less decisive in shaping awareness or perception (Tanggol, 2021; Ong & Cabañes, 2018).

However, a significant difference was found for civil status (p=0.001), with single voters reporting a higher level of campaign practices than married voters. This implies that marital status influences sensitivity to premature campaigning, with single respondents appearing more observant or critical of early campaign activities. This may be due to their stronger engagement in social networks and digital media, which increases exposure to campaign-related content and activities (S. Rajaratnam School of International Studies, 2023; Stromback et al., 2024). On the other hand, David et al. (2021) suggest that married voters may perceive such practices with greater tolerance, possibly shaped by familial priorities, stability, and competing daily responsibilities.

These results align with the findings of Hicken and Nathan (2020) and Pabico (2020), which emphasize that socio-demographic characteristics influence how citizens interpret political behavior, including tolerance toward early campaigning and other electoral practices such as vote buying. The data suggest that premature campaigning has become a patterned social practice, with single voters' heightened sensitivity reflecting their more active participation in the social and digital environments where these practices circulate. Carter and Fuller (2016) further explain, through the lens of Symbolic Interactionism, how individuals attach meaning to social actions; in this context, single voters may interpret premature campaign activities as indicators of candidate behavior and political integrity.

Research findings underscore the need for targeted voter education strategies that consider civil status as a relevant factor. Programs may encourage single voters to take on more active roles as community monitors of campaign compliance, while also raising awareness among married voters about the long-term implications of tolerating premature campaigning. These interventions can reinforce the regulations of the Commission on Elections (2019) and promoted more responsible political engagement, ultimately contributing to the strengthening of electoral integrity at the local level.

When it comes to campaign strategies, the results indicate no significant differences in the level of campaign practices of barangay election candidates when grouped and compared according to sex (p=0.557) and civil status (p=0.224). These data suggest that these factors do not substantially influence respondents' perceptions of candidates' campaign strategies. This research finding is consistent with studies by Hicken et al. (2019) and Sidel (2021), showing that exposure to modern campaign strategies, especially digital outreach, may operate independently of sex or marital status due to the pervasive nature of online platforms and community-based political interactions.

On the other hand, a significant difference was noted for age (p=0.000), with younger voters reporting higher campaign practices in this domain. This implies that younger respondents are more exposed to or more actively targeted by campaign strategies, reflecting their heightened engagement in digital and social media spaces where political messaging is increasingly concentrated. These results align with Norris and Gromping (2019), who note that contemporary electoral campaigns rely heavily on digital platforms that disproportionately reach younger audiences. Similarly, Enli (2017)

highlights the role of online campaigning and mediated authenticity in fostering stronger connections with younger voters, while older voters tend to rely more on traditional media such as television, radio, and print.

The generational divide observed in these findings can also be understood through Practice Theory, which emphasizes the patterned behaviors, routines, and social interactions embedded within political campaigns (Bennet & Saggerberg, 2016). Younger voters' higher exposure may be facilitated by their dense online social networks, where campaign content spreads rapidly and peer influence amplifies engagement. In addition, Symbolic Interactionism (Carter & Fuller, 2016) provides insight into how these voters interpret and respond to political messages, where symbolic cues, media presentation, and interactive digital experiences shape their perceptions of candidates' strategies.

The findings highlight a clear generational and technological dimension to campaign exposure, underscoring the need for COMELEC to strengthen oversight of digital campaigning, ensure fairness, and promote equitable access to political information. Furthermore, these results point to the importance of voter education programs tailored to younger audiences, particularly those that emphasize critical media literacy and ethical political participation. Such efforts are essential in safeguarding democratic accountability and promoting participatory equity in increasingly digitized electoral environments.

Meanwhile, no significant difference was found in vote buying and vote selling when grouped and compared according to sex ($p=0.893$). The result suggests that this demographic variable does not meaningful shape respondents' perceptions or experiences of vote buying practices. This finding aligns with prior research indicating that exposure to clientelistic practices and vote buying behaviors can transcend formal educational or gendered divides, particularly in contexts where political mobilization relies heavily on localized networks and social norms (Hicken et al., 2019; Sidel, 2021).

In contrast, significant differences emerged for age ($p=0.015$) and civil status ($p=0.034$). Younger voters and single respondents and married voters reported higher campaign practices in this domain than older and married voters, implying that these groups are more exposed to or observant of vote buying activities. These results resonate with global and regional empirical evidence, highlighting youth as a primary focus of contemporary campaign strategies.

For instance, in Indonesia, candidates have strategically engaged younger audiences through pop culture, e-sports, and digital media content (Associated Press, 2024). Similarly, in the Philippines, over 80% of Gen Z voters engage with social media daily, making them especially susceptible to online political messaging and targeted mobilization (RSIS, 2023). Stromback et al. (2024) further underscore that political engagement among younger cohorts intensifies as elections approach, reflecting campaign's reliance on digital outreach, interactive platforms, and entertainment-driven strategies to capture attention.

The generational and social differences observed in this study can also be interpreted through the lens of Practice Theory, which conceptualizes campaign behaviors as socially embedded practices involving networks of actors, routines, and interactions (Apps et al., 2019). Younger and single voters are likely embedded in more dynamic social networks (both online and offline) which facilitate rapid dissemination of campaign information, including exposure to vote buying activities. Symbolic Interactionism (Carter & Fuller, 2015) highlights how the meanings and interpretations of campaign practices are socially constructed, suggesting that youth may perceive vote buying differently due to peer influence, digital disclosure, and media-mediated representations of political engagement.

These results reveal a generational and social dimension to perceptions of electoral misconduct, with younger and single voters being more attuned to campaign dynamics in both digital and community spaces. The findings underscore the need for targeted voter education campaigns, strengthened monitoring of digital campaign practices, and community-based reporting mechanisms to mitigate the risks associated with early exposure to clientelistic tactics. By addressing these vulnerabilities, policymakers and electoral commissions can uphold electoral integrity, foster informed participation, and strengthen trust in democratic processes amid increasingly sophisticated and technology-driven political campaigns.

7. Conclusion

The study provides clear evidence that campaign practices in the 2023 Barangay Elections remain deeply entrenched in both traditional and transactional forms of political engagement.

Premature campaigning and the distribution of material inducements were the most prominent strategies observed, reflecting the persistence of visibility-driven and clientelistic approaches despite existing legal safeguards. Age and civil status emerged as significant factors shaping voter perceptions, with younger and single respondents more attuned to early campaigning and direct inducements, while older and married voters emphasized logistical support as a common tactic. Other demographic variables, such as sex, did not yield notable differences.

These findings underscore the continuing dominance of practices that blur the line between legitimate campaigning and electoral misconduct. While modern digital strategies are increasingly evident, they coexist with entrenched methods such as vote buying and excessive reliance on campaign paraphernalia. This duality highlights the adaptive nature of local political actors, who tailor strategies to specific voter profiles while exploiting gaps in enforcement.

To strengthen electoral integrity at the grassroots level, the study recommends intensified monitoring by the Commission on Elections, localized civic education programs, and targeted voter awareness initiatives that engage youth and families. Such measures can help foster ethical political behavior, reduce tolerance for transactional practices, and promote transparency in community level elections. Addressing these challenges contributes not only to cleaner barangay elections but also to the broader objectives of democratic consolidation and the United Nations Sustainable Development Goal 16, which calls for accountable institutions and inclusive participation.

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From Waste to Worth: Utilizing Watermelon Rind as an Innovative Plant-based Bacon Substitute

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Abstract

This study developed a plant-based bacon alternative using watermelon rind, a commonly discarded byproduct, to promote sustainability and healthier food options. Employing a descriptive-developmental research design, watermelon rinds were processed through washing, peeling, blanching, dehydration, and pulverization, then combined with natural spices and binders to produce bacon-like strips. The product was evaluated by 30 respondents, including hospitality students, faculty, and health-conscious individuals, using a 5-point Likert scale to assess appearance, color, aroma, taste, texture, and overall acceptability. Findings revealed that the watermelon rind bacon was generally well accepted, particularly in terms of texture and visual appeal. However, improvements in saltiness and flavor balance were identified as necessary for product enhancement. The study demonstrates that watermelon rind can be transformed into a viable plant-based meat alternative, contributing to food waste reduction and sustainable culinary practices. It further highlights opportunities for innovative, eco-friendly menu development within the hospitality industry while supporting the use of natural and nutritious ingredients.

Keywords: Watermelon rind, plant-based bacon, sustainability, food waste reduction, sensory evaluation, hospitality innovation

1. Introduction

Since watermelon is a globally cultivated fruit that is mainly consumed, its peels are often overlooked. Watermelon rind refers to the hard and white inner part of the fruit between the flesh and the green outer layer. Watermelon peels are usually ignored in the kitchen but are a good source of fiber, antioxidants, and amino acids (Badr et al., 2019). Ashoka et al. (2021) examine the effective use of agricultural waste, particularly watermelon peels, to create value-added food products. Watermelon peels were converted into watermelon rind flour (WRF), after which they were added to cookies in varying proportions (10%, 20%, and 30%) to evaluate the nutritional and quality standards of the product. This article highlights the use of fruit peels, such as watermelon peels, to increase the sustainability of food items and make them nutritionally rich bakery products (Ashoka et al., 2021). The recognition and utilization of waste materials, such as watermelon peels, creates a unique bridge between the concepts of nutrition, innovation, and economic development.

In terms of global concerns about processed meat consumption, such as bacon, there are many serious and deadly diseases associated with uncontrolled meat intake. Chronic diseases, including cancers, type II diabetes, and cardiovascular diseases, are a major public health burden globally, resulting in increased healthcare expenditure, decreased quality of life, and premature death. Among all the dietary and lifestyle components known to contribute to such diseases, overconsumption of red and processed meat has been a significant contributor. 36 million deaths per year, equivalent to 63% of all global deaths, can be attributed to these diseases, and almost 40% of these deaths occur before the age of 70 years (Händel et al., 2019). It is evident that diets high in red and processed meats have been linked to an increased risk of these diseases.

Watermelon (Citrullus lanatus) is a flowering plant species of the Cucurbitaceae family, and the name of its edible fruit is widely recognized. It is widely produced around the world, and while the juicy flesh of the watermelon is enjoyed worldwide, unfortunately, the rinds are usually discarded as waste. Watermelon rinds are most often used for composting. However, it is not solely used for fertilizer; watermelon rind is not merely a waste product, but a rich source of nutrients and fiber. Preliminary research suggests that watermelon rind possesses potential health benefits due to its antioxidant and antimicrobial properties (Kumar et al., 2018). Watermelon rinds are rich in nutrients, including moisture, carbohydrates, protein, vitamins, minerals, and phytochemicals, making them a

valuable source of dietary fiber and antioxidants (Arivuchudar, 2023; Rezagholizade-Shirvan et al., 2023). Studies have shown that incorporating watermelon rind into food products, such as crackers, can enhance nutritional profiles by increasing protein, fiber, iron, zinc, calcium, and phosphorus content while reducing energy, carbohydrates, and fat (Arivuchudar, 2023).

Beyond its potential to reduce food waste, watermelon rind possesses considerable nutritional value that supports its utilization as a functional food ingredient. The white rind contains substantial amounts of dietary fiber, vitamin C, potassium, magnesium, citrulline, phenolic compounds, flavonoids, and other bioactive antioxidants that have been associated with various health-promoting properties (Badr et al., 2019; Kataria et al., 2023). Dietary fiber contributes to improved digestive health, promotes satiety, and may assist in regulating blood glucose and cholesterol levels, while antioxidants help reduce oxidative stress by neutralizing free radicals (Arivuchudar, 2023; Rezagholizade-Shirvan et al., 2023). Watermelon rind is also recognized as a natural source of the amino acid L-citrulline, a precursor of L-arginine, which has been associated with improved vascular function and nitric oxide production that may support cardiovascular health (Figueroa et al., 2010; Kataria et al., 2023).

Utilizing watermelon rinds creatively serves as an innovative approach to addressing challenges related to food waste reduction and the development of sustainable plant-based foods. The transformation of watermelon rind into a plant-based bacon substitute aligns with the principles of the circular economy by converting an agricultural byproduct into a value-added food ingredient while supporting the United Nations Sustainable Development Goals (SDGs), particularly SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action). Repurposing fruit byproducts reduces food waste, improves resource efficiency, and contributes to more sustainable food production systems (Arivuchudar, 2023; FAO, 2019; Papargyropoulou et al., 2014).

The rapid growth of the global plant-based food sector has increased consumer demand for alternatives that closely resemble conventional meat products in appearance, flavor, aroma, and texture. Consumer acceptance studies consistently demonstrate that sensory quality remains one of the strongest determinants of consumers' willingness to purchase and repeatedly consume plant-based meat alternatives (Michel et al., 2020; Szenderák et al., 2022). Likewise, Kumari et al. (2023) emphasized that successful plant-based meat products must closely replicate the sensory characteristics of animal meat while simultaneously providing nutritional and environmental benefits. Recent sensory comparisons between commercial plant-based bacon and traditional bacon further indicate that improvements in flavor, texture, and overall eating experience are essential for increasing consumer acceptance and market competitiveness (Melios et al., 2024).

Considering the nutritional value of watermelon rind and the increasing demand for sustainable meat alternatives, investigating its application as a plant-based bacon substitute represents a promising area of food innovation. The present study therefore explores the feasibility of utilizing watermelon rind to develop an acceptable plant-based bacon product that contributes to food waste reduction, sustainable hospitality practices, and the growing market for environmentally responsible food products.

Objectives

This study aimed to develop and evaluate a plant-based bacon substitute from watermelon rind.

2. Materials and methods

Procedure

I. **Collection and Preparation of Raw Materials**

Fresh watermelons were acquired from the local market, as shown in Figure 1. Only ripe and high-quality watermelons were selected to ensure consistency and suitability for processing.

Figure 1. Process of acquiring Watermelon from the market

***II*. Washing**

The watermelon was thoroughly washed with clean water to remove dirt and impurities, as shown in Figure 2. Ensuring sanitation before processing.

Figure 2. Process of washing the watermelon

***III*. Cutting**

After washing, the watermelon was cut into halves using a sanitized knife to expose the red flesh and rind portions (Figure 3).

Figure 3. Watermelon was cut in half

***IV*. Peeling**

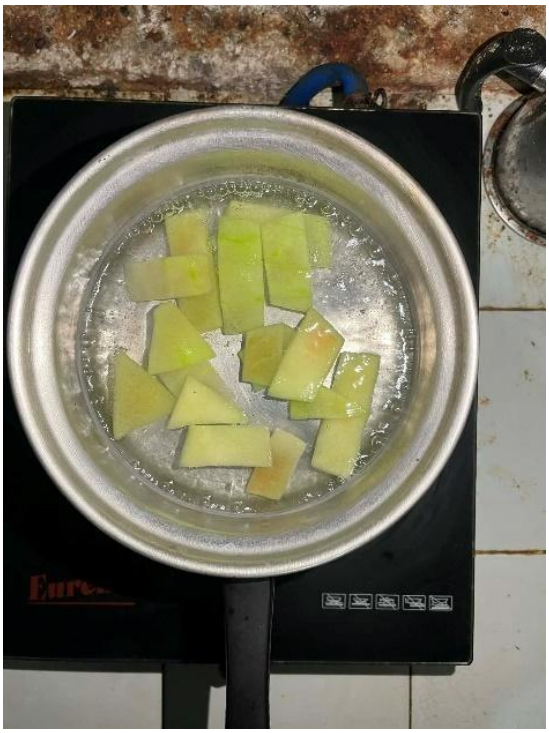
The green outer skin of the watermelon was peeled off using a clean peeler, as shown in figure 4 leaving only the white rind portion that would serve as the main raw material

Figure 4. Removing the outer layer of the watermelon

***V.* Boiling**

The rind strips were blanched in boiling water with salt for 6 to 8 minutes to improve texture and reduce bitterness, as shown in Figure 5. After boiling, the rinds were removed and patted dry with paper towels to eliminate excess moisture.

Figure 5. Blanched with a salt and water mixture



***VI*. Dehydrating and Pulverizing the watermelon rind**

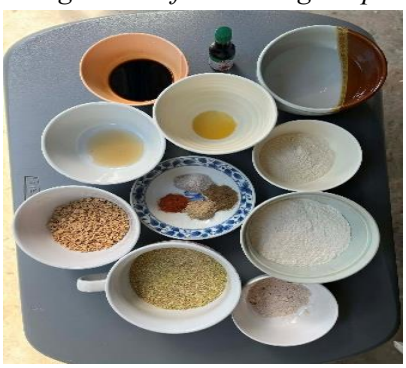
Figure 6. Dehydrating the Watermelon Rind

The white rind was sliced into thin strips. The strips were placed evenly on dehydrator trays and dehydrated at 70°C (158°F) for 14 hours, as illustrated in Figure 6. The dried rinds were then pulverized using a food processor until a fine powder was obtained. This powdered form of the watermelon rind was used to ensure even distribution, improved texture, and consistency in the final product (Figure 7).

Figure 7. Pulverizing the dried Watermelon Rind

***VII*. Mixing with Spices and Condiments**

Figure 8. Measured ingredients for creating the plant-based bacon mixture



The dehydrated rind was thoroughly mixed with spices and condiments to enhance its flavor, as shown in Figure 8. It was then combined with vital Wheat gluten flour and kneaded for six (6) minutes to form the first layer of the plant-based bacon (Figure 9). The formulation yielded approximately 20–30 thin strips of plant-based bacon, depending on the thickness and slicing method.

Ingredients Used:

- Powdered Watermelon Rind
- ¼ cup Textured Vegetable Protein
- 1cupVital Wheat Glutinous Flour
- ½ cup Water
- 1 ½ tbsp Oil
- 1 tbsp Soy Sauce
- 2 tsp Sugar
- 1 tsp Liquid Smoke (Hickory)
- 2 tsp Spanish Paprika
- 2 tbsp McCormick Grill Mates Hickory
- 2 tsp Pepper
- 2 tsp Salt
- 1 cup Flour
- Annatto powder

Figure 9. Creating the first layer mixture

***VIII*. Preparing the Second Layer**

Figure 10. Produced layers for the plant-based bacon structure

The extender, oil, and vital wheat glutinous flour were mixed and kneaded for seven (7) minutes. This layer served as a binder and added texture to the product, finishing it with food coloring, as shown in Figure 10

***IX*. Layering and Shaping**

Figure 11. Layered the plant- based bacon structure

Both layers were combined, as shown in Figure 11, and it was flattened to form a bacon-like structure. The mixture was shaped into strips resembling bacon slices as illustrated in Figure 12, ensuring uniform thickness for even cooking.

X. **Marination and Frying**

Figure 12. Flattened and Shaped plant-based bacon

The shaped watermelon rind "bacon" was brushed with a prepared marinade and fried for about five (5) minutes, or until golden brown and slightly crispy as shown in Figure 13.

Figure 13. Plant-based bacon after frying

This final step developed the smoky aroma and bacon-like appearance of the product

Research Design

This study used a descriptive developmental research design.

Respondents of the Study

The respondents consisted of 30 participants of Hospitality and tourism management students, health-conscious individuals or fitness enthusiasts, and faculty members from the School of Accountancy, Business, and Hospitality at the University of Saint Louis. testability of the watermelon rind–based bacon substitute. Each table reflected the acceptability test of the product across the sensory attributes of appearance, color, aroma, taste, flavor, and texture. The data consisted of ratings from 30 respondents, scored on a scale of 1 (strongly disagree) to 5 (strongly agree). The research questionnaire was based on the work of Bajo et al. (2025). Structural characteristics of tilapia parts: Utilizing tilapia bones as an innovative product (By University of Saint Louis) [Thesis].)

Respondents	Number of respondents
Hospitality Management	18
Tourism Management	5
Fitness Enthusiasts	4
Faculty members from the School of Accountancy, Business, and Hospitality	3
Total	30

3. Results

Table 1. Variable Interpretation Scale for Response Ratings

Variable Interpretation		**Descriptive Equivalent**
4.50-5.00	Strongly Agree (5)	Excellent
3.50-4.49	Agree (4)	Very Good
2.50-3.49	Neutral (3)	Good
1.50-2.49	Disagree (2)	Fair
1.00-1.49	Strongly Disagree (1)	Poor

Table 2. Respondents' Assessment of the Utilization of Watermelon Rind as a Plant-based Bacon Substitute

Statement	**Mean**	**Qualitative Description**
In terms of Appearance (Shape, size)		
1. Is it appealing?	4.47	Excellent
2. Does the appearance resemble normal bacon?	4.53	Excellent
3. Were the size and shape consistent?	3.97	Very Good
4. Are there unwanted particles visible on the food?	2.20	Fair
5. Does the visual presentation look appetizing?	4.37	Excellent
Categorical Mean	3.907	Very Good
In terms of Color		
1. Does the product have a color similar to that of traditional bacon?	4.57	Excellent
2. Was the color even and consistent across the product?	4.50	Excellent
3. Was the color visually attractive?	4.50	Excellent
4. Does the product look properly cooked (not burnt or under-cooked)?	4.10	Excellent
5. Do you associate the color of the food with specific flavors or tastes?	4.30	Excellent
Categorical Mean	4.393	Excellent
In terms of Aroma		
1. Is the smell pleasing?	4.27	Excellent

2.	Is the smell natural?	3.97	Very Good
3.	Is the smell overpowering?	2.97	Good
4.	Does the smell attract you to eat the product?	4.20	Excellent
5.	Does the aroma resemble the smell of traditional bacon?	4.10	Excellent
Categorical Mean		3.900	Excellent
In terms of Taste			
1.	Did the taste match the aroma?	4.37	Excellent
2.	Was the taste rich and flavorful?	4.30	Excellent
3.	Is the seasoning well-balanced?	4.17	Excellent
4.	Are you satisfied with the overall taste of the product?	4.43	Excellent
5.	Does it have any after taste?	3.23	Good
Categorical Mean		4.100	Excellent
In terms of Flavor			
1.	Is the flavor of the product pleasant?	4.33	Excellent
2.	Does the flavor resemble the taste of traditional bacon?	4.27	Excellent
3.	Does the flavor make the product more appetizing?	4.27	Excellent
4.	Are you satisfied with the overall flavor of the product?	4.27	Excellent
5.	Does the flavor seem natural rather than artificial?	4.13	Excellent
Categorical Mean		4.253	Excellent
In terms of Texture			
1.	Is the texture of the product suitable for all ages of consumers?	4.13	Excellent
2.	Does the crispiness last long?	3.27	Good
3.	Does the texture complement the flavor of the food?	4.30	Excellent
4.	Is the texture uniform?	4.27	Excellent
5.	Does the texture provide a satisfying crunch?	3.87	Very Good
Categorical Mean		3.967	Very Good
Overall Mean		4.086	Very Good

Table 2 presents respondents' assessment of the utilization of watermelon rind as a plant-based bacon substitute across six key sensory and functional criteria: appearance, color, aroma, taste, flavor, and texture. The product received an overall mean of 4.086, interpreted as "Very Good," indicating general acceptance and a positive perception among respondents, while highlighting areas for refinement. In terms of appearance, the watermelon rind bacon was rated very positively for visual appeal, resemblance to traditional bacon, and appetizing presentation. However, the visibility of unwanted particles lowered the categorical mean to 3.907 (Very Good), suggesting that attention to cleanliness and visual refinement during processing is crucial. These findings align with previous research indicating that appearance significantly influences consumer willingness to try plant-based or novel foods, as presentation can strongly affect perceived quality and acceptance (Spence et al., 2019).

The color of the product received the highest ratings (categorical mean = 4.393, Excellent), with respondents noting its similarity to conventional bacon, evenness, and proper cooking. Color is recognized as a key determinant of perceived flavor and overall food quality, particularly in plant-based meat alternatives, as it shapes expectations and encourages consumption (Pérez-López et al., 2020). Regarding aroma, the watermelon rind bacon obtained a categorical mean of 3.900 (Excellent), with respondents appreciating the pleasing smell and similarity to traditional bacon. The slightly lower rating for overpowering smell suggests that aroma intensity should be moderated to appeal to a

wider range of consumers. Research indicates that aroma consistency and naturalness are crucial for achieving sensory satisfaction and acceptance of alternative protein products (Delwiche, 2020).

In terms of taste, the product achieved a categorical mean of 4.100 (Excellent), reflecting favorable assessments for richness, balance of seasoning, and overall satisfaction, although aftertaste received a lower score. This suggests that while the flavor profile is generally acceptable, refining the lingering aftertastes could further enhance the consumer experience. Studies in plant-based food development highlight that taste and aftertaste directly influence repeat consumption and product adoption (Davis et al., 2021).

The flavor dimension also received excellent ratings (categorical mean = 4.253), withrespondents noting that the product was pleasant, appetizing, and resembled traditional bacon. Natural flavor perception further contributed to positive acceptability, reinforcing the importance of ingredient authenticity in plant-based substitutes (Hwang et al., 2020).

Finally, the texture of the watermelon rind bacon received a categorical mean of 3.967 (Very Good), with high ratings for suitability across ages, complementing flavor and uniformity. Lower scores for crispiness retention and satisfying crunch suggest that further optimization of preparation methods is necessary to improve mouthfeel and maintain textural integrity over time. Prior research indicates that texture is a crucial factor in determining the success of plant-based bacon alternatives, as it affects both palatability and perceived similarity to traditional meat products (Hwang et al., 2020; Davis et al., 2021).

Overall, the findings demonstrate that watermelon rind has strong potential as a plant-based bacon substitute, being generally appealing in appearance, color, aroma, taste, flavor, and texture. While the product shows promise for consumer acceptance, attention to cleanliness, aftertaste, and textural consistency is necessary to enhance sensory satisfaction and usability further, ensuring that plant-based alternatives can compete effectively with traditional bacon in both domestic and commercial markets.

4. Discussion

The findings of this study firmly establish that watermelon rind can be successfully transformed into a plant-based bacon substitute with a high level of consumer acceptability. The overall mean score of 4.086 (Very Good) demonstrates that respondents generally accepted the product across all evaluated sensory attributes, particularly color, flavor, taste, and aroma. These results support the conclusion that an agricultural byproduct traditionally regarded as food waste can be converted into a value-added food product without compromising desirable sensory characteristics. This finding reinforces previous studies emphasizing the nutritional potential and functional applicability of watermelon rind in food innovation (Arivuchudar, 2023;Capossio et al., 2022; Kataria et al., 2023).

The consistently high ratings for color and flavor suggest that appropriate formulation and processing techniques can successfully mimic important sensory characteristics associated with traditional bacon. This finding contributes to the growing body of literature on plant-based meat alternatives by demonstrating that consumer acceptance depends not only on nutritional value but also on the successful replication of familiar sensory experiences. Michel et al. (2020) reported that consumers evaluate plant-based meat alternatives primarily based on their resemblance to conventional meat in terms of appearance, flavor, and eating experience. Similarly, Szenderák et al. (2022) concluded that sensory quality remains one of the strongest determinants of consumer acceptance and repeat purchase intention for plant-based meat products. The present study extends these findings by demonstrating that watermelon rind, an underutilized agricultural byproduct, can serve as a viable raw material for developing acceptable meat alternatives.

The favorable ratings for taste indicate that the seasoning formulation and preparation methods were generally successful in producing a product that met respondents' expectations. Although the aftertaste received comparatively lower ratings, the overall taste remained highly acceptable, suggesting opportunities for improving seasoning composition and processing techniques. Kumari et al. (2023) emphasized that balancing flavor, aroma, and aftertaste remains one of the major challenges in plant-based meat development, as these attributes strongly influence overall consumer satisfaction and willingness to adopt alternative protein products.

Similarly, the flavor dimension received excellent ratings, indicating that respondents perceived the product as pleasant, appetizing, and comparable to traditional bacon. These findings support previous evidence that successful plant-based products should deliver sensory experiences that closely resemble those of conventional meat while maintaining natural flavor characteristics. According to Michel et al. (2020), positive flavor perception plays a critical role in reducing consumer hesitation toward novel plant-based foods, thereby increasing acceptance and repeat consumption.

The texture of the watermelon rind bacon received a categorical mean of 3.967 (Very Good), with respondents expressing favorable perceptions of its uniformity, suitability for different age groups, and ability to complement the overall flavor profile. Lower ratings for crispiness retention and satisfying crunch suggest that further refinement of dehydration, formulation, and frying conditions could improve product quality. These findings are consistent with Melios et al. (2024), who demonstrated that texture, crispiness, and mouthfeel are among the most influential sensory characteristics distinguishing plant-based bacon from conventional bacon and remain important factors for consumer preference.

Beyond sensory acceptability, the study has broader implications for sustainable food systems. The successful utilization of watermelon rind demonstrates a practical strategy for reducing food waste while creating innovative, plant-based food products with commercial potential. This supports current sustainability frameworks advocating the valorization of agricultural byproducts through circular economy practices and resource-efficient food production (Papargyropoulou et al., 2014; FAO, 2019). The findings therefore strengthen the assumption that food waste can be transformed into economically valuable products capable of addressing both environmental sustainability and consumer demand for healthier and more sustainable food choices.

The present study also provides preliminary evidence supporting the hypothesis that watermelon rind-based bacon could become a viable product within the expanding plant-based food market. However, this hypothesis requires validation through additional investigations beyond sensory evaluation. Future research should therefore examine the physicochemical composition, nutritional profile, antioxidant activity, shelf-life stability, microbiological safety, and consumer willingness to purchase the product under actual market conditions. Comparative studies evaluating watermelon rind bacon alongside commercially available plant-based bacon and conventional pork bacon would provide stronger evidence regarding its competitive position within the food industry.

Several key experiments are needed to advance this line of research. First, optimization studies using different proportions of watermelon rind powder, vital wheat gluten, textured vegetable protein, and seasoning formulations should be conducted to maximize texture and flavor while minimizing undesirable aftertaste. Second, instrumental analyses of texture, color stability, moisture content, nutritional composition, and antioxidant capacity should complement sensory evaluation to establish objective quality standards. Third, shelf-life, packaging, and microbiological studies should determine product stability and safety during storage. Finally, larger consumer studies involving more diverse demographic groups, together with market acceptability, willingness-to-pay, and commercialization analyses, are recommended to evaluate the product's potential for successful market introduction.

Overall, the findings demonstrate that watermelon rind represents a promising raw material for sustainable food innovation. The conclusions supported by the present data indicate that the developed product possesses high sensory acceptability while identifying specific processing improvements needed before commercialization. The study contributes to the advancement of plant-based food development by demonstrating that food waste materials can be transformed into appealing, functional, nutritious, and environmentally responsible alternatives to conventional meat products, thereby supporting sustainable food production and the growing demand for innovative plant-based foods.

5. Conclusion

This study concludes that watermelon rind can serve as a viable plant-based bacon substitute, as evidenced by the overall Very Good evaluation of its sensory and functional qualities. Respondents generally perceived the product as visually appealing, naturally colored, flavorful, aromatic, and texturally acceptable, demonstrating that watermelon rind can be transformed into an innovative, sustainable, and value-added food product. The findings support the potential of utilizing an

agricultural byproduct to reduce food waste while contributing to the growing demand for plant-based alternatives in the hospitality and food service industry.

Despite these promising results, the study has several limitations. First, the evaluation relied solely on sensory assessment from a relatively small sample of 30 respondents drawn from a single institution, which limits the generalizability of the findings to broader consumer populations. Second, the study did not include laboratory analyses of the developed product's nutritional composition, physicochemical properties, microbiological safety, or shelf-life stability. Third, the research did not compare the developed watermelon rind bacon with commercially available plant-based bacon or conventional pork bacon, making it difficult to determine its relative quality and market competitiveness. In addition, economic feasibility, production scalability, and consumer purchase intention were not investigated.

Based on these limitations, future studies should involve larger and more diverse groups of consumers to improve the external validity of the findings. Laboratory-based analyses should be conducted to determine the nutritional profile, antioxidant activity, proximate composition, physicochemical characteristics, microbiological safety, and storage stability of the product. Further research should also optimize the formulation and processing conditions to improve crispiness, reduce aftertaste, and enhance overall sensory quality. Comparative sensory evaluations with commercial plant-based bacon and conventional bacon, together with market acceptability, willingness-to-pay, and commercial feasibility studies, are likewise recommended to establish the product's potential for large-scale commercialization. Such investigations would provide stronger scientific evidence supporting watermelon rind as a sustainable, nutritious, and commercially viable plant-based bacon alternative.

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Factors Influencing Patients' Satisfaction with AI-Guided Triage System: A Case Study of Longgang Central Hospital

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Abstract

The integration of artificial intelligence (AI) into medical triage has shown promise in reducing waiting times and improving resource allocation. However, patient satisfaction with AI-guided triage systems remains underexplored. This quantitative case study at Longgang Central Hospital (Shenzhen, China) surveyed 387 adult patients who used the AI triage system. Multiple regression analysis examined how system functional factors (accuracy, efficiency, usability, privacy protection) and patient characteristics (age, gender, education, prior digital health experience) influence satisfaction. Results showed that all four functional factors positively predicted satisfaction, with efficiency having the strongest effect ($\beta = 0.297$, $p < 0.001$). Age negatively affected satisfaction ($\beta = -0.102$), while education and prior experience had positive effects ($\beta = 0.085$ and 0.118, $p < 0.01$). Gender was not significant. The findings provide actionable insights for optimizing AI triage systems in public hospitals.

Keywords: AI-guided triage system; patient satisfaction; functional factors; digital health; smart healthcare

1. Introduction

The integration of artificial intelligence into healthcare has made AI-guided triage systems a promising solution to overcrowding, prolonged waiting times, and inconsistent triage accuracy in emergency and outpatient services. These systems automate patient assessment and prioritize cases based on severity, thereby improving clinical workflow efficiency. Empirical evidence indicates that AI-driven triage can reduce waiting time and enhance diagnostic accuracy compared with conventional methods (Zhang et al., 2025; Topol, 2019). However, the effectiveness of AI triage systems depends not only on technical performance but also on patient-centered outcomes such as satisfaction and acceptance (Steerling et al., 2025). Prior studies have identified challenges including algorithmic bias, system inefficiencies, usability barriers, and privacy concerns (Liu et al., 2021; Zhou, 2021; Chen et al., 2019). Despite these insights, there remains a lack of integrated analysis on how functional factors—accuracy, efficiency, usability, and privacy protection—jointly influence patient satisfaction in real hospital settings. To address this gap, this study focuses on Longgang Central Hospital, where an AI-guided triage system has been implemented. Using a quantitative case study design, the research examines how patient characteristics (age, gender, education level, prior digital health experience) and system functional factors affect satisfaction. The findings aim to provide evidence-based recommendations for optimizing AI triage systems and promoting their effective adoption.

Problem Statement

1) It is not clear which functional factors of AI-guided triage systems have a significant impact on patient satisfaction.

2) It is not clear which patient characteristics influence satisfaction with AI-guided triage systems.

Objectives

1) To identify the key functional factors of AI-guided triage systems that significantly influence patient satisfaction.

2) To examine the effects of patient demographic characteristics and usage experience on patient satisfaction with AI-guided triage systems.

2. Literature Review

AI-Guided Triage Systems

Artificial intelligence has been integrated into clinical triage through various technical approaches, including rule-based expert systems, machine learning algorithms, natural language processing, and hybrid models (Liu et al., 2021). Rule-based systems offer high transparency but limited adaptability, while machine learning models provide superior predictive accuracy at the cost of reduced interpretability (Topol, 2019). In practice, AI triage systems are typically designed to support rather than replace human triage staff, achieving concordance rates of over 90% with professional nurses in identifying high-risk cases (Greenes, 2018). Studies have reported that AI-assisted triage can reduce patient waiting time by an average of 20%, significantly improving emergency department workflow efficiency (Lee et al., 2020). However, challenges remain, including algorithmic bias, poor integration with existing clinical workflows, and insufficient attention to user diversity across age and digital literacy levels (Chen & Zhang, 2020).

Functional Factors of AI-Guided Triage Systems

Drawing on the Technology Acceptance Model (TAM) (Davis, 1989), four core functional factors were identified as critical determinants of patient satisfaction.

Accuracy refers to the consistency between AI triage results and subsequent clinical judgments. High accuracy enhances patient trust, reduces medical anxiety, and promotes adherence to recommendations (Li & Zhou, 2019). Empirical evidence indicates that accuracy is a fundamental prerequisite for system acceptance (Greenes, 2018).

Efficiency reflects the system's ability to complete triage quickly, shorten waiting times, and optimize workflow. In emergency settings, efficiency is often the most immediately perceptible benefit to patients (Topol, 2019; Lee et al., 2020). Faster system response and simplified registration processes directly improve patient experience.

Usability encompasses interface clarity, ease of operation, and the ability to complete triage independently. Usability is particularly important for elderly patients and those with limited digital literacy (Chen et al., 2019). Intuitive design and natural language interaction can significantly reduce learning barriers (Zhang & Wang, 2020).

Privacy protection involves the secure handling of personal medical information. With growing regulatory requirements and public awareness of data privacy, patients increasingly expect transparent data use policies and robust security measures (Lau & Zhang, 2021). Privacy concerns have been identified as a major barrier to AI healthcare adoption (Zhou, 2021).

Patient Characteristics

Patient demographic characteristics have been shown to moderate the relationship between system performance and satisfaction.

Age is consistently associated with technology acceptance. Younger patients (18–35 years) typically possess higher digital literacy and report greater satisfaction, while older adults (65 years and above) often face navigation difficulties and prefer human-led triage (Smith & Johnson, 2021; Chen et al., 2020). A negative relationship between age and satisfaction is therefore expected.

Gender findings are mixed. Some studies report no significant gender differences in AI healthcare acceptance when the technology focuses on functional tasks (Adams et al., 2022), while others suggest that women may prioritize empathy and interaction quality more than men (Patel & Jones, 2021). Given the functional nature of AI triage, a non-significant effect is plausible.

Education level positively influences satisfaction because more educated individuals have stronger information-processing abilities and more realistic expectations of AI capabilities (Zhang et al., 2021; Lee & Park, 2020). They are also better able to interpret system recommendations accurately.

Prior digital health experience refers to cumulative exposure to digital health tools. Experienced users adapt more quickly, perceive higher usefulness, and report greater ease of use (Venkatesh et al., 2003; Brown et al., 2022). This experience reduces technology anxiety and enhances overall satisfaction.

Evaluation of Patient Satisfaction with AI-Guided Triage Systems

Patient satisfaction with AI-guided triage systems is a multidimensional subjective outcome that integrates patients' perceptions of system quality, their usage experience, and their overall evaluation (Liu et al., 2021). Based on the literature, this study adopts three core dimensions for

satisfaction evaluation: system quality perception, usage experience evaluation, and overall satisfaction (Venkatesh et al., 2003). System quality perception refers to patients' subjective assessment of accuracy, efficiency, usability, and privacy protection—the most important determinant of overall satisfaction (Chen et al., 2019; Zhou, 2021). Usage experience evaluation captures patients' feelings during interaction, including the smoothness of human-computer interaction, clarity of triage guidance, and availability of support (Patel & Jones, 2021). Overall satisfaction represents the final comprehensive judgment and includes willingness to reuse and recommend the system (Steerling et al., 2025)

3. Theoretical Framework

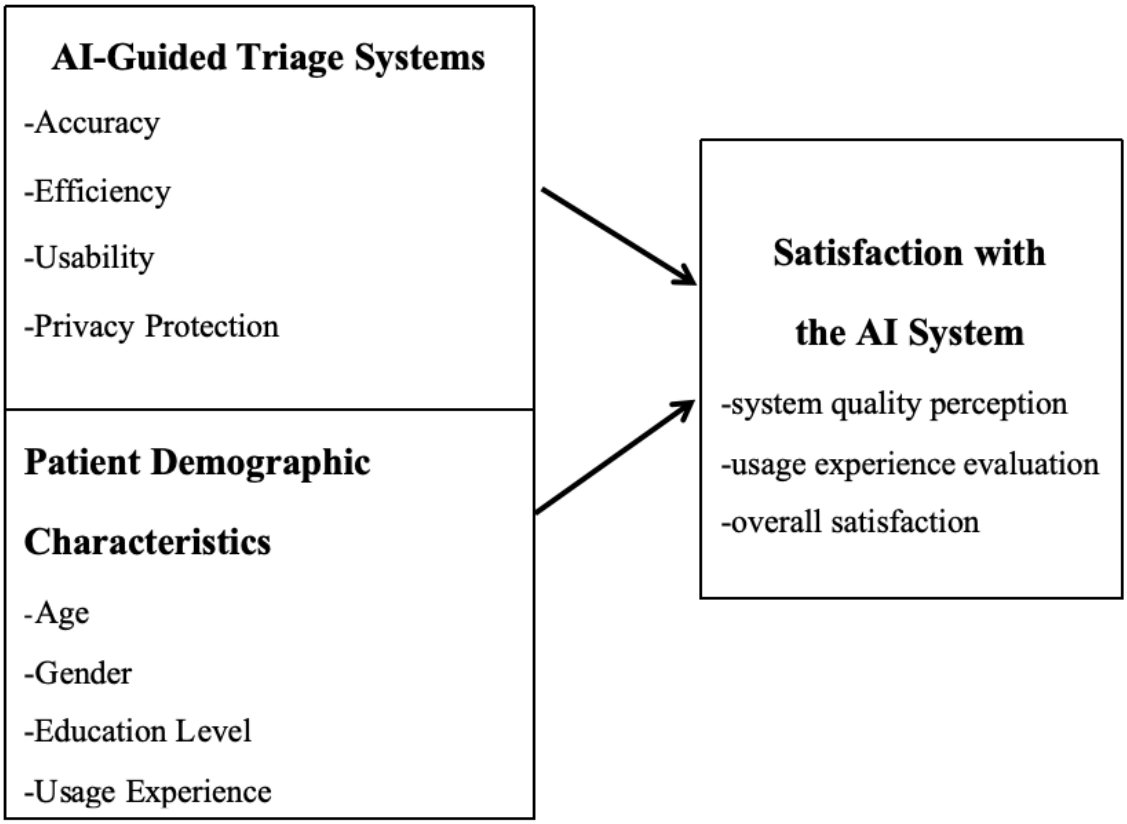

Figure 1 Theoretical Framework

Hypotheses

Based on the literature review, the following hypotheses were proposed:

H1: Functional factors of the AI-guided triage system (accuracy, efficiency, usability, and privacy protection) have a significant positive effect on patient satisfaction.

H2: Patient demographic characteristics (age, gender, education level, and prior digital health experience) have a significant effect on patient satisfaction.

Research Design

This study adopted a quantitative, cross-sectional survey design. A structured questionnaire was used as the primary data collection instrument, supplemented by secondary data from hospital system logs for validation purposes. The design was selected for its ability to statistically test hypotheses, collect large samples efficiently, and maintain objectivity in hospital-based research settings.

Population and Sample

The target population consisted of adult patients (aged 18 years and above) who had used the AI-guided triage system at the emergency or outpatient departments of Longgang Central Hospital

during the study period (January 2026). The hospital processes approximately 1,200 triage requests daily, with adult patients accounting for 92% of users.

Sample size was determined using Taro Yamane's formula with a 5% margin of error and 95% confidence level. The calculation yielded a required sample size between 200 and 400 respondents. To account for potential non-response (estimated at 15–20%), a target of 400 completed responses was set. Convenience sampling was employed, as it best suited the operational constraints of on-site hospital data collection. Trained research assistants approached eligible patients after they had completed their medical consultations. A total of 387 valid questionnaires were collected, representing a response rate of 86.2% after excluding incomplete or invalid responses.

Data Collection Instrument

The questionnaire was developed based on existing validated scales from the literature, including the Technology Acceptance Model, the SERVQUAL model, and prior AI healthcare satisfaction studies. It consisted of three sections. Section 1 collected demographic characteristics (age, gender, education level, prior digital health experience) using categorical response options. Section 2 measured perceptions of the four functional factors using 12 items (three per factor) on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Section 3 measured overall patient satisfaction using three items on a 5-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). The questionnaire was pre-tested with 30 eligible patients, yielding Cronbach's alpha values of 0.82 for the functional factors scale and 0.87 for the satisfaction scale, indicating good reliability. The final questionnaire was distributed in both paper and electronic (QR code) formats on-site.

Data Analysis

Data were analyzed using IBM SPSS Statistics 28.0. Descriptive statistics (frequencies, percentages, means, standard deviations) were computed to summarize sample characteristics and variable distributions. Pearson correlation analysis was conducted to examine bivariate relationships among variables. Multiple linear regression analysis was performed to test the hypotheses, with overall patient satisfaction as the dependent variable and the four functional factors plus four demographic characteristics as independent variables. The regression model included control variables to isolate the unique effects of each predictor. Assumptions of linearity, independence of errors, homoscedasticity, and absence of multicollinearity (variance inflation factor < 10) were checked and satisfied.

Research quality

To ensure questionnaire reliability, a pre-test with 30 samples was conducted and the internal consistency was calculated using Cronbach's Alpha coefficient. The results showed that the Cronbach's Alpha coefficients for the functional factors scale and the satisfaction evaluation scale were 0.82 and 0.87, respectively, both exceeding the acceptable threshold of 0.80, indicating good reliability of the measurement instrument.

For validity, following Eignor (2013), validity reflects the extent to a measurement tool measures its intended constructs. This study reviewed existing literature, referred to mature scales (including the TAM and UTAUT), and invited two experts to review the questionnaire content, ensuring sufficient content validity across dimensions.

Finally, regarding ethical issues, the study adhered to the ethical guidelines of the Ethics Committee of Longgang Central Hospital and Huachiew Chalermprakiet University to ensure participant confidentiality, informed consent, and the right to withdraw from the study without any consequences.

4. Results

Descriptive Statistics

Table 1 Sample demographic characteristics.

Characteristic	Category	Frequency	Percentage (%)
Age	Below 18 years	12	3.1
	18–25 years	98	25.3
	26–35 years	112	28.9
	36–45 years	76	19.6
	46–55 years	53	13.7
	56–64 years	28	7.2
	65 years and above	8	2.1
	Total	**387**	**100.0**
Gender	Male	189	48.8
	Female	192	49.6
	Other	3	0.8
	Prefer not to say	3	0.8
	Total	**387**	**100.0**
Education Level	Primary school or below	21	5.4
	Junior high school	58	15.0
	Senior high school/Vocational education	97	25.1
	Diploma/Associate degree	86	22.2
	Bachelor's degree	102	26.4
	Postgraduate degree	19	4.9
	Prefer not to say	4	1.0
	Total	**387**	**100.0**
Prior Digital Health Experience	None (never used)	67	17.3
	Limited (used 1–2 times or very infrequently)	124	32.0
	Moderate (used occasionally)	136	35.1
	Extensive (used regularly or very familiar)	60	15.5
	Total	**387**	**100.0**

A total of 387 valid responses were collected. As shown in Table 1, the majority of respondents were aged 26–35 years (28.9%) and 18–25 years (25.3%), together accounting for 54.2% of the sample. Females (49.6%) slightly outnumbered males (48.8%). In terms of education, bachelor's degree holders constituted the largest group (26.4%), followed by senior high school/vocational education (25.1%). Regarding prior digital health experience, 35.1% of respondents reported moderate experience, 32.0% limited experience, and 17.3% no experience.

Table 2 Descriptive Statistics of Core Research Variables

Variable	Items	Mean	SD	Min	Max
Accuracy	3	3.72	0.86	1.00	5.00
– Dept recommendation appropriateness		3.78	0.91	1.00	5.00
– Urgency level appropriateness		3.66	0.94	1.00	5.00
– Key symptom identification		3.72	0.89	1.00	5.00
Efficiency	3	3.85	0.79	1.00	5.00
– Waiting time reasonable		3.76	0.88	1.00	5.00
– System responds quickly		3.92	0.82	1.00	5.00
– Simplified registration process		3.87	0.85	1.00	5.00
Usability	3	3.68	0.92	1.00	5.00
– Interface clarity		3.71	0.95	1.00	5.00
– Independent operation		3.59	1.03	1.00	5.00
– Symptom input method clarity		3.74	0.91	1.00	5.00
Privacy Protection	3	3.54	0.97	1.00	5.00
– Data protection information clear		3.48	1.02	1.00	5.00
– Health information secure		3.57	0.98	1.00	5.00
– Data used only for triage		3.57	0.99	1.00	5.00
Overall Patient Satisfaction	3	3.76	0.83	1.00	5.00
– Satisfied with service		3.74	0.87	1.00	5.00
– Willing to continue use		3.82	0.89	1.00	5.00
– Willing to recommend		3.72	0.91	1.00	5.00

Perceptions of system functional factors and satisfaction. As presented in Table 2, the mean scores for all variables ranged from 3.54 to 3.85 on a 5-point scale. Efficiency received the highest mean score (M = 3.85, SD = 0.79), followed by overall satisfaction (M = 3.76, SD = 0.83), accuracy (M = 3.72, SD = 0.86), usability (M = 3.68, SD = 0.92), and privacy protection (M = 3.54, SD = 0.97). This indicates that patients were most satisfied with the time-saving effect of the AI triage system and most concerned about data privacy.

Correlation Analysis

Table 3 Correlation Matrix of Research Variables

Variable	1	2	3	4	5
1. Accuracy	1				
2. Efficiency	0.678**	1			
3. Usability	0.624**	0.657**	1		
4. Privacy Protection	0.589**	0.612**	0.643**	1	
5. Overall Patient Satisfaction	0.721**	0.754**	0.698**	0.657**	1

Note: $p < 0.01$ (two-tailed)

Pearson correlation analysis was conducted to examine bivariate relationships among the variables. As shown in Table 3, all four functional factors were significantly and positively correlated with overall patient satisfaction ($p < 0.01$). Efficiency had the strongest correlation with satisfaction ($r = 0.754$), followed by accuracy ($r = 0.721$), usability ($r = 0.698$), and privacy protection ($r = 0.657$). Correlations among independent variables ranged from 0.589 to 0.678, indicating moderate multicollinearity that remained within acceptable limits for regression analysis.

Multiple Linear Regression Analysis

Multiple linear regression was performed to test the research hypotheses, with overall patient satisfaction as the dependent variable and the four functional factors plus four demographic characteristics as independent variables. The regression model was statistically significant ($F = 95.324$, $p < 0.001$), with an adjusted R^2 of 0.702, indicating that the independent variables collectively explained 70.2% of the variance in patient satisfaction. Variance inflation factor (VIF) values for all predictors were below 3, confirming the absence of problematic multicollinearity.

Table 4 presents the regression coefficients. All four functional factors had significant positive effects on satisfaction: efficiency ($\beta = 0.297$, $p < 0.001$), accuracy ($\beta = 0.253$, $p < 0.001$), usability ($\beta = 0.206$, $p < 0.001$), and privacy protection ($\beta = 0.182$, $p < 0.001$). Thus, hypotheses H1a–H1d were all supported.

Table 4 Regression Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	Beta	t	Sig.	VIF
	B	Std. Error				
(Constant)	0.324	0.156		2.077	0.039	
Accuracy	0.245	0.042	0.253	5.833	0.000	2.145
Efficiency	0.312	0.045	0.297	6.933	0.000	2.267
Usability	0.187	0.039	0.206	4.795	0.000	2.089
Privacy Protection	0.156	0.036	0.182	4.333	0.000	1.976
Age	-0.089	0.021	-0.102	-4.238	0.000	1.342
Gender	0.023	0.035	0.014	0.657	0.512	1.125
Education Level	0.067	0.024	0.085	2.792	0.006	1.456
Prior Digital Health Experience	0.102	0.028	0.118	3.643	0.000	1.523

Note: Dependent Variable: Overall Patient Satisfaction

Among patient characteristics, age had a significant negative association with satisfaction ($\beta = -0.102$, $p < 0.001$), supporting H2a. Education level had a significant positive association ($\beta = 0.085$, $p < 0.01$), supporting H2c. Prior digital health experience also had a significant positive association ($\beta = 0.118$, $p < 0.001$), supporting H2d. Gender was not statistically significant ($\beta = 0.014$, $p = 0.512$), so H2b was not supported.

5. Discussion

This study empirically examined the factors influencing patient satisfaction with the AI-guided triage system at Longgang Central Hospital. The results support most of the proposed hypotheses and provide both theoretical and practical insights.

Influence of system functional factors. Consistent with the Technology Acceptance Model (Davis, 1989), all four functional factors—accuracy, efficiency, usability, and privacy protection—were found to have significant positive effects on patient satisfaction. Efficiency exerted the strongest influence ($\beta = 0.297$, $p < 0.001$), reflecting the time-sensitive nature of emergency and outpatient care. Patients value reduced waiting times and streamlined processes as the most immediate benefits of AI triage (Topol, 2019; Lee et al., 2020). Accuracy ranked second ($\beta = 0.253$, $p < 0.001$), confirming that reliable triage decisions build trust and reduce medical anxiety (Greenes, 2018; Li & Zhou, 2019). Usability ($\beta = 0.206$, $p < 0.001$) was particularly important for older adults, as shown in the subgroup analysis, where its effect was nearly twice as strong in the older group compared to the younger

group. Privacy protection ($\beta = 0.182$, $p < 0.001$), while the weakest predictor, remains essential for maintaining long-term trust, especially as data protection regulations tighten in China (Lau & Zhang, 2021; Zhou, 2021).

Influence of patient characteristics. Age had a significant negative association with satisfaction ($\beta = -0.102$, $p < 0.001$), consistent with the digital divide literature: younger patients possess higher digital literacy and adapt more easily to AI systems, while older patients often require additional support (Smith & Johnson, 2021; Chen et al., 2020). Education level ($\beta = 0.085$, $p < 0.01$) and prior digital health experience ($\beta = 0.118$, $p < 0.001$) were both positively associated with satisfaction, confirming that greater cognitive resources and familiarity with digital tools enhance positive evaluations (Zhang et al., 2021; Venkatesh et al., 2003). Gender was not significant ($\beta = 0.014$, $p = 0.512$), indicating that male and female patients share similar expectations regarding functional performance in emergency triage contexts (Adams et al., 2022).

Theoretical and practical contributions. Theoretically, this study extends the TAM and SERVQUAL models to the AI triage context, demonstrating that perceived usefulness (accuracy, efficiency), perceived ease of use (usability), and trust (privacy protection) collectively explain over 70% of the variance in patient satisfaction. Practically, the findings provide clear priorities for system optimization: efficiency should be the top priority, followed by accuracy, usability, and privacy protection, with special attention to age-friendly design and support for digitally inexperienced patients.

Limitations and Future Research

Several limitations should be acknowledged. The single hospital and cross-sectional design limits causal inference and generalizability. Self-reported data may be subject to recall and social desirability biases. Future research should employ longitudinal, multi-site designs and mixed methods (quantitative + qualitative) to deepen understanding. Additionally, clinical outcomes (e.g., triage accuracy, patient safety) should be examined alongside satisfaction. Cross-cultural comparative studies would also help determine the generalizability of these findings to other healthcare systems.

Recommendations

For hospital administrators. Prioritize system efficiency by ensuring fast response times, seamless integration with registration systems, and dynamic resource allocation during peak hours. Implement age-friendly features such as voice assistance, large fonts, and step-by-step guidance for elderly patients. Strengthen privacy protection through transparent data use policies and robust encryption.

For technology developers. Continuously improve triage algorithm accuracy, especially for urgency level classification. Conduct usability testing with diverse user groups, including older adults and those with limited digital literacy. Simplify symptom input methods using natural language processing or visual selectors.

For policymakers. Establish clear regulatory standards for AI medical system safety, accuracy, transparency, and privacy protection. Promote digital health literacy programs for underserved and older populations to reduce the digital divide. Support multi-center research to validate and generalize findings across different hospital settings.

6. Conclusion

This study investigated the factors influencing patient satisfaction with the AI-guided triage system at Longgang Central Hospital. The empirical results lead to three main conclusions. First, all four functional factors—accuracy, efficiency, usability, and privacy protection—significantly and positively affect patient satisfaction, with efficiency being the strongest driver. Second, patient characteristics matter: younger age, higher education, and greater prior digital health experience are associated with higher satisfaction, while gender has no significant effect. Third, the integrated TAM-SERVQUAL framework explains 70.2% of the variance in satisfaction, confirming its applicability to AI healthcare contexts. These findings provide actionable guidance for optimizing AI triage systems to enhance patient-centered care and promote inclusive smart healthcare in China's public hospitals.

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Research on Human Resource Management of E-commerce Live Streaming Under the Background of Digital Economy: A Case Study of TikTok

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Abstract

In the digital economy, e-commerce live streaming has developed rapidly, and its human resource management has attracted widespread academic attention. Taking TikTok as the research context, this study notes that previous literature emphasizes work motivation and rewards while ignoring employee relations. Based on motivation theory, it adopts extrinsic motivation as a mediator to explore the effects of employee relations and talent management on job performance and puts forward three hypotheses. With 303 valid questionnaires collected from top TikTok live streaming organizations, SPSS software was employed for data analyses, including descriptive statistics, correlation analysis, and multiple linear regression. The findings reveal a significant positive correlation between talent management approaches and job performance, while employee relations exert a direct positive impact on job performance. Work motivation, acting as a mediating variable, plays a crucial role among talent management approaches, employee relations, and job performance. This study supplements relevant theories and provides practical HRM suggestions and references for the digital transformation of e-commerce live streaming enterprises.

Keywords: Digital Economy, E-commerce Live Streaming, Human Resources, Work Performance, Employee Relationships

1. Introduction

1.1 Research Background

The rapid advancement of the digital economy has propelled e-commerce live streaming into a core business model for enterprises. According to the Statistical Report on Internet Development in China released by CNNIC (2023), by December 2022, the number of online live streaming users in China reached 751 million, accounting for 70.3% of the total netizens, while the number of short video users reached 1.012 billion. The added value of digital economy-related industries and national online retail sales maintained steady growth, making short video-based e-commerce live streaming a mainstream industry trend. As a leading live streaming platform, TikTok witnessed 180 million e-commerce-related short videos posted monthly in 2021, with over 49.8 billion live streaming views and 2.6 million e-commerce creators achieving successful sales. However, in the fiercely competitive market environment, the effectiveness of HRM has become a key factor for enterprises to enhance their competitiveness.

As an emerging industry in the digital economy, e-commerce live streaming features data-driven operations, requiring employees to possess keen data awareness and processing capabilities. The new business models and management concepts spawned by the industry's rapid development have also made the implementation of HRM an urgent issue to be addressed. Exploring the HRM model of TikTok's e-commerce live streaming can not only provide scientific management strategies for e-commerce enterprises but also enrich academic research on HRM in the digital economy, boasting both theoretical and practical value.

1.2 Research Significance

1.2.1 Theoretical Significance

Existing research on e-commerce live streaming mainly focuses on development status, platform interaction, and opinion leaders, while HRM research emphasizes innovation and performance appraisal, lacking specialized studies from the perspectives of talent management approaches, employee relations, and job performance. Previous studies have mostly adopted literature review and case study methods, with theoretical foundations centered on Maslow's hierarchy of needs theory and the AMO theory. This study introduces motivation theory0, employs questionnaire surveys and

empirical analysis to explore the intrinsic mechanism among the three variables in the e-commerce live streaming field, filling the research gap0. Meanwhile, it optimizes the application scenario of HRM theory by combining the characteristics of the TikTok platform, enhancing the adaptability and effectiveness of the theory.

1.2.2 Practical Significance

This study sorts out the actual status of HRM in TikTok's e-commerce live streaming enterprises and proposes targeted optimization strategies based on industry characteristics. It can help enterprises adapt to talent management needs in the digital economy, improve organizational operational efficiency and employee performance, and provide specific references for e-commerce live streaming enterprises in recruitment, training, motivation, and employee relations management. Ultimately, it assists enterprises in building core competitiveness and promoting the sustainable development of the industry.

1.3 Research Questions

RQ1: What are the current HRM problems in the e-commerce live streaming industry amid the digital economy? How to develop effective strategies for recruitment, training and development, performance appraisal, and compensation and benefits0?

RQ2: What are the new trends and characteristics of HRM in the digital economy era? How does digital technology affect HRM?

RQ3: How is HRM practically applied in the TikTok e-commerce live streaming industry, and how can these experiences be drawn from and optimized?

RQ4: How can HRM in e-commerce live streaming under the digital economy enhance industry competitiveness and productivity, and respond to the challenges and opportunities in the digital economy environment?

1.4 Research Objectives

RO1 : To investigate the existing HRM issues in the e-commerce live streaming industry under the digital economy, and formulate effective strategies for recruitment, training and development, performance appraisal, and compensation and benefits.

RO2: To explore the new trends, characteristics of HRM in the digital economy era, and the impact of digital technology on HRM.

RO3: To analyze the practical application of HRM in the TikTok e-commerce live streaming industry and propose experience-based optimization approaches.

RO4: To examine how HRM enhances industry competitiveness and productivity, and how to respond to challenges and opportunities in the digital economy.

2. Literature Review

2.1 Development and Trends of E-commerce Live Streaming

There is no unified definition of e-commerce live streaming in academia. Essentially, it is a digital marketing method that introduces products or services to potential consumers through real-time video streaming, featuring real-time interactivity and entertainment. Xu (2018) argued that e-commerce live streaming is a new marketing model of traditional e-commerce0, Zheng (2019) defined it as a marketing activity integrating live streaming and e-commerce, while Wang et al0. (2021) pointed out that it is a new type of e-commerce with innovations in price, content, and model0.

Domestic e-commerce live streaming originated in 2016 and entered a period of rapid development after the launch of Taobao Live in 2018. The participation of short video platforms such as TikTok and Kuaishou has further expanded the industry scale. Studies by Yuan (2021) and Han (2020) indicated that the development of e-commerce live streaming relies on content optimization and marketing innovation. In the future, it will present trends of diversified content, dynamic platform patterns, and deep integration of social interaction and shopping. Its digital development has also brought new opportunities and challenges to HRM, promoting the digital transformation of enterprise talent management.

2.2 Motivation Theories

Motivation refers to the intrinsic driving mechanism that triggers and sustains an individual's goal-oriented behavior. Hackman and Oldham (1975), Deci & Ryan (1985), and Amabile (1994) divided it into two dimensions: intrinsic motivation, derived from the pleasure of the activity itself, and extrinsic motivation, driven by external factors such as rewards and punishments. Among classic motivation theories, Maslow's hierarchy of needs theory divides human needs into five levels—physiological, safety, social, esteem, and self-actualization—laying the foundation for motivation research; Vroom's (1964) Expectancy Theory holds that motivation intensity depends on the expectancy and valence of behavioral outcomes; Deci & Ryan's (1985) Self-Determination Theory, the core theoretical support of this study, emphasizes human growth and integration tendencies, focusing on the satisfaction of three basic psychological needs—autonomy, competence, and relatedness—and can be subdivided into four sub-theories: Basic Psychological Needs Theory, Cognitive Evaluation Theory, Organismic Integration Theory, and Causality Orientations Theory, explaining the formation, regulation, and internalization mechanisms of motivation.

Pinder (2008) defined work motivation as internal and external forces affecting work performance-related behaviors. Cerasoli et al. (2014) pointed out that the degree of internalization of work motivation is positively correlated with job performance, while research by Zhao et al. (2019) confirmed that work motivation plays a mediating role between performance management and job performance, providing direct theoretical basis for the hypothesis and model construction of this study.

2.3 Research on the Relationship Between Human Resource Management and Enterprise Performance

Recent studies have confirmed a close correlation between HRM and enterprise performance. A study published in the Harvard Business Review indicated that excellent HRM can significantly improve enterprise performance, with incentive mechanisms and employee relations as core influencing factors. Moorhead & Griffin (1998) argued that employee performance is jointly determined by ability and motivation, and the core responsibility of managers is to stimulate employee motivation; empirical studies by Zhu (2016) and Du & Teng (2018) found a significant positive correlation between work motivation and job performance, and empowering performance appraisal can enhance employees' autonomous work motivation and performance.

Regarding employee relations, relevant studies have shown that positive employee relations can improve employee satisfaction, thereby promoting enterprise performance improvement (Warren et al., 2004); Ni (2019) found a direct correlation between employee relations and enterprise job performance, and optimizing interpersonal management is an effective way to improve performance. Under the digital economy, HRM in e-commerce live streaming enterprises needs to balance incentive mechanism design and employee relations construction to achieve sustained performance improvement.

2.4 The Concept of Employee Relations and Job Performance

Employee relations are a core component of HRM. Cheng (2012) pointed out that it is a systematic practice centered on organizational strategies to coordinate relationships between employees and the organization, as well as among employees, aiming to build a harmonious organizational environment and balance organizational efficiency and employee development. Brewster (1989) defined employee relations as a multidimensional system including relationships between employees and the organization, management, and government institutions, while Graham (2018) emphasized that its core is managing the relationship between organizational implementers and decision-makers, serving as a key mechanism for talent retention.

Job performance is an important criterion for enterprises to evaluate employee value. Bernardin (1984) defined it as employees' work outputs within a specific time frame, and Borman & Motowidlo (1993) divided it into task performance (direct work results related to job responsibilities) and contextual performance (positive social and psychological behaviors of employees). Studies by Hunter (1983) and Korman (1977) found that job performance is affected by three dimensions:

individual characteristics, job attributes, and organizational context, and sound HRM practices can improve employee job performance from multiple dimensions.

3. Research Methodology

3.1 Research Method

This study adopted questionnaire surveys, literature reviews, and empirical research to explore HRM practices in TikTok's e-commerce live streaming enterprises, propose optimization strategies, and offer references for e-commerce firms.

Questionnaire survey: Collects and analyzes data on TikTok enterprises' HRM (recruitment, performance appraisal, training, incentives, employee relations) to identify commonalities and lay a data foundation.

Literature review: Synthesizes global research on HRM in digital economy-driven e-commerce live streaming to clarify research status, gaps, and provide theoretical support.

Empirical research: Conducts in-depth analysis of TikTok enterprises' HRM application and impacts of management strategies on performance/teamwork; proposes feasible optimization suggestions via on-site investigations and case studies.

Overall, these methods comprehensively examine HRM in digital economy-based e-commerce live streaming, delivering practical guidance for enterprises and contributing to theoretical and practical HRM development.

3.2 Research Participants

The research participants of this study are professionals engaged in TikTok's e-commerce live streaming, including both management and non-management personnel such as anchors, operators, planners, and technical personnel, covering core industry positions to ensure the representativeness and pertinence of the samples.

3.3 Research Process

The research process is divided into four stages: 1) Literature combing: systematically collect domestic and foreign relevant literature, sort out research results on e-commerce live streaming, motivation theory, and HRM, and build a theoretical framework; 2) Questionnaire design: refer to mature measurement scales, design questionnaires combined with the characteristics of TikTok's e-commerce live streaming industry, and finalize the formal questionnaire after pre-survey modification; 3) Data collection: conduct surveys on the top 50 TikTok e-commerce live streaming entities through random sampling, distribute and collect questionnaires; 4) Data analysis: use SPSS software for data cleaning, descriptive analysis, reliability and validity analysis, correlation analysis, and regression analysis to verify research hypotheses and draw conclusions.

3.4 Research Hypotheses

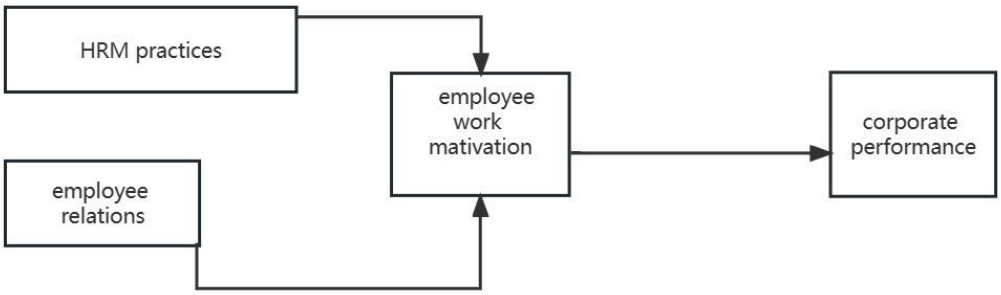
H1: Talent management approaches have a significant positive correlation with enterprise job performance. Scientific salary incentives, promotion mechanisms, and reasonable job-person fit can improve employees' work enthusiasm, thereby promoting job performance improvement (Yang, 2009; Hochwarter et al., 2020).

H2: Employee relations have a significant positive correlation with enterprise job performance. Harmonious superior-subordinate relationships, team atmosphere, and effective communication mechanisms can enhance employees' sense of belonging, improve job satisfaction, and thus exert a positive impact on job performance (Ni, 2019; Warren et al., 2004).

H3: As a mediating variable, work motivation has a significant positive impact on enterprise job performance through talent management approaches and employee relations. The optimization of talent management and employee relations can stimulate employees' intrinsic and extrinsic motivation, which is a key factor in improving job performance (Zhao et al., 2022; Liu & Zhang, 2010).

3.5 Research Model

Based on motivation theory, this study constructs a model with talent management approaches and employee relations as independent variables. Talent management is further delineated into two aspects: incentive mechanisms and job-person fit, while employee relations are broken down into team culture and communication frequency. The mediating variable is work motivation, and job performance is considered as the dependent variable. A multi-level research model is constructed as depicted in the diagram.



3.6 Questionnaire Survey

3.6.1 Questionnaire Design

To ensure the content validity of the questionnaire, this study refers to mature domestic and foreign measurement tools. On the basis of controlling irrelevant variables, a Likert 5-point scale is adopted (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree). The questionnaire includes four core dimensions: talent management (covering incentive methods, compensation, benefits, promotion, job-person fit), employee relations (covering communication and feedback, team culture, communication frequency), work motivation (covering intrinsic motivation, autonomous work, self-encouragement), and job performance (covering work experience, work ability). Clear and concise language is used in the questionnaire design to avoid ambiguity, and the privacy of respondents is protected to ensure data reliability and security.

3.6.2 Sample Group and Data Collection

Random sampling is adopted for this study. Thirty enterprises are selected from the top 50 TikTok e-commerce live streaming entities. According to the sample size calculation formula $n=\frac{(Z^2 * \alpha^2)}{E^2}$ (where n is the sample size, Z is the Z-value corresponding to the confidence level, α is the estimated population standard deviation, and E is the margin of error), the required sample size is 308. A total of 400 questionnaires are distributed, and 303 valid questionnaires are collected after excluding invalid ones, with an effective recovery rate meeting research requirement.

3.6.3 Data Processing and Analysis

A systematic data processing process is formulated: first, data cleaning is performed to eliminate invalid and outlier data to ensure data quality; then descriptive statistical analysis is conducted to calculate basic statistics such as frequencies and proportions of each item; correlation analysis and factor analysis are carried out to explore the relationships among variables; finally, research conclusions are drawn based on statistical results to verify research hypotheses.

4. Results

4.1 Descriptive Analysis

Among the valid samples, females account for 71.3%, respondents aged 26-35 account for 60.0%, and non-HR staff account for 89.0%. The demographic characteristics of the respondents are highly consistent with the job requirements of the e-commerce live streaming industry, indicating that the samples are representative.

Table 4-1: Descriptive Statistics of Participant Information

Category		Number	Percentage (%)
Gender	Male	89	28.7
	Female	221	71.3
Age	25 and below	30	9.7
	26-35	186	60.0
	36-45	69	22.3
	46-55	25	8.1
Education	Below College	47	15.2
	Associate	149	48.1
	Bachelor	96	31.0
	Postgraduate	18	5.8
Work Experience	1-3years	81	23.8
	3-5years	203	17.8
	6-9years	26	18.8
	10-15years	0	0
Position Level	Non-HR staff	276	89.0
	HR staff	34	11.0

4.2 Reliability and Validity Analysis

As observed from Figures 4-2 and 4-3, the questionnaire exhibits favorable reliability and validity. The reliability of each dimension and scale exceeds 0.89. Additionally, KMO = 0.979, which is greater than 0.6, and the significance level P=0.000 (<0.05), indicating that the questionnaire is suitable for conducting exploratory factor analysis. This implies that the data collected through this questionnaire survey can authentically and reliably reflect the conditions of talent management, employee relations, work motivation, and work performance as perceived by the respondents.

Table 4-2: Reliability Analysis

Dimension	Cronbach's Alpha	Number of Items
Talent Management	0.902	10
Employee Relations	0.810	5
Work Motivation	0.845	6
Job Performance	0.863	7
Overall Scale	0.936	28

Table 4-3: Validity Analysis

KMO and Bartlett's Test		
	KMO	0.979
Bartlett sphericity test	Approximate chi square	4868.02
	free degree	378
	significance	.000

4.3 Current Situation Analysis

The mean values of the four core dimensions are all close to 4, indicating that the respondents generally recognize the correlations among the variables, which is consistent with the research objectives and lays the foundation for subsequent correlation and regression analysis.

Table 4-4: Current Situation Analysis

	N	Minimum	Maximum	Mean	Standard Deviation
Talent Management	310	2.00	4.90	3.648	.63305
Employee Relations	310	1.60	5.00	3.632	.66866
Work Motivation	310	1.83	5.00	3.651	.66010
Job Performance	310	2.00	5.00	3.625	.66615
Valid Cases	310				

4.4 Differences Analysis

Through the comparison in the table below, it is observed that there are no significant differences in talent management, employee relations, and work motivation based on gender and age (P>0.05). This indicates that age and gender factors do not need to be considered in subsequent recommendations and measures.

Table 4-5: Gender Difference Analysis

	Male	Female	T	P
Talent Management	3.64±0.68	3.65±0.61	-0.089	0.084
Employee Relations	3.64±0.71	3.63±0.65	-0.062	0.319
Work Motivation	3.60±0.68	3.67±0.65	-0.900	0.595
Job Performance	3.61±0.68	3.63±0.66	-0.204	0.554
Overall scale	3.62±0.66	3.65±0.61	-0.279	0.262

Table 4-6: Age Difference Analysis

	25 and Below	26-35	36-45	46-55	F	P
Talent Management	3.47±0.8	3.59±0.7	3.57±0.8	3.60±0.7	0.425	0.8
Employee Relations	3.47±0.8	3.54±0.8	3.58±0.9	3.67±0.8	0.714	0.6
Work Motivation	3.40±0.8	3.59±0.7	3.53±0.9	3.53±0.9	0.767	0.5
Job Performance	3.40±0.8	3.59±0.7	3.53±0.9	3.53±0.9	0.767	0.5
Overall scale	3.40±0.8	3.59±0.7	3.53±0.9	3.53±0.9	0.767	0.5

4.5 Correlation Analysis

The results show that there are significant positive correlations among all variables (P < 0.01). Talent management and employee relations both have positive impacts on job performance, and work motivation is closely correlated with the former two, verifying the rationality of research hypotheses H1, H2, and H3.

Table 4-7: Correlation Analysis

	Talent Management	Employee Relations	Work Motivation	Job Performance	Overall scale
Talent Management	1				
Employee Relations	.868**	1			
Work Motivation	.864**	.858**	1		
Job Performance	.891**	.862**	.873**	1	
Overall scale	.965**	.934**	.940**	.956**	1

Note: ** indicates P<0.01, * indicates P<0.05.

4.6 Linear Regression Analysis

The constructed multiple linear regression model has a good fit ($R^2 = 0.880>0.6$), and there is no multicollinearity among variables (VIF < 5). The regression equation is significant (F = 1146.3, P = 0.0001<0.001). The regression formula obtained is: $Y=0.449X_1+0.221X_2+0.318X_3+0.207$(where X_1 = talent management, X_2 = employee relations, X_3 = work motivation, Y = job performance). The results confirm that the three independent variables are independent positive influencing factors of job performance.

Table 4-8: Multiple Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance	
	B	Std. Error	Beta			VIF
Constant	0.28	0.089		0.314	0.753	
Talent Management	0.449	0.054	0.426	8.318	0.000	5.19
Employee Relations	0.221	0.050	0.221	4.404	0.000	4.99
Work Motivation	0.318	0.050	0.315	6.357	0.000	4.85
		R^2			0.845	
		F			557.225	
		P			0.00001	
		Dependent Variable: Job Performance				

4.7 **Model Summary and Discussion**

The research model and regression equation clearly explain the positive impact mechanism of talent management approaches, employee relations, and work motivation on job performance, verifying the mediating effect of work motivation, and providing quantitative basis for the optimization of HRM in e-commerce live streaming enterprises. Meanwhile, the limitations of the model are acknowledged, which need to be improved in subsequent studies.

5. Conclusion

5.1 Research Findings

This study takes the e-commerce live-streaming industry on TikTok (TikTok) under the digital economy as its research subject. Through a combination of survey questionnaires, literature review, and empirical research methods, it thoroughly investigates the impact mechanism of human resource management on work performance. The following core conclusions were drawn:

1) All dimensions of HRM have significant impacts on job performance. The optimization of talent management approaches can directly improve performance, with a standardized coefficient of 0.452 ($P < 0.001$); the improvement of employee relations has a more significant impact on performance, with a standardized coefficient of 0.512 ($P < 0.001$).
2) Work motivation plays a key mediating role between HRM practices and job performance. Talent management and employee relations affect job performance by stimulating employees' intrinsic motivation (such as autonomy and sense of achievement), verifying the applicability of Self-Determination Theory in the industry.
3) Under the digital economy, HRM in the e-commerce live streaming industry presents digital and personalized characteristics. The integration of digital technology is the key to improving management efficiency, and employees' demands for work autonomy and creativity put forward higher requirements for management flexibility and innovation.
4) There is still room for optimization in HRM in the TikTok e-commerce live streaming industry. Although leading enterprises have explored adaptive models, there is still a need for improvement in systematic talent training, long-term incentive mechanisms, and employee mental health care.

5.2 Practical Management Recommendations

Based on the research findings, this study proposes the following targeted recommendations:

1) Construct a systematic talent management system: improve a diversified incentive mechanism linked to performance, and use data analysis to achieve precise job-person fit to meet the development needs of employees at different levels.
2) Strengthen employee relations construction: establish a regular two-way communication mechanism between management and employees, and cultivate a positive team culture through team building and cross-departmental collaboration to reduce internal friction.
3) Stimulate employee work motivation: grant employees greater work autonomy, provide skill training and challenging goals, and establish a psychological support system to pay attention to employees' mental health.
4) Promote the digital transformation of HRM: introduce AI and big data technologies in recruitment, assessment, and training, and build a data-driven management decision platform.

5.3 Research Limitations

This study has the following limitations: the samples are mainly from leading TikTok enterprises, which may not fully represent the entire e-commerce live streaming industry; the cross-sectional research design makes it difficult to clarify the causal relationships among variables; the variable measurement does not cover emerging HRM practices, and external variables such as organizational structure and macroeconomics are not included, resulting in insufficient control of external factors.

5.4 Conclusion

The digital economy has brought unprecedented opportunities for the development of the e-commerce live streaming industry, while also posing new challenges for HRM. Through empirical analysis of HRM in the TikTok e-commerce live streaming industry, this study reveals the impact mechanism of talent management, employee relations, and work motivation on job performance, enriches relevant theoretical research, and provides theoretical support and practical suggestions for industry practice. In the future, academia and industry should collaborate to explore new HRM models adapting to the characteristics of the digital economy, promoting the healthy and sustainable development of the e-commerce live streaming industry and contributing to the prosperity of the digital economy.

Recommendations for Further Studies

Future research on digital economy-oriented human resource management (HRM) can be further advanced from four key dimensions to enrich and refine the existing body of knowledge.

First, from the perspective of theoretical development, future studies should seek to establish a dedicated theoretical framework for HRM that aligns with the operational characteristics and developmental logic of the digital economy. Moreover, greater attention should be devoted to examining the mediating and contextual effects of additional latent variables, thereby deepening the understanding of the underlying mechanisms of digital HRM and contributing to the development of a more systematic, comprehensive, and coherent theoretical framework. Second, with respect to research methodology, future investigations are encouraged to adopt an integrated mixed-methods approach that combines quantitative and qualitative research designs. In particular, longitudinal studies tracking the same research subjects over time should be conducted to address the inherent limitations of cross-sectional research, thereby improving the robustness of causal inference and enhancing the validity and reliability of research findings.Third, regarding research scope, future studies should extend current research by undertaking cross-platform comparative analyses to identify the distinctive characteristics of digital HRM practices across different digital contexts. Furthermore, greater emphasis should be placed on emerging occupations, such as virtual anchors, to explore the mechanisms, implementation pathways, and operational models through which digital technologies are deeply integrated with traditional HRM practices. Such efforts will contribute to broadening the research boundaries and enriching the theoretical and practical understanding of digital human resource management.Finally, in terms of practical implications, future research should pay greater attention to industry-specific contexts by developing scientific and targeted evaluation frameworks for digital HRM that are tailored to the characteristics of different industries. In addition, establishing a systematic repository of digital HRM best practices would facilitate the dissemination of effective management experiences and provide practical guidance for organizations seeking to optimize HRM in the digital era. Collectively, these research directions are expected to provide stronger empirical evidence and theoretical support for the continuous development, innovation, and optimization of digital human resource management, while laying a solid foundation for future in-depth research in this field.

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Impact of Financial Performance on the Stock Market Price Growth of the Top 10 Commercial Banks in the Philippines from 2019-2023

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Abstract

This study analyzed the financial performance and stock market valuation of the top 10 Philippine commercial banks from 2019 to 2023, focusing on the impact of the COVID 19 pandemic and government interventions, particularly loan moratoriums and Republic Act No. 11494 (Bayanihan to Recover as One Act). Findings show that banks experienced significant declines in profitability, ROA, and ROE during 2020, followed by gradual but uneven recovery through 2023. Chinabank consistently led in operational efficiency, while DBP recorded the lowest performance and PNB and UnionBank showed high volatility. Stock market valuation ratios, including P/E, P/S, and Market-to-Book, fluctuated in response to changing investor sentiment. Multiple regression analysis identified ROE and P/E ratio as the main determinants of stock prices, highlighting that investors prioritize profitability and market valuation over other financial metrics. The study concludes that Philippine banks demonstrated resilience post-pandemic, but differences in adaptability and strategic response underscore the importance of enhancing shareholder value and sustaining market confidence for long-term competitiveness.

Keywords: financial performance; stock price; commercial banks; multiple regression analysis; financial ratio

1. Introduction

The relationship between financial performance and stock market price growth is a fundamental concern in corporate finance because a firm's profitability and financial stability influence investor confidence and market valuation. For commercial banks, financial performance reflects their ability to generate profits, manage risks, and sustain operations, making it an important determinant of stock price movements. This relationship is particularly significant for the top commercial banks in the Philippines, which play a vital role in supporting economic growth through lending, investment, and other financial services.

From 2019 to 2023, the Philippine banking sector experienced significant changes due to the COVID-19 pandemic and subsequent economic recovery. In the post-pandemic period, banks faced new challenges, including higher interest rates, inflation, evolving regulatory policies, geopolitical uncertainties, and increasing competition from financial technology (fintech) firms. Despite these developments, studies indicate that financial indicators such as profit margin, return on assets (ROA), return on equity (ROE), liquidity, and capital adequacy remain important predictors of stock price performance (Brealey et al., 2020; Higgins, 2022). These conditions provide an opportunity to examine how financial performance influences stock market price growth among Philippine commercial banks.

Financial ratio analysis remains a widely accepted tool for evaluating corporate performance and market value. Ratios such as Profit Margin, ROA, ROE, Price-Earnings (P/E), Price-Sales (P/S), and Market-to-Book (M/B) provide insights into profitability, efficiency, and investor expectations, enabling managers, investors, and regulators to assess financial health and make informed decisions (Subramanyam, 2023; Ward, 2020; Juma, 2023; Kelkar, 2024).

Stock market prices likewise serve as indicators of investor confidence and economic conditions. Rising stock prices encourage investment and economic activity, while declining prices may reduce consumer spending and business confidence (Remesh, 2024). A well-developed stock market also promotes capital formation, efficient resource allocation, and sustainable economic growth by providing timely information for investment decisions (Mamun et al., 2018). Consequently, investment analysts closely monitor stock prices to evaluate a company's financial strength and long-term sustainability (Murphy, 2022).

Recent reports indicate that the Philippine commercial banking sector demonstrated resilience from 2019 to 2023, with continued growth in assets, lending activities, and profitability despite economic uncertainties (Bangko Sentral ng Pilipinas, 2025; Philstar, 2025). However, limited empirical evidence examines how financial performance indicators directly influence stock market price growth among Philippine commercial banks during this period.

This study addresses this gap by analyzing the relationship between financial performance and stock market price growth of the Top 10 commercial banks in the Philippines from 2019 to 2023. Using descriptive statistics, financial ratio analysis, horizontal analysis, and regression analysis, the study provides empirical evidence on how profitability and market valuation indicators affect stock price growth. The findings are expected to contribute to the literature and provide useful insights for investors, bank management, regulators, and policymakers.

2. Objectives

The general objective of the study was to determine a probable significant impact of financial performance on the stock market price growth of a parent universal bank and a subsidiary thrift bank in the Philippines for the years 2019 to 2023. Specifically, it sought to achieve the following:

1. Analyze the financial performance of the Top 10 Commercial Banks in the Philippines from 2019 to 2023 using audited financial statement ratios in terms of:
    a. Profit Margin Ratio (PMR);
    b. Return on Assets (ROA);
    c. Return on Equity (ROE);
    d. Price-Earnings (P/E) Ratio;
    e. Price-Sales (P/S) Ratio; and
    f. Market-to-Book (M/B) Ratio.
2. Examine the trend and variation in the stock market price growth of the Top 10 Commercial Banks in the Philippines from 2019 to 2023.
3. Determine the significant effect of financial performance on stock market price growth of the Top 10 Commercial Banks in the Philippines from 2019 to 2023 using panel regression analysis, with:
    a. Profit Margin Ratio (PMR);
    b. Return on Assets (ROA); and
    c. Return on Equity (ROE)
4. Evaluate the effects of the COVID-19 pandemic and government regulatory interventions on the financial performance and stock market price growth of the Top 10 Commercial Banks in the Philippines from 2019 to 2023 by:
    4.1. Determining the effect of loan payment moratoriums and non-collection periods on:
        a. Profit Margin Ratio (PMR);
        b. Return on Assets (ROA); and
        c. Return on Equity (ROE).

4.2. Determining the effect of Republic Act No. 11494 (Bayanihan to Recover As One Act) and other pandemic-related financial relief policies on:
   a. Price-Earnings (P/E) Ratio;
   b. Price-Sales (P/S) Ratio; and
   c. Market-to-Book (M/B) Ratio.

3. Materials and methods

Research Design

This study employed a quantitative, non-experimental research design using secondary panel data to examine the effect of financial performance on the stock market price growth of the Top 10 commercial banks in the Philippines from 2019 to 2023. Since the study relied exclusively on audited financial statements and historical stock market data, no variables were manipulated, making the study observational in nature (Çobanoğlu, 2023).

To determine the influence of financial performance on stock market price growth, the study utilized multiple regression analysis (MRA) and panel data regression. The dependent variable was stock market price growth, while the independent variables included Profit Margin Ratio (PMR), Return on Assets (ROA), Return on Equity (ROE), Price-Earnings (P/E) Ratio, Price-Sales (P/S) Ratio, and Market-to-Book (M/B) Ratio.

Sample and Setting

The study focused on the Top 10 commercial banks in the Philippines based on total assets reported by the Bangko Sentral ng Pilipinas (BSP): BDO Unibank, Metropolitan Bank and Trust Company, Land Bank of the Philippines, Bank of the Philippine Islands, China Banking Corporation, Rizal Commercial Banking Corporation, Philippine National Bank, Union Bank of the Philippines, Security Bank Corporation, and Development Bank of the Philippines.

Purposive sampling was employed to select these banks because they represent the largest institutions in the Philippine banking sector and provide complete audited financial information. Financial data covering 2019–2023 were obtained from publicly available sources, including the BSP, Philippine Stock Exchange (PSE Edge), and the banks' annual reports.

Data Collection Procedure

Secondary data were collected from the BSP, PSE Edge, and the official annual reports of the selected banks. Audited financial statements were used to compute Profit Margin Ratio, ROA, ROE, P/E Ratio, P/S Ratio, and Market-to-Book Ratio, while historical stock prices were obtained from PSE records.

To ensure accuracy, financial figures were cross-validated across multiple sources. Since all data were publicly available, no permission from the banks was required. Data collection commenced after the complete 2023 audited financial statements became available.

Data Analysis

The study employed four statistical techniques:

- **Descriptive Statistics** to summarize the financial performance of the banks using measures of central tendency and variability.
- **Financial Ratio Analysis** to evaluate profitability and market valuation through PMR, ROA, ROE, P/E Ratio, P/S Ratio, and Market-to-Book Ratio.
- **Horizontal Analysis** to examine year-to-year changes in financial performance and stock market price growth from 2019 to 2023.

- **Multiple Regression Analysis (MRA)** and **panel data regression** to determine the effects of financial performance indicators on stock market price growth.

Prior to regression analysis, diagnostic tests for linearity, normality, homoscedasticity, and multicollinearity were conducted. For panel data estimation, the Breusch–Pagan Lagrange Multiplier Test and Hausman Test were performed to determine the most appropriate regression model.

Treatment of Missing Data

Pairwise deletion was applied to handle missing observations. This approach excluded only the missing values from the relevant analyses while retaining the remaining available data. Missing observations primarily involved Land Bank of the Philippines and Development Bank of the Philippines, which are government-owned and non-listed banks without publicly available stock price information.

Ethical Considerations

The study used only publicly available secondary data from reputable sources, including the BSP, PSE Edge, and audited annual reports. All references were properly cited following APA 7th Edition to uphold academic integrity. Data were analyzed objectively without manipulation or fabrication. Artificial intelligence tools were used only to improve grammar and language clarity and did not contribute to the interpretation or analysis of the findings. The study was conducted solely for academic purposes and involved no conflicts of interest.

4. Results

Descriptive Statistics

Table 1 Net Profit Margin

BANKS	2019	2020	2021	2022	2023	MEAN	MEDIAN	MODE
BDO	19.58%	6.24%	11.30%	17.03%	19.60%	14.75%	17.03%	-
BPI	22.87%	17.19%	21.44%	29.14%	28.91%	23.91%	22.87%	-
METROBANK	24.85%	12.96%	25.65%	32.53%	27.97%	24.79%	25.65%	-
CHINABANK	29.20%	27.53%	31.03%	34.39%	40.71%	32.57%	31.03%	-
PNB	19.29%	5.59%	74.74%	25.60%	30.15%	31.07%	25.60%	-
RCBC	18.93%	17.58%	23.34%	31.18%	28.34%	23.87%	23.34%	-
UNIONBANK	36.51%	29.97%	34.62%	25.22%	11.72%	27.61%	29.97%	-
SECURITY	22.85%	18.42%	21.02%	28.72%	18.55%	21.91%	21.02%	-
DBP	16.71%	10.31%	9.60%	9.52%	12.60%	11.75%	10.31%	-
LANDBANK	23.28%	25.29%	37.86%	22.73%	30.38%	27.91%	25.29%	-

From 2019 to 2023, the Top 10 commercial banks in the Philippines exhibited varying levels of net profit margin, with most experiencing a decline in 2020 due to the COVID-19 pandemic, followed by gradual recovery in subsequent years. Chinabank recorded the highest average net profit margin, indicating superior profitability and operational efficiency, while Landbank and UnionBank also posted relatively strong results. Metrobank, BPI, RCBC, and Security Bank maintained stable and moderate profitability, whereas DBP consistently recorded the lowest margins. PNB showed an exceptional increase in 2021, which raised its overall average. Since net profit margin measures a bank's ability to convert revenue into profit (Brigham & Houston, 2021), the results suggest that banks differed considerably in their operational efficiency and financial performance throughout the study period. Overall,

the close mean and median values indicate generally stable performance despite year-to-year fluctuations.

Table 2 Return on Asset

ANKS	2019	2020	2021	2022	2023	MEAN	MEDIAN	MODE
BDO	5.93%	1.50%	2.85%	3.78%	3.43%	3.50%	3.43%	-
BPI	1.36%	0.98%	1.04%	1.59%	1.89%	1.37%	1.36%	-
METROBANK	1.23%	0.57%	0.90%	1.25%	1.44%	1.08%	1.23%	-
CHINABANK	11.00%	12.10%	14.50%	16.00%	16.00%	13.92%	14.50%	16%
PNB	0.92%	0.22%	2.62%	0.99%	1.53%	1.26%	0.99%	-
RCBC	0.76%	0.65%	0.82%	1.14%	1.02%	0.88%	0.82%	-
UNIONBANK	1.90%	1.50%	1.60%	1.30%	0.80%	1.42%	1.50%	-
SECURITY	13.00%	10.30%	10.20%	13.70%	10.60%	11.56%	10.60%	-
DBP	0.77%	0.39%	0.32%	0.36%	0.66%	0.50%	0.39%	-
LANDBANK	1.91%	0.94%	1.41%	0.86%	1.30%	1.28%	1.30%	-

From 2019 to 2023, most of the Top 10 commercial banks in the Philippines maintained relatively low but stable Return on Assets (ROA), with slight declines in 2020 followed by gradual recovery. Chinabank recorded the highest ROA, followed by Security Bank, indicating superior efficiency in utilizing assets to generate profits. In contrast, BPI, Metrobank, RCBC, UnionBank, Landbank, and PNB posted modest but consistent ROA levels, while DBP recorded the lowest average throughout the period. Since ROA measures how effectively a bank converts its assets into earnings (Brigham & Houston, 2021), the results suggest that Chinabank and Security Bank demonstrated stronger asset utilization and profitability than the other banks. Overall, the close mean and median values indicate stable performance across the years, although clear differences existed between the highest- and lowest-performing institutions.

Table 3 Return on Equity

BANKS	2019	2020	2021	2022	2023	MEAN	MEDIAN	MODE
BDO	34.44%	13.05%	25.73%	22.74%	18.30%	22.85%	22.74%	-
BPI	11.09%	7.80%	8.36%	12.96%	15.29%	11.10%	11.09%	-
METROBANK	9.47%	4.36%	6.89%	10.29%	12.51%	8.70%	9.47%	-
CHINABANK	11.04%	12.09%	13.58%	15.10%	15.50%	13.46%	13.58%	-
PNB	6.89%	16.90%	19.98%	7.00%	9.95%	12.14%	9.95%	-
RCBC	6.57%	5.45%	6.67%	10.62%	9.10%	7.68%	6.67%	-
UNIONBANK	15.30%	11.50%	11.60%	9.70%	5.60%	10.74%	11.50%	-
SECURITY	8.87%	6.16%	5.57%	8.42%	6.95%	7.19%	6.95%	-
DBP	10.04%	5.66%	5.04%	5.07%	8.27%	6.82%	5.66%	-
LANDBANK	13.83%	12.62%	18%	11.44%	16.64%	14.51%	13.83%	-

From 2019 to 2023, the Top 10 commercial banks in the Philippines exhibited fluctuating Return on Equity (ROE), with many experiencing declines in 2020 followed by varying levels of recovery. BDO posted the highest ROE in 2019 and maintained one of the highest average returns despite subsequent declines, while Chinabank and Landbank demonstrated strong and consistent performance throughout the period. BPI, Metrobank, RCBC, Security Bank, and DBP recorded moderate but relatively stable ROE, whereas UnionBank showed a gradual decline and PNB displayed more irregular movements. Since ROE measures how effectively a bank uses shareholders' equity to generate profit (Brigham

& Houston, 2021), the findings indicate that BDO, Chinabank, and Landbank were more efficient in generating returns for shareholders than the other banks. Overall, the close mean and median values suggest balanced performance, although year-to-year fluctuations were evident across institutions.

Table 4 Price-to-Earnings Ratio

BANKS	2019	2020	2021	2022	2023	MEAN	MEDIAN	MODE
BDO	16	16.5	12.1	11.1	9.7	13.08	12.1	-
BPI	14.1	15.4	19	12.5	10.8	14.36	14.1	-
METROBANK	14.2	8.5	21.5	7.5	11.2	12.58	11.2	-
CHINABANK	6.68	5.56	4.63	3.9	3.8	4.914	4.63	-
PNB	6.5	6.4	1.3	1.5	2.1	3.56	2.1	-
RCBC	7.9	7.5	6.8	4.8	5.7	6.54	6.8	-
UNIONBANK	5.0	6.3	11	15.5	14.2	11.75	12.6	-
SECURITY	15.1	11.1	16	6.2	5.6	10.8	11.1	-

Between 2019 and 2023, the price/earnings ratio of most banks showed From 2019 to 2023, the Price-to-Earnings (P/E) ratios of the Top 10 commercial banks in the Philippines showed noticeable fluctuations rather than a consistent trend. BDO and Security Bank recorded relatively high P/E ratios in the earlier years before declining, while UnionBank showed steady improvement toward the end of the period. BPI and Metrobank exhibited more volatile movements, whereas RCBC maintained relatively stable performance. Chinabank and PNB consistently posted lower P/E ratios, with PNB experiencing a sharp decline after 2020. Since the P/E ratio reflects how much investors are willing to pay for each unit of earnings (Brigham & Houston, 2021), the results suggest that banks with stronger and more consistent performance, such as BDO and UnionBank, were generally viewed more favorably by investors than banks with declining or inconsistent performance. Overall, the close mean and median values indicate relatively balanced market valuations despite year-to-year fluctuations.

Table 5 Price-Sales Ratio

BANKS	2019	2020	2021	2022	2023	MEAN	MEDIAN	MODE
BDO	0.02	0.02	0.01	0.01	0.01	0.014	0.01	0.01
BPI	3.08	2.9	3.84	3.37	2.75	3.188	3.08	-
METROBANK	1.6E-10	1.1E-10	5.3E-10	4.4E-10	2.9E-10	3.1E-10	2.9E-10	-
CHINABANK	6.68	5.55	4.63	3.86	3.77	4.898	4.63	-
PNB	0.81	793.46	369.92	483.19	387.97	407.07	387.97	-
RCBC	1.54	1.28	1.36	1.25	1.26	1.338	1.28	-
UNIONBANK	0.0013	1.65	2.35	2.88	1.21	1.61826	1.65	-

From 2019 to 2023, the Price-to-Sales (P/S) ratios of the Top 10 commercial banks in the Philippines exhibited varied trends. BDO, Metrobank, and RCBC maintained consistently low and stable P/S ratios, while BPI and Security Bank recorded moderate but relatively steady values. Chinabank showed a gradual decline throughout the period, whereas PNB and UnionBank displayed unusually large spikes that substantially increased their average P/S ratios. Since the P/S ratio compares a company's market value with its sales revenue (Brigham & Houston, 2021), the results suggest that most banks maintained stable market valuations relative to sales, while the exceptional increases observed in PNB and UnionBank likely reflected temporary market conditions or investor reactions. Overall, the majority of

banks demonstrated stable performance, with a few outliers contributing to significant variability in the dataset.

Table 6 Market-to-Book Ratio

BANKS	2019	2020	2021	2022	2023	MEAN	MEDIAN	MODE
BDO	0.051	0.065	0.033	0.003	0.016	0.034	0.033	-
BPI	1.470	1.330	1.490	1.470	1.400	1.432	1.470	1.47
METROBANK	0.940	0.660	0.800	0.770	0.650	0.764	0.770	-
CHINABANK	0.700	0.638	0.587	0.549	0.552	0.605	0.587	-
PNB	0.340	0.290	0.190	0.170	0.150	0.228	0.190	-
RCBC	0.528	0.361	0.371	0.213	0.357	0.366	0.361	-
UNIONBANK	0.717	0.817	1.081	1.240	0.669	0.905	0.817	-
SECURITY	1.250	0.820	0.720	0.520	0.400	0.742	0.720	-

From 2019 to 2023, the Market-to-Book (M/B) ratios of the Top 10 commercial banks in the Philippines generally remained stable or showed gradual declines. BPI maintained the most consistent M/B ratio throughout the period, while Metrobank and Chinabank exhibited moderate but steadily decreasing values. PNB, RCBC, and Security Bank also followed downward trends, whereas UnionBank experienced greater fluctuations, peaking in 2022 before declining in 2023. BDO recorded the most significant change, with its M/B ratio falling sharply to a negative value in 2023. Since the M/B ratio reflects how investors value a company's market worth relative to its book value (Brigham & Houston, 2021), the findings suggest that BPI maintained relatively stable market valuation, while BDO and UnionBank experienced greater variability in investor perception. Overall, the close mean and median values indicate generally balanced performance despite the presence of a few notable fluctuations.

Table 7 Stock Price

BANKS	2019	2020	2021	2022	2023	MEAN	MEDIAN	MODE
BDO	157.40	104.50	120.70	105.90	129.10	123.52	120.70	-
BPI	86.90	81.05	95.60	102.00	104.10	93.93	95.60	-
METROBANK	66.30	49.05	57.00	54.60	51.50	55.69	54.60	-
CHINABANK	24.95	24.85	26.00	27.45	30.85	26.82	26.00	-
PNB	34.95	29.35	20.50	19.00	18.40	24.44	20.50	-
RCBC	22.60	18.88	20.20	23.85	22.45	21.60	22.45	-
UNIONBANK	57.70	70.50	99.50	85.80	49.95	72.69	70.50	-
SECURITY	196.00	134.00	119.50	87.00	71.50	121.60	119.50	-

From 2019 to 2023, the stock prices of the Top 10 commercial banks in the Philippines showed varying trends, with most experiencing fluctuations, declines, or moderate recovery. BDO recorded the highest average stock price despite a pandemic-related decline in 2020, while BPI demonstrated consistent growth throughout the period. Security Bank and PNB experienced continuous declines, reflecting weaker market performance, whereas Chinabank showed gradual improvement. Metrobank and RCBC maintained relatively stable prices with minimal fluctuations, while UnionBank exhibited significant volatility, reaching a peak in 2021 before declining in 2023. Overall, the close mean and median values indicate relatively balanced stock price distributions, although yearly variations reflect changing investor sentiment and market conditions.

Horizontal Analysis

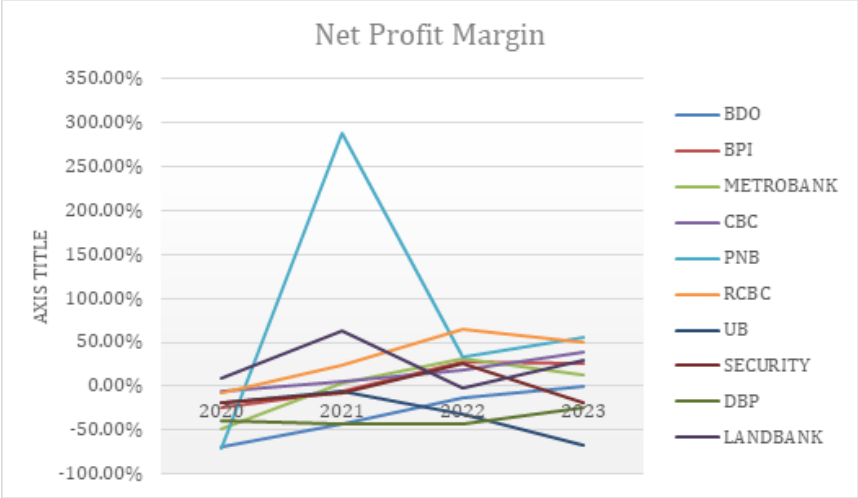

Figure 1 Net Profit Margin

Figure 1 illustrates the annual percentage changes in bank performance from 2020 to 2023, showing a significant decline in 2020 followed by gradual recovery in subsequent years. Most banks experienced negative growth in 2020, with PNB, BDO, and Metrobank recording the largest decreases, while Landbank was the only bank with positive growth. In 2021, several banks began recovering, with PNB showing an exceptional increase due to a properties-for-shares swap transaction and Landbank posting strong growth. The recovery continued in 2022 and 2023, with most banks achieving positive returns, although some institutions such as UnionBank continued to experience declines. Overall, the trend reflects post-pandemic recovery, with varying levels of resilience and performance among the banks.

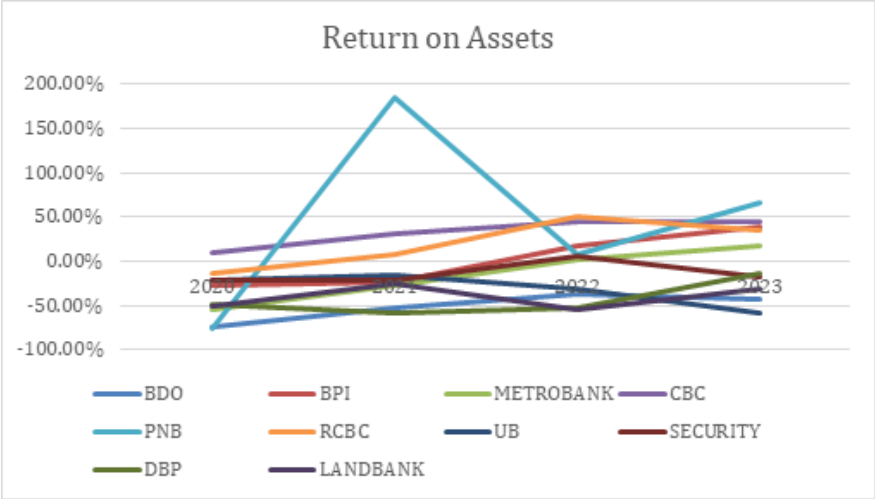

Figure 2 Return on Assets

Figure 2 presents the annual performance changes of the banks from 2020 to 2023, showing widespread declines in 2020 followed by gradual recovery in the succeeding years. While BPI, Metrobank, CBC, and RCBC demonstrated strong recovery and growth, BDO continued to experience negative performance despite narrowing losses. PNB showed significant volatility with a sharp increase in 2021, whereas UnionBank continued to decline. Security Bank, DBP, and Landbank exhibited mixed but improving trends. Overall, the results indicate a post-pandemic recovery period with varying levels of resilience and stability among the banks.

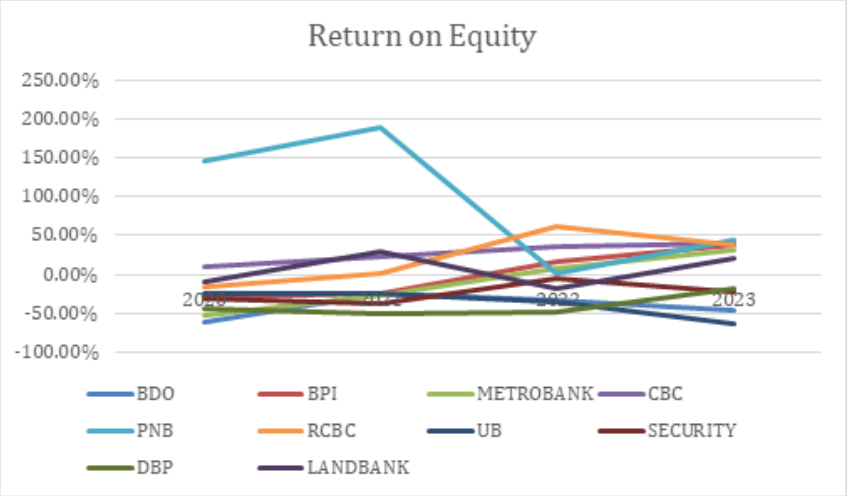

Figure 3 Return on Equity

Figure 3 shows a decline in bank performance in 2020 followed by an uneven recovery from 2021 to 2023. While some banks, including BPI, Metrobank, CBC, RCBC, PNB, and Landbank, achieved sustained growth, others such as BDO and UnionBank continued to experience declines. Security Bank showed fluctuating performance, while DBP demonstrated gradual improvement despite remaining negative. Overall, the results indicate a slow and varied post-pandemic recovery, with differences in resilience and financial performance among the banks.

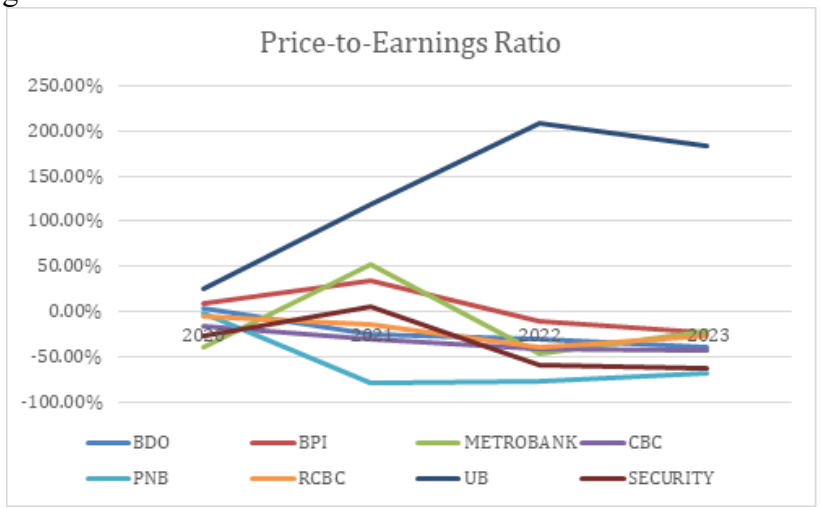

Figure 4 Price-to-Earnings Ratio

Figure 4 shows a generally volatile and declining performance trend among the banks from 2020 to 2023, with only a few institutions demonstrating sustained growth. While some banks, such as BDO, BPI, and UnionBank, recorded periods of improvement, most experienced declines, particularly in 2022 and 2023. UnionBank emerged as the strongest performer, showing exceptional growth despite market fluctuations, whereas other banks faced persistent challenges and inconsistent results. Overall, the findings highlight uneven recovery and continued instability across the banking sector during the period.

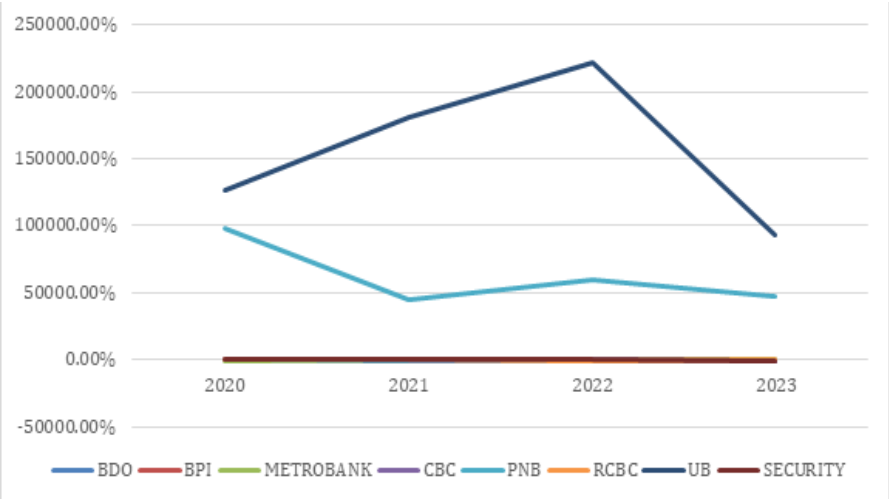

Figure 5 Price-Sales Ratio

Figure 5 shows extreme volatility in the dataset, with a clear divide between banks experiencing persistent declines and those with unusually large percentage increases. BDO remained stagnant in 2020 and then consistently declined by 50% from 2021 through 2023, indicating a continuous contraction. BPI showed some recovery in 2021 and 2022 with growth, but this reversed into a decline again in 2023. Metrobank exhibited a strong upward trend, with very high growth in 2021 and 2022, although this moderated in 2023 while remaining positive. In contrast, CBC and RCBC both demonstrated consistent negative performance across all years, suggesting ongoing deterioration. Security Bank also followed a downward trajectory, with losses worsening each year. Meanwhile, PNB and UnionBank (UB) recorded extraordinarily large percentage increases throughout the period, reflecting either very low base values or significant fluctuations, but both showed a gradual decline in growth rates by 2023. Overall, the analysis highlights a highly unstable pattern, where only a few banks show sustained growth, while most experience continuous declines or erratic changes over time.

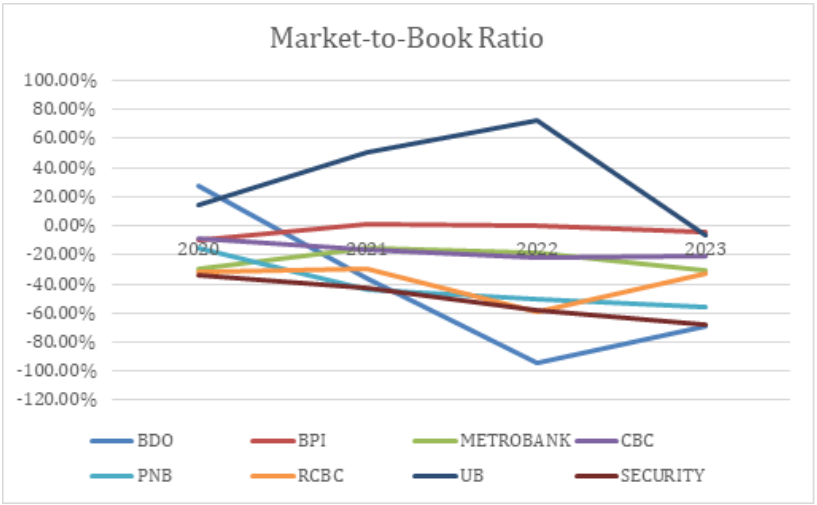

Figure 6 Market-to-Book Ratio

Figure 6 indicates a predominantly declining trend across most banks, with only limited instances of recovery. In 2020, performance was mixed, as BDO and UnionBank (UB) recorded growth, while the rest of the banks experienced declines, particularly RCBC and Security Bank. By 2021, the overall trend weakened further, with most banks posting negative changes; however, BPI showed slight improvement and UB recorded a strong

increase. The downward movement intensified in 2022, where nearly all banks exhibited significant declines, most notably BDO with a sharp drop, while UB stood out again with substantial growth. In 2023, the negative trend persisted across most banks, including BDO, Metrobank, CBC, PNB, RCBC, and Security Bank, all of which continued to decline. BPI showed only a slight decrease, indicating relative stability compared to others, while UB reversed its previous gains and turned negative. Overall, the data reflects a sustained period of contraction and instability, with UnionBank being the only bank to demonstrate notable growth in earlier years before declining, and most other banks experiencing consistent or worsening negative performance throughout the period.

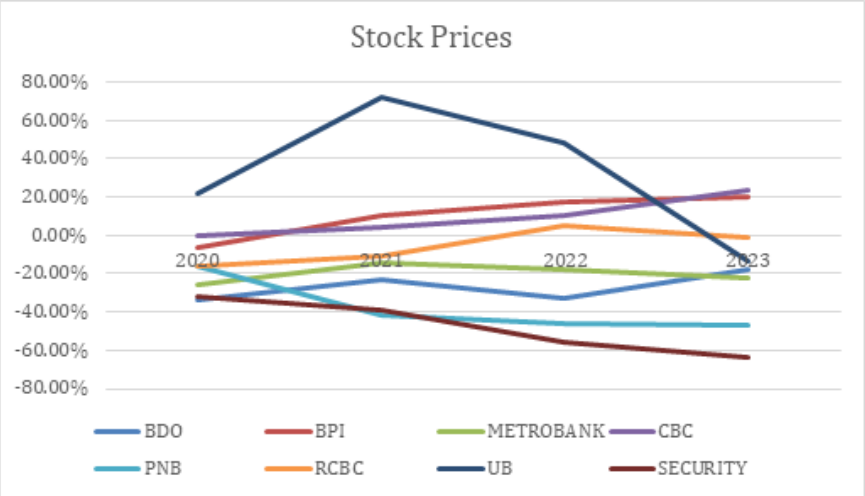

Figure 7 Stock Prices

Figure 7 shows an uneven recovery trend among the banks from 2020 to 2023, with most institutions experiencing declines and only a few demonstrating sustained improvement. While BPI, CBC, and RCBC showed gradual recovery, banks such as BDO, Metrobank, PNB, and Security Bank continued to face challenges. UnionBank initially recorded strong growth but later declined, reflecting market volatility. Overall, the results indicate that post-pandemic recovery was inconsistent, with varying levels of resilience and financial performance among the banks (Noviyanti et al., 2021).

Multiple Regression Analysis

The Breusch–Pagan test was used to determine whether the data from the eight commercial banks should be analyzed using pooled regression or panel data analysis. It identifies whether significant differences exist among banks, ensuring that the most appropriate regression model is selected for accurate and reliable results.

Table 8 Breusch-Pagan test Results

Estimated results:			
	Var	sd = sqrt(Var)	
---------+----------			
Stockpr~e	1960.228	44.27446	
e	360.9204	18.9979	
u	537.5056	23.18417	

Estimated results:
Test: Var(u) = 0
chibar2(01) = 13.74
Prob > chibar2 = 0.0001

The Breusch–Pagan LM test was conducted to determine whether pooled OLS or panel data regression was more appropriate. The test result ($chibar^2 = 13.74$, $p = 0.0001$) rejected the null hypothesis of no panel effects, indicating significant differences among the commercial banks. The substantial panel-level variance further confirmed that pooled OLS was unsuitable, and a panel regression model was required.

To identify the appropriate panel model, the Hausman test was performed to determine whether fixed effects or random effects should be applied. The results supported the use of the random effects model, indicating that the unobserved individual effects were not significantly correlated with the explanatory variables. Therefore, the random effects model was selected as it provides more efficient estimates while accounting for both within-bank and between-bank variations (Wooldridge, 2010; Baltagi, 2021).

Table 9 Random Effect Results

Stock price	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	Stock price
Profit Margin Ratio	-21.82591	39.04165	-0.56	0.576	-98.34614	**Profit Margin Ratio**
ROA	197.893	171.4723	1.15	0.248	-138.1865	**ROA**
ROE	209.358	93.02347	2.25	0.024	27.03538	**ROE**
P/E Ratio	3.259045	1.100783	2.96	0.003	1.10155	**P/E Ratio**
Price-Sales Ratio	-0.033428	0.034297	-0.97	0.33	-0.1006488	**Price-Sales Ratio**
Market-to-Book Ratio	1.372816	9.443196	0.15	0.884	-17.13551	**Market-to-Book Ratio**
cons	9.132784	19.43739	0.47	0.638	-28.96381	**cons**

The random effects regression results indicate that only Return on Equity (ROE) and Price-Earnings (P/E) Ratio have a significant impact on stock price growth, with p-values of 0.024 and 0.003, respectively. ROE shows a positive relationship, suggesting that higher profitability relative to shareholders' equity is associated with higher stock prices, while the positive effect of the P/E ratio reflects stronger investor expectations for future growth (Anggraini & Yuniningsih, 2024). Meanwhile, Profit Margin Ratio, ROA, Price-to-Sales Ratio, and Market-to-Book Ratio were found to have no significant influence, as their p-values exceeded 0.05. Overall, the findings suggest that investors place greater emphasis on equity profitability and valuation expectations when assessing bank stock performance.

5. Discussion

The results from 2019 to 2023 indicate that Philippine commercial banks maintained generally stable but varied financial performance, with a significant decline in 2020 followed by an uneven recovery. Chinabank consistently showed strong profitability and asset efficiency, while BDO and Landbank also performed well in selected indicators. Most banks, including BPI, Metrobank, RCBC, and Security Bank, maintained moderate and stable results, whereas DBP recorded weaker performance and PNB and UnionBank showed greater volatility. Valuation ratios reflected changing market conditions and investor perceptions. Horizontal analysis confirmed the pandemic-related downturn in 2020 and gradual recovery thereafter. The random effects regression revealed that only ROE and P/E Ratio significantly

influenced stock price growth, indicating that investors place greater importance on equity profitability and valuation expectations. Overall, the findings highlight a recovering banking sector where financial stability and investor confidence remain key factors affecting stock performance.

6. Conclusion

The study concludes that the financial performance of the Top 10 commercial banks in the Philippines from 2019 to 2023 demonstrated resilience amid the COVID-19 disruption, followed by a gradual but uneven recovery. Chinabank emerged as one of the strongest performers in profitability and asset efficiency, while BDO and Landbank also showed favorable results in selected indicators. Meanwhile, most banks maintained moderate stability, although DBP recorded weaker performance and PNB and UnionBank exhibited greater volatility. The pandemic significantly affected profitability and market valuation, as loan moratoriums and financial relief measures reduced income and increased credit risks during 2020–2021. However, improvements in economic conditions and regulatory interventions supported recovery in profitability and stock valuations from 2022 to 2023.

The regression analysis using the random effects model revealed that Return on Equity (ROE) and Price-Earnings (P/E) Ratio were the only significant determinants of stock price growth. This suggests that investors primarily consider a bank's ability to generate shareholder returns and its market valuation relative to earnings when making investment decisions. Other indicators, including profit margin, ROA, Price-Sales Ratio, and Market-to-Book Ratio, showed no significant independent influence within the model.

For future researchers, the study recommends expanding the scope of analysis by including additional variables that may better explain stock market movements. Future researchers are further encouraged to examine the role of digital transformation in banking performance by incorporating measurable digitalization indicators, such as digital transaction volume, technology investment, digital banking adoption, or a composite digitalization index. This would provide stronger empirical evidence on how technological advancement influences profitability, operational efficiency, and investor perception.

Additionally, future studies may utilize alternative methodologies, such as comparative studies between large and small banks, cross-country analyses, or advanced econometric approaches, to provide broader insights into the relationship between financial performance and stock market behavior. Researchers may also address data limitations by including more listed banks or using longer panel datasets to improve the robustness and generalizability of findings.

Overall, future research should continue exploring the evolving factors that influence banking performance and market valuation, particularly in the context of digital transformation, regulatory changes, and changing investor behavior in the post-pandemic financial environment.

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Addressing the Accountancy Faculty Shortage in Quezon Province: Strategies to Inspire Academic Career Path for Accounting Students

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Abstract

This study explores strategies to inspire accounting students to pursue academic careers, addressing the pressing shortage of faculty in accountancy departments in Quezon Province. Using a mixed-method research design, the study gathered data from 181 Bachelor of Science in Accountancy (BSA) students and 53 accounting professionals through surveys, complemented by in-depth interviews with five field experts. The research focuses on identifying factors influencing career decisions, such as financial rewards, professional recognition, training, requirements, job market consideration, and personality, while exploring actionable strategies for educational institutions to attract and retain qualified faculty. Insights from the study aim to provide practical recommendations to address the faculty shortage, ensuring the continued quality and relevance of accountancy education. By bridging the gap between practice and Academe, this study highlights the importance of fostering interest in teaching among accounting graduates to sustain the growth and excellence of the accountancy profession.

Keywords: accounting education, faculty shortage, career options, Philippines, Quezon Province

1. Introduction

The Republic Act No. 9298 Philippine Accountancy Act of 2004, is a legislative measure enacted to regulate the practice of accountancy in the Philippines. This law establishes the Professional Regulatory Board of Accountancy, which is responsible for overseeing the licensure, practice, and ethical standards of accountants in the country. The Act aims to ensure the integrity, competence, and professionalism of accountancy practitioners by setting forth the qualifications for licensure, the requirements for continuing professional education, and the disciplinary actions for violations of the profession's code of ethics.

A significant issue associated with this law is the increasing scarcity of highly competent faculty in accounting programs. This shortage is further complicated by RA 9298's strict regulations, which mandate that educators in the sector obtain valid licenses and achieve specific professional experience qualifications. Because of this, a lot of professionals who fit this description choose not to teach but rather take on higher paying jobs in the private sector. As a result, it is difficult for accounting schools to retain a sufficient number of faculty members, which has an effect on the standard of instruction and the readiness of aspiring accountants.

The accounting profession provides several job opportunities, but few choose to work in Academe. This tendency begs crucial concerns regarding the factors influencing their choice of careers. Around the world, corporate jobs with better pay, greater opportunities for growth, and strong professional standing are sometimes appealing than teaching jobs. As per the International Federation of Accountants (IFAC, 2020), a considerable proportion of accounting graduates globally choose industrial positions, while a minority pursues academic professions. The issue of academic shortages of expertise in the accounting sector is brought to light by this global trend.

The academic sector faces a critical shortage of qualified faculty members worldwide. According to a report by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2023), there is an estimated shortage of 69 million teachers worldwide. In the field of accountancy, the International Federation of Accountants (IFAC, 2019) highlighted that while there is a global demand for over 2 million new accountants annually, the number of accounting educators is not keeping pace. Globally, there were about 3 million accountants in the profession as of 2020, with a significant portion employed in industry rather than Academe (International Federation of Accountants, 2020).

In Asia, most accounting graduates seek industrial positions. According to a survey conducted by the Institute of Chartered Accountants in India (ICAI, 2021), more than 85% of accounting graduates choose to work for corporations because of the high salary levels and wide range of job options available to them. Less than 10% of accounting graduates in China choose Academe, following similar patterns (Ministry of Education of the People's Republic of China, 2022). These figures highlight the difficulties academic institutions have in attracting and retaining demanded accounting instructors, an issue that may have an effect on the quality of accounting education.

The Commission on Higher Education (CHED) has determined that there is a substantial discrepancy between the quantity of educators with the necessary qualifications and the growing number of students enrolling in accounting programs. While there are thousands of CPAs in practice, only a small fraction are active in academics, according to the Philippine Institute of Certified Public Accountants (PICPA, 2022). In that regard, a study by Cruz (2023) research found that approximately 5% of the 188,000 CPAs in the Philippines are engaging in full-time teaching positions.

Despite the high demand for accountants, there is a noticeable scarcity of accounting graduates who choose to enter the teaching profession. This phenomenon is particularly evident in Quezon Province, where educational institutions face challenges in recruiting qualified accountancy faculty. Several factors contribute to this issue, including better financial incentives in the private sector, the perceived prestige of corporate roles, and a general lack of interest in teaching careers among accounting graduates.

The shortage of accountancy faculty in Quezon Province is a pressing issue, starkly reflected in the membership statistics of professional organizations. The Philippine Institute of Certified Public Accountants (PICPA) Quezon chapter lists 1,264 members, but only 520 are active, and among these, a mere 25 are engaged in Academe. The remaining 495 members are spread across other sectors: 180 in commerce and industry, 162 in government, 125 in public practice, and 28 new CPAs without specific records yet. This disparity highlights a significant faculty shortage in the Academe.

Further compounding the issue, the Quezon Federation of Junior Philippine Institute of Accountants (QFJPIA) reports a total of 1,419 Bachelor of Science in Accountancy (BSA) students across Quezon Province. The current faculty-to-student ratio is far from ideal. According to the Commission on Higher Education (CHED) Memorandum Order No. 52 Series 2007, the ideal class size is 35 students or less, with a maximum of 50. However, many accountancy programs exceed this limit, often reaching ratios of 50:1 or more, stressing the already limited teaching resources.

Salary discrepancies between academic and industry roles further exacerbate this shortage. The researchers conducted an initial survey indicating that assistant professors earn between PHP 20,000 to PHP 30,000 monthly, focusing mainly on teaching college and senior high school students. In contrast, assurance associates earn less than PHP 20,000 but engage in diverse tasks such as preparing working papers, conducting fieldwork, and performing administrative duties. Public practitioners who run their accounting firms and also serve as academic chairpersons can earn over PHP 50,000 monthly, balancing tax practice, general accounting, and auditing with program supervision and instructional responsibilities. Accountant II positions in the government earn about PHP 40,000 per month, offering a competitive alternative to teaching.

The stringent requirements set by the Board of Accountancy and the competitive nature of the accounting profession often draw potential educators into industry roles rather than academic positions. These factors collectively contribute to the critical shortage of qualified accountancy faculty in Quezon Province. If no professionals engage in Academe, several detrimental effects would occur. The quality of education in accountancy would decline, as students would not receive the comprehensive and current training needed to excel in the field. This would result in a shortage of skilled accountants, impacting various sectors such as business, government, and public practice that rely on these professionals. Additionally, the remaining faculty would be overburdened, leading to higher student-to-teacher ratios and reduced personalized instruction.

Without professionals' real-world experience and updated knowledge, the curriculum would become outdated, failing to keep pace with industry changes. The lack of academic research and development would stifle innovation in accounting theories and practices. Furthermore, accountancy programs might lose their accreditation due to the absence of qualified educators, diminishing the value of the degrees offered. This would deter prospective students, exacerbating the shortage of qualified accountants and having long-term negative economic impacts due to increased financial

errors, fraud, and instability in businesses. Addressing this issue is crucial to maintaining the quality and relevance of accountancy education and ensuring the continuous development of skilled professionals in the field.

This study seeks to examine effective approaches to encourage accounting students in Quezon Province to consider careers in Academe, aiming to tackle the notable shortage of faculty in accounting departments. Through this investigation, the research aims to uncover insights into how local educational institutions can attract and keep qualified educators. This research is crucial for maintaining the quality and relevance of accounting education programs in Quezon Province amid the ongoing shortage of faculty. Additionally, the study aims to provide actionable recommendations that can assist academic institutions in improving their recruitment and retention of faculty members, particularly within the field of accounting.

2. Objectives

1. To assess the factors influencing the Faculty Shortage of Accountancy Program in Quezon Province in terms of:
   2.1 Financial Rewards
   2.2 Professional Requirements
   2.3 Professional Recognition
   2.4 Professional Training
   2.5 Job Market Consideration
   2.6 Personality
2. To identify the strategies that can be derived from the study to inspire accounting students to choose academic career path

3. Materials and methods

This study was conducted using a mixed-method research approach to determine the demographic profile of the respondents and assess the factors influencing the faculty shortage of the Accountancy Program in Quezon Province. The quantitative component aimed to gather data on BSA students, specifically their type of school and year level, and on professionals working in the field of accounting, including their age, marital status, years in service, position in the industry, and estimated monthly income. Additionally, it sought to evaluate factors such as financial rewards, professional recognition, professional training, job market considerations, and personality traits that may influence the faculty shortage. The qualitative component focused on identifying strategies to inspire accounting students to choose an academic career path by conducting in-depth interviews and focus group discussions with experts who will provide strategies to help address the faculty shortage in Accountancy programs in BSA.

4. Results

Factors influencing the Faculty Shortage of Accountancy Program in Quezon Province

Table 1. Factors influencing the Faculty Shortage of Accountancy Program in Quezon Province

	Professionals			BSA Students		
	WM	**Rank**	**Descriptive Equivalent**	**WM**	**Rank**	**Descriptive Equivalent**
Financial rewards	4.30	1	Strongly Agree	4.22	1	Agree
Professional requirements	3.73	4	Agree	3.94	3	Agree
Professional recognition	3.02	6	Undecided	3.84	5	Agree
Professional training	3.49	5	Agree	3.82	6	Agree
Job market consideration	3.90	3	Agree	3.91	4	Agree
Personality	3.99	2	Agree	4.03	2	Agree

The survey results indicate that financial rewards are the most significant factor influencing both professionals and Bachelor of Science in Accountancy (BSA) students in their decision to pursue or remain in accountancy education. With a mean score of 4.30 for professionals and 4.22 for BSA students, both groups strongly agree that the lack of competitive financial incentives in the academic field contributes to the faculty shortage. The strongest evidence suggests that targeted money can encourage people into teaching but does not necessarily keep them in the teaching profession. The salary must be substantial enough to make up for the drawbacks of working in specific schools and locations, and competitive enough to outweigh the potential earnings from more profitable careers (Beng Huat See, et al., 2020). They also agreed that professional requirements, such as the need for CPAs, educational qualifications, and work experience, pose significant barriers to entering accountancy teaching roles. However, professionals ranked professional recognition as the least influential factor (mean score of 3.02), with students showing a higher level of agreement (3.84), suggesting that students place more importance on acknowledgement and career advancement opportunities in the teaching profession.

Strategies that can be derived from the study to inspire accounting students to choose academic career path

Table 2. Summary of the evaluation of alternatives intended to inspire accounting students to choose academic career path

	Alternatives	Decision
Professional Recognition	Implement a system where they recognize outstanding faculty in their department based on evaluations from students and the dean. There are incentives given, and typically, those with higher evaluations have higher rankings	ACCEPT
Professional Training	Continuous internal training, where new regulations are discussed with all members, can be a solution. This ensures that everyone stays informed and updated on important changes, improving overall performance and compliance	ACCEPT
Personality	Focus on changing the culture to spark interest in teaching. By creating a positive, supportive, and inspiring environment, we can encourage more people to consider teaching as a career	ACCEPT

Professional recognition is a vital element in the academic sector, and its significance was highlighted through expert recommendations despite being perceived as a less significant factor contributing to faculty shortages. The survey and interviews with respondents revealed that professional recognition does not play a major role in the shortage of faculty members in the academe. Many respondents agreed that Certified Public Accountants (CPAs), regardless of the sector they work in, enjoy equal levels of respect and recognition. Some even noted that CPAs in the academe might experience greater public visibility and acknowledgment due to frequent interactions with students and the community. For instance, several professionals shared that they are often recognized and greeted by students and alumni, which enhances their sense of accomplishment and pride.

Continuous internal training for educators, particularly through regular updates on new regulations and developments in the field, was the only accepted alternative for addressing the professional training needs of faculty members. This solution ensures that all faculty members are well-informed about recent changes, thereby enhancing their ability to deliver high-quality education. Its acceptance is grounded in its feasibility and sustainability, as it does not rely heavily on external financial resources, making it more practical and acceptable to stakeholders.

The personality factor was identified as the second most significant contributor to faculty shortages in the survey, following financial rewards. The results indicate that many individuals do not pursue teaching because they perceive it as incompatible with their personality. Some respondents noted traits such as shyness, introversion, or a lack of patience as barriers to considering a teaching career. Despite these reservations, experts emphasized that teaching can still become a viable path for individuals if they feel a calling or develop a passion for sharing knowledge.

5. Discussion

Factors influencing the Faculty Shortage of Accountancy Program in Quezon Province

The results also show that personality traits and job market considerations rank highly in influencing decisions, with both groups agreeing that these factors are important in choosing accountancy education or other accounting fields. While professional training was considered important, it was ranked lower, reflecting a perceived gap in the availability of continuous learning opportunities in the academic sector. These findings align with studies on teacher retention and recruitment, which suggest that improving financial rewards and professional recognition, along with enhancing job stability, are essential to addressing faculty shortages (Rebolledo & Macuja, 2022). Providing clearer pathways to professional development and aligning academic roles with personal interests could enhance faculty retention and attract more individuals to teaching roles in accountancy (Araneta & Moya, 2020).

After obtaining the results of the survey, the researchers went back to some of the respondents to gather their reactions to the findings. The respondents reflected on the key points from the survey, particularly the factors contributing to the faculty shortage, including low financial rewards, high professional requirements, lack of professional recognition, limited professional training, better job market opportunities, and the importance of personality and interest in choosing teaching as a career. The responses confirmed the concerns raised in the survey, with many agreeing that addressing these issues could help alleviate the faculty shortage in the accounting field.

In terms of Financial Rewards, respondents believe that working in other areas of accounting, such as government, private practice, or public practice, offers better financial opportunities. This includes higher starting salaries, better benefits like health care and retirement plans, faster salary growth, and greater long-term earning potential.

These views significantly impact career decisions, as financial rewards are a key factor in choosing a profession. Respondents feel that accountancy education does not provide as much financial security or growth potential as other accounting sectors. For students, this perception may make them less inclined to consider teaching as a career after graduation. For professionals, it may lead to fewer experienced accountants opting for teaching positions, as they believe other sectors offer more lucrative financial rewards.

The Institute of Management Accountants (2020) emphasized that financial considerations, including salary disparities between Academe and industry, deter professionals from pursuing academic roles. Their study suggests that addressing these financial gaps is crucial to reducing the faculty shortage. If financial concerns are not addressed, the shortage of faculty in accountancy programs could worsen. By improving salaries, benefits, and career growth opportunities in Academe, more individuals may be encouraged to view teaching as a viable and rewarding career path.

After having an interview with the respondents, this is the result: Both BSA students and professionals agree that financial rewards play a significant role in the faculty shortage in the academe. Many students noted that teaching is challenging and often underappreciated, with low salaries failing to reflect the effort and expertise required, especially for CPAs with extensive experience. They emphasized that more lucrative opportunities in other sectors, such as private companies and government agencies, make teaching a less attractive option. Professionals echoed this sentiment, highlighting that compared to the competitive compensation offered by BPOs and global employers, the academe falls short. Additionally, the slow salary growth in teaching compared to the financial benefits of job-hopping in other fields further discourages educators from committing to a long-term career in the academe.

In terms of Professional Requirements, both groups generally agree that accountancy education demands stricter qualifications, such as higher educational requirements, extensive work experience, and licensure. This reflects the field's emphasis on advanced knowledge, practical expertise, and professional certification for educators. While students agree that accountancy education involves greater job complexity, professionals are more hesitant, possibly due to their firsthand experience, which might provide a more nuanced perspective on the challenges of teaching. Overall, both groups perceive accountancy education as requiring higher professional standards, but students show slightly stronger agreement.

These perceptions may discourage individuals from pursuing careers in accountancy education, especially when combined with the financial concerns highlighted earlier. If potential educators believe that they need to meet extensive qualifications and experience requirements without proportionate benefits, they may opt for other career paths in accounting. This is consistent with existing research. For instance, Hunt et al. (2009) identified that the demand for doctoral qualifications and certifications in Accounting education can deter professionals from entering Academe due to the significant time and financial investment involved.

After interviewing the respondents, the findings reveal that high professional requirements, such as CPD units and a master's degree, contribute to the faculty shortage in the academe. BSA students expressed mixed opinions, with some acknowledging that these requirements can be discouraging due to the significant time and financial investment involved. However, they believe that maintaining high standards is crucial for ensuring quality education, provided that competitive salaries are also offered. Others noted that higher salaries and better benefits could offset the discouragement caused by stringent requirements.

Professionals highlighted that while CPD may not be mandatory for teaching, the need for a master's degree can be a barrier, especially for those with demanding careers. Part-time instructors, in particular, face challenges in fully committing to teaching due to these requirements. They emphasized that without institutional support, such as training subsidies or tuition assistance for further education, pursuing a teaching career becomes less appealing. This underscores the need for targeted support systems to address these challenges and encourage more professionals to enter the Academe.

In terms of Professional Recognition, findings indicate that students generally agree that other sectors of accounting offer better professional recognition, while professionals remain undecided on the matter. This difference reflects contrasting perspectives on the sufficiency of recognition in Academe. Students believe that other fields provide greater recognition, better promotion of awards and honors, and more opportunities for publishing research and gaining visibility compared to accountancy education. In contrast, professionals are neutral, possibly because they are either satisfied with the current recognition in Academe or prioritize other factors based on their experiences. Some of the professionals interviewed shared that Certified Public Accountants (CPAs) in any sector of accounting are equally respected and recognized, even outside of Academe. This might explain the undecided stance of professionals, as they feel that their qualifications and expertise are acknowledged regardless of the sector in which they work.

The overall ratings suggest that students view professional recognition in other sectors more favorably than in accountancy education. These views indicate that limited recognition in Academe may discourage students from pursuing teaching roles. Professional recognition, such as awards, research opportunities, and career advancement, plays a significant role in career decisions. If students perceive Academe as less rewarding in these aspects, they may opt for other accounting careers where their achievements are more publicly acknowledged. This aligns with findings from Danish and Usman (2010), who noted that recognition and rewards significantly impact work motivation, even though they are not always directly tied to job satisfaction. Similarly, Akafo and Boateng (2015) found that rewards positively influence work motivation, reinforcing the idea that better recognition can enhance career satisfaction. These studies suggest that improving professional recognition in Academe could help attract more individuals to academic careers in accountancy.

In the interview BSA students generally perceive that educators in the academic sector receive less acknowledgement compared to professionals in other accounting fields. Many pointed out a lack of tangible rewards or incentives for professors, which could contribute to feelings of undervaluation. They also noted that other sectors of accounting provide more opportunities for career growth and diverse experiences, making those paths more attractive than teaching.

Professionals offered differing opinions, with some highlighting that recognition depends significantly on the institution and may not be universally inadequate. Certain institutions and professional organizations were noted to acknowledge top-performing educators. Additionally, some professionals emphasized that professors are already respected within the CPA community for their dedication and skills. However, the cultural tendency to equate recognition with financial rewards may diminish the perceived value of educators, emphasizing the need to address salary gaps to enhance their overall standing and appreciation.

In terms of Professional Training, both groups generally agree that other sectors of accounting offer more abundant opportunities for professional development, mentorship, and continuing education than the academic sector. Both students and professionals recognize that non-academic sectors provide more workshops, seminars, and mentorship programs, indicating that these fields are seen as better at supporting career development through various training and guidance options. While professionals remain uncertain about the availability of resources like libraries and databases, students believe that these resources are more comprehensive in non-academic sectors.

Furthermore, both groups agree that Continuing Professional Development (CPD) opportunities are more extensive and better supported in other fields of accounting. This is consistent with research by Al-Hashimy, Yao, and Hussein (2023), who found that professional certification plays a key role in career development by providing access to better opportunities and specialized skills. Similarly, Ciuhureanu (2022) emphasized that continuous professional development is essential for professionals to remain up-to-date with industry standards. If students see Academe as offering fewer professional training opportunities, they may be more inclined to pursue careers in other sectors of accounting.

The responses highlight the perceived importance of professional training and development programs in addressing the faculty shortage in Academe. BSA students emphasized that while the accountancy program primarily prepares graduates for corporate roles, incorporating professional training focused on teaching could enhance their readiness for academic careers. They noted that better training programs could help bridge the gap between the profession's demands and the skills required for teaching. However, some students pointed out that big companies often offer more comprehensive training programs and better compensation, making these opportunities more attractive than pursuing a career in education.

Professionals offered a broader perspective, suggesting that while training opportunities exist, accessibility and relevance remain challenges. Many current CPD programs cater to public practitioners rather than educators, limiting their direct application to teaching. They also highlighted logistical barriers, such as cost, travel time, and scheduling conflicts, which reduce participation. Professionals emphasized that institutional support, such as subsidized training or advanced degree programs, could be a key solution. Alongside these initiatives, improved salary packages would likely play an even more significant role in encouraging CPAs to consider teaching careers.

In terms of Job Market Consideration, both groups generally agree that employment opportunities, job stability, demand for specialized skills, and career experiences are more favorable in other sectors of accounting compared to the academic sector.

Both professionals and students agree that there are more employment opportunities in other sectors of accounting, indicating that there are more job openings and a greater variety of positions outside of Academe. This suggests that individuals see other fields offering more career options. Regarding job stability, both groups also agree that other sectors provide more satisfactory employment security compared to Academe. This perception reflects a belief that teaching positions in accountancy may be less secure or less stable in terms of long-term career prospects.

Moreover, both groups feel that other sectors offer more opportunities to apply and develop specialized knowledge and skills, indicating a preference for environments where specialized expertise is better utilized. Additionally, both groups agree that there is a greater risk of becoming "trapped" in teaching without gaining exposure to the broader, dynamic aspects of the profession, which might limit their understanding and appreciation of the field. This reflects concerns that a career in Academe may restrict professionals' practical experiences.

These findings suggest that job market considerations, including better employment opportunities, job stability, skill development, and exposure to practical experiences, heavily influence the decision-making process of both students and professionals when choosing between a career in accountancy education and other sectors. If students and professionals view other sectors as offering more promising career prospects, they may be less likely to pursue academic careers. To address these concerns, academic institutions could enhance job security for accountancy educators, offer more opportunities for faculty to engage in practical experiences, and foster a supportive environment for the development of specialized skills. Such measures could help attract more individuals to academic careers in accountancy.

The disparity in job market opportunities plays a significant role in the faculty shortage within the academe. BSA students noted that CPAs often opt for non-teaching roles due to higher income and better benefits in other sectors. They emphasized that low salaries and a perceived lack of appreciation in the academe deter potential educators. To address this, they suggested offering competitive salaries, better benefits, and training programs to attract CPAs to teaching positions. Some also highlighted the importance of surpassing the financial and professional incentives offered by popular job markets.

Professionals echoed these sentiments, pointing out that sectors like BPOs and foreign client services offer superior financial rewards, working conditions, and career development opportunities. Features such as remote work, state-of-the-art office amenities, and pathways to international careers make these roles more appealing. Additionally, private sector job entry requirements have become less stringent, further attracting CPAs. To counter these trends, professionals suggested that better incentives and benefits in the academe are crucial for encouraging CPAs to pursue teaching roles.

In terms of Personality, both professionals and students agree that their personal characteristics are more suited to working in other fields of accounting than in teaching accountancy education. This suggests that individuals may perceive academic work as less compatible with their personal traits, likely due to the nature of the role, which demands specific skills such as teaching, mentoring, and conducting research—skills that may not align with their preferences. Similarly, both groups share the view that their career aspirations and interests are more aligned with other sectors of accounting, such as government, private practice, or public practice, than with Academe. This suggests that opportunities for professional growth and career advancement outside of Academe are more appealing.

Furthermore, both groups agree that they find more satisfaction and fulfillment in contributing to the development of accountants in other fields compared to developing students in Academe. This highlights that professionals and students may feel more rewarded and fulfilled by working in the practical application of accounting skills, where they can have a direct impact on the industry, as opposed to Academe, which focuses primarily on teaching and academic contributions.

Additionally, some professionals noted that they would not pursue a career in Academe unless they had a genuine passion for teaching, even if the academic sector offered higher pay. This reinforces the importance of intrinsic motivation and personal connection to the teaching profession when deciding to pursue an academic career. Research by Hussain et al. (2012) suggests that aligning personality traits with job requirements is crucial for career success. They argue that individuals whose personality traits match the demands of their chosen profession are more likely to experience job satisfaction and success. Furthermore, Kabir and Hoque (2014) emphasized that personality traits significantly influence career decisions, underscoring the importance of aligning career choices with personal traits and preferences.

These findings suggest that personality traits, career interests, job satisfaction, and intrinsic motivation are key factors influencing decisions to pursue careers in accountancy education versus other sectors. If individuals feel that their traits and career aspirations align better with roles outside Academe, they may be less inclined to pursue teaching careers. To attract more individuals to academic careers, institutions may need to create an environment that better matches the personal and professional aspirations of potential educators, providing more opportunities for professional development and ensuring that teaching is as fulfilling as roles in other sectors.

BSA students emphasized that teaching requires confidence, resilience, and a strong sense of self to handle evaluations and interact with diverse students. They believe that many CPAs do not pursue teaching because they lack the drive, courage, or inclination to teach, opting instead for roles in firms or government agencies, which align more closely with their career aspirations. Additionally, the perception that teaching is less financially rewarding further discourages CPAs from considering this path.

Professionals echoed this sentiment, highlighting that teaching is more of a vocation than just a job. While many CPAs excel in their fields, they often feel they lack the patience or passion to educate others. They noted that teaching demands a distinct skill set, different from managing or coaching in a corporate setting. For many, the appeal of financial stability or pursuing entrepreneurial ventures outweighs the intrinsic rewards of teaching. As a result, personality and interest significantly influence the decision to enter the Academe.

Strategies that can be derived from the study to inspire accounting students to choose academic career path

Professional Recognition Factor

Despite its lower ranking as a cause of faculty shortages, professional recognition was still deemed an important area for improvement by experts. They recommended implementing a system that recognizes outstanding faculty members based on evaluations from students and department heads. This system includes incentives such as higher rankings or rewards, which can motivate educators to strive for excellence in their roles. By adopting this approach, institutions can foster a positive environment where faculty members feel valued and appreciated for their contributions. For instance, a study by Siddique et al. (2011) found that academic leadership significantly impacts faculty motivation and organizational effectiveness, emphasizing the role of recognition in enhancing faculty satisfaction. Additionally, research by Roberts (2018) indicates that professional staff contributions are crucial to student retention and success, further underscoring the value of recognizing faculty efforts.

The expert-endorsed recommendation aligns with these findings, emphasizing the importance of recognition in retaining talented educators and maintaining high-quality teaching standards. While professional recognition may not directly address the core issues of faculty shortages, its improvement can positively impact the overall working environment, making the academe a more attractive career option for CPAs.

Professional Training

Other alternatives related to financial support from the school for professional development activities, such as CPD (Continuing Professional Development) programs, were rejected. While these options were considered beneficial in theory, they were deemed infeasible due to budget constraints. One expert noted that while it is vital for educators to have adequate knowledge to teach effectively—emphasizing that "one cannot teach what they do not have"—he acknowledged that providing financial support for such training would strain institutional resources. Another expert, a school administrator, explained that while funding for teacher training is possible, it would result in increased tuition fees to generate the required budget. This economic tradeoff was viewed as less acceptable to stakeholders, particularly students and their families.

When the alternatives were evaluated by experts during the decision-making process, those involving financial support fell below the threshold due to factors such as their limited acceptability to stakeholders and the economic challenges of implementation. The accepted alternative, on the other hand, leverages existing institutional resources and focuses on creating a culture of learning and collaboration within the academic environment. According to Darling-Hammond et al. (2017), professional development is critical for improving teaching quality and student outcomes. However, financial constraints often hinder institutions from providing adequate support. Schools must strike a balance between offering professional training opportunities and managing costs to ensure affordability for students. Meanwhile, Hill et al. (2013) stress that effective professional development programs do not necessarily require large budgets but can be designed to maximize available resources and focus on collaborative, in-house training approaches.

This highlights the importance of prioritizing feasible and impactful solutions like internal training programs. By avoiding alternatives that require significant financial investments, institutions can still ensure that faculty members receive the necessary support for their professional growth while maintaining financial stability and stakeholder satisfaction.

Personality

One notable perspective came from an expert who is a full-time government employee and part-time faculty member. He shared that his motivation for teaching stems from a desire to impart real-world knowledge and experiences to students, rather than simply teaching theoretical concepts. For him, teaching is less about financial gain and more about fulfilling a personal calling to contribute to the growth of future professionals. This example highlights that even those who may initially feel

that teaching is not aligned with their personality can still find fulfillment in the role if they possess the intrinsic motivation to share their expertise.

The survey results and interviews collectively support the idea that personality is a key factor in faculty shortages. Many individuals view teaching as a profession that requires specific traits—such as patience, confidence, and extroversion—that they may not possess or believe they can develop. However, some experts countered this perception by suggesting that teaching does not have to align perfectly with one's personality if there is a genuine passion or calling to educate and mentor students.

Among the proposed alternatives, the accepted solution focuses on changing the culture to spark interest in teaching. This involves creating a positive, supportive, and inspiring environment that encourages individuals to explore teaching as a career, regardless of initial hesitations about their personality fit. This alternative was deemed feasible and effective because it addresses the underlying perceptions that deter individuals from considering teaching, rather than trying to force a fit where it may not naturally exist.

Creating a supportive and inspiring culture, as suggested by the accepted alternative, is consistent with findings that workplace environments play a crucial role in shaping employees' attitudes and behaviors (Ryan & Deci, 2017). By fostering an environment that highlights the impact and rewards of teaching, academic institutions can encourage individuals to pursue teaching, even if they do not initially view it as a natural fit for their personality.

6. Conclusion

This study sheds light on the primary factors contributing to faculty shortages in accountancy education in Quezon Province, with financial rewards and personality traits being the most significant influences. The survey results indicated that professionals and students perceive more attractive job opportunities, higher financial incentives, and greater career advancement prospects in sectors outside of Academe. Additionally, personality traits, such as shyness, introversion, and lack of patience, are also key factors that make teaching seem less aligned with individual preferences. These insights suggest that the shortage of qualified faculty members in accountancy education is closely tied to both extrinsic and intrinsic factors, with financial rewards and a perceived mismatch between personal characteristics and teaching demands playing pivotal roles.

The findings highlight a pressing need for academic institutions to address the key factors that drive faculty shortages. Without a significant shift in the way teaching careers are perceived, especially in terms of compensation and the alignment of job requirements with personal traits, the gap in accountancy education faculty will likely persist. In particular, addressing the financial disparity between Academe and the private sector, alongside fostering an environment that encourages faculty who may not naturally gravitate toward teaching roles, will be crucial for both attracting and retaining qualified educators.

This study is limited by its focus on Bachelor of Science in Accountancy students and accounting professionals within Quezon Province, which may restrict the generalizability of its findings to other regions with different educational and labor market conditions. Moreover, the study primarily relied on self-reported perceptions, which may not fully capture the actual career decisions of accounting graduates or the long-term effectiveness of the proposed strategies. The qualitative component also involved a relatively small number of experts, providing in-depth insights but limiting the diversity of perspectives. Future researchers are encouraged to replicate this study in other provinces or at the national level to compare regional differences and validate the findings across broader populations. Longitudinal studies that track accounting students from graduation to their actual career choices are likewise recommended to determine whether the identified factors and proposed strategies influence long-term career decisions. Future investigations may also examine institutional, organizational, and policy-related interventions, such as compensation models, faculty development programs, mentorship initiatives, and scholarship schemes, to identify evidence-based approaches for strengthening the pipeline of future accountancy educators.

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An Empirical Study of the Application Artificial Intelligence in the Safety Management of Jiangmen City: Taking Yingjia Metal Company as the Case Study

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Abstract

In the current era, artificial intelligence technology is constantly developing, and the potential of artificial intelligence is constantly being explored. Therefore, artificial intelligence is being applied in more and more aspects, including agent management, job positions, industrial manufacturing, etc., and accordingly, at this stage, artificial intelligence technology is also being applied in enterprise safety management. More and more enterprises and factories apply artificial intelligence to their safety management systems, such as the rapid response ability and intelligent control and monitoring of artificial intelligence, which can help enterprises reduce the occurrence of safety problems and help improve the safety and efficiency of enterprises. This study aims to study the application of artificial intelligence in enterprise security management. The research takes Jiangmen Yingjia Metal Company as the research case, by this case, Demographic characteristics have a partial impact on safety management, specifically age and educational background significantly affect facility factors, and educational background significantly affects employee factors, while gender and department have no significant impact. AI applications (risk warning, smart monitoring, smart controlling, cost effectiveness) have a significant positive impact on all dimensions of enterprise safety management, which is the core driving force to improve the level of safety management. The current AI application of Yingjia Metal Company has outstanding advantages in smart controlling, but has shortcomings in risk warning and cost effectiveness, which needs targeted optimization. Through the issuance of questionnaires to Yingjia Metal Products Company, and through Reliability and Validity Analysis methods to understand the application of artificial intelligence at this stage in enterprise security management.

Keywords： Safety Management, Artificial Intelligent, Reliability Analysis, Validity analysis

1. Introduction

In the era of intelligent manufacturing, artificial intelligence technology has been widely integrated into industrial production, operational management, and safety control. For metal processing enterprises with complex production environments, high-temperature operation, heavy machinery, and sharp materials, safety risks are characterized by high frequency, strong concealment, and high severity. Traditional safety management relies heavily on manual inspection, post-incident disposal, and experience-based decision-making, which leads to problems such as untimely risk detection, incomplete hidden danger rectification, and low emergency response efficiency (Burrows & Mueller-Kaler, 2021).

With the policy support of China's new-generation artificial intelligence development plan and the maturity of technologies such as computer vision and the Internet of Things, AI-driven safety management has gradually replaced the traditional passive management model (State Council, 2017). However, small and medium-sized metal manufacturing enterprises generally face problems such as limited funds, weak technical foundation, and low employee acceptance of new technologies in the process of AI application, which restricts the effect of intelligent safety transformation.

Objectives

The main objectives of this study are to:

1. To investigate the functions can AI be embedded in SMS systems.
2. To examine the influence of demographic variables on Safety Management System (SMS).

2. Literature Review

Artificial Intelligence

Artificial intelligence is a technology that simulates human intelligence through machines to realize perception, reasoning, decision-making, and automatic control. The development of AI has gone through discriminative AI, generative AI, and agentic AI stages, and its application in safety management has expanded from simple monitoring to autonomous decision-making and closed-loop control. The application of AI in enterprise safety management is affected by system resources, technical infrastructure, cost input, and employee acceptance (Sarikaya,2025).

Safety Management

Safety management is a systematic process to prevent personal injury and property loss by identifying, assessing, and controlling risks. It is divided into four dimensions: employee factors, working environment, facility factors, and safety measures (Mahdinia, 2025). Employee factors include safety awareness, training participation, and hazard reporting initiative; working environment involves lighting, ventilation, and site layout; facility factors cover protective equipment, fire-fighting equipment, and emergency facilities; safety measures include risk assessment, hidden danger rectification, and emergency drills.

Traditional safety management focuses on post-incident disposal, while modern safety management emphasizes proactive prevention and whole-process control. The Systems-Theoretic Accident Model and Processes (STAMP) regards safety as an emergent property of a complex system (Ortega,2024).

Relationship Between AI Application and Safety Management

Existing studies show that AI application can significantly improve the level of enterprise safety management. AI risk warning can predict potential accidents in advance; smart monitoring can automatically identify unsafe behaviors; smart controlling can realize automatic emergency response; cost effectiveness can reduce accident loss and management cost (Huber, 2025; Motive, 2025). The integration of AI and safety management forms a closed-loop system of "perception-early warning-disposal-optimization", which effectively improves the proactive prevention capability of safety risks (Wang, 2021).

Theoretical framework

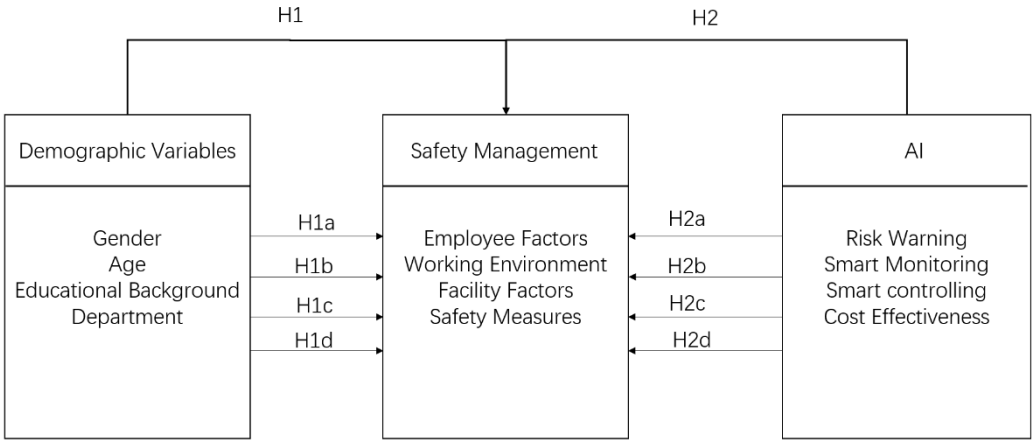

Figure 2 Theoretical Framework

Research hypotheses

H1: Demographic characteristics of employees have a significant influence on safety management in metal manufacturing enterprises.

H1a: Gender has a significant influence on safety management.

H1b: Age has a significant influence on safety management.

H1c: Educational background has a significant influence on safety management.

H1d: Department has a significant influence on safety management.

H2: Artificial intelligence applications have a significant positive influence on safety management in metal manufacturing enterprises.

H2a: AI-based risk warning systems have a significant positive influence on safety management.

H2b: Smart monitoring systems have a significant positive influence on safety management.

H2c: Smart controlling systems have a significant positive influence on safety management.

H2d: Cost effectiveness of AI applications has a significant positive influence on safety management.

3. Materials and Methods

This study adopts a quantitative research method, collects data through questionnaire, and uses statistical software for reliability and validity analysis, descriptive statistics, correlation analysis, and multiple linear regression analysis to verify the research hypotheses. In order to population and Sample. Target population: 500 employees of Jiangmen Yingjia Metal Products Co., Ltd. Sample size will be 475 employees (determined by sample size calculation principle with 95% confidence level and 5% margin of error). Data collection: Questionnaires were distributed and collected through the "Wen Juanxing" platform, with 475 valid questionnaires recovered, and the effective recovery rate will be appreciable.

4. **Results**

Descriptive Statistical Analysis

Table 1 Population Statistics

variable	Options	frequency	percentage
gender	male	392	78.4
	female	108	21.6
age	22–30 years old	92	18.4
	31–40 years old	316	63.2
	41–50 years old	39	7.8
	51 and above	53	10.6
Education	High school and below	201	40.2
	Junior college	249	49.8
	Bachelor	50	10.0
department	Production/Operations	349	69.8
	Safety Management	98	19.6
	Engineering/Technology	53	10.6

It shows that there are 392 male employees, accounting for 78.4%, and 108 female employees, accounting for 21.6%. In terms of age distribution, the largest group of employees is between 31 and 40 years old, with 316 employees, accounting for 63.2%; employees aged 22 to 30 account for 18.4%; employees aged 51 and above account for 10.6%; and employees aged 41 to 50

account for the smallest group, with 7.8%. Regarding education level, the largest group of employees has a college diploma, with 249 employees, accounting for 49.8%; employees with high school diploma or below account for 40.2%; and employees with a bachelor's degree account for 10.0%. In terms of departmental distribution, the production and operations department has 349 employees, accounting for 69.8%; the safety management department has 19.6%; and the engineering and technical department has 10.6%.

Table 2. Mean and Standard Deviation of Each Variable

variable	mean	Standard deviation
Employee factors	3.63	0.97
Work environment	3.64	1.00
facility factors	2.99	0.88
Safety measures	3.62	0.97
Risk Warning	2.37	0.99
Intelligent monitoring	3.00	0.89
Intelligent control	3.64	0.99
Cost-effectiveness	2.35	0.99

Table 2 shows the mean and standard deviation of each variable. The data shows that the working environment and intelligent control have the highest mean at 3.64, while employee factors have a mean of 3.63 and safety measures have a mean of 3.62, indicating that employees have a high level of acceptance of traditional safety management and intelligent control. Facility factors and intelligent monitoring have mean values of 2.99 and 3.00 respectively, which are at a moderate level. Risk warnings and cost-effectiveness have relatively low mean values of 2.37 and 2.35 respectively, indicating that there is still room for improvement in the application of artificial intelligence risk warning and cost-effectiveness perception among enterprises.

Table 3 Results of Regression Analysis of AI on Safety Management

Model		B	Standard error	Beta	t	p	Tolerance	VIF
1	(constant)	1.45	0.16		9.075	0.001		
	Risk Warning	0.204	0.042	0.209	4.815	0.001	0.746	1.341
	Intelligent monitoring	0.240	0.048	0.220	4.985	0.001	0.717	1.394
	Intelligent control	0.180	0.042	0.183	4.312	0.001	0.777	1.287
	Cost-effectiveness	0.136	0.042	0.139	3.221	0.001	0.755	1.325

The regression equation is expressed as follows: Employee Factors = 0.204 * Risk Warning + 0.24 * Intelligent Monitoring + 0.18 * Intelligent Control + 0.136 * Cost-Effectiveness + 1.45. Therefore, the hypothesis that AI application variables have an impact on employee factors is verified. The regression equation is expressed as follows: Work environment = 0.172* Risk Warning+0.214* With intelligent monitoring+0.224*Intelligent control+0.205*Cost-effectiveness+1.295. Therefore, the hypothesis that AI application variables have an impact on the work environment is verified. The regression equation of factors from facility is expressed as follows:

Facility Factors = 0.143*Risk warning +0.232*Intelligent monitoring +0.192*Intelligent control +0.190*Cost-effectiveness +0.804. The results are detailed shows an R-squared value of 0.368, indicating that the four AI application variables explain 36.8% of the facility factors, Therefore, the hypothesis that AI application variables have an impact on facility factors is verified. The regression equation from safety measures is expressed as follows: safety measures equal 0.108.* Risk Warning+0.202*Intelligent monitoring+0.176* Intelligent control+0.236*Cost-effectiveness+1.563. Therefore, the hypothesis that AI application variables have an impact on safety measures is verified.

Table 4 Results of Regression Analysis of AI on Safety Management

Model		B	Standard error	Beta	t	p	Tolerance	VIF
1	(constant)	3.862	0.226		17.073	0.001		
	gender	-0.046	0.105	-0.019	-0.432	0.666	0.997	1.003
	age	0.040	0.053	0.034	0.757	0.449	0.997	1.003
	Education	-0.118	0.068	-0.078	-1.747	0.081	0.998	1.002
	Department or work area	-0.043	0.064	-0.030	-0.67	0.503	0.996	1.004

This study selected demographic characteristics (gender, age, education level, department, or work field) as independent variables. shows an R-squared value of 0.008, indicating that demographic characteristics only explain 0.8% of the employee factors. The model significance is 0.390, higher than 0.1, indicating that the overall regression model is not significant. Consequently the unstandardized coefficient for education level is negative, indicating a negative effect of education level on employee factors. As to independent variables and work environment as the dependent variable for regression analysis. The model significance is 0.543, higher than 0.1, indicating that the overall regression model is not significant. And work field are all higher than 0.1, indicating that demographic characteristics do not have a significant impact on the work environment.

Summary:

1. Only age and educational background have a locally significant effect on safety management: age positively influences facility factors, while educational background negatively influences both employee and facility factors.

2. Gender and department have no significant impact on employee factors, work environment, facility factors, or safety measures. Demographic characteristics have extremely weak overall explanatory power ($R^2 < 0.02$) and are not core influencing factors for enterprise safety management.

3. AI application is a core positive driving factor. Risk warning, intelligent monitoring, intelligent control, and cost-effectiveness—the four AI dimensions—have a significant positive impact on all dimensions of safety management. H2 and all sub-hypotheses are fully valid. AI application has the highest explanatory power for facility factors ($R^2 = 0.368$) and the lowest for safety measures ($R^2 = 0.277$), but its overall explanatory power is far higher than that of demographic characteristics. Intelligent monitoring has the strongest positive effect on most safety management dimensions and is the core AI application for improving safety management levels.

5. Discussion

Age and education have a partial significant impact on safety management, which is consistent with the characteristics of metal manufacturing enterprises. Older employees pay more attention to safety facilities due to their rich experience; employees with lower education have stronger on-site safety awareness; gender and department have no significant impact due to standardized safety systems and training.

AI application is the core driving force to improve the level of enterprise safety management. As a "controller" in the STAMP system, AI imposes safety constraints on production processes,

realizes real-time perception and automatic control of risks, and breaks through the limitations of traditional manual management. The enterprise has a good application effect in smart controlling, but there is still room for improvement in risk warning and cost effectiveness, which needs targeted optimization. and LLM-based warning research (2025), which show that traditional AI warning systems suffer from low prediction accuracy and high false positive rates in complex manufacturing scenarios, while advanced predictive models and multimodal fusion can greatly improve warning performance. (Infosys, 2026) pointed out that SMEs often lack quantitative ROI evaluation; unified dashboards and integrated IoT-AI architectures can improve cost transparency and employee perceived value, which directly addresses the weak cost-effectiveness perception in this case.

6. Conclusion

The research takes Jiangmen Yingjia Metal Company as the research object, and uses quantitative research methods to explore the impact of AI applications and demographic characteristics on the safety management of small and medium-sized metal manufacturing enterprises. This study enriches the empirical research on AI application in the safety management of small and medium-sized manufacturing enterprises, and provides a practical reference for metal processing enterprises to carry out intelligent safety transformation. At the same time, the research verifies the effectiveness of the STAMP theory in the analysis of AI-driven safety systems, and provides a theoretical basis for subsequent related research.

Key Findings

Demographic characteristics have a partial impact on safety management:

age and education significantly affect facility factors, and education significantly affects employee factors. AI application (risk warning, smart monitoring, smart controlling, cost effectiveness) has a significant positive impact on all dimensions of safety management. The current AI application of Yingjia Metal Company is strong in smart controlling but weak in risk warning and cost effectiveness perception.

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Factors Influencing the Employability of Chinese Overseas Graduates in Thailand

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Abstract

The rapid expansion of China–Thailand educational cooperation and Thailand's digital transformation under the Thailand 4.0 policy have created both opportunities and challenges for Chinese graduates from Thai universities. However, empirical evidence regarding their employability remains limited. This study aimed to (1) examine the overall level of employability among Chinese fresh graduates from Thai universities and (2) investigate the influence of demographic characteristics and digital transformation on employability. Quantitative research design was employed. Data were collected through a questionnaire survey from 382 Chinese undergraduate and master's graduates who completed their studies at Thai universities during 2024–2025. Participants were selected using purposive sampling. The research instrument demonstrated satisfactory reliability (Cronbach's alpha = 0.856). Data were analyzed using descriptive statistics, Pearson correlation analysis, multiple regression analysis, and one-way ANOVA. The findings revealed that the overall employability level of respondents was moderately high (M = 3.65, SD = 0.72). Career development capacity showed the highest mean score, while work–life balance capacity had the lowest. Language competence emerged as a major strength, whereas practical professional skills remained a key weakness. Educational level was found to significantly predict language ability and career planning capacity, whereas gender, age, marital status, and internship experience showed no significant effects on most employability dimensions. In addition, graduates intending to work in Thailand demonstrated significantly higher employability than those planning to work in China or other regions. The findings provide practical implications for universities, employers, and policymakers in improving talent development programs, employability enhancement initiatives, and cross-border employment support mechanisms for Chinese graduates in Thailand.

Keywords: Employability, Chinese Overseas Graduates, Thailand, Digital Transformation, Higher Education

1. Introduction

The global restructuring of educational resources and deepening regional economic integration have driven the diversification of international study destinations. Southeast Asia, particularly Thailand, has emerged as an important hub for Chinese international students, with over 24,700 Chinese university students in Thailand in the 2025 academic year (Ministry of Higher Education, Science, Research and Innovation of Thailand, 2025). This growth is fueled by cultural affinity, cost advantages, and expanding opportunities under the Belt and Road Initiative.

In the post-pandemic era, the global job market has undergone structural adjustments, intensifying cross-border talent competition. Employers increasingly demand "composite capabilities" and "cross-cultural adaptability" (OECD, 2023). Chinese graduates in Thailand face dual challenges: employment in Thailand is constrained by visa policies and workplace cultural differences, while returning to China involves certification recognition issues and competition with graduates from Western institutions. Simultaneously, the rapid growth of China-Thailand cross-border e-commerce and digital services creates new opportunities for bilingual, market-savvy international students.

Existing research on employability predominantly focuses on mainstream international student groups in Europe, America, and Australia, with limited attention to Southeast Asian contexts. Studies on Chinese students in Thailand primarily examine study-abroad motivation and cross-cultural adaptation, lacking systematic exploration of employability structure, influencing factors, and improvement pathways at the graduation stage. This study addresses this gap by empirically investigating the employability of Chinese fresh graduates from Thai universities and its determinants.
Research Objectives

This study aims to: (1) investigate the overall level and dimensional characteristics of employability among Chinese fresh graduates from Thai universities, encompassing career

development capacity, career adaptability, workplace adaptability, job competency, and work-life balance capacity; and (2) analyze key factors influencing employability, including demographic characteristics and digital transformation context.

2. Literature Review and Theoretical Framework

Employability refers to individuals' comprehensive ability to obtain, maintain, and adapt to employment while achieving career development (Fugate et al., 2004; Van der Heijde & Van der Heijden, 2006). For Chinese graduates in Thailand, employability encompasses not only professional skills and adaptability but also cross-cultural communication, career planning, and workplace integration capabilities, shaped by the Thai employment environment, digital economy development, and China-Thailand economic cooperation (Liao et al., 2023; Sika Kaew et al., 2022).

Building on classic employability theories and the specific employment context of Chinese graduates in Thailand, this study operationalizes employability across five dimensions: (1) **Career development capacity** — proactive learning, skill improvement, and career planning for sustainable growth (Rothwell & Arnold, 2007); (2) **Career adaptability** — ability to adapt to Thai workplace culture, processes, and environmental changes (Wang, 2023a; Güzel & Glazer, 2019); (3) **Workplace adaptability** — recognition and adaptation to work atmosphere, interpersonal patterns, and corporate culture (Chen, 2022; Serrano-Sánchez et al., 2021); (4) **Job competency** — professional knowledge and practical skills including digital competencies (Zhou, 2023a; Istrate & Velea, 2024); and (5) **Work-life balance capacity** — ability to coordinate career development with personal well-being (Clark, 2000; Liu, 2022).

Demographic characteristics—including gender, age, marital status, educational background, and internship experience—constitute foundational individual differences affecting employability (OECD, 2026; Li, 2022). Research suggests that educational level significantly influences employability through knowledge reserves and learning abilities, though advantages may diminish if majors mismatch market demands (Li, 2022). Internship experience in Thailand enhances local workplace adaptability, language proficiency, and social capital (Thai Ministry of Labour, 2022; Sisavath, 2021). Gender and age also shape career cognition, adaptability, and employment expectations among international students (Gabrielova & Buchko, 2021; UN Women, 2022).

Digital transformation, driven by Thailand's "Thailand 4.0" strategy and "Digital Thailand" plan, has become a core engine of economic growth, with the digital economy growing at 19% annually (Chapter 3 of the Road to Breaking Through Industry-University Integration, 2025). Digital transformation reshapes talent demand structures and enhances employability through four dimensions: digital resources, employee digital skills, executive support, and technological innovation (Westerman et al., 2014; Hess et al., 2016; Wang, 2023b). Research confirms that digital transformation positively predicts all five dimensions of employability, serving as a key external driver for capability improvement (Belaid, 2025; Hu & Wang, 2025).

Research Hypotheses

Based on the literature review, the following hypotheses are proposed:

1. H1: Demographic characteristics significantly influence the employability of Chinese fresh graduates from Thai universities.
2. H2: Digital transformation exerts a significant positive impact on the employability of Chinese fresh graduates from Thai universities.

3. Methodology

This study employs a quantitative research design using a questionnaire survey. The research follows a technical path of "descriptive statistics → correlation analysis → multiple regression analysis → difference analysis" to systematically examine employability and its influencing factors.

Sampling Procedure

The target population consisted of Chinese undergraduate and master's graduates who completed full-time study programs at Thai universities between 2024 and 2025. Purposive sampling was employed to recruit respondents who met the inclusion criteria. A total of 400 questionnaires were distributed, and 382 valid responses were retained for analysis, yielding a response rate of 95.5%. This study employed a mixed stratified-convenience sampling strategy targeting 2024–2026 Chinese full-time undergraduate and master’s fresh graduates from four major Bangkok universities. Stratification by university type, academic level and major category reduced subgroup sampling bias,

while questionnaires were distributed through official international student offices, Chinese student associations and alumni networks to capture eligible respondents. A target of 300–400 valid samples was set: the sample size meets the minimum 10:1 variable-to-participant rule for multivariate regression and satisfies central limit theorem requirements against the population of 24,711 Chinese students in Thailand, ensuring statistical representativeness.

Instrument Validity and Reliability

The questionnaire items were adapted from established employability and digital transformation studies. Content validity was assessed by three experts in business administration and higher education. All items achieved acceptable content validity. The reliability analysis indicated strong internal consistency, with an overall Cronbach's alpha coefficient of 0.856. A self-developed 5-point Likert questionnaire was adopted, with measurement items adapted from established overseas career studies. Two academic experts conducted content validity reviews to refine culturally appropriate items, targeting a content validity index above 0.85. Post-collection tests included Cronbach's α for internal reliability (threshold ≥0.7), exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to assess construct validity; items with factor loadings below 0.6 were removed, with acceptable AVE (>0.5) and discriminant validity criteria enforced.

Data Analysis

Data was analyzed using SPSS software. Descriptive statistics were used to examine respondent characteristics and employability levels. Pearson correlation analysis was conducted to explore relationships among variables. Multiple regression analysis was employed to investigate the predictive effects of demographic characteristics on employability dimensions. One-way ANOVA was performed to examine differences in employability across intended employment regions. All valid data were cleaned and analyzed via SPSS 26.0 and AMOS 24.0. The analytical workflow included descriptive statistics, reliability and validity checks, Pearson correlation analysis to detect multicollinearity, independent t-tests and one-way ANOVA for inter-group differences, hierarchical multiple regression for direct hypothesis testing, and 5,000-bootstrap mediation analysis to identify indirect pathways. Subgroup regression by degree level was further implemented as a robustness check to stabilize empirical findings.

4. Results

Reliability Analysis

The overall Cronbach's alpha coefficient for the employability scale was 0.856 (30 items), indicating good internal consistency. All subscales demonstrated acceptable reliability, with alpha coefficients ranging from 0.78 to 0.85.

Table 1. Reliability Statistics

Cronbach's Alpha	Number of Items
0.856	30

Descriptive Statistics

Among the 382 respondents, 44.5% were male and 55.5% were female. Business Administration was the largest major group (27.7%), followed by Educational Management and Digital Economy. The majority were undergraduate students, with a substantial proportion having limited or no internship experience in Thailand.

Table 2. Demographic Statistics (Selected)

Variable	Category	Percentage (%)
Gender	Male	44.5
	Female	55.5
Education	Bachelor	68.3
	Master	31.7
Intended Region	Thailand	39.8
	China	50.3
	Other	9.9

The overall employability level was medium-high (M = 3.65, SD = 0.72). Among the five dimensions, career development capacity ranked highest (M = 3.72, SD = 0.83), followed by career adaptability (M = 3.66, SD = 0.79), workplace adaptability (M = 3.64, SD = 0.76), job competency (M = 3.60, SD = 0.68), and work-life balance capacity (M = 3.58, SD = 0.74). Language competence emerged as the strongest sub-skill, while practical professional skills were identified as the primary area for improvement.

Table 3. Mean and Standard Deviation of Employability Dimensions

Dimension	Mean	SD
Career Development Capacity	3.72	0.83
Career Adaptability	3.66	0.79
Workplace Adaptability	3.64	0.76
Job Competency	3.60	0.68
Work-Life Balance Capacity	3.58	0.74

Correlation Analysis

Pearson correlation analysis revealed that educational background was significantly negatively correlated with language ability ($r = -0.129$, $p < 0.05$) and career planning ability ($r = -0.115$, $p < 0.05$). Internship duration in Thailand showed no significant correlation with any employability dimension. All five employability dimensions were significantly and positively correlated with each other ($p < 0.01$), indicating construct coherence.

Table 4. Correlations Between Demographic Variables and Employability Dimensions

Employability Dimension	Education (r)	Internship (r)
Career Development Capacity	-0.115*	-0.023
Career Adaptability	-0.087	-0.034
Workplace Adaptability	-0.065	-0.012
Job Competency	-0.034	-0.018
Work-Life Balance Capacity	-0.078	-0.045

*Note. *p < 0.05.*

Regression Analysis

Multiple linear regression was conducted with demographic variables (gender, age, marital status, educational level, internship duration) as predictors and each employability dimension as the dependent variable. Results indicated that demographic variables collectively explained only 1.0–3.4% of variance in employability dimensions, with educational level emerging as the sole significant predictor. Specifically, higher educational level significantly predicted lower language ability ($\beta = -0.152$, $p < 0.01$) and lower career planning ability ($\beta = -0.134$, $p < 0.05$). Gender, age, marital status, and internship duration showed no significant predictive effects on most employability dimensions.

Group Differences by Intended Employment Region

ANOVA revealed significant differences in overall employability across intended employment regions ($F = 4.567$, $p < 0.05$). Post-hoc comparisons showed that graduates intending to work in Thailand (M = 3.74, SD = 0.78) scored significantly higher on overall employability than those planning to work in China (M = 3.63, SD = 0.85) or other regions. Among specific dimensions, significant regional differences were observed in career adaptability and workplace adaptability, with Thailand-intending graduates demonstrating stronger performance.

Table 5. Employability by Intended Employment Region

Intended Region	N	Mean	SD
Thailand	152	3.74	0.78
China	192	3.63	0.85
Other	38	3.52	0.79

5. Discussion

Based on 382 valid questionnaires from Chinese fresh graduates at four Thai universities, this discussion interprets correlation and ANOVA results via human capital, career construction and cross-

cultural adaptation theories and contrasts findings with existing overseas student literature instead of simply reporting statistical values. Hypothesis 1 receives partial support: consistent with prior research, higher academic qualifications negatively predict self-assessed language and career planning ability ($p=0.012$, $p=0.004$), since master's students adopt stricter evaluation criteria, yet local internship duration exerts no significant influence on employability dimensions. This divergence from mainstream human capital research arises from severe sample homogeneity (96.9% undergraduates) and insufficient long-term Thai internship experience among most respondents; short or absent placements cannot facilitate cross-cultural socialization as outlined in Berry's theory, leading to non-significant demographic effects on professional skills, cross-cultural adaptation and overall employability. Hypothesis 2 is fully validated, aligning with situated learning theory: intended employment region creates significant gaps in overall employability ($F=4.567$, $p=0.011$). Graduates planning to work in Thailand achieve far higher scores in language proficiency and cross-cultural adaptation ($p<0.01$) thanks to accumulated local cultural capital matching Thailand 4.0 industry needs, alongside clearer localized career planning ($p=0.041$), while standardized university coursework makes professional skills indistinguishable across destination groups. Post-hoc tests confirm Thai-bound graduates outperform those returning to China or seeking jobs elsewhere, identifying employment destination as a key factor shaping cultural capital accumulation. Descriptive results show participants hold medium overall employability, with career planning as their strongest capability and language ability the weakest with large individual variation, consistent with regional studies highlighting linguistic barriers for Chinese graduates in Thailand. Most students lack sustained local internships and demand language, digital and cross-cultural career training, exposing misalignment between university support and labor market requirements under experiential learning theory.

Main Conclusions

Chinese graduates in Thailand demonstrate medium overall employability, with language proficiency as their primary disadvantage featuring prominent individual disparities. Educational background and internship experience only correlate with language and career planning self-perception, while sample homogeneity and insufficient internships eliminate their impact on professional and cross-cultural competencies. Those targeting Thai employment exhibit stronger linguistic, adaptive and career-planning strengths without differing in universal professional skills. Most graduates lack long-term local internships and have clear demands for diversified employment support services.

Recommendations

Thai universities ought to add targeted multilingual and digital skill courses, establish long-term corporate internship cooperation and provide destination-specific career guidance. Chinese students should proactively improve multilingual competence, participate in formal long-term local internships and formulate career plans matching regional industrial characteristics. Relevant overseas education institutions can launch systematic training camps covering cross-cultural communication, digital literacy and job-hunting skills for cross-border job seekers.

Limitations and Future Research

This cross-sectional survey only samples four universities and adopts limited demographic indicators, failing to track dynamic changes in graduates' post-graduation employability. Future studies can expand the sampling scope, incorporate more personal and industrial influencing factors, and conduct longitudinal research to explore the long-term development of international graduates' employability.

6. Conclusion and Implications

Main Conclusions

1. The overall employability of Chinese fresh graduates from Thai universities is at a medium-high level. Career development capacity ranks highest, while work-life balance capacity is lowest. Language competence is the dominant advantage, whereas practical professional skills represent the key area for improvement.
2. Demographic variables have limited predictive power for employability. Educational level exerts a significant negative influence on language ability and career planning capacity, while gender, age, marital status, and internship duration show no significant effects on most dimensions.

3. Intended employment region is significantly associated with employability. Graduates planning to work in Thailand exhibit higher overall employability, particularly in career and workplace adaptability, compared to those intending to work in China or other regions.
4. Graduates express strong demand for support services, including digital skills training, language improvement coaching, and career planning guidance, indicating gaps between current university offerings and market needs.

Practical Implications

For Thai universities: Curricula should be optimized to integrate more practical training, particularly in digital skills (data analysis, digital marketing, AI applications) and professional practice. Universities should expand quality internship partnerships with local Thai enterprises and provide targeted career guidance services, including resume coaching, interview preparation, and cross-cultural workplace training. Language support programs should be strengthened, especially for graduate-level students who may have fewer opportunities for language practice.

For Chinese graduates in Thailand: Students should proactively enhance their language proficiency (Chinese, English, and Thai) and actively seek quality internship opportunities to build practical experience. Early career planning based on intended employment region is recommended — those targeting Thailand should focus on local workplace culture and professional networks, while those returning to China should emphasize certification recognition and domestic market understanding. Digital skill development should be prioritized regardless of major, given the pervasive impact of digital transformation across industries.

For educational and employment institutions: Sino-Thai educational cooperation organizations should establish integrated employment service platforms that provide cross-border job information, digital skills training camps, and career counseling services. Policy coordination between China and Thailand on work visa procedures, degree certification, and talent recognition mechanisms would facilitate smoother cross-border employment transitions. Enterprise partnerships should be fostered to create more structured internship and employment pathways for international graduates.

Limitations and Future Research

This study has several limitations. First, the sample is limited to Bangkok-based universities and may not fully represent Chinese students across all regions of Thailand. Second, the cross-sectional design prevents causal inferences about the relationships between variables. Third, the study focuses primarily on demographic and digital transformation factors, leaving other potential determinants such as social capital, personality traits, and family background underexplored.

Future research could expand the sample to include universities across different regions of Thailand and incorporate longitudinal designs to track employability development over time. Additional variables such as social capital, cross-cultural competence, and specific industry contexts could be explored to provide a more comprehensive understanding of employability drivers. Qualitative studies could also complement quantitative findings by exploring graduates' lived experiences and the mechanisms through which digital transformation shapes their employment outcomes.

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Exploring Southeast Asian Consumers' Perceptions of Cross-Gender Endorsements in the Health and Beauty Industry

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Abstract

Cross-gender endorsements, in which influencers promote products traditionally associated with the opposite gender, are becoming more visible across Southeast Asia, yet audience perceptions of these practices have been understudied. This research explored the effects of source credibility dimensions (expertise, trustworthiness, and attractiveness) and parasocial relationship dimensions (liking, perceived closeness, and emotional attachment) on Southeast Asian consumers' perceptions of cross-gender endorsements in the health and beauty industry. A quantitative cross-sectional survey was conducted among 220 qualified consumers aged 18 years and above from eleven Southeast Asian countries, namely Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam, recruited through convenience sampling via online Google Forms distributed across personal social media accounts, direct messages, and peer networks. The data were analyzed using descriptive statistics, Pearson correlation, multiple regression, independent samples t-test, and one-way ANOVA. The regression model was statistically significant ($F(6, 213) = 55.039$, $p < .001$, $R2 = .608$). Expertise ($\beta = .241$), trustworthiness ($\beta = .167$), liking ($\beta = .242$), and emotional attachment ($\beta = .177$) were significant predictors. Attractiveness and perceived closeness were not significant predictors. There were no significant differences in perception by gender ($p = .849$) or nationality ($p = .562$). The findings suggest that in the area, credibility and emotional appeal are the primary determinants of positive perceptions of cross-gender endorsements, rather than physical attractiveness or demographic background. Contrary to expectations, cross-gender endorsements were more widely accepted by Southeast Asian consumers than traditional gender-role frameworks would have predicted, suggesting the normalizing effect of digital media culture in the region. This study extends Source Credibility Theory and Parasocial Relationship Theory to a cross-gender endorsement context in Southeast Asia and contributes to the communication literature with implications for brands that wish to leverage nontraditional influencer representations for health and beauty marketing.

Keywords: Cross-gender endorsements; Source credibility; Parasocial relationships; Influencer marketing; Southeast Asia

1. Introduction

Influencer marketing has become one of the dominant forms of brand communication across Southeast Asia, particularly in the health and beauty sector. As social media platforms continue to reshape how audiences encounter and evaluate product endorsements, a notable shift has emerged: influencers are increasingly stepping outside the gender boundaries that have traditionally defined beauty marketing. Men promoting cosmetics, women endorsing grooming products, these cross-gender endorsements are no longer rare, yet how audiences actually receive them remains an open question.

This matters because Southeast Asia is a region where cultural norms, collectivist values, and gender role expectations remain deeply embedded in everyday social life (Muhmin, Syah, & Anggraeni, 2026; Wood & Eagly, 2012). In these contexts, audiences do not simply receive a message passively. They evaluate the person delivering it, questioning whether the communicator is appropriate, credible, and trustworthy given what they are promoting (Tripopsakul & Hoonsopon, 2025). When an influencer's gender sits outside the expected norm for a product, that evaluative process becomes even more pronounced.

At the same time, social media creates a different kind of dynamic. Repeated exposure to the same influencer, through posts, stories, and comments, can build feelings of closeness and emotional connection that go well beyond what traditional celebrity endorsement ever allowed (Horton & Wohl, 1956; Muhmin et al., 2026; Stever & Lawson, 2013). These parasocial bonds may soften the friction

that comes with nontraditional endorsements, making audiences more open to messages that would otherwise challenge their expectations.

A vivid example of this tension unfolded in mid-2025 when Thai actor Pond Naravit was announced as a brand ambassador for Ever Bilena, a Filipino cosmetics company. The endorsement generated considerable engagement online, with fan communities actively participating in campaign activities, illustrating how credibility evaluations and parasocial dynamics play out in real time around cross-gender endorsements (Ancheta, 2025).

Despite the growing prevalence of such endorsements, research specifically examining how Southeast Asian audiences interpret and evaluate them remains limited. Most existing work focuses on sales outcomes or brand performance in East Asian markets (Chen & Zhong, 2022), leaving a gap in understanding how cultural context, credibility perceptions, and relational bonds interact to shape audience reception. This study addresses that gap by applying Source Credibility Theory (Ohanian, 1990) and Parasocial Relationship Theory (Horton & Wohl, 1956; Muhmin et al., 2026; Tukachinsky, 2011) to examine the communicative and relational factors most relevant to Southeast Asian consumers.

2. Objectives

This study pursued the following objectives:

- To examine the influence of source credibility dimensions (expertise, trustworthiness, and attractiveness) on Southeast Asian consumers' perceptions of cross-gender endorsements.
- To examine the influence of parasocial relationship dimensions (liking, perceived closeness, and emotional attachment) on Southeast Asian consumers' perceptions of cross-gender endorsements.
- To examine whether demographic characteristics (gender and nationality) significantly influence perceptions of cross-gender endorsements among Southeast Asian consumers.

3. Materials and Methods

Research Design

This study adopted a quantitative cross-sectional survey design. A structured self-administered questionnaire was used to collect data at a single point in time, enabling statistical analysis of variable relationships and hypothesis testing. This approach was chosen because the study aims to measure the influence of specific independent variables on a defined dependent variable across a broad sample of Southeast Asian consumers.

Population and Sample

The target population comprised Southeast Asian consumers aged 18 years and above who had prior exposure to influencer marketing content in the health and beauty industry. Participants were recruited through convenience sampling from several channels. The researcher distributed the questionnaire through personal social media accounts, direct messages, and email as an online Google Form. The researcher also asked colleagues to share the questionnaire through their personal accounts and fan communities to reach respondents in Southeast Asian countries. Also, a QR code linked to the Google Form was used to collect responses in person. Data were collected through online and in-person distribution. The respondents were from eleven Southeast Asian countries, namely: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam. The minimum sample size was set at 200 qualified respondents, following Hair, Black, Babin, and Anderson (2010), who recommend samples exceeding 200 for multivariate analysis and a minimum ratio of five respondents per scale item. With 34 scale items, the required minimum was 170 respondents. A total of 245 responses were collected; after screening and data cleaning, 220 qualified responses were retained for analysis.

Research Instrument

The questionnaire comprised eight sections. Section 1 gathered demographic information (gender and nationality). Sections 2–4 measured source credibility dimensions: expertise, attractiveness, and trustworthiness using items adapted from Ohanian (1990) Source Credibility Scale, as also applied in Tripopsakul and Hoonsopon (2025). Sections 5–7 measured parasocial relationship dimensions: liking, perceived closeness, and emotional attachment using items adapted from Rubin, Perse, and Powell (1985)and Tukachinsky (2011), with additional grounding in Muhmin et al. (2026). Section 8 measured perception of cross-gender endorsements, including perceived appropriateness,

credibility, legitimacy, and acceptance, drawing on Wood and Eagly (2012). All items in Sections 2–8 used a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Instrument Reliability

A pilot test with 50 respondents was conducted before the main data collection. Cronbach's alpha values ranged from .824 to .949 across all constructs, well above the recommended threshold of .70 (George & Mallery, 2003). For the main study sample (N = 220), alpha values ranged from .806 to .882, confirming satisfactory internal consistency throughout.

Content validity was established through the use of previously validated scales adapted from established instruments in source credibility and parasocial relationship research. As the study employed well-validated existing measures, statistical construct validity testing through confirmatory factor analysis was not performed.

Data Analysis

Data were analyzed using IBM SPSS Statistics version 25. Descriptive statistics summarized sample characteristics and variable distributions. Pearson correlation examined bivariate associations among all variables. Multiple regression tested H1–H6 by entering all six independent variables simultaneously. An independent samples t-test tested H7a (gender differences), and a one-way ANOVA tested H7b (nationality differences). The significance threshold was set at $p < .05$ for all analyses.

Hypotheses

- H1: Perceived expertise significantly influences consumers' perceptions of cross-gender endorsements.
- H2: Perceived trustworthiness significantly influences consumers' perceptions of cross-gender endorsements.
- H3: Perceived attractiveness significantly influences consumers' perceptions of cross-gender endorsements.
- H4: Liking toward the influencer significantly influences consumers' perceptions of cross-gender endorsements.
- H5: Perceived closeness with the influencer significantly influences consumers' perceptions of cross-gender endorsements.
- H6: Emotional attachment to the influencer significantly influences consumers' perceptions of cross-gender endorsements.
- H7a: Consumers' perceptions of cross-gender endorsements differ significantly based on gender.
- H7b: Consumers' perceptions of cross-gender endorsements differ significantly based on nationality.

Figure 1 presents the Source Credibility Model (Ohanian, 1990).

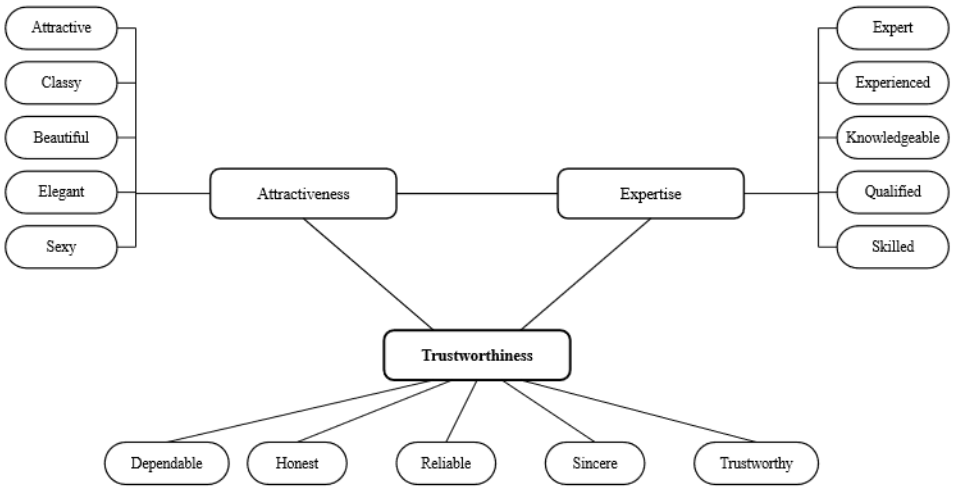
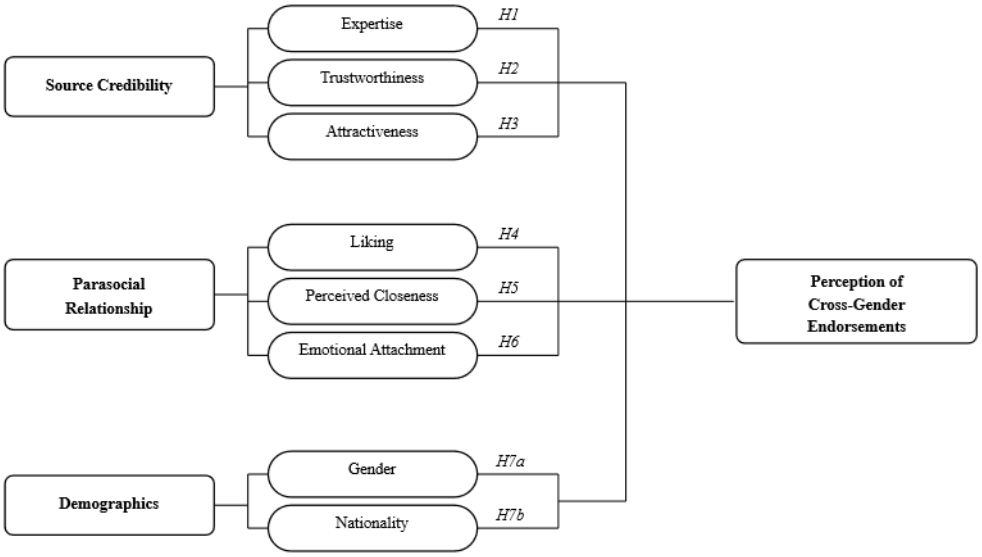


Figure 1 Source Credibility Model (Ohanian, 1990)

The following hypotheses were formulated based on Source Credibility Theory (Ohanian, 1990; Tripopsakul & Hoonsopon, 2025) and Parasocial Relationship Theory (Horton & Wohl, 1956; Tukachinsky, 2011):

Figure 2 presents the full theoretical framework guiding this study.

Figure 2 Theoretical Framework of the Study



Several recent studies have examined Source Credibility Theory and Parasocial Relationship Theory not as separate approaches, but as complementary lenses for understanding how audiences respond to influencers. Han and Balabanis (2024), in a meta-analysis of 53 studies, found that the Source Credibility Theory was the most reliable explanatory framework for influencer persuasiveness, and Parasocial Interaction Theory also contributed significantly to shaping attitudinal outcomes. Similarly, Yuan and Lou (2020) demonstrated the connection between source credibility and parasocial relationship quality in influencer contexts, where credibility perceptions strengthen the relational bonds that shape consumer responses. Tripopsakul and Hoonsopon (2025) further supported this relationship in the context of Thai social media, in which the credibility of influencers positively strengthens parasocial relationships that mediate consumer intentions. Based on these integrated applications, both frameworks are used in this study to examine how source credibility and parasocial relationship bonds influence Southeast Asian consumers' perceptions of cross-gender endorsements.

4. Results

Sample Characteristics

Of the 220 qualified respondents, 166 (75.5%) identified as female, 47 (21.4%) as male, and 7 (3.2%) selected other or preferred not to disclose. Respondents came from eleven Southeast Asian countries. The Philippines contributed the largest share (n = 120, 54.5%), followed by Thailand (n = 48, 21.8%) and Vietnam (n = 15, 6.8%). The remaining respondents were from Myanmar, Singapore, Malaysia, Indonesia, Cambodia, Brunei, Laos, and Timor-Leste. The uneven national distribution reflects the convenience sampling method and is acknowledged as a limitation for nationality-based comparisons.

Descriptive Statistics

All variables scored above the scale midpoint of 3.00, suggesting that respondents held generally favorable views across all constructs. Liking received the highest mean (M = 4.07), while Emotional Attachment was the lowest (M = 3.56), a pattern consistent with Parasocial Relationship Theory, which holds that deeper emotional bonds develop gradually through sustained exposure rather than being immediately formed (Tukachinsky, 2011). The dependent variable, Perception of Cross-Gender Endorsements, recorded M = 4.02, indicating an overall positive reception across the sample. Table 1 presents the full descriptive results.

Table 1 Descriptive Statistics of Examined Variables (N = 220)

Variable	Mean	Interpretation
Expertise	4.05	High
Attractiveness	4.05	High
Trustworthiness	3.90	High
Liking	4.07	High
Perceived Closeness	3.71	High
Emotional Attachment	3.56	Moderate
Perception of Cross-Gender Endorsements	4.02	High

Note. Based on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). High = M ≥ 3.50; Moderate = M = 2.50–3.49; Low = M ≤ 2.49.

Reliability Analysis

Reliability analysis on the full sample confirmed satisfactory internal consistency across all constructs, with Cronbach's alpha values ranging from .806 to .882, all exceeding the recommended threshold of .70 (George & Mallery, 2003). Results are presented in Table 2.

Table 2 Reliability Analysis of Research Constructs — Main Study (N = 220)

Construct	Cronbach's Alpha	No. of Items	Interpretation
Expertise	.826	4	Good
Attractiveness	.836	5	Good
Trustworthiness	.882	5	Good
Liking	.806	5	Good
Perceived Closeness	.871	5	Good
Emotional Attachment	.845	4	Good
Perception of Cross-Gender Endorsements	.833	6	Good

Note. .70–.79 = Acceptable; .80–.89 = Good (George & Mallery, 2003).

Correlation Analysis

Pearson correlation analysis revealed that all six independent variables were significantly and positively associated with the dependent variable (all $p < .001$). Expertise showed the strongest correlation with perception ($r = .675$), followed closely by Liking ($r = .672$) and Trustworthiness ($r = .634$). Worth noting is the particularly high correlation between Perceived Closeness and Emotional Attachment ($r = .761$), which signals considerable shared variance between these two parasocial dimensions and helps explain the regression findings that follow. The complete correlation matrix is presented in Table 3.

Table 3 Pearson Correlation Matrix (N = 220)

Variable	1	2	3	4	5	6	7
1. Expertise	—						
2. Attractiveness	.634**	—					
3. Trustworthiness	.638**	.588**	—				
4. Liking	.666**	.639**	.592**	—			
5. Perceived Closeness	.563**	.463**	.610**	.601**	—		
6. Emotional Attachment	.493**	.408**	.529**	.506**	.761**	—	
7. Perception toward CGE	.675**	.587**	.634**	.672**	.596**	.571**	—

*Note. CGE = Cross-Gender Endorsements. **p < .01 (two-tailed).*

Multiple Regression Analysis (H1–H6) A multiple regression analysis with all six predictors entered simultaneously produced a statistically significant model, $F(6, 213) = 55.039$, $p < .001$, $R^2 = .608$, Adjusted $R^2 = .597$. Put simply, the six variables together accounted for about 60.8% of the variance in how respondents perceived cross-gender endorsements, a strong result that speaks to the combined relevance of both theoretical frameworks. All VIF values were below 3.1, confirming that multicollinearity was not a concern. Results are presented in Table 4.

Table 4 Multiple Regression Analysis: Predictors of Perception of Cross-Gender Endorsements (N = 220)

Variable	Beta (β)	Sig.	Result
Expertise	.241	.000	Supported
Attractiveness	.093	.131	Not Supported
Trustworthiness	.167	.009	Supported
Liking	.242	.000	Supported
Perceived Closeness	.035	.638	Not Supported
Emotional Attachment	.177	.009	Supported

*Note. Dependent variable: Perception of Cross-Gender Endorsements. $R^2 = .608$; Adjusted $R^2 = .597$; $F(6, 213) = 55.039$, $p < .001$. All VIF values < 3.1, indicating no multicollinearity concerns. *p < .05. **p < .01.*

H1 (Expertise) was supported ($\beta = .241$, $p < .001$). Respondents who viewed the influencer as more knowledgeable and skilled also evaluated cross-gender endorsements more favorably, underscoring the importance of perceived competence.

H2 (Trustworthiness) was supported ($\beta = .167$, $p = .009$). Perceptions of honesty and sincerity made a meaningful positive contribution to endorsement evaluations, even when controlling for the other variables.

H3 (Attractiveness) was not supported ($\beta = .093$, $p = .131$). While attractiveness correlated positively with perception at the bivariate level ($r = .587$), it did not hold up as an independent predictor in the full model. This is likely due to shared variance with expertise and other credibility dimensions, suggesting that in cross-gender contexts, audiences look beyond appearance.

H4 (Liking) was supported and emerged as the strongest predictor in the model (β = .242, p < .001). This finding highlights just how central positive regard for an influencer is in shaping how audiences receive nontraditional endorsements.

H5 (Perceived Closeness) was not supported (β = .035, p = .638). Despite its significant bivariate correlation with the dependent variable (r = .596), perceived closeness lost its independent contribution once modeled alongside emotional attachment, a dimension with which it shares considerable overlap (r = .761).

H6 (Emotional Attachment) was supported (β = .177, p = .009). Stronger emotional bonds with an influencer were associated with more favorable perceptions, reinforcing the idea that depth of connection matters more than simple familiarity.

Independent Samples T-Test — Gender (H7a)

An independent samples t-test found no significant difference in perception between female (M = 4.03) and male (M = 4.01) respondents. Levene's test indicated unequal variances (F = 6.578, p = .011), so the equal variances not assumed row was used. The result was not statistically significant (t = .191, p = .849), meaning gender did not meaningfully distinguish how respondents evaluated cross-gender endorsements. H7a is not supported. Results are shown in Table 5.

Table 5 Independent Samples T-Test: Perception of Cross-Gender Endorsements by Gender (N = 213)

Variable	Gender	N	Mean	t	Sig. (2-tailed)
Perception of Cross-Gender Endorsements	Female	166	4.03	.191	.849
	Male	47	4.01		

Note. Equal variances not assumed (Levene's F = 6.578, p = .011). Seven respondents who did not identify as male or female were excluded from this analysis.

One-Way ANOVA — Nationality (H7b)

A one-way ANOVA found no significant differences in perception across the eleven nationality groups. Levene's test confirmed homogeneity of variances (p = .766). The ANOVA result was not statistically significant, F(10, 209) = .870, p = .562, suggesting that nationality did not produce meaningful variation in how respondents evaluated cross-gender endorsements. It is worth noting, however, that three nationality groups (Brunei, Laos, and Timor-Leste) each had only one respondent, which substantially limited statistical power and made post-hoc testing impossible. This sampling imbalance is recognized as a limitation. H7b is not supported. Results are presented in Table 6.

Table 6 One-Way ANOVA: Perception of Cross-Gender Endorsements by Nationality (N = 220)

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.173	10	.317	.870	.562
Within Groups	76.233	209	.365		
Total	79.406	219			

Note. Levene's Test: F = .587, p = .766.

Summary of Hypothesis Testing Results

Table 7 summarizes all hypothesis testing outcomes. Four hypotheses were supported (H1, H2, H4, H6) and four were not supported (H3, H5, H7a, H7b).

Table 7 Summary of Hypothesis Testing Results

H	Statement	β / Statistic	Decision
H1	Expertise significantly influences consumers' perceptions of cross-gender endorsements.	β = .241, p < .001	Supported
H2	Trustworthiness significantly influences consumers' perceptions of cross-gender endorsements.	β = .167, p = .009	Supported
H3	Attractiveness significantly influences consumers' perceptions of cross-gender endorsements.	β = .093, p = .131	Not Supported
H4	Liking significantly influences consumers' perceptions of cross-gender endorsements.	β = .242, p < .001	Supported
H5	Perceived closeness significantly influences consumers' perceptions of cross-gender endorsements.	β = .035, p = .638	Not Supported
H6	Emotional attachment significantly influences consumers' perceptions of cross-gender endorsements.	β = .177, p = .009	Supported
H7a	Consumers' perceptions of cross-gender endorsements differ significantly based on gender.	t = .191, p = .849	Not Supported
H7b	Consumers' perceptions of cross-gender endorsements differ significantly based on nationality.	F(10, 209) = .870, p = .562	Not Supported

5. Discussion

The results of this study offer a nuanced picture of how Southeast Asian consumers evaluate cross-gender endorsements. Rather than simply accepting or rejecting such endorsements on the basis of gender, respondents appeared to rely primarily on whether they found the influencer credible and whether they felt an emotional connection with them. This pattern cuts across both theoretical frameworks applied here and carries implications for how brands approach influencer selection in the region.

Consistency with Past Research

The significant effects of expertise (H1) and trustworthiness (H2) are consistent with Ohanian (1990) foundational work on source credibility, which established that perceived competence and integrity are the most influential dimensions of endorser evaluation, a finding further supported by Tripopsakul and Hoonsopon (2025). Pan, Blut, Ghiassaleh, and Lee (2024), in a recent meta-analytic review, similarly confirmed that the persuasive effectiveness of an endorsement rests primarily on the communicator's credibility, a claim the current data support in a cross-gender context.

The strong predictive power of liking (H4) and emotional attachment (H6) aligns with research on parasocial relationships in digital influencer settings. Muhmin et al. (2026) found that audiences are more receptive to influencers with whom they feel an emotional bond, and Sokolova and Kefi

(2020) demonstrated that parasocial connections strengthen persuasion on social media platforms. Both patterns are reflected in the present findings.

The non-significant effect of attractiveness (H3) is perhaps the most thought-provoking result. Traditional endorsement research has consistently identified physical appeal as an important predictor of endorsement effectiveness (Muhmin et al., 2026; Ohanian, 1990). However, in cross-gender endorsement contexts, where the influencer's gender already introduces a degree of role incongruence, audiences may shift their evaluative criteria, placing greater weight on what the influencer knows and whether they can be trusted, rather than how they look. Han and Balabanis (2024) argued that credibility cues become particularly salient under conditions of endorser-product uncertainty offers a useful lens for this finding.

Perceived closeness (H5) presents a similar story. Despite a meaningful bivariate correlation with perception, it did not hold as an independent predictor when modeled alongside emotional attachment. The high correlation between the two dimensions ($r = .761$) suggests they tap into overlapping aspects of the same relational bond, with emotional attachment capturing the more affectively intense layer. This is consistent with Muhmin et al. (2026), who similarly distinguished between surface-level familiarity and deeper emotional investment within parasocial relationships.

The absence of significant gender and nationality differences (H7a, H7b) adds another layer to the picture. Rather than viewing this as a null finding, it may reflect something meaningful: that digital media exposure is gradually normalizing diverse gender representations across Southeast Asia. Banet-Weiser (2023) has noted that global media increasingly promotes fluid representations of gender, and sustained exposure to such content may be progressively eroding the influence of traditional demographic factors on how audiences evaluate endorsement messages.

Consistency with Relevant Theories

The findings broadly support the core propositions of both theoretical frameworks. Source Credibility Theory (Ohanian, 1990; Tripopsakul & Hoonsopon, 2025) is validated in the sense that credibility dimensions, particularly expertise and trustworthiness, significantly shaped perception, while attractiveness did not independently do so. This suggests that in culturally complex, gender-atypical endorsement contexts, audiences engage in a more deliberate form of source evaluation, one that prioritizes substantive credibility over superficial appeal. Han and Balabanis (2024) similarly demonstrated that when audiences encounter uncertainty about a communicator's appropriateness, they invest more cognitive effort in assessing credibility cues.

Parasocial Relationship Theory (Horton & Wohl, 1956; Muhmin et al., 2026; Tukachinsky, 2011) also receives meaningful support. The significant contributions of liking and emotional attachment confirm that affective relational bonds, built through repeated exposure on social media, shape how audiences ultimately judge endorsement messages. The non-significant effect of perceived closeness further refines this picture: it is not merely the sense of knowing an influencer that matters, but the emotional depth of the bond.

Consistency with Researcher Expectations

The researcher initially anticipated that all six independent variables would significantly predict perception. It was expected that attractiveness and perceived closeness would contribute positively, given the visual nature of influencer content and the relational dynamics of social media. The results, however, showed that neither variable independently predicted perception when modeled alongside the others.

Regarding demographic differences, variation by gender and nationality was anticipated, given Southeast Asia's diverse cultural landscape and its strong gender role expectations. No significant differences were found. This outcome may reflect the growing digital media exposure of Southeast Asian audiences and the increasing normalization of gender-atypical content in online spaces, which may be reducing the influence of traditional demographic factors on endorsement perceptions. Overall, the findings indicate that contemporary audiences may evaluate cross-gender endorsements more through credibility and emotional resonance rather than traditional gender expectations alone.

6. Conclusion

This study set out to understand how Southeast Asian consumers perceive cross-gender endorsements in the health and beauty industry, and the answer, broadly, is that what matters most is not who the influencer is in terms of gender, but how credible they are and how much the audience genuinely likes them. Expertise, trustworthiness, liking, and emotional attachment all significantly

predicted favorable perceptions, while attractiveness and perceived closeness did not. Together, the six predictors explained 60.8% of the variance in perception, reflecting the combined strength of both Source Credibility Theory and Parasocial Relationship Theory in this context.

Neither gender nor nationality produced significant differences in perception, a finding that suggests Southeast Asian consumers may be more uniformly open to cross-gender endorsements than traditional gender-role frameworks would predict. With an overall mean perception score of 4.02 out of 5, the sample's response was clearly favorable.

For practitioners in the health and beauty industry, the practical message is clear: invest in endorsers who are seen as knowledgeable, trustworthy, and capable of building genuine emotional connections with their audience. Physical attractiveness alone is not enough, and in cross-gender contexts, it may matter even less than expected. Campaigns that prioritize sustained engagement between influencers and their followers are more likely to generate the kind of emotional attachment that drives positive perception.

For researchers, this study extends the application of both theories to an underexplored cultural and representational context. Future work would benefit from more nationally balanced samples to enable meaningful cross-country comparisons, experimental designs that can establish causality, and investigations into cross-gender endorsements across other product categories and industries.

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在泰中国留学生的生活质量满意度的调查问卷
Questionnaire on the satisfaction of the quality of life of Chinese international students in Thailand

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摘要

本研究以184名在泰中国留学生为调研样本，综合运用问卷调查法、文献研究法与观察法，系统探究该群体生活质量满意度现状、核心影响因素及作用机制。数据结果显示：受访留学生对生活质量的认知呈多元化特征，普遍重视精神满足与个人成长；整体生活质量满意度均值处于中等偏上水平，个人、学校、社会三大维度均对满意度产生显著正向影响。信效度检验表明，本研究量表克隆巴赫α系数为0.801，KMO值0.726，问卷信度、效度表现良好。针对调研发现的语言障碍、住宿条件有限、跨文化融入困难等问题，本文从学术支持、生活环境、社会融入三大维度提出优化方案：构建分层语言课程与个性化学习指导体系，升级校园住宿及配套设施、丰富校园文化活动，搭建常态化跨文化交流平台与全流程反馈机制。研究结论可为泰国高校完善留学生服务体系、中泰两国教育部门制定留学相关政策提供实证支撑，同时丰富东南亚区域留学生跨文化适应领域的研究成果。

关键词： 在泰中国留学生；生活质量满意度；跨文化适应

Abstract

This study surveyed 184 Chinese students studying in Thailand and systematically examined their quality of life satisfaction, core influencing factors, and underlying mechanisms using a combination of questionnaire surveys, literature review, and observation methods. The data show that respondents' perceptions of quality of life are diverse, generally valuing spiritual fulfillment and personal growth; the overall mean life satisfaction is at a moderately high level, with personal, school, and social dimensions all having significant positive effects. Reliability and validity tests indicate that the Cronbach's alpha of the scale used in this study is 0.801 and the KMO value is 0.726, demonstrating good reliability and validity of the questionnaire. In response to issues identified in the survey, such as language barriers, limited accommodation, and difficulties in cross-cultural adaptation, this paper proposes optimization strategies from three dimensions: academic support, living environment, and social integration: developing tiered language courses and personalized learning guidance systems, upgrading campus accommodations and associated facilities, enriching campus cultural activities, and establishing a regular cross-cultural exchange platform with a comprehensive feedback mechanism. The study's conclusions can provide empirical support for Thai universities in improving services for international students, assist the educational authorities in China and Thailand in formulating study-abroad-related policies, and enrich research on the cross-cultural adaptation of international students in Southeast Asia.

Keywords: Chinese students in Thailand; Life satisfaction; Cross-cultural adaptation

一、引言：

在高等教育国际化持续推进的背景下，海外留学生规模不断扩大，留学生生活质量满意度已成为衡量境外高校办学水平、管理能力与综合竞争力的核心指标。高校的教学服务、硬件设施、校园文化等软硬件条件，直接影响留学生的学习状态与生活体验，同时作用于院校国际声誉与长期发展。学生生活质量满意度是融合客观环境与主观感受的综合性评价指标，既包含课程体系、师资力量、基础设施等硬性条件，也涵盖校

园氛围、人际交往、文化融入等软性要素，是高校优化管理决策、完善服务体系的重要依据。中国社会科学院与首都经济贸易大学联合发布的城市生活质量指数，从主观满意度与客观发展两大维度构建评价体系，为主观生活质量调研提供了成熟的参考范式。从现有研究格局来看，当前国内与国际学界针对留学生群体的研究主要集中于来华留学生、赴欧美及日韩中国留学生两大方向，针对东南亚国家、尤其是以泰国为目的地的中国留学生专项实证研究数量偏少。同时，现有文献多聚焦宏观跨文化适应现象，少有研究结合泰国本土文化、高校办学特色，从个人—学校—社会三维度系统剖析该群体生活质量满意度；针对赴泰留学生生活痛点、服务短板的量化分析与落地对策也存在明显缺口，这也是本研究明确的核心研究空白。

随着中泰教育合作不断深化，赴泰求学的中国学生逐年增多，留学生在语言学习、校园生活、文化融入、社会交往等方面面临的现实问题日益凸显。基于上述背景，本研究以泰国H大学中国留学生为样本开展问卷调查，量化分析其生活质量满意度现状与影响因素，一方面填补东南亚区域赴泰留学生生活质量研究的空白，另一方面直面留学生现实困境，为泰国高校优化国际学生服务、助力中国留学生完成跨文化适应提供实践支撑。

二、研究目的

（一）研究问题

1. 量化分析在泰中国留学生整体及各维度的生活质量满意程度。
2. 实证剖析个人、学校、社会及人口统计学变量对生活质量满意度的影响机制。
3. 针对满意度偏低的维度与现存问题，提出可落地的优化方案。

（二）研究目标

1. 系统梳理在泰中国留学生学习与生活中的优势与短板，客观呈现生活质量现状。
2. 识别影响该群体生活质量满意度的核心因素，厘清各变量之间的作用关系。
3. 提出针对性改进策略，帮助在泰中国留学生提升跨文化适应能力，优化学习与生活状态。

（三）研究意义

1. 实践意义

本研究成果可面向留学生、留学服务机构、泰国高校、中泰两国教育主管部门四大主体提供参考。第一，帮助在泰中国留学生完成自我状态评估，主动调整生活与学习方式；第二，为留学中介与海外服务机构优化服务内容、提升专业能力提供数据支撑；第三，为泰国高校完善国际学生管理制度、升级配套服务提供实证依据；第四，为中泰两国教育部门制定跨境留学、教育交流相关政策提供现实参考。

2. 理论意义

在理论层面，当前跨文化适应理论、留学生生活质量相关研究多应用于欧美、日韩等主流留学地区，针对东南亚国家的本土化实证研究较为薄弱。本研究立足泰国本土场景，以个人、学校、社会三维分析框架为依托，丰富跨文化适应理论在东南亚语境下的应用场景，填补东南亚地区中国留学生生活质量专项研究的空白。同时，本研究从留学生个体微观体验切入，分析教育服务、文化融入、社会支持对个体发展的影响，验证并拓展现有理论模型，为高等教育国际化研究补充微观实证案例，也为后续同区域、同类型研究提供分析范式与研究思路。

（四）概念性框架

本研究依托跨文化适应理论、生活质量评价理论，构建个人因素、学校因素、社会因素三维整合概念框架。三大核心因素共同作用于在泰中国留学生的生活质量满意度，其中社会支持作为中介变量，在留学生跨文化适应、情绪调节、生活体验提升过程中发挥重要促进作用。该框架清晰阐释各变量的影响路径与互动关系，既解析留学生跨文化适应的内在机制，也为泰国高校国际教育管理、留学生支持体系建设提供理论支撑。

三、文献综述

1.在泰中国留学生对生活质量与生活质量满意度概念

刘锐（2022）阐述，生活质量包含生活便利度与心理舒适感两大层面；Hall A（2024）阐述，生活满意度是个体对整体生活状态的积极主观评价；高艳红（2024）阐述，生活满意度是反映主观幸福感的综合性概念。综合来看，现有研究普遍将二者划分为“客观状态”与“主观感受”两个层面，但多数研究未结合跨文化留学场景对概念进行细化，本研究将结合海外求学的特殊性，界定留学生群体专属的生活质量评价内涵。

2.评估生活质量满意度

崔晓丽（2025）阐述，采用主客观维度相结合的方式，从生理、心理、社会关系、环境 4 个维度对生活质量展开研究。Rogowska A M等（2021）阐述，运用MSLSS多维度量表，从家庭、朋友、学校、环境、自我五大领域测评学生满意度。两类评估体系各有侧重，但通用量表难以适配跨境留学生群体的文化特殊性，这也是本研究结合留学场景修订量表、增设跨文化融入维度的重要原因。

3.在泰中国留学生在生活质量上的满意与不满意

Neto F（2023）研究证实，留学生满意度与经济状况、文化歧视感知、文化智力、社会文化适应高度相关；Wu Z等（2025）发现，住宿条件、安全保障、学校服务、社会文化体验与留学生生活满意度呈正相关。现有研究已证实外部环境对满意度的影响，但针对泰国本土环境的实证调研较少，研究结论不具备地域适配性。

4.生活质量满意度对于在泰中国留学生的重要性

杨羽丰等（2024）提出，留学生满意度直接影响学业投入、学习成效与高校国际声誉；Serrano-Sánchez J等（2025）认为，生活满意度是留学生维持学习动力、提升跨文化适应能力的核心要素。学界已形成共识：生活质量满意度是海外留学生发展的重要保障，但少有研究结合东南亚国家学情展开深度分析。

5.在泰中国留学生的生活质量满意度受到多方面因素的影响

Wu Z等（2025）指出，住宿、安全、校园服务正向影响满意度，学业压力则产生负向作用；Achangwa C等（2022）证实，年龄、性别、学业阶段、课业量等人口统计学变量与留学生生活质量存在关联。过往研究多单一分析变量相关性，未搭建多维度整合分析框架，本研究将整合人口学变量、个人、学校、社会四大类别，系统分析多层级影响因素。

6.帮助提升在泰中国留学生的生活质量满意度

刘嘉诚（2023）建议留学生主动开展跨文化交流、转变思维方式、积极参与社交活动；Zhang A（2024）提出可借助第三方服务、语言培训、社群组织提升留学体验，同时鼓励学生主动对接教师解决学业问题。现有对策多偏向留学生个体层面，缺少从学校、社会、政策多方联动的系统性方案，本研究将弥补这一短板，构建多元协同的提升体系。

四、研究设计规划

（一）研究方法

1.描述性研究

鉴于本论文研究的是在泰中国留学生的生活质量满意度调查，因此本研究采用描述性研究，通过对在泰中国留学生当下对于生活质量、生活质量满意度的概念认知、对生活质量特征的了解以及对在泰中国留学生生活质量满意程度等客观事实进行描述记录，帮助调研者初步了解在泰中国留学生对生活质量的满意程度及各影响因素的影响程度。调研者采用描述性研究针对各个关键要素进行对策建议的收集，从“中国知网”“谷歌学术”等知名文献资源数据库以“生活质量” “生活质量满意度”等关键词，采集关于提升学习者生活质量满意度的观点，结合在泰中国留学生的生活质量满意程度以及关键影响因素情况，尝试提出更为贴合在泰中国留学生的生活质量满意度提升策略，使得本研究的整体结构更具系统性，进而帮助在泰中国留学生提升个人角度质量、增强其学校角度层面、提升其社会角度层面。

2.文献研究法

本研究的课题是以泰国H大学为例的在泰中国留学生的生活质量满意度的调查问卷，需要对在泰中国留学生生活质量满意程度、影响生活质量满意度的关键因素有基本了解，依靠大量文献支持。文献研究法为本研究提供了坚实的权威理论支持，并且便于收集，能够节省调研者的时间，对本研究具有极大贡献，因此本研究采用文献研究法。文献研究法通常以书面调查的形式进行，使得本研究在借鉴关于大学生生活质量满意度相关认知的研究、大学生生活质量满意程度的研究、影响大学生生活质量满意度因素的研究、提升大学生生活质量满意度的对策研究等方面的文献时确保所有资料数据都具有可靠的出处来源，使调研者透过不同时间阶段（从古至今）、不同国家维度（国外及国内）的文献中了解大学生的生活质量满意度影响因素相关研究的动态变化趋势，基于参考前人在不同时间维度下的对于生活质量满意度及影响因素的研究成果，确保本研究在进行在泰中国留学生生活质量满意度及影响因素研究的每一个步骤都具有真实权威的理论支持。

（二）调查方法

1.问卷调查法

问卷调查法是以书面提出问题的方式搜集资料的一种研究方法。为方便数据的收集，本研究采用两种方式（电子、纸质）收集相关数据，了解被调查者对生活质量的满意程度、分析影响其生活质量满意度的因素以及了解其对生活质量满意度提升策略的看法与意见。本调查中被调查信息部分只有性别、学院、年级、学习水平和年龄属于个人信息，相对而言被调查者对问卷的排斥心理较低，因此在填写时较为遵循现实情况，这也是问卷信度较高的原因之一。但由于个别原因，调研者只能通过线上形式发放调查问卷，无法直接向调研对象解释本次调查问卷的重要性且调研者无法对调研对象

填写问卷的过程进行监督，导致调研对象对问卷措辞出现疑问时难以及时进行解答，调研者难以完全排除被调查者对问卷内容理解不准确的情况，更难以达到 100%的问卷有效率。

2.观察法

本次调查研究使用观察法，通过线上和线下形式发放问卷（泰国H大学中国留学生）到相关微信群，或通过线下发放中国留学生填写问卷。在这些填写时间短的问卷中，将填写内容存在规律性的问卷（如连续几题均选择一个选项的题）作为废卷进行剔除，尽可能保证问卷的有效性。

（三）信度与效度分析

在进行正式的数据分析之前，首先需要对量表的可靠性与稳定性进行检验，即信度分析。本研究采用克隆巴赫 Alpha（Cronbach's α）系数作为评判标准，以衡量量表内部题目之间的一致性程度。通常认为，α 系数高于 0.7 表明量表的信度良好，可以接受；高于0.8 则表明信度非常理想。本节将对生活满意度、个人、学校和社会四个核心维度的信度进行分析与汇报。调研者将调查问卷中生活满意度量表的数据进行可靠性分析（表1），得出测试的项目总数为19 个，整体结果的信度值为 0.801，大于 0.7，可得出所有有效样本数据从整体来看可靠性较高。

表1 生活满意度量表信度分析

可靠性统计	
克隆巴赫 Alpha	项数
.801	19

生活满意度量表效度分析结果如表 2 所示，问卷中全部变量的 KMO 值为 0.726，在 0.7-0.8 之间，远大于0.6，且显著性小于 0.05，即具有较强的相关性，因子分析效果好，适合做因子分析。

表2 生活满意度量表效度分析

KMO 和巴特利特检验		
KMO 取样适切性量数		0.726
巴特利特球形度检验	近似卡方	896.003
	自由度	171
	显着性	0.000

五、研究结论

（一）基本信息

本研究描绘了在泰中国留学生的基本群体特征。样本在性别分布上相对均衡，年龄结构以青年本科生为主，主要集中在 20-23 岁的传统大学年龄段。学业表现方面，大部分学生 GPA 处于中等偏上水平，显示出整体较好的学术适应性。年级分布呈现以毕业班学生为主的特点，这可能反映了高年级学生更愿意参与学术调研的倾向。学院分布突出显示语言学院学生占主导地位，这与泰国作为汉语教学重要基地的定位相符，同时也体现了商科和传媒艺术类专业的吸引力。

（二）在泰中国学生对生活质量满意程度的理解

在泰中国学生对生活质量这一概念的理解展现出丰富而个性化的认知图景。学生们在诠释生活质量时，往往突破单一维度的物质条件考量，而是将其视为一个融合客观条件与主观体验的综合性概念。这种认知倾向体现在多数受访者更注重内在的心灵舒适感与个人化的生活体验，将精神层面的满足置于比物质享受更重要的位置。这种价值取向的转变折射出当代留学生群体认知模式的深层变化——他们不再简单地将海外求学等同于获取学位或改善物质条件，而是更加重视留学过程中的心理体验与精神成长，追求个体在跨文化环境中的全面发展与自我实现。当谈及对生活质量满意度的理解时，在泰中国学生普遍展现出整体性的思维特征。他们倾向于将满意度视为对生活各个方面的综合性积极评价，而非对某个孤立领域的简单评判。这种理解方式突显了满意度概念在留学生认知体系中的心理建构特性，即它不仅仅是对外部条件的客观反映，更是个体基于自身价值观和生活经历而形成的主观感受与情感体验。值得注意的是，在具体评估生活质量时，学生们表现出对学校教育环境的高度关注。这种倾向一方面揭示了学术经历在留学生活中的核心地位，另一方面也反映了学生们对校园生活质量的多维度期待——他们不仅关注教学质量和学术资源，同样重视在校园环境中建立的人际网络和个人成长空间。这种评估取向体现了当代留学生对教育价值的重新定义：教育环境不仅是知识传授的场所，更是个人发展和社会交往的重要平台。

（三）在泰中国学生生活质量满意度的现状

表3在泰中国学生生活质量满意度的现状

描述统计

	N	最小值	最大值	平均值	标准差	方差
五·留学生在生活质量上的满意与不满意—10.我对于我的心理健康状况	184	1	5	3.74	1.001	1.003
11.我对于与泰国人的人际交往	184	1	5	3.57	.853	.728
12.我对于泰国当地人的卫生习惯	184	1	5	3.50	.905	.820
13.我对于泰国当地的饮食习惯	184	1	5	3.33	1.016	1.032
14.我对于我的财务状况	184	1	5	3.29	1.096	1.201
15.我对于泰语的使用	184	1	5	3.32	.963	.927
16.我对于英语的使用	184	1	5	3.08	1.011	1.022
17.我对于高校提供的宿舍条件	184	1	5	3.47	.963	.928
18.我对于学校的网络服务	184	1	5	2.83	1.188	1.412
19.我对学校宿舍提供的厨房设备	184	1	5	2.91	1.026	1.053
20.我对于学校的食堂环境	184	1	5	3.34	.897	.804
21.我对于学校的环境设施	184	1	5	3.41	.863	.746
22.我对于学校的交通条件	184	1	5	3.21	1.051	1.105
23.我对于泰国高校的师资教育	184	1	5	3.80	.867	.752
24.我对于学校的后勤服务	184	1	5	3.43	.847	.717
25.我对于学校的行政管理	184	1	5	3.47	.934	.873
26.我对于泰国的医疗条件	184	1	5	3.35	.856	.732
27.我对于泰国人的公共意识	184	1	5	3.45	.922	.849
28.我对于泰国社会的安全状况	184	1	5	3.28	.933	.871
有效个案数（成列）	184					

在泰中国学生生活质量满意度的现状呈现出多层次、多维度的特征（表3）。从整体测量结果来看，学生们对当前生活质量的评价建立在个人、学校与社会三个层面的综合体验基础之上，形成了一个相对稳定的认知结构。在个人层面，学生们普遍表现出较强的自我调适能力。面对跨文化环境的挑战，多数学生能够通过建立个人生活节奏、培养兴趣爱好、维持健康生活习惯等方式来构建心理安全空间。这种个人层面的满意度往往源于对生活掌控感的获得，以及在不同文化语境中自我认同的维系。值得注意的是，个人满意度的建立不仅仅依赖于物质条件的改善，更多来源于精神层面的充实感和个人成长的获得感。在学校层面，教育环境的质量成为影响学生满意度的重要因

素。教学设施的完善程度、课程设置的合理性、教师的教学水平以及学术支持系统的完备性，共同构成了学生 们评价学校环境的基本框架。研究发现，学生们对学校环境的期待已经超越了传统意义上的硬件条件，更加注重教育教学过程中的互动质量和支持体验。校园文化氛围、国际化学术环境以及跨文化交流机会等软性因素，正日益成为学生们评估学校层面满意度的重要指标。在社会层面，留学生们的满意度呈现出较为复杂的状态。一方面，泰国当地的社会包容度和文化接纳度为留学生提供了相对友善的外部环境；另一方面，语言障碍、文化差异和社会融入难度仍然构成了一定的挑战。学生们在社会层面的满意度往往取决于其建立的社会支持网络的广度和质量，包括与当地人的互动深度、留学生社群的联系紧密 度，以及获取社会资源的能力等。从三个维度的互动关系来看，个人、学校与社会层面的满意度并非孤立存在，而是形成了一个相互影响、相互支撑的有机整体。个人良好的心理状态有助于更好地适应学校环境，积极的学校体验又为社会融入提供了基础，而成功的社会融入反过来又会增强个人的心理安全感。这种环环相扣的影响机制使得在泰中国学生的生活质量满意度呈现出动态平衡的特征。

（四）在泰中国学生生活质量满意度的影响因素

表4在泰中国学生生活质量满意度的影响因素

描述统计

	N	最小值	最大值	平均值	标准差
六·在泰中国留学生的生活质量满意度受到多方面因素的影响—29.我与当地文化融合的程度	184	1	5	3.11	1.111
30.我的跨文化适应程度	184	1	5	3.11	1.045
31.学习的压力与投入	184	1	5	3.24	.974
32.结交朋友的数量	184	1	5	3.11	1.021
33.自身的财务状况	184	1	5	3.42	1.069
34.自身的心理健康状况	184	1	5	3.22	1.219
35.住宿条件	184	1	5	3.20	1.084
36.管理人员的服务	184	1	5	3.17	.959
37.教学质量	184	1	5	3.16	1.148
38.学校的支持程度	184	1	5	3.20	1.037
39.泰国学校的居住体验	184	1	5	3.24	1.040
40.泰国的文化环境	184	1	5	3.27	.975
41.泰国的餐饮服务	184	1	5	3.23	.983
42.泰国的交通条件	184	1	5	3.21	1.030
43泰国社会的安全体验	184	1	5	3.40	1.106
44.泰国社会政策支持程度	184	1	5	3.31	1.134
有效个案数（成列）	184				

本研究关于人口学变量的分析结果引发了若干值得深入探讨的发现。性别和年级变量对生活满意度的非显著性影响，可能揭示了在跨文化学习环境中，传统的人口学特征对个体体验的解释力正在减弱。这一现象或许可以归因于留学生群体内部的高度同质性，以及跨文化经历对个体差异的消解作用。当学生置身于全新的文化环境中时，原有的性别角色期待和年级差异可能被共同面临的适应挑战所替代，从而减弱了这些因素对生活满意度的区分度。年龄因素影响的有限性同样值得关注。不同年龄段学生表现出的相似适应模式，可能反映了留学生群体在应对文化冲击时采用的共性策略。无论处于哪个年龄阶段，面对语言障碍、文化差异和社交重建等共同挑战时，学生们都需要调动相似的心理资源和社会支持系统。这种共性体验在一定程度上弥合了年龄差异可能带来的影响。特别值得深入探讨的是学业表现（GPA）与生活满意度之间的独特关系。与传统认知中"学业成就促进生活满意"的线性思维不同，本研究发现二者呈现出复杂的作用模式。这种非常规的关系可能源于多重因素的交互作用：一方面，追求卓越学业表现可能带来时间压力和心理负担；另一方面，学业成就的获得方式及其对自我价值的确立方式，可能在跨文化情境下呈现出特殊性。这提示我们需要超越简单的因果关系，从更整体的视角理解学业表现在留学生活质量中的角色。个人维度的重

要作用凸显了心理资本在跨文化适应中的核心地位。留学生个体的情绪调节能力、自我效能感和心理韧性，构成了应对文化冲击的基础性资源。这些内在心理品质不仅直接影响主观幸福感，更为个体利用外部资源提供了内在条件。值得注意的是，个人维度的影响更多通过间接路径实现，说明心理因素很可能是通过影响个体的认知评价和行为选择，进而作用于整体生活满意度。学校环境作为留学生活的主要场域，其影响强度体现了教育质量在海外求学体验中的关键作用。教学设施、课程设置、教师支持等要素共同构成了学生日常体验的重要部分。然而，学校维度同样表现出显著的间接效应，这表明学校环境可能通过塑造学术成就感、建立师生关系和提供发展平台等中介变量，间接影响学生的生活满意度（表4）。社会维度的强直接效应揭示了社会支持在跨文化环境中的独特价值。对留学生而言，社会支持和文化融入不仅提供情感慰藉，更是获取信息、资源和机会的重要渠道。这种直接作用模式可能源于社会支持对基本心理需求的即时满足，特别是在面对文化隔阂和孤独感时，良好的社会连接能够直接缓解心理压力，提升生活体验。

六、建议

（一）优化学校教育服务供给

1.完善学术支持系统

针对留学生在学术适应过程中面临的语言障碍和学业挑战，学校应当着力构建系统化的学术支持体系。首先，有必要开设分层次的泰语强化课程，既包括面向零基础学生的日常交际用语培训，也应设置针对中高级水平学生的学术泰语专项训练，帮助学生克服课堂学习和文献阅读中的语言困难。同时，配套开设符合留学生认知特点的学术写作指导课程，通过案例分析、范文解读和实操训练相结合的方式，系统讲解论文写作规范、文献引用方法和学术表达技巧，切实提升学生的学术素养和语言应用能力。考虑到留学生群体在学业基础上存在的个体差异，建议建立个性化的学习指导机制。可以依托各学院的专业教师资源，为有需要的学生配备学术导师，提供一对一的学业咨询和辅导服务。特别是对于学习存在困难的学生，应当及时进行学业预警和干预，通过定制化的学习计划、针对性的补习课程和定期的进度跟踪，帮助不同基础的学生都能获得适切的学术支持，实现学业水平的稳步提升。教师队伍的跨文化教学能力建设同样不容忽视。83应当定期组织教师参加跨文化教学方法的专题培训，重点提升教师对多元文化背景学生的理解力和包容度，培养其设计跨文化课堂活动、运用多样化教学策略的能力。鼓励教师在教学过程中注重文化差异的调和，灵活调整教学节奏和表达方式，营造包容互敬的课堂氛围。同时建立教师跨文化教学能力评估机制，将留学生的课堂体验和教学反馈纳入教师考核体系，持续推动教学质量的优化与提升。

2.改善校园生活环境

在留学生活保障方面，应着力打造宜居宜学的校园环境。当前留学生宿舍存在设施老化、功能单一等问题，亟需实施住宿条件改善计划。建议对留学生公寓进行整体升级改造，重点改善卫浴设施、更新家具电器、优化网络覆盖，并在公共区域增设厨房、洗衣房和休闲空间。同时要加强宿舍安全管理，完善门禁系统、监控设备和消防设施，定期开展安全演练，让留学生住得既舒心又安心。　针对留学生课余生活单调的现状，学校需要精心设计多元化的文化娱乐活动。可以结合中国传统节日和泰国当地特色，定期举办文化嘉年华、美食节、文艺汇演等大型活动，增进中泰学生之间的文化交流。同时鼓励成立各类学生社团，如书法社、武术队、泰语角等，为留学生提供发展兴趣爱好的平台。此外，还应组织周末观影、体育竞赛、郊游踏青等日常休闲活动

，帮助留学生在紧张学习之余放松身心，丰富精神文化生活。校园基础设施建设也需同步推进。建议在留学生主要活动区域增设指引标识，提供中泰英三语服务；优化校园交通线路，增加班车频次；扩建图书馆的中文藏书区，增订专业期刊；改善体育场馆设施，延长开放时间；在食堂开设特色窗口，提供符合中国学生口味的餐食。通过这些细致周到的设施改进，为留学生创造更加便捷舒适的学习生活　环境，让他们能够更好地专注于学业和个人发展。

（二）促进社会融入与文化适应

1.搭建跨文化交流平台

为深化中泰学生间的相互理解与友谊，应当构建多元立体的文化交流机制。我们可以定期举办"中泰文化对话"系列活动，每月设定一个特色主题，如传统节庆、民间艺术、当代影视等，邀请两国学生分享各自的文化见解。这种持续性的深度交流，能够帮助学生超越表层的文化差异，真正理解对方的文化内核。语言学习作为文化交流的重要桥梁，84需要创新互动模式。建议推行"语言咖啡屋"项目，在轻松惬意的氛围中开展中泰语对话练习。同时可以组建"语言学习搭档"，让中泰学生结成对子，每周固定时间进行语言互助。在此基础上，举办"双语微电影创作大赛"、"中泰歌曲翻唱会"等趣味活动，使语言学习融入文化创意，激发学生的参与热情。为让学生更直观地感受泰国社会，应当设计系统性的文化体验课程。例如，组织学生探访曼谷的古老寺庙和水上市场，了解泰国传统生活方式；安排参观清迈的手工艺村落，体验独特的泰北文化；开展"舌尖上的泰国"美食制作活动，在烹饪中感受饮食文化魅力。这些沉浸式体验不仅能丰富学生的见闻，更有助于他们从多维度理解泰国社会的文化脉络，建立起更深层次的文化共鸣。

2.拓展社会支持网络

要着力拓展实践平台，让学生在真实的社会场景中锻炼成长。与在泰中资企业、本地知名公司建立实习基地，为学生提供将理论知识转化为实践能力的机会。同时，组织开展社会调研、志愿服务等实践活动，引导学生深入泰国社会肌理，在服务当地社区的过程中增进对泰国社会的理解。这些实践经历不仅能提升学生的综合素质，更能帮助他们在实践中明确未来发展方向，为日后在泰的长期发展奠定坚实基础。

（三）建立动态监测与反馈机制

1.完善质量评估体系

为构建持续改进的服务保障体系，应当建立健全留学生满意度监测与反馈机制。建议每学期开展一次全面的满意度问卷调查，问卷设计要涵盖教学品质、生活服务、管理效能等关键维度，并采用量化评分与质性建议相结合的方式，确保能够精准捕捉学生的真实体验。同时，在学期中段辅以焦点小组座谈，邀请不同背景的学生代表参与深度交流，从而发现潜在问题，洞察深层需求。　在意见反馈渠道建设方面，需要打造多元化、便捷化的诉求表达平台。除传统的意见箱和辅导员接待日外，应开发专属的线上服务系统，支持匿名提交和实时查询处理进度。更重要的是要建立分级响应机制：一般性问题确保在 3 个工作日内回复，复杂问题一周内给出解决方案，重大事项由校领导牵头处理。每周生成诉求分析报告，定期在校园平台公示处理结果，让学生切实感受到自己的声音被重视。在服务质量提升方面，要推行"评估-改进-再评估"的闭环管理模式。基于满意度调查和日常反馈的结果，各部门需制定具体的服务质量提升方案，明确改进措施、责任人和完成时限。建立跨部门的服务质量联席会议制度，每季度检讨工作成效，分

享最佳实践。同时引入第三方专业机构开展年度评估，从客观角度审视服务质量，确保各项改进措施真正落地见效，持续提升留学生的获得感和满意度。

2. 加强家校社会协同

为构建多方联动的支持体系，我们需要建立完善的家校社协同机制。学校应当每学期定期向留学生家长寄送学生在校情况报告，详细说明学生的学业进展、生活适应状况和参与校园活动的情况。同时，通过建立家长微信群组，及时发布学校重要通知和泰国当地动态，让远在千里之外的家长能够了解子女的留学近况。在学期中，可安排线上家 座谈会，由校领导、辅导员和专业教师共同参与，解答家长关切，听取家长建议。与国内高校及留学主管部门的协作也不容忽视。应当建立定期沟通机制，每季度与国内合作院校交流学生培养情况，协调解决跨校区管理中的问题。同时，要主动向留学服务中心等机构汇报学生在泰情况，争取政策支持和专业指导。特别是在突发事件处理上，要与国内保持紧密联络，共同制定应急预案，确保学生的安全和权益得到保障。更重要的是要善于整合各方优质资源，构建全方位的支持网络。可以邀请国内知名专家学者开展线上讲座，弥补海外教学资源的不足；联合在泰中资企业设立实习基地，为学生提供实践平台；对接泰国当地的文化教育机构，丰富学生的课外生活。通过建立资源清单和合作档案，形成持续发展的合作伙伴关系，真正实现″1+1>2″的协同效应，为留学生成长成才提供强有力的支持。

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消费下行新常态下中国江西省中小型传统食品加工企业营销组合策略优化研究

Research on the Optimization of Marketing Mix Strategies for SME Traditional Food Processing Enterprises in Jiangxi Province

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摘要

本文采用了PEST模型、SWOT分析模型、4PS、4CS、4RS营销组合模型，并通过文献研究法、探索研究法、深度访谈法，针对中国江西省中小型传统食品加工企业的市场营销组合策略研究得出以下结论：中国政府出台的《食品安全法》规范了企业自身，税收优惠政策有效减轻了企业负担；原材料价格波动、融资难题及劳动力成本上升挤压企业利润，国民收入增长推动消费需求向高端化、新奇化转变；老龄化与饮食结构变化导致传统食品消费群体萎缩，但消费习惯改变也催生了新的市场机遇；数字化转型、绿色工艺及冷链技术等为企业提升效率与产品品质提供了支持。本论文的创新点在于研究对象和研究环境背景的创新，调研者对中国江西省中小型传统食品加工企业在消费下行新常态下的市场营销策略进行深入研究，并提出了优化建议，希望为江西省中小型传统食品加工企业的发展提供参考。

关键词:营销组合策略；中小企业；食品加工企业；消费下行

Abstract

This study adopts PEST, SWOT, 4Ps, 4Cs and 4Rs models, combined with literature research, exploratory research and in-depth interviews, to explore the marketing mix strategies of small and medium-sized traditional food processing enterprises in Jiangxi Province, China. The results show that the Food Safety Law and preferential tax policies regulate enterprise operation and reduce operational burdens. Fluctuating raw material prices, financing difficulties and rising labor costs compress corporate profits. Rising residents' income drives consumption upgrading, while population aging and changing dietary habits shrink the traditional consumer group yet create new market opportunities. Digital transformation, green production and cold chain technology help improve operational efficiency and product quality. This paper features innovative research objects and contexts. It proposes targeted optimization strategies under the sluggish consumption trend, providing practical references for the development of local food enterprises.

Keywords: Marketing mix strategy；Middle and small-sized enterprises；Food processing enterprise；Declining consumption

一、引言

当前经济步入中速增长区间，中小企业普遍面临资源不足、市场开拓难、竞争激烈及转型压力，大量企业因缺乏有效营销策略被淘汰。中小型传统食品加工企业更是深陷食品安全、产能过剩、产品同质化、成本上涨、消费需求转变等困境，转型升级压力加剧。现有研究多聚焦大型企业或行业宏观分析，针对经济下行背景下江西本土中小型传统食品加工企业的营销组合策略研究存在明显空白。本研究以此为切入点，结合行业健康化、数字化等趋势，通过案例分析探讨企业如何通过营销组合提升竞争力，在经济下行中实现生存与发展，可为同类企业提供理论参考与实践借鉴。

二、研究目标

（一）研究问题

1. 市场营销策略和市场营销组合策略的概念界定。
2. 采用PEST分析法研究中国中小型传统食品加工企业的外部宏观环境。
3. 通过波特五力模型了解江西J食品有限公司在中国中小型食品加工企业中的竞争情况。
4. 使用SWOT分析法了解江西J食品有限公司的优势、劣势、机会和威胁。
5. 使用4PS理论、4CS理论和4RS理论来分析江西J食品有限公司市场营销组合策略的现状。
6. 综合分析，消费下行新常态下影响江西J食品有限公司市场营销的内部因素。
7. 提出针对江西J食品有限公司的市场营销组合策略优化的可行性方案。

（二）研究目标

1. 了解市场营销和市场营销组合策略本质上的区别。
2. 从政治、经济、社会文化和科学技术了解影响中国中小型传统食品加工企业的宏观因素。
3. 从供应商的议价能力、购买者的议价能力、新进入者的威胁、代替品的威胁和同行业竞争者的竞争程度中了解江西J食品有限公司在中国中小型食品加工企业的行业状况。
4. 通过江西J食品有限公司的优势、劣势、机会和威胁了解现阶段的运营状况。
5. 从产品、定价、渠道、促销、消费者、成本、便利、沟通、关联、反应、关系和报酬中发现现阶段消费下行新常态下江西J食品有限公司市场营销组合策略的问题。
6. 找出影响消费下行新常态下江西J食品有限公司在市场营销的关键因素。
7. 通过可行性优化方案帮助江西J食品有限公司更好地维护客户关系和提升市场核心竞争力。

（三）研究意义

1.实践意义

通过PEST分析法研究中国传统食品加工企业的宏观环境，能够帮助企业管理者从政治、经济、社会和技术四个方面分析当下宏观环境的情况变化，把握市场现状，预测未来趋势，制定相应的市场营销策略。总结出中国中小型传统食品加工企业市场营销策略中的共性问题，分析出中国中小型传统食品加工企业的行业现状和该类型企业的优势、劣势、机会和威胁，提出可行性优化方案来帮助中小型传统食品加工企业来改变现状，帮助企业更有效地完成转型，对促进中国中小型传统食品加工企业可持续健康发展具有重大地意义。

2.理论意义

目前针对中小型传统食品加工企业营销组合策略的研究数量较少，但是我国现存中小型传统食品加工企业数量庞大，很多企业因未采取正确的市场营销策略而导致竞争力低下，甚至企业无法存活完全失去市场。所以研究与之相适应的研究策略是非常重要的，帮助中小型传统食品加工企业走出困境、健康发展和成功转型有着重要意义。

（四）概念性框架

本研究整合PEST、波特五力、SWOT、4Ps、4Cs、4Rs六大理论模型对江西J食品有限公司的具体情况形成完整逻辑分析。借助郝宁宁（2024）的PEST模型，结合经济下行新常态，从政治、经济、社会、技术维度剖析企业外部宏观环境；运用邱子帆（2024）波特五力模型了解行业竞争格局，明确各类竞争压力，为后续分析奠定外部基础。采用刘华（2025）SWOT模型梳理企业自身优劣势与发展机遇、威胁，完成内外部综合分析。最后结合施佳杰（2024）4Ps、李冉（2023）4Cs、吴鸿远（2023）4Rs营销模型，从产品、价格、渠道、促销、消费者、成本、沟通、便利、关系、关联、反应和报酬等因素，助力企业制定科学的营销组合策略。

调研者针对江西J食品有限公司的实际情况结合前人的文献参考，根据PEST分析模型、波特五力模型、SWOT分析模型、4Ps营销理论模型、4Cs营销理论模型、4Rs营销理论模型编绘出概念性框架（图一）。

三、文献综述

(1) 市场营销与市场营销组合策略的概念界定

Djeribi S, Siyahia S.（2023）指出4Rs营销组合通过关联、关系、响应、连接客户反馈、竞争优势，与客户建立独特关系。ZENG X, YUAN Z.（2023）认为4Cs市场理论重新设定了市场营销组合的四个基本要素:消费者、成本、便利性和沟通。宗玲玲（2024）指出市场营销组合策略（4P）策略是企业在市场营销环节中，根据市场营销活动实际特点形成的营销策略，包括产品策略、渠道策略、价格策略、促销策略等。

(2) 中国中小型传统食品加工企业的外部宏观环境分析

政治上，政府采购是企业获取市场需求的战略手段，促进中小企业发展（周晓光,贺天祥,鲁元平，2025）。经济上，金融危机：缩小食品企业的国际市场；食品原材料价格上涨；大众消费需求降低（宋万生，2022）。社会上，随着消费者收入水平的增加，消费需求逐渐发生变化，需求水平也相应提高并朝着多样化的方向扩展（YAN D，2023）。技术上，大数据、人工智能等新兴技术正在重塑企业运营和创新机制 ，为中小企业带来挑战与机遇（史青,张雪洁，2025）。

(3) 中国中小型传统食品加工企业的行业状况分析

邹永琴（2023）指出原材料的品质、价格对商品利润率影响较大，供应商一般会通过提高销售价格、降低货品质量等方式来提升议价能力。徐娜（2023）指出肉制品产品销售对象：大型商超直接面向广大消费者，尤其关注肉制品食品的价格，具有非常强的议价能力；连锁便利店、地方小型商超、社区个人商店等，铺数量多、销售范围广的优势，买方议价能力稍强；普通个人消费者，对食品安全、营养、便捷性较为关注，对价格不太敏感，每次购买量少，议价能力较弱。

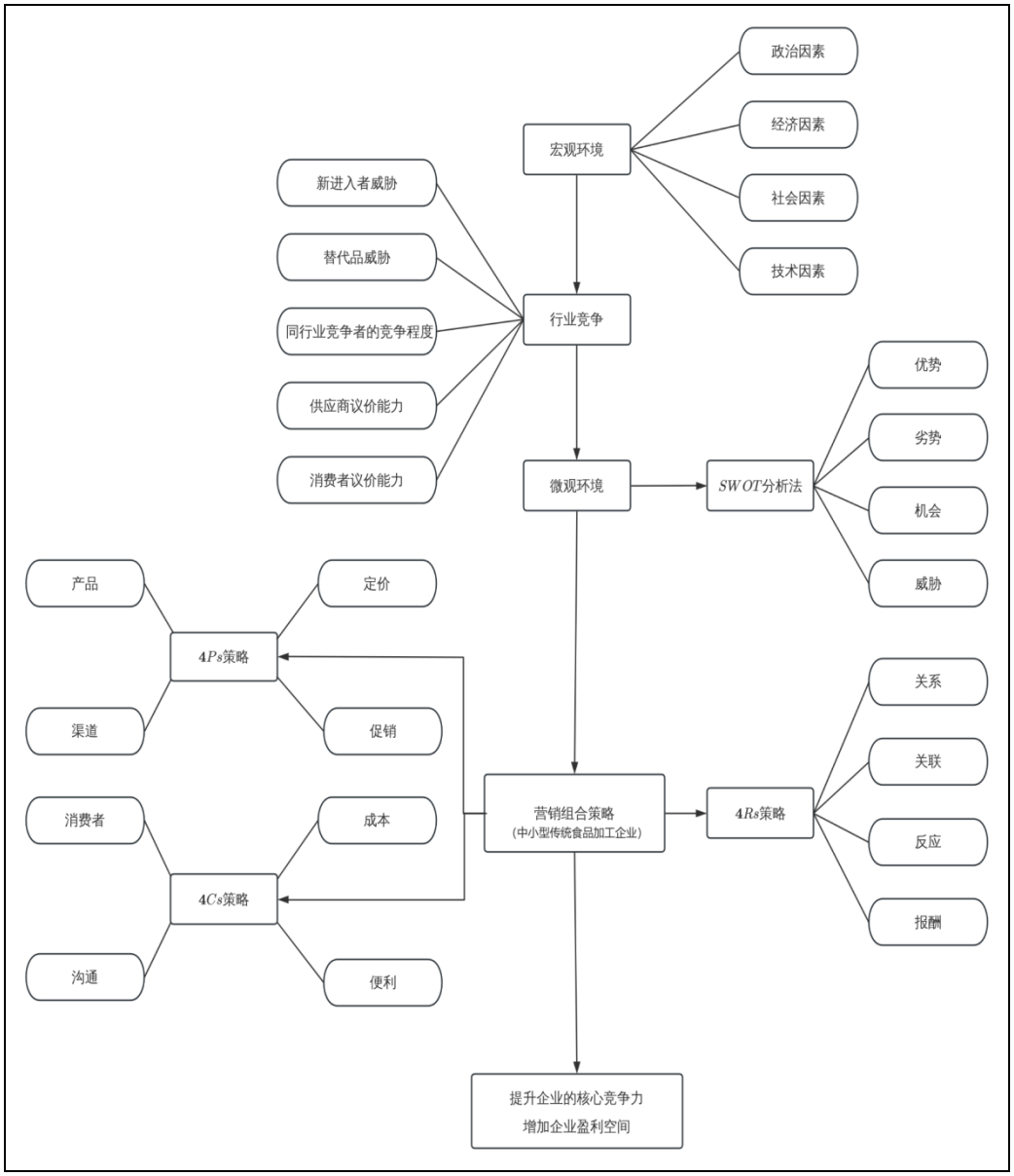

图1：概念性框架图

(4) 江西食品公司的SWOT分析

ZY企业自身优势：地理位置优势。企业所在地劳动力较为丰富、交通优势明显；销售网优势。成功把产品销售网扩充至国内数十个个大中城市及国外市场；品牌优势。拥有集体商标和莘州净菜商标等数十个商标（于红蕾,2022）。消费者的消费欲望降低，使得许多食品加工厂的产品滞销，消耗了大量成本造成了企业资金周转困难。中小企业的综合信用评分不足，无法通过金融机构获取日常生产经营所需的资金（杜玥，罗晓涵，2022）。

(5) 食品公司的市场营销组合策略及其问题分析

在价格上，通过总成本加成的方式为产品制定价格（郑彩鑫，2023）。灵活地调整定价策略以适应市场需求的变化，以确保价格与产品价值相符（周莹，2024）。在促销上，使用线上和线下广告手段进行推广。线上模式包括网上购物平台、网站、移动应用，线下模式则是实体店销售（Di S.，2023）。在沟通上，通过社交媒体、社区互动和线下活动的多维沟通策略实现了品牌信息的高效传播，还成功构建了与消费者之间的紧密联系（任国安，2025）。在便利上，钱大妈通过线上商城和线下门店相结

的方式，为消费者提供便捷的购物渠道。线上预订产品，线下自提或送货上门的服务，满足了消费者对购物便利性的需求，提供了灵活的购物方式。支持多种支付方式，如微信支付、支付宝支付等，方便消费者支付（张少龙，2024）。在关联上，公司提供个性化的服务，满足消费者的个性化需求，加强公司与产品关联，提升产品的感知价值，从而实现产品附加价值的提升（邱子帆，2024）。在关系上，在微博上拥有特殊的官方账号，定期发布新产品信息和活动信息。在微博评论中与用户互动，增强用户体验和参与感（Di S，2023）。在反应上，通过与用户的定期互动了解客户需求，并推出更符合公众口味的新产品；售前积极回应客户的问题，在售后积极解决任何问题，不推卸责任（Di S，2023）。

(6) 消费下行新常态下影响食品公司市场营销的关键因素

CHANGSHU W U.（2023）指出网络营销策略受到人才引进、网络营销知识培训、信息化以及品牌形象的显著影响。王玉国（2024）指出产品策略问题的主要成因（1）追求产品多样化。（2）缺乏明确的品牌定位。（3）品牌重视度不够。渠道策略问题的主要成因（1）线上渠道资源投入力度不够。（2）线下直营渠道建设晚，远远落后于经销商渠道。促销策略问题的主要原因（1）线下渠道经销商管理难度较高。（2）线上渠道资源投入不足。

(7) 江西食品公司市场营销组合策略的优化建议

郭晶晶,王晶（2024）指出转变营销理念。通过移动互联网，把用户与企业联系在一起。开展全渠道营销模式。在所有渠道为顾客提供统一的库存、统一的价格、统一的促销。搭建电商平台、社会化媒体平台等数字化平台，跟顾客进行更好的互动。培养专业性人才。丁钊（2024）指出实施促销策略时，通过举办有趣的互动活动、提供独特的赠品或优惠券等方式来刺激消费者的购买欲望并提高他们的忠诚度。Srirattanaworakul S, Maneesong O, Tantiprabpa P.（2025）指出将产品开发与市场开发策略结合使用以增加销售，例如，在市场或展会上设立销售摊位，让客户试购，强调品牌或店名以及销售人员。可以与社交媒体的意见领袖合作，在曾经购买过的目标消费者中，可能提供大额购买的免费配送服务。刘璐毅（2025）指出三种价格策略：低利润定价法，通过推出组合套餐来进行捆绑低价销售。高利润定价法，研发特色产品。阶梯定价法，满足不同消费水平的需求。

四、研究设计规划

（一）研究方法

1. 探索性研究法

本论文采用的研究设计方法是探索性研究法，以江西J食品有限公司为研究对象，分析消费下行新常态下行业环境对其的影响，并探究其市场营销组合策略。当前相关研究资料较为匮乏，采用该方法可满足研究需求。首先，从公司的宏观环境入手，调查大环境对其的影响；其次，针对公司在同行业竞争力分析，对公司的竞争现状进行了解；再进一步，通过对公司的内外部情况进行分析，得出其存在的优劣势；最后，针对公司市场营销组合策略的实际情况进行研究。

2. 文献研究法

调研者通过文献研究法，对前人的学术论文、期刊、报纸、论文集和书籍进行归纳总结，并通过收集公司的相关信息，二者相结合为调研者研究公司的市场营销组合策略模型提供了大量理论数据支撑。

（二）调查方法

1. 深度访谈法

本论文采用的调查方法是深度访谈法。调研者通过深度访谈法与江西J食品有限公司的高层管理者W总经理与C销售经理分别进行一对一的访谈，可以详细地获得江西J食品有限公司的相关信息。

2. 观察法

本论文同时也采用了观察法的调查方法。调研者通过观察与公司的高层管理者进行访谈时的神情形态和行为举止，感受到受访者的真实情感和态度，并进行记录。调研者在访谈过程中观察到手机发出提示音等情况都对受访者的回答产生了干扰，导致访谈结果与受访者实际的想法有出入。

五、研究结果

通过与江西J食品有限公司高层管理者的访谈调查及分析，结合相关理论研究和实验研究结果得出分析结果

（一）市场营销与市场营销组合策略的概念界定

市场营销是围绕市场需求和企业盈利目标展开的系统性活动。根据受访者的观点，市场营销不仅包括以顾客为中心的价值传递，也涵盖市场推广的关键环节，致力于通过全流程管理实现短期交易与长期客户关系的平衡；在市场营销活动中，企业主要依托市场调研与产品定价作为共同基础，同时兼顾促销活动、售后服务、渠道搭建以及品牌传播等多元手段，全面满足消费者需求；在市场营销组合策略方面，产品、价格、渠道和促销被共同视为核心要素，此外还需纳入消费者洞察与反馈管理，从而系统性地降低企业运营与消费者购买成本，最终提升企业的整体盈利能力。

（二）中国中小型传统食品加工企业的外部宏观环境分析

政治环境：“一带一路”倡议为企业开拓海外市场创造了机遇，但中美贸易摩擦所带来的关税上升也削弱了出口价格竞争力，造成订单减少。中国政府出台的《食品安全法》通过惩罚性赔偿与明确责任范围，对中小型传统食品加工企业起到规范作用，同时也带来成本压力并加速行业优胜劣汰，在处理投诉方面增加了企业运营难度。此外，税收优惠政策有效减轻了企业负担，有助于支持企业升级创新、扩大生产与就业，但部分税收与社保政策仍对企业构成挑战。国内统一大市场建设与消费促进政策为行业整体发展提供了动力。

经济环境：原材料价格波动对企业生产带来直接影响，融资难、融资贵问题持续制约企业发展，并加剧运营压力，削弱抗风险能力，影响技术创新与产品升级。国民收入增长带来消费能力提升，但也推动需求向新奇、高端化方向转变，传统食品消费占比有所下降。与此同时，劳动力成本上升、市场竞争加剧、线上电商及新零售模式兴起进一步挤压企业利润，促使部分企业转向研发高附加值产品以拓展品牌影响力。

社会环境：老龄化社会与新生儿数量减少导致传统食品消费群体萎缩，饮食结构变化也影响市场需求。实际购买力提升虽有助于扩大市场总体规模，推动企业销量增长与品牌建设，但也对企业的目标群体定位、渠道策略以及利润空间带来挑战。消费习惯的变化促使企业调整营销渠道与推广方式，并加速新产品研发，传统食品面临需求减少与市场边缘化压力，但同时也为企业通过品牌宣传提升知名度创造新机遇。

技术环境：数字化转型与智能化、自动化设备的应用提升了生产效率，降低了成本与资源浪费，尽管设备投入较高且需要复合型人才进行操作，但对产品质量与稳定性带来积极影响。绿色食品加工工艺符合政策与社会导向，有助于提升产品附加值，

但存在技术门槛并可能增加企业成本。此外，先进的食品安全与检测技术为产品质量提供保障，冷链物流与保鲜技术也有助于延长产品保质期、降低损耗，从多方面支持企业可持续发展。

（三）中国中小型传统加工企业的行业状况分析

行业内现有竞争者：江西J食品有限公司的现有竞争者主要是同类型企业，以及北方面粉生产商构成的间接竞争。此外，陈克明、中粮等多家企业也在不同层面形成竞争压力。

替代品威胁：湿面、高蛋白饮食、素食产品，以及方便面、速冻面食、预制面制品和外购食品等多种类型的产品均可能对企业现有产品构成替代，进而影响市场占有率，所以企业当前存在较大的替代品威胁。

新进入者威胁：食品加工行业的进入威胁主要受资本投入与行业壁垒的影响，新进入者较难进入食品加工行业，故其对企业威胁较小，但同时市场饱和度、品牌与渠道建设难度、政策法规监管强度以及产品差异化空间也共同决定了新进入者的难易程度。完整产业链的竞争格局对企业构成成本压力，使其在价格竞争中处于不利地位，并容易受到上游供应商和下游渠道的制约，进一步影响品牌信任度的建立。

供应商议价能力：企业目前主要与原辅材料和包装材料供应商合作。议价能力受供需关系、采购规模、产品特性及替代选项等多方面因素影响。包装材料因替代性强、切换成本低，企业议价空间相对较大；而原辅料则因质量指标限制，更换供应商可能影响产品稳定性，部分原辅料因其标准化程度高、供应商数量多，仍具备一定替代性。供应商为提升议价能力，通常采取提高产品品质、优化服务、加强与下游企业的合作关系以及扩大自身规模等方式。

消费者议价能力：大宗采购客户的议价能力较强，而普通消费者因面条属于日常刚需食品，具有单价低、品牌多、购买频次高但单次量小的特点，整体议价能力较弱。消费者心理、价格认知、品牌信任和购买习惯也会影响其议价行为。对于企业客户而言，采购量越大，议价能力越高；长期合作伙伴在面临竞争对手更低报价时，其议价能力也会相应增强。尽管部分消费者存在压价心理，但由于该品类消费的刚需属性和品牌依赖性，整体上消费者的议价能力仍较为有限。

（四）江西J食品有限公司的SWOT分析

优势：江西J食品有限公司当前的优势是企业具备一定的生产规模与技术研发实力，产品质量稳定并积累了相应的品牌基础。地理条件优越为其提供了区位便利，产业链模式较为成熟，同时管理团队结构年轻化，有助于企业及时把握市场趋势并做出响应。

劣势：公司也存在政策支持力度有限、内部管理经验与专业人才储备相对薄弱等方面劣势。同时，全国化市场布局尚未完善，品牌影响力多局限于区域层面，在营销创新、消费者触达以及产品多元化方面存在明显短板，制约了企业的进一步发展。

机会：公司未来的机会主要有数字化转型、技术创新与产品升级，为企业提升竞争力创造了条件；而国际贸易环境的改善也为市场拓展提供可能；国内食品消费需求持续增长，市场空间广阔，而日益严格的食品监管政策在促进行业规范的同时，也对企业形成正向引导。此外，政策与资金支持力度逐步增强，产业链协同与企业合作渐成趋势，有助于企业整合资源、提升综合竞争力。

威胁：行业内部竞争不断加剧，“内卷化”态势明显，对企业持续盈利构成压力；消费者健康意识的提升，特别是控糖、控碳水饮食趋势的兴起，可能导致目标客

户群体规模收缩，叠加消费力减弱的影响，进一步挤压市场空间；原材料价格波动及政策法规变动也带来不确定性，加剧企业经营风险，这些都是江西J食品有限公司在未来发展中会面临的较大的威胁。

（五）江西J食品有限公司的市场营销组合策略及问题分析

产品：在市场营销组合方面，江西J食品有限公司的核心目标客户主要是包括传统经销商与批发商、线上B to C消费者以及海外出口客户，同时也覆盖家庭消费者与礼品团购企业。未来潜在消费群体主要包括具有赠礼需求的企业、健康饮食追求者、以00后为主的年轻客群、餐饮服务企业及国际消费者。其产品的研发与生产注重产品质量安全与营养健康属性，并依据市场需求推进便捷化、科技化的产品创新，为老年及特殊人群提供营养定制产品，同时在服务上关注消费者的情绪价值。然而，公司品牌在全国及全球市场的影响力仍较弱，且产品丰富度有限，创新速度与售后服务能力尚存提升空间。

价格：江西J食品有限公司综合运用市场定价法、成本定价法、价值导向与战略导向定价。针对传统产品通过市场法定价，能维持稳定客流，但受行业竞争影响利润有限；针对新品采用成本法定价，虽能保障利润，但却难以显著提升销量；整体定价受品牌认知度制约，在吸引价格敏感型客户方面面临挑战。

渠道：江西J食品有限公司的销售渠道主要以江西为核心，辐射周边省份，并覆盖欧洲与东南亚出口市场，同时拓展至线上外卖平台及东北、西北、华北等部分区域；并采用线下经销、电商平台、多媒体内容与外贸等多渠道运营，通过源头工厂直销、一键代发及参展等方式积极拓客。

促销：江西J食品有限公司的促销手段涵盖线上活动、直播带货、线下买赠打折、试吃推广及社区宣传等多种形式，以及丰富的促销方式与线上线下融合模式，结合产品与成本优势，有效吸引消费者，阶段性提升经营业绩。

消费者：江西J食品有限公司依据消费习惯与偏好进行产品研发，提供定制服务，并通过荞麦面、富硒鸡蛋面等产品满足健康需求，以客家拌面、多元化面制品系列满足便利化与个性化需求。

沟通：公司借助抖音宣传、公交车广告、美食节活动、电话邮件、展会参与及区域反馈等多元渠道与消费者保持互动，及时了解消费者需求。

成本：江西J食品有限公司借助抖音宣传、公交车广告、美食节活动、电话邮件、展会参与及区域反馈等多元渠道与消费者保持互动，及时了解消费者需求。在成本控制方面，公司通过智能化生产、规模化采购、优化供应链管理及库存控制等措施降低生产成本，从而拓展盈利空间。

便利：江西J食品有限公司构建线上线下全渠道销售网络，提供一键代发、定制服务、免费样品与物流支持，增强购买与使用体验。

关系：江西J食品有限公司通过多渠道沟通、客户关怀、管理层拜访、专属对接及信息系统建设维护客户关系。

反应：江西J食品有限公司通过设立专门售后部门与多通道反馈机制及时回应客户需求。

回报：江西J食品有限公司通过营销活动带来的回报主要体现在客户忠诚度提升、销量增长、市场拓展与品牌影响力增强等方面。

问题：江西J食品有限公司当前面临的主要问题包括：市场竞争加剧导致产品价格持续走低、成本压力大、盈利困难；新渠道开拓难度高、资源分散；供应链体系尚不完善，原材料采购与库存管理效率有待提升；以及用人成本高、结构不合理对生产

效率造成影响。

（六）消费下行新常态下影响江西J食品有限公司营销策略的关键因素

关键因素：消费下行新常态下影响江西J食品有限公司营销策略的关键因素主要有：市场竞争持续加剧，同行间竞争压力显著；消费者购买力普遍下降，价格敏感度相应提升，同时新型消费行为习惯逐步形成，对营销方式提出新的要求；线上线下互动融合成为提升市场竞争力的重要方向，而成本控制难度增大、品牌影响力提升困难也给营销策略的制定与执行带来挑战；此外，政策法规变化及政府对食品安全监管力度的不断加强，进一步增加了企业运营环境的不确定性。

（七）江西J食品有限公司市场营销组合策略的优化建议

首先，在产品方面，公司应持续提升产品质量、丰富产品种类，并通过建设长期品牌、增加促销与互动活动增强客户忠诚度，同时可推出定制化产品，围绕便利化、健康化及功能性食品等方向拓展，并注重在服务中为消费者提供情绪价值，以有效吸引潜在客户。在价格策略上，建议采用动态定价方法，根据不同市场、渠道、消费者及场景灵活制定价格，并结合成本与竞争导向的定价机制，适当运用心理定价策略，以增强价格吸引力。在渠道拓展方面，公司可积极发展私域运营，如在社群与销售联盟中设置专员进行推广与服务，同时进一步拓展电商渠道，并加强国际市场布局，构建更加多元立体的销售网络。在促销方式上，除了延续传统打折、赠品、消费券等方式外，公司还可以探索IP联名与品牌合作，并积极运用直播带货、线下试吃、专员引导、会员社群运营及新品品鉴活动等形式，多维度促进销量增长。

其次，在消费者维度上，应持续精准把握客户需求，提升产品与服务品质，同时增强品牌曝光与宣传力度，优化沟通与反馈机制，不断提高客户满意度与复购意愿。在成本优化方面，除了降低产品生产成本外，还可通过赠品搭赠、流程简化、提供免费样品与试用等方式，有效帮助顾客降低购买成本与认知门槛。在与消费者沟通方面上，公司应加强对业务人员与客服的培训，完善社交媒体功能，搭建多元沟通渠道并优化客户服务流程，建立反馈闭环与数据驱动的优先处理机制，促进与客户的高效互动。在提升客户购买便利性方面，公司需不断优化购物流程，提供专业咨询与售后支持，合理规划线下门店布局，并选择可靠的物流合作伙伴、完善配送跟踪服务，全面提升客户购买体验。

最后，在客户关系维护方面，公司可借助线上社交媒体互动与线下区域经理服务增强客户黏性，同时建立私域流量池，完善会员体系并提供个性化服务，持续深化客户关联。在客户反馈回应方面，应制定专项优化计划，加强定期客户拜访与关怀，同时整合线上平台互动、线下门店反馈及展会活动等多种渠道，完善反馈分类与时效管理机制，确保对客户需求与意见做出及时有效回应。

六、建议

（一）江西J食品有限公司4PS营销组合策略优化建议

1. 产品策略

在产品种类方面，江西J食品有限公司可以丰富产品线，提供多元化的食品品类，如江西米粉、薯粉，针对年轻客群推出“赣潮”系列趣味零食；关注消费者需求趋势，满足不同核心及潜在消费群体的特定需求，比如针对便捷化推出方便面、针对健康化推出无盐挂面、针对个性化定制推出红薯面、艾草面等，定期对市场趋势进行研判和产品更新，保持产品线的创新性和竞争力，并根据销售数据与客户反馈动态调

整产品结构。

在产品服务方面，江西J食品有限公司可以开发增值服务，提供完善的售后与情感维系体系，如会员健康咨询、产品定制祝福、食谱分享等，能够增强客户粘性，提升复购率，提升顾客体验，增强品牌竞争力。

在产品质量方面，基于当前消费者高度重视食品质量安全与营养健康的选购标准，江西J食品有限公司确保各类食品产品的质量稳定可靠，并通过透明化、可追溯的方式赢得消费者信赖。公司应强化全链条质量监控，为核心产品引入第三方安全认证（如有机认证、HACCP）并建立“一物一码”溯源系统，让消费者通过扫描二维码即可查看原料产地与质检报告。

在附加价值方面，江西J食品有限公司可以依托科技与文化元素提升产品溢价能力，围绕便捷化与礼品属性拓展产品的使用场景和情感内涵。具体而言，公司可运用冻干、自加热等技术开发“户外露营系列”便捷食品，如自热拌粉、速食煨汤包；同时，深度融合江西本地文化IP，推出“文旅联名款”高端礼品。

2. 定价策略

在定价策略方面，江西J食品有限公司可以根据不同销售渠道、客户群体及产品品类合理制定差异化与动态化的价格策略，既能满足不同需求层次的客户，又能最大化利润空间，应对市场价格战。针对线上B to C消费者与年轻客群，可以设置“会员等级折扣”、“新品尝鲜组合价”及节假日主题促销，并广泛运用“9.9元尝鲜”、“99元包邮”等心理定价策略，这不仅能吸引价格敏感的新客户，也能激发现有客户的复购欲望。针对传统经销商与海外出口客户，则需建立“量级返利”与“端口定价”体系，即根据采购额梯度提供返利，并依据海外市场（如竞争激烈的东南亚与高价值的欧洲）的成熟度制定渗透性或价值性价格，以稳固渠道并提升单客户贡献率。

在价值传递与成本管理方面，江西J食品有限公司可以通过价值导向定价与保持价格透明度，让客户了解产品高定价背后的品质依据与健康价值，有助于建立品牌信任并缓解低价压力。具体而言，公司可为高价值产品明确阐述其研发背景、营养认证（如低GI认证）与原料溯源信息，并通过包装上的二维码让消费者一键查询，从而支撑其高于市场均价的定价合理性。同时，通过优化供应链与规模化采购来压缩不必要的成本，将部分节约反哺于针对老客户的“感恩回馈价”或“积分兑换”活动，让利的同时进一步强化客户关系。

3. 渠道策略

(1) 江西J食品有限公司可以构建私域流量池，建立品牌专属的微信社群与会员体系，并由专属营养顾问或客服进行精细化运营与推广服务。 这不仅能通过日常内容推送、营养知识分享和团购活动直接触达核心消费者，还能有效收集客户偏好数据，为产品定制与精准营销奠定基础，有效应对渠道资源分散的问题。

(2) 江西J食品有限公司可以通过深化与主流及特色电商平台的合作，如入驻天猫国际、京东超市及抖音电商等，利用其庞大的流量和成熟的物流体系。 针对线上渠道开发专属规格产品包，如“尝鲜组合装”或“月度订阅包”，能快速提升品牌在目标人群中的知名度并提振销售业绩，同时借助平台仓配资源缓解自身库存管理效率不足的压力。

(3) 江西J食品有限公司可以优化及拓展私域渠道，积极对接大型餐饮服务企业、连锁酒店及企事业单位的采购平台。为此，公司需开发标准化的私域产品手册与解决方案，例如推出5公斤装餐饮专用面制品或为企业定制专属员工福利礼盒，以此提升大客户服务体验与订单稳定性，构建稳固的批量销售网络。

(4) 江西J食品有限公司应该充分利用社交媒体与内容平台进行场景化内容营销和互动。通过在抖音、小红书等平台持续输出如“一分钟制作地方特色拌粉”、“健康早餐食谱”等短视频内容，并与用户积极互动，可以有效展示产品便捷性与健康属性，吸引年轻客群，以较低成本提升品牌在全国市场的影响力。

4. **促销策略**

(1) 江西J食品有限公司可以在线上渠道开展场景化与互动式的营销活动，如与江西文旅IP或热门国潮动漫进行联名合作，推出限定礼盒。这不仅能通过跨界话题提升品牌曝光度，还能赋予产品独特的文化价值，避免陷入单纯的价格战。同时，在抖音等平台开展“客家拌粉创意吃法大赛”等话题互动，并赠送联名赠品，能有效刺激用户的参与和购买欲望。

(2) 江西J食品有限公司可以系统性运用直播带货与线下体验相结合的模式，进行深度内容营销。在直播中，由“美食专员”现场演示自热拌粉、营养羹的便捷食用场景，并与观众实时互动；同时，在线下商超、社区开展免费试吃活动，由专业导购进行引导。这种方式能够将产品“便捷、健康”的卖点具象化，与消费者建立更深厚的情感联系，增强品牌粘性。

(3) 江西J食品有限公司可以通过建立精细化的会员积分与成长体系，为核心客户提供个性化服务。会员可通过消费、分享、参与食谱创作等方式获取积分，兑换如“新品优先试吃权”、“专属营养顾问咨询”等非价格性权益。同时，推出“老会员推荐新客，双方同享定制产品折扣”的“老带新”活动，能有效提升客户忠诚度和复购率，并以较低成本拓展优质客户群体。

（二）江西J食品有限公司4CS营销组合策略优化建议

1. **消费者策略**

(1) 江西J食品有限公司应重点关注消费者的情绪价值与使用体验，针对部分消费者（尤其是老年群体及厨房新手）在食用便捷食品时可能存在的操作困惑。公司可以在产品包装内附赠一份设计精美的“爱心食谱卡”，不仅提供清晰的烹煮步骤，还推荐创意吃法和营养搭配小建议，从而提升产品的易用性和趣味性，让消费者感受到超出预期的关怀，有效提高客户满意度。

(2) 江西J食品有限公司针对具有赠礼需求的企业客户和礼品团购企业，可以提供“一站式”情绪定制服务。根据客户的企业文化、节日主题或受赠对象特点，在标准产品基础上，提供定制化祝福语、企业Logo烙印、专属礼品包装乃至高管感谢语音二维码等深度定制选项，从而将普通食品升华为情感纽带，显著提高客户的满意度和忠诚度。

(3) 江西J食品有限公司可以建立精细化的会员成长体系，根据顾客的消费金额、复购频率及互动参与度划分会员等级。对于高等级忠实客户，不仅可以提供生日专属礼品、新品优先试吃权，还可分配“专属营养顾问”提供一对一的膳食建议。通过这种差异化、人性化的服务，能够有效增加与消费者之间的情感粘度，将一次性客户转化为长期合作伙伴，从而在激烈的市场竞争中稳固核心客户群。

2. **成本策略**

(1) 江西J食品有限公司针对客户的决策与时间成本，可以利用数字化工具，为消费者精准推荐匹配其需求的产品组合。例如，在电商平台或私域社群中，当客户浏览低糖食品时，系统可自动推送“控糖轻食套餐”，包含富硒面条、低GI糕点和健康酱料；同时，为有意向的企业客户提供在线“礼品方案生成器”，客户输入预算和场合

，系统即刻生成包含产品3D效果图与报价的定制方案，极大节约客户筛选与沟通的时间。

(2) 江西J食品有限公司针对客户的金钱与试错成本，可以系统化地设计“降低初次门槛”的优惠体系。例如，常态化地提供“9.9元新品体验装”，内含小份装的客家拌粉和富硒鸡蛋面；对于线上订单，设置“满99元免邮”或“赠运费险”政策；同时，在会员体系中嵌入“积分兑换免单”权益。这些措施能有效降低消费者的首次购买风险和实际支出，从而提升转化率与复购意愿。

3. **沟通策略**

(1) 江西J食品有限公司在沟通方面，应建立专业化的信息支持体系。 可以系统培训客服与销售人员，要求他们不仅熟悉产品价格，更要精通各类产品的核心原料来源、营养功效及适用场景，并统一编制详尽的《产品知识手册》与《常见问题应答指南》。当客户咨询时，能够准确解答关于“富硒鸡蛋面的硒含量标准”等专业问题，避免因信息不透明或回答不清而影响客户的信任感。

(2) 江西J食品有限公司应充分利用客户关系管理系统（CRM），将不同渠道和需求的客户进行精细化分类。根据客户属性（如餐饮企业、礼品采购商、健康追求者）和购买历史，在数据库中为其打上标签，从而定向推送其可能偏爱的产品信息与内容。例如，向餐饮客户推送适合用作餐食的“客家拌面”批量采购方案，向关注健康的会员推送“荞麦面”的营养科普，从而实现精准触达与有效沟通。

(3) 江西J食品有限公司可以建立分层级的客户关怀与回访机制。对核心经销商、大型企业客户及高价值会员，由销售经理或客户专员定期通过微信、电话进行一对一回访，不仅了解销售动态与库存情况，更主动征集其对产品口感、包装及服务的改进建议。对于线上消费者，则可通过自动化工具发送满意度调查，并将反馈汇总分析，形成一个从市场到研发的“反馈闭环”，从而持续优化产品与服务，提升整体客户满意度。

4. **便利策略**

(1) 江西J食品有限公司可以建立一体化的数字信息中心，如在官方微信公众号或小程序中，不仅定期推送新品信息，更提供便捷的“食谱库”与“原料溯源”查询功能，使消费者能够方便快捷地获取产品创意吃法、学习营养搭配知识，并能扫描产品二维码直接查看原料产地与检测报告，大幅降低客户的信息搜寻成本。

(2) 江西J食品有限公司针对线上个人消费者与新客户，可以推出“尝鲜无忧”计划，提供小额付费试吃包与默认赠送的“退换货运费险”。当消费者对正装产品口味不满意时，可简化售后流程快速退货，这能极大降低消费者的初次购买决策门槛与顾虑，让尝试新品变得方便无负担。

(3) 江西J食品有限公司可以通过内容短视频与透明工厂直播的方式，将产品的生产过程、烹饪实况及包装细节直观地展示给消费者。将“自热拌粉”的便捷操作、“富硒面”的劲道口感以及“礼品盒”的精美包装通过视频动态呈现，并与产品的核心原材料信息同步讲解，让客户对产品价值一目了然，避免因信息不透明而产生的重复咨询，提升决策效率。

（三）江西J食品有限公司4RS营销组合策略优化建议

1. **关系策略**

(1) 江西J食品有限公司应建立客户数据库，按经销商、礼品团购企业、线上会员等客户类型进行分类，并推送个性化的产品信息和新品推荐。例如，向餐饮服务企业

推送大包装半成品面食信息，向健康饮食追求者精准推荐富硒面条，实现精准营销和资源高效利用。

(2) 江西J食品有限公司应定期由区域经理对大客户和核心经销商进行回访，通过微信、电话等方式主动了解销售动态、库存情况和产品反馈。这不仅能及时掌握市场一线信息，还能通过专业服务巩固与大客户的合作关系，增强客户黏性。

(3) 江西J食品有限公司可以通过建立“J食客会”会员制度和私域社群来提升客户黏性和忠诚度。 针对不同等级会员提供专属优惠、生日礼品、新品优先试吃等差异化福利，同时在社群内开展营养知识分享、食谱大赛等互动活动，有效增强客户对品牌的情感联系和忠诚度，促进重复购买。

2. 关联策略

(1) 江西J食品有限公司可以通过社交媒体平台（如微信公众号、抖音、小红书）建立“J美食生活社”品牌社群，定期发布新品信息、营养食谱、健康饮食知识及原料溯源视频等内容，鼓励消费者点赞、评论和分享自己的创意吃法，增强品牌曝光和用户参与感，将分散的客户资源沉淀为品牌自有资产。

(2) 江西J食品有限公司可以推出“星选会员”成长体系与专属礼品卡，通过不同会员等级对应的专属优惠、生日专属礼品、新品优先体验权等差异化权益，增强与客户的情感联系与长期价值，从而在价格竞争激烈的市场中锁定核心消费群体。

(3) 可以在社群与会员体系中开展深度互动活动，如投票选择下一款产品口味、征集地方传统美食创新方案或举办“我的营养早餐”线上图片征集活动，增加消费者的参与感和归属感，让客户觉得自己是品牌产品创新的共创者，从而持续深化客户关联，提升忠诚度。

3. 反应策略

(1) 江西J食品有限公司在客户反馈回应方面，应建立系统化的闭环管理机制。可以设立专门的客户服务小组，统一负责处理来自线上平台、经销商、展会等全渠道的客户反馈。该小组需熟悉产品知识、供应链流程及售后服务政策，并建立标准化的反馈分类与响应话术库，确保对客户提出的产品改进建议、物流查询、投诉等问题给予专业、统一的解答，避免因多头回应或信息不一致造成客户体验不佳。

(2) 江西J食品有限公司要建立客户反馈的优先级分类与响应机制，根据反馈类型和客户价值实施差异化处理。例如，将涉及产品质量安全的反馈设为“紧急”级别，要求在4小时内响应并启动溯源流程；将大型经销商提出的包装改进建议设为“高价值”级别，由区域经理跟进并在3个工作日内给出解决方案；将普通消费者的口味偏好标记为“产品优化”类，按月汇总分析，为新品研发提供数据支持，从而实现有限服务资源的高效配置。

(3) 江西J食品有限公司应实施“主动关怀+定期复盘”的客户回访制度。 对核心经销商与重点企业客户，由销售负责人每季度进行一次深度回访，了解销售动态、收集产品使用反馈；同时，建立月度客户反馈复盘会议机制，整合分析各渠道数据，将典型问题转化为具体的产品改良、供应链优化或服务升级行动计划，并将处理结果通过适当渠道告知相关客户，形成“收集-处理-改进-反馈”的完整闭环，持续提升客户满意度和供应链响应效率。

4. 回报策略

(1) 建立“反馈价值化”的忠诚度回报体系，将客户反馈机制与核心伙伴的权益直接挂钩。对于积极提供有效产品改进建议、市场信息或成功推广案例的经销商及终端客户，给予其“战略贡献积分”，该积分可用于兑换独家新品代理权、更高等级的价格折扣或联合市场活动资源支持。

(2) 实施“数据驱动”的供应链协同回报计划，将稳定的销售数据作为优化供应链、降低成本的杠杆。为核心客户设立“精准预测奖励”，对那些能够提供准确季度或月度滚动需求预测的客户，给予额外的“供应链效率折扣”，以提升公司原材料采购与库存管理的计划性，减少浪费和资金占用。

(3) 构建“品牌共建”市场拓展成果共享机制与核心渠道伙伴设立“区域市场品牌共建基金”。对于成功开发新区域市场、新渠道类型或大型终端客户的伙伴，公司除销售返利外，还从基金中匹配专项投入，用于该区域的品牌联合推广、产品体验活动等，并将成功案例在全渠道进行宣传表彰。

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泰国中小型民营重型机械租赁企业市场营销策略研究
A Study on Marketing Strategies of Small and Medium-Sized Private Heavy Machinery Rental Enterprises in Thailand

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摘要

随着泰国基础设施建设和城市化进程的加快，重型机械租赁行业呈现出持续增长的趋势。然而，中小型民营企业在市场竞争中普遍面临品牌影响力不足、营销理念落后及资源整合能力有限等问题。本文以泰国曼谷C重型机械有限公司为例，运用PEST分析、波特五力模型、SWOT分析、4P与4C营销理论，对泰国中小型民营重型机械租赁企业的市场营销现状及问题进行了系统研究。研究发现，C公司在产品和渠道布局方面具有一定优势，但其营销策略仍存在产品同质化、定价模式单一、促销手段不足及数字化推广能力薄弱等问题。针对上述问题，本文提出了优化建议，包括：强化差异化服务与品牌建设、采用灵活定价策略、构建线上线下融合的营销渠道、以及提升数字化营销与客户关系管理能力。研究结果对于提升泰国中小型民营重型机械租赁企业的市场竞争力、完善营销体系以及推动行业可持续发展具有一定的参考价值。

关键词：市场营销组合策略；重型机械租赁；中小型民营企业；泰国

Abstract

With the acceleration of infrastructure construction and urbanization in Thailand, the heavy machinery rental industry has shown a steady growth trend. However, small and medium-sized private enterprises generally face challenges such as weak brand influence, outdated marketing concepts, and limited resource integration capabilities. This study takes C Heavy Machinery Co., Ltd. in Bangkok, Thailand as a case study and applies the PEST analysis, Porter's Five Forces Model, SWOT analysis, and the 4P and 4C marketing theories to conduct a systematic investigation of the marketing strategies of small and medium-sized private heavy machinery rental enterprises in Thailand. The results indicate that C possesses certain advantages in product and channel strategies, but still suffers from serious product homogeneity, a single pricing model, insufficient promotional approaches, and a lack of digital marketing capabilities. Based on these findings, this paper proposes several improvement strategies, including strengthening service differentiation and brand building, adopting flexible pricing mechanisms, developing integrated online and offline marketing channels, and enhancing digital marketing and customer relationship management. This research provides valuable insights for improving the market competitiveness of small and medium-sized private heavy machinery rental enterprises in Thailand, optimizing their marketing systems, and promoting sustainable industry development.

Keywords: Marketing mix strategy; Heavy machinery rental; Small and medium-sized private enterprises;Thailand

一、引言

工程机械租赁是对工程机械的出租和承租行业的总称，归根究底其属于对工程机械类产品的租赁行业，从我国市场竞争格局来看，我国工程机械租赁市场仍处于发展初级阶段，市场规模虽大，但参与竞争的企业数量多、缺乏有绝对话语权的头部企业、行业竞争格局极为分散。据统计，2021年前三大参与者合计市场份额仅1.2%，超过15000名中小规模参与者占据剩下98.8%的市场份额。近年来，随着基础设施建设和

城市化进程的加快，重型机械租赁市场在全球范围内呈现快速增长态势。国际市场方面，全球重型机械租赁行业在 2024 年市场规模约为 1229 亿美元，预计到 2033 年仍将保持 4%－6% 的年复合增长率，其中亚太地区增速最快，受益于基建投资与城市扩张。

二、研究目标

（一）研究问题

1.泰国中小型民营重型机械市场营销与市场营销组合策略的概定界定。
2.采用PEST分析法研究泰国民营重型机械租赁企业的外部宏观因素。
3通过波特五力模型了解泰国民营C重型机械租赁有限公司在泰国中小型重型机械租赁行业中的竞争情况。
4.使用SWTO分析法了解泰国民营重型机械租赁有限公司的优势、劣势、机会和威胁。
5.使用4ps理论和4cs理论来分析泰国民营C重型机械有限公司市场营销组合策略现状。
6.综合分析，找出现阶段影响泰国民营C重型机械租赁有限公司营销组合策略的内部因素
7.提出针对泰国民营C重型机械租赁有限公司的营销组合策略的可行性方法

（二）研究目标

1.了解市场营销和市场营销组合策略本质上的区别。
2.从政治，经济，社会文化和科学技术了解影响泰国中小型民营重型机械租赁类企业的宏观因素。
3.从供应商的议价能力、购买者的议价能力、新进入者的威胁、替代品的威胁和同行竞争者的竞争程度分析泰国曼谷民营重型机械租赁有限公司的行业地位。
4.通过泰国曼谷民营重型机械租赁有限公司的优势、劣势、机会和威胁了解现阶段的运营状况。
5.从产品、定价、渠道、促销、消费者、成本、便利和沟通发现泰国曼谷民营重型机械租赁有限公司现阶段市场营销组合策略现状及问题。
6.找出影响泰国曼谷民营重型机械租赁有限公司市场营销策略根本原因。
7.通过可行性方案帮助泰国曼谷民营重型机械租赁有限公司更好的维护客户关系和提升市场核心竞争力。

（三）研究意义

1.实践意义

从社会层面来看，通过PEST分析法研究泰国曼谷中小型民营重型机械租赁有限公司的宏观环境，能够帮助企业管理者针对当下的政治、经济、社会文化和科学技术的变化，而更好的制定市场营销组合策略，挖掘更多的市场机会。改善泰国中小型民营重型机械租赁企业的寿命短缺的问题，更好的推动改革的进程，创造出更多的社会价值。

从经济层面看，泰国经济建设速度越来越快，特别是在交通、港口和城市建设等方面，对重型机械设备的需求越来越大。市场竞争也随之加剧，客户在选择机器时，不仅关注价格，还重视性能、质量和售后服务。在这种情况下，中小型重型机械企业如果没有及时调整经验模式，就非常容易失去市场优势。企业结合行业状况和自身情况来制定与市场相适应的营销策略是必要的，可以更好的帮助公司开展商业活动，又可以增加企业在市场的竞争地位。

2.理论意义

近年来，随着“一带一路”倡议的深入实施和东盟基础设施互联网互通进程的加速，泰国基础设施建设需求持续增长，为重型机械租赁市场创造了广阔的发展空间。在这一背景下，泰国中小型民营重型机械租赁企业作为市场重要参与者，其发展模式与战略选择不仅关系到企业自身的生存与发展，也对完善区域装备服务业理论体系具有重要意义。目前，泰国有很多的中小型民营重型机械租赁类企业，但有很多企业因为缺乏正确的营销理念和手段，导致在市场中的竞争地位低下。所以研究分析与相适应的营销策略是及其重要的。总结出适合重型机械租赁类企业的经营策略，不仅能给企业带来帮助，还可以为行业发展提供新思路。

（四）概念性框架

调研者针对泰国曼谷C重型机械租赁有限公司的实际情况并结合前人的文献参考，根据PEST分析模型、波特五力模型、SWOT分析模型、4PS营销策略、4CS营销策略模型编绘出概念性框架。（参见图1）

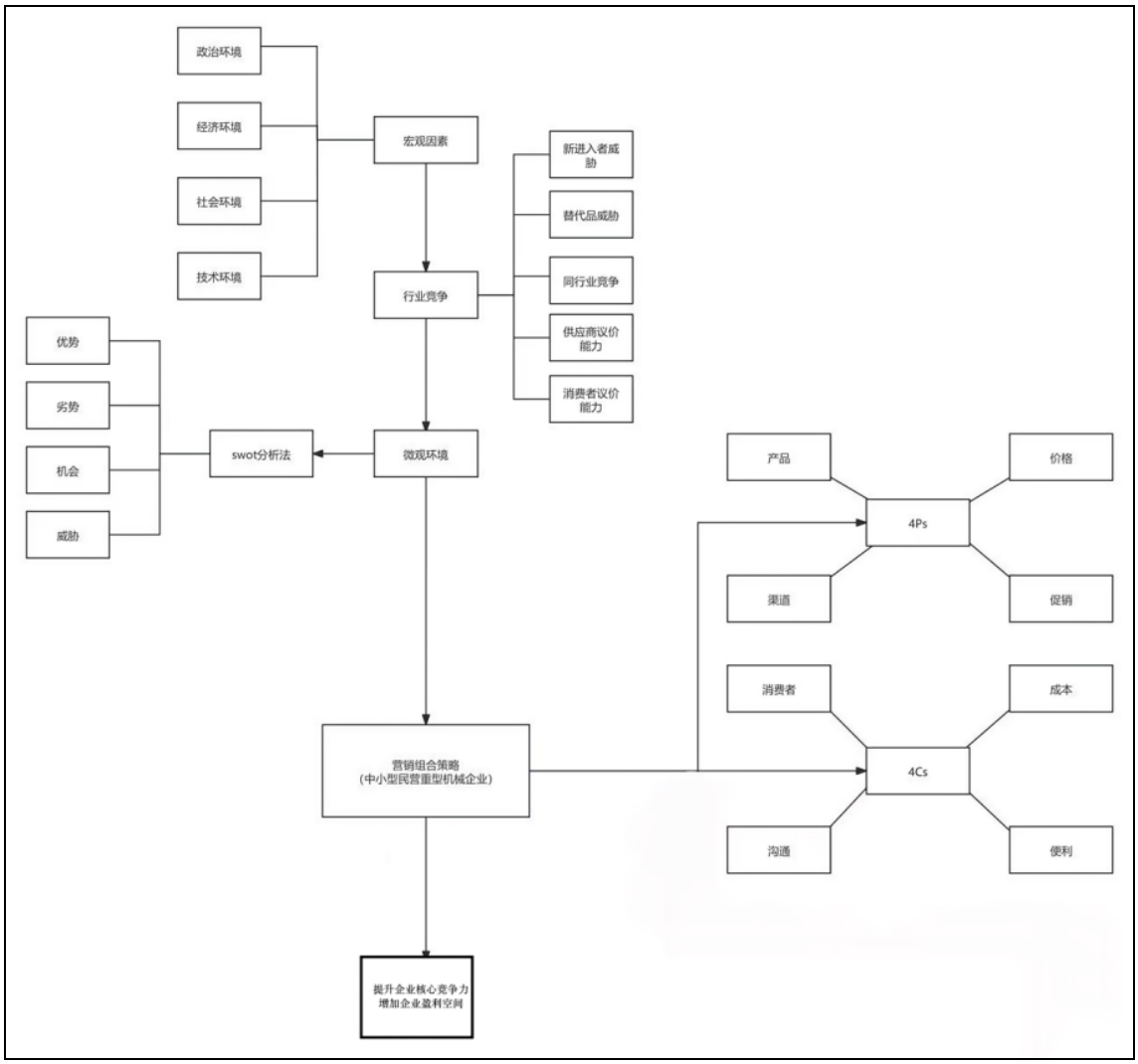

图1：概念性框架图

三、文献综述

1.市场营销与市场营销组合策略的概念界定

Contreras F L, Ramos M L Z.（2016）指出营销的核心是通过价值创造与交换来识别并满足需求，从而建立长期关系。它不仅是组织的战略工具，也是促进社会互动的机制。除此之外，关系营销理论也被广泛应用于企业市场营销研究。王卫国（1992）提出，关系营销主要由营销资料库、传播不同的信息以及追踪消费者、销售成果与成本关系三个部分组成。企业应根据不同客户的需求和特征，建立长期稳定的合作关系，提高客户满意度和客户忠诚度。

在理论分析方面，本文首先运用 PEST 分析法对泰国中小型民营重型机械租赁企业所处的政治、经济、社会文化及技术环境进行分析；其次利用波特五力模型分析行业竞争状况；然后通过 SWOT 分析企业自身优势、劣势、机会和威胁；最后结合 4Ps 和 4Cs 理论，对企业产品、价格、渠道、促销以及消费者需求、成本、便利和沟通等方面进行分析，从而为提出市场营销优化策略提供理论依据。

国外学者也对重型机械行业市场营销进行了研究。Simatupang 和 Sridharan（2016）认为，重型机械供应链中零部件供应及维护服务会影响设备可用性和客户满意度。Ghanadiof（2021）提出，基础设施投资、绿色可持续发展以及数字化技术正推动租赁市场持续增长，同时维护服务、客户支持以及数字化工具已成为企业竞争的重要因素。Kholidun 和 Febriansyah（2024）认为，在产品生命周期不同阶段，企业应采取差异化营销策略，通过服务差异化和市场渗透提高市场竞争力。

2. 泰国中小型民营重型机械租赁行业的宏观环境分析

(1)政治环境：Liu S.（2014）指出政府通过直接补贴、税收优惠和政府采购等方式，也通过财政支持政策创新政策的孵化和扩散等方式，加强中小企业加大创新资源投入。(2)经济环境：宋国向（2022）指出疫情、经济分化、汇率压力及境外融资障碍等多重因素，共同加剧了中国工程机械出口贸易的困境与风险。(3)社会环境：李朦（2024）指出人口老龄化和城市化进程为工程机械行业带来双重影响。(4)技术环境：李艳芳（2018）指出①国内外技术融合加速，产品在核心部件持续升级，操作舒适、节能环保等全面提升②市场竞争推动技术送代加速③电子化、自动化技术深度应用。余悦（2019）指出程机械企业通过建设工业互联网与电商平台，实现了设备管理、电子商务及全生命周期服务的数字化升级，显著提升了智能化行业智能化与全球化运营水平。

3.泰国中小型民营重型机械租赁企业的行业分析

（1）行业现有竞争者：高芸柯,李淑明（2022）指出三家企业中三一凭借挖掘机械的技术优势和市场适应性在海外市场表现突出，徐工则以起重机为核心形成多品类布局，而中联专注于细分领域但市场份额相对受限。（2）潜在竞争者：韩伟（2005）指出中国工程机械零部件市场存在三类潜在进入者：尚未进入中国的国际大型独立零部件制造商及其代理商；国内民营企业；其他整机品牌的代理商。（3）替代品威胁：欧阳学（2018）指出工程机械行业无外部替代品，但内部产品存在差异，适用不同环境。中国产品常以“高性价比”为名行低价竞争之实，而国外产品凭借技术可靠性与质量优势，成为强有力的替代品，极具市场竞争力。李杨（2023）指出徐工的技术优势与品牌地位有效降低了其跨境电商平台面临的替代品风险。（4）购买者议价能力;段蕊（2010）指出需求增长与下游行业的低整合可能性共同削弱了下游用户的议价能力。陆霞（2021）指出买方通过议价严格把控采购价格，尤其关注挖掘机等高价固定资产的成本。尽管低价国产品牌具有一定吸引力，但买方会综合评估质量、支付方式及服务等因素后方做决策。（5）供应商议价能力;钟德富（2005）指出关键零

部件的外部依赖严重削弱了本土品牌的采购成本控制能力。范锡生（2005）指出矿山机械行业在关键零部件领域对外依存度高，导致供应商议价能力显著增强。苏窈（2014）指出供应商议价能力指其争取较好售价的能力。在我国环境产业中，供应商在以下四种情况下具备较强实力：供应商行业集中度高于买方行业；能够实施向前整合策略；未面临替代产品的竞争威胁；产品具有差异性或转换成本较高。

4.C重型机械租赁有限公司的SWOT分析

(1)优势：伦学熙（2014）指出产品结构上存在明显的不均衡性，搅拌站技术优势突出且利润空间大，但泵车产品的技术短板制约了整体竞争力，体现出“强弱并存、高低分化”的典型特征。（2）劣势：张珑娟（2023）中小企业因规模小、抗风险能力弱，在疫情下面临收入锐减与成本攀升的双重压力。然而，地方政府受资源所限，难以全面覆盖纾困需求，加之企业自身融资困难，导致其现金流紧张，生存挑战严峻。（3）机会：魏冬（2014）指出我国融资租赁业面临四方面机遇：一是扩大内需政策为行业带来发展空间；二是银行惜贷促使银租合作，增强信贷风控；三是公共服务建设可借助融资租赁吸引社会资金；四是国际租赁业务有助于促进出口，平衡国际收支（4）威胁：徐颖（2023）指出行业下行、国际风险、供应链依赖、跨界竞争及技术变革等多重威胁，共同对三一重工的市场地位及发展构成严峻挑战

5.泰国曼谷C重型机械租赁有限公司的市场营销组合策略分析

4PS：（1）产品:Ulhaq T Z.（2025）指出公司通过“产品质量+认证服务”的双重优势构建了差异化竞争力。（2）价格:张扬（2022）指出国内工程机械企业通过高性价比优势、灵活定价及分期付款策略有效提升了市场竞争力。（3）渠道:白健（2022）指出企业需结合线上渠道的高效广覆盖与线下渠道的信任建立和灵活谈判优势，通过线上线下融合的渠道策略提升产品销售效果。（4）促销:甄强（2018）指出重型机械产品的促销侧重于①销售人员推销策略②服务人员促进销售设备运往客户需要安装的产地③高层销售策略公司高层管理人员定期对重要客户的拜访。

4CS：（1）消费者:伦学熙（2014）指出中国混凝土机械市场消费者主要分为3类①大型工程建筑商②商混公司及设备租赁商③个体租赁者。（2）成本：魏莎莎（2025）指出制定合理价格体系以下三个步骤①深入分析市场需求②精准核算产品成本③设计差异化价格结构（3）沟通：孙龙珊（2024）指出A机械公司应定期召开部门交流会议，促进信息共享与问题解决，并建立线上协作平台和绩效评估机制。（4）便利：欧阳学（2018）指出通过服务网络扩展、信息化管理和专业培训三方面提升，可有效增强渠道服务能力。

表1：C重型机械租赁有限公司4Ps营销组合存在的问题归纳

营销策略	存在的问题
产品（Product）	产品同质化现象严重，缺乏差异化服务
价格（Price）	定价模式较为单一，灵活性不足
渠道（Place）	主要依赖线下网点，线上渠道建设不足
促销（Promotion）	营销推广效果有限，客户来源主要依赖老客户

表2：C重型机械有限公司4Cs营销组合存在的问题归纳

营销组合策略	存在的问题
消费者（Customer）	对不同客户需求研究不够深入，客户细分有待加强
成本（Cost）	成本控制压力较大，价格优势逐渐减弱
沟通（Communication）	客户沟通方式较为传统，互动性有待提高
便利（Convenience）	数字化服务和信息获取便利性仍需进一步提升

6.导致泰国曼谷C重型机械租赁有限公司组合策略出现的问题及原因

张扬（2022）指出W公司营销策略方面存在8个问题①产品同质化严重②产品定价偏高③营销网络不健全④营销模式单一⑤营销人才流失严重⑥资金占用高⑦经销商渠道固化⑧售后服务响应延迟。

7.泰国曼谷C重型机械租赁有限公司的影响组合策略建议。

赵明月（2021）指出中联重科通过以下三种方式提升客户体验①邀请意向客户回工厂考察；②按客户类型举办行业交流会；③开展设备巡展。费忠云（2023）指出在D机械公司推广时应落实三点短视频营销策略①制作有趣且富有创意的内容；②与挖掘机客户建立情感连接；③运用生动的视觉音效及优化标题描述。李海燕（2024）指出E叉车公司在满足客户需求方面应采取以下措施①产品的多元化需求；②采购付款方式多元化需求；③运输方式多元化需求。

四、研究设计

（一） 研究方法

1. 探索性研究法

本论文采用探索性研究方法，重点关注泰国中小型重型机械租赁有限公司的市场营销策略，并分析其所处行业的大环境影响。由于针对这一领域的相关资料相对匮乏，调研者对其具体情况了解有限，因此选择探索性研究法能够有效满足研究需求。首先，研究将从泰国中小型重型机械租赁有限公司的宏观环境入手，调查这一大环境对重型机械租赁行业的影响。接着，将对中小型重型机械租赁的竞争状况进行分析，以了解其在行业中的竞争力。进一步地，通过对泰国C重型机械租赁的内外部情况进行详细分析，识别其优劣势。最后，将重点研究该公司的市场营销组合策略，探讨其实际运作情况。综上所述，本论文的研究方法为探索性研究法。

2.文献研究法

文献研究法是通过搜集、鉴别和整理文献来形成对事实的科学认识的一种便捷、安全的研究方法。我将以市场营销组合策略理论为基础，检索相关的期刊和书籍，收集国内外有关市场营销组合策略的学术著作和研究论文，以便了解和学习其他研究者的方法和成果。

3.深度访谈法

本文采用半结构式深度访谈方法，以泰国 C 重型机械租赁有限公司管理人员为主要访谈对象，围绕企业市场营销现状、产品策略、价格策略、渠道策略、促销策略以及客户需求等方面展开访谈，并结合企业经营资料进行交叉验证，以提高研究结果的可靠性。

在数据分析过程中，根据访谈内容进行整理和归纳，并结合 PEST 分析、波特

五力模型、SWOT 分析以及 4Ps 和 4Cs 理论进行综合分析，以保证研究结论的科学性和合理性。

同时，为保护受访者隐私，本文遵循学术研究伦理原则，对受访者个人信息及企业内部经营数据进行匿名处理，相关资料仅用于学术研究。

（二）样本结构

本次研究的样本结构选择了泰国C重型机械租赁有限公司的A管理者和B 管理者作为访谈对象。A管理者在行业内有十余年的从业经验，积累了丰富的知识和实践经验。作为该公司的最高决策者之一，他对公司的各项情况非常熟悉，能够为调研者提供最真实、有效的采访数据。同样的B管理者在行业内也有着丰富的从业经验，对公司的各项业务经营过程都颇有感受。因此，A管理者和B管理者无疑是研究泰国中小型民营重型机械租赁企业市场营销组合策略情况的最佳访谈对象。

五、结论

本研究主要针对泰国中小型民营重型机械租赁的市场营销组合策略进行探讨。文章分析了泰国的宏观经济环境及中小型民营重型机械中的行业竞争情况，并对泰国C重型机械租赁有限公司的优势、劣势、机会与威胁进行了详细研究。同时，研究还深入探讨了曼谷C重型机械租赁有限公司在产品、价格、促销、渠道、消费者、成本、便利性及沟通等方面的具体市场营销策略实施情况。通过对泰国C重型机械租赁有限公司高层管理者的访谈及数据分析，结合相关理论和实证研究结果，本文提出了针对该公司市场营销组合策略的优化建议，并得出了相应的分析结论

（一）市场营销与市场营销与市场营销组合策略的概念界定

在市场营销概念方面，A和B两位管理者的观点均体现了对客户需求与市场连接的重视。他们都认识到利用信息技术优化客户连接与内部运营是数字化时代营销的重要环节。

在市场营销组合概念方面，两位管理者的观点有所不同。A管理者侧重于构建标准化、可复制的服务产品与严谨的成本定价模型，强调策略的稳定性和内部可控性；而B管理者则更关注市场的灵活性和客户的直接感受，主张通过多元方案和随行就市的定价来适应市场需求。因此，A管理者的结论偏向于营销策略的标准化与内部成本控制，而B管理者则从市场适配性出发，强调策略的灵活性与客户体验。

（二）泰国中小型民营重型机械租赁企业的外部宏观环境分析

在政治因素方面，两位管理者均认为新劳动法等政策增加了运营成本。A管理者关注政策对具体成本构成的直接影响及企业的应对策略；而B管理者则从宏观层面看待政策与行业的适应性，对具体细节讨论较少。

在经济因素方面，两位受访者一致认为宏观经济下行导致需求下降。A管理者将需求下降归因于具体建筑活动的减少；而B管理者则将其归因于国家基础设施预算的削减。在汇率影响上，A管理者区分了其对不同业务的影响，B管理者则更关注其对整体市场价格的普遍影响。

在社会环境方面，两位管理者均认为人口老龄化对行业产生负面影响。A管理者侧重于分析其导致的劳动力短缺问题；而B管理者则侧重于分析其引发的社会整体建设需求萎缩。

在创新技术方面，两位受访者都认为信息技术能改变行业模式。A管理者关注技

术对行业客户来源方式的宏观变革；而B管理者更关注如何运用技术优化内部管理流程与提升客户服务体验。

（三）中小型重型机械租赁企业的行业状况分析

同行业竞争者：　A管理者的视角更为细化和全面，明确指出了三类直接竞争对手及其竞争策略；相较之下，B管理者的视角较为前瞻，认为未来最大的竞争威胁来自掌握生产优势的中国品牌。

潜在竞争者：　A管理者的分析更为警觉和具体，指出了因设备积压而被迫进入租赁市场的中资品牌是迫在眉睫的威胁；B管理者的评估则显得更为自信，认为凭借现有客户基础并未感受到明显威胁。

替代品威胁：　A管理者认为替代威胁主要来自技术迭代产生的新型设备；B管理者则认为替代压力主要来自竞争对手在价格和租赁条款上的灵活性。

消费者议价能力：　A管理者强调客户的自身属性与交易条件是议价能力的关键；而B管理者则认为“买方市场”的宏观结构是客户拥有强大议价能力的根本原因。

供应商议价能力：　访谈记录中主要包含A管理者的观点，他认为企业规模是决定议价能力的关键。两者都关注议价能力，但侧重点不同：A更侧重于自身作为采购方的规模优势。

客户需求与竞争环境分析：通过对泰国重型机械租赁市场现状进行分析发现，市场客户主要包括建筑施工企业、房地产开发企业以及基础设施项目承包商。其中，中小型施工企业由于资金有限，难以一次性购买大型机械设备，因此更加依赖租赁模式满足施工需求。客户在选择租赁服务时，不仅关注租赁价格，还关注设备性能、设备供应的及时性、维修保养服务以及企业信誉。随着市场竞争不断加剧，客户需求逐渐由单纯价格导向转向服务质量导向，对企业设备管理能力和售后服务水平提出了更高要求。同时，泰国重型机械租赁行业竞争较为激烈，市场参与者数量较多，行业集中度较低。由于产品和服务同质化现象较为明显，企业之间容易陷入价格竞争。大型企业凭借品牌优势和完善的服务体系不断扩大市场份额，而新进入企业则通过价格优势进入市场，对现有企业形成一定竞争压力。因此，C重型机械有限公司需要通过提高服务质量和优化营销策略来增强市场竞争优势。

（四）C重型机械租赁有限公司的SWOT分析

优势：　A和B管理者在优势上的观点存在差异。A管理者强调公司的优势来源于设备齐全与人员配套，能够提供完整的解决方案；而B管理者则认为设备种类的广度是其硬件优势，能让客户“一次咨询、全面满足”。在软件优势方面，A管理者更注重“设备+司机”服务模式建立的专业壁垒，而B管理者则认为该模式创造了可信赖的客户感受。

劣势：在公司与竞争者的劣势对比上，A和B管理者也有不同的侧重点。A管理者认为公司的劣势在于商业模式灵活性不足，无法提供短期租赁等服务；相比之下，B管理者更直接地指出，公司面临的主要劣势是地理覆盖有限导致的服务响应能力不足。因此，A管理者更关注商业模式本身的局限，而B管理者则聚焦于运营覆盖范围的问题。

机会：关于公司未来发展的机会，A和B管理者有不同的战略视角。A管理者的策略较为全面，计划通过抓住未来大型项目的机会来拓展业务；B管理者则专注于业务模式创新，提出了通过“租售”模式处理二手设备。B管理者强调利用金融工具创造新的业务增长点。

威胁：　关于公司面临的威胁，A和B管理者看法不同。A管理者所指出的威胁更为具体和直接，聚焦于客户现金流问题对公司运营的直接冲击；B管理者所指出的威胁更为宏观，认为威胁源于整体宏观经济环境的乏力。

（五）C重型机械租赁有限公司的市场营销组合策略策略及问题分析

产品策略方面：　两位受访者都认为公司通过“设备+司机”的一站式服务模式为客户创造了重要价值。A管理者侧重于专业与标准化价值；B管理者则侧重于情感与体验价值。在服务存在的问题上，A管理者明确指出了商业模式上的不足，即无法提供短期（日租）服务，导致失去中小客户市场；B管理者则强调了运营保障上的要求，认为必须确保设备时刻处于良好可用的状态。

价格策略方面：　在定位方向上，A管理者主张成本导向定价法，核心原则是租金必须覆盖全部成本；B管理者则主张市场导向定价法，强调应参照市场中间价定价。关于盈利存在的问题，两位受访者都认为公司当前的设备租赁业务盈利能力有限。A管理者指出问题的核心在于高昂的设备折旧；B管理者则认为需要通过严格控制成本和增加设备出勤率来维持运营。

渠道策略方面：　两位受访者都认可并使用了线上渠道作为公司当前的销售推广方式之一。A管理者对现状的描述更为单一和被动，并明确承认缺乏专职销售人员；B管理者的描述则更多元和主动，采用了线上线下结合等多种方式。关于渠道存在的问题，A管理者认为根本问题在于缺乏专职销售团队；B管理者则提出可以利用现有的客户数据库进行主动营销。

促销策略方面：　两位受访者都提到了会使用网络平台进行推广。A管理者的促销手段更具体和主动，包含“特价活动”和“账期优惠”；B管理者的描述则相对基础和被动，主要是通过官网和Facebook展示。关于促销存在的问题，A管理者确认了网络促销带来显著的业绩提升，只是效果尚未最大化；B管理者则承认尚未系统开展促销，但相信推出新方式会有效。

消费者策略方面：　两位受访者都认为C公司的核心客户群体是建筑行业中的企业级客户。A管理者对客户的定义更为宏观和高阶，指出客户主要是大型工程建设总包商；B管理者对客户的描述更为具体和细分，他将客户定位为建筑承包公司中负责混凝土运输的业务方。

成本策略方面：　两位受访者提出的措施都旨在通过减少客户的无效支出或损失来降低其总体拥有成本。A管理者的策略是预防与保障导向的，侧重于通过提升自身运营质量来避免客户损失；B管理者的策略是风险共担与公平导向的，他提出了一个创新的按实际工作量收费的模式。

沟通策略方面：　两位受访者都认识到与客户保持良好沟通和联系对于维系客户关系至关重要。A管理者提出的措施是结构化和数字化的，侧重于利用特定的线上平台；B管理者提出的措施是互动性和体验式的，他强调通过直接的沟通和灵活的谈判来服务客户。关于沟通存在的问题，A管理者认为沟通机制是当前最明显的短板，并精准地指出了中泰文化差异和语言障碍两个根源；B管理者的看法则更为系统，认为需要系统性提升多个维度。

便利策略方面：　两位受访者都致力于通过优化服务体系来提升客户的便利性。A管理者侧重于实体流程的整合与保障，强调提供覆盖设备使用前、中、后的全流程一站式服务；B管理者侧重于流程的数字化与信息化，着重通过电子化文档等数字化手段来提升服务效率。

（六）C重型机械租赁有限公司的市场营销组合策略存在的问题原因

问题： 在存在问题方面，两位受访者都认为公司在营销和运营方面存在需要改进的突出问题。A管理者对问题的诊断全面、具体且深入，他系统地指出了三大问题：价格竞争力不足、客户群体单一以及内部资源配置失衡（语言与文化障碍）。他进一步指出核心问题是缺乏专业销售团队和差异化产品，导致公司“大而不强”。相比之下，B管理者的回应则较为笼统和模糊，他表示将根据已有数据选择两个方向发展，但未明确具体问题，其提到的管理与销售进度缓慢和机械设备老化等问题，在分析的深度和系统性上不如A管理者。

原因： 在原因分析方面，从两位管理者的回答中可以推断，他们都认为公司在资源或资产配置方面存在根本性问题，这导致了运营上的挑战。A管理者的诊断触及了战略层面的核心矛盾，他指出设备租赁业务并非公司主营业务，这直接导致了资源投入不足，并由此引发了设备利用率低、营销和服务水平有待提升等一系列问题。B管理者的关注点则集中在运营维护层面的具体方案上，他认为核心问题在于需要建立设备更新机制，通过销售旧设备、引进新设备来保持设备的技术状态和可用性，减少故障率。

（七）中小型重型机械租赁企业市场营销策略的优化建议

在产品服务方面，A管理者强调通过内部专业能力建设，如提升司机操作水平与维修团队能力，以强化服务可靠性；B管理者则注重系统性塑造“综合服务印象”，针对新老客户采取差异化服务策略，以建立深刻的客户感知。

在定价策略方面，两位管理者一致认同可对新客户采取吸引性价格。A管理者主张直接实施价格优惠并加大宣传；B管理者则强调成本控制，并建议对具备长期合作潜力的客户提供针对性折扣，以建立稳定客户关系。

在渠道策略方面，A管理者认为应大力发展线上渠道，将其作为拓展国内外市场的关键路径；B管理者则明确聚焦于国内市场，主张深耕现有客户，暂不进行海外扩张。

在促销方面，A管理者侧重于长期品牌建设，建议通过短视频与社交媒体保持品牌曝光；B管理者则倾向于短期促销转化，如通过网页与社交媒体发布租赁优惠信息，以快速吸引客户。

在消费者方面，A管理者构建了覆盖服务前、中、后的全流程闭环优化方案，包括设备状态保障、维修能力提升与满意度回访等；B管理者则强调对客户需求的快速响应与租赁过程中的设备保障，通过合理价格与优质服务提升回头率。

在成本方面，双方均反对简单降租。A管理者提出通过更新低油耗或电动设备，从根本上帮助客户降低使用成本；B管理者则主张通过灵活谈判价格与租赁条件，响应不同客户的具体成本需求。

在沟通方面，A管理者建议开发集成化APP，实现一键服务呼叫，以技术驱动沟通效率；B管理者则主张建立客户热线与反馈机制，通过流程优化提升沟通质量。

在便利方面，双方均认同开发APP是重要方向。A管理者设想构建一站式集成平台，实现租赁、维修、配件购买等功能整合；B管理者则倾向于开发信息查询型应用，清晰展示设备、价格与位置，以促进客户联系。

通过研究发现，本文结论与已有研究结果基本一致。杨穗（2023）认为，中小企业应积极开展市场调研，及时掌握客户需求变化，并通过数字化营销提升市场竞争能力。本文研究结果表明，C重型机械有限公司在产品、价格、渠道及促销方面仍存在一定问题，需要通过优化营销组合策略、提高服务质量以及加强客户关系管理来提升

市场竞争优势，这与已有研究结论基本一致。

同时，泰国重型机械租赁市场与中国工程机械市场存在一定差异。中国市场规模较大，行业集中度较高，大型企业在品牌、资金和数字化建设方面具有明显优势；而泰国市场以中小型企业为主，市场集中度相对较低，客户更加注重价格、服务质量以及长期合作关系，因此企业需要根据泰国市场特点制定更加灵活的营销策略。

此外，随着数字化技术不断发展，数字化营销已成为企业提高市场竞争力的重要手段。C重型机械有限公司虽然已经利用网络平台进行产品宣传，但线上渠道建设和专业化运营水平仍有待提高。未来企业可以进一步完善数字化营销平台，加强客户关系管理，提高服务效率，从而增强企业市场竞争能力，实现可持续发展。

由于本文主要采用探索性研究方法，并以两位管理人员访谈资料为基础进行分析，因此研究结果更多体现定性研究特征，缺少问卷调查及统计分析等量化研究方法的支持。同时，受样本数量及资料获取条件限制，研究结论在一定程度上存在局限性。未来可进一步结合问卷调查、客户满意度分析及统计模型，对泰国重型机械租赁企业市场营销策略进行更加深入的研究，以提高研究结果的普适性和科学性。

六、建议

（一）C重型机械租赁有限公司4PS营销组合策略建议

1.产品策略

(1)　在产品种类方面，建立"星级设备评级体系"，根据设备新旧程度、性能状况划分为不同等级，配套差异化定价。

(2)　在产品服务方面，开发"设备健康管理"增值服务，通过物联网技术远程监控设备运行状态，提供预防性维护提醒。

(3)　在业务拓展方面，开展"闲置设备托管"业务，为拥有闲置设备的客户提供托管和租赁服务，开辟轻资产运营新模式。

2. 定价策略

(1)　在定价模式方面，设计"长期战略客户价格保护"机制，与核心客户签订年度框架协议。

(2)　在价格结构方面，引入"阶梯式租赁"优惠方案，对长期租赁客户提供租期越长、单价越低的激励政策。

(3)　在合作创新方面，与设备制造商建立"以租代购"合作，为有长期设备需求但资金紧张的客户提供灵活的设备获取方案。

3. 渠道策略

(1)　在线上渠道方面，打造集设备展示、在线选型、实时报价、视频看设备于一体的数字化平台。

(2)　在线下渠道方面，实施"驻地服务代表"模式，为重点客户和重点区域配备专属服务人员。

4. 促销策略

(1)　在品牌推广方面，制作系列专业短视频，展示设备操作规范、故障排查教程和项目案例解析。

(2)　在销售促进方面，推出"设备租赁金融方案"，与金融机构合作为客户提供分期付款服务。

（二）C公司4CS营销组合策略优化建议

1. 消费者策略

(1)　在客户关系方面，建立"客户价值金字塔"管理模型，根据客户贡献度配置差异化服务资源。

(2)　在客户开发方面，创建"设备租赁学院"在线平台，通过专业知识输出培育潜在客户市场。

(3)　在服务承诺方面，推出"设备租赁绩效保证"产品，与客户约定关键绩效指标，将服务保障能力产品化。

2. 成本策略

(1)　在成本优化方面，推出"绿色设备节能计划"，向客户展示使用新型节能设备与传统设备的成本对比数据。

(2)　在降低客户成本方面，推出“设备置换升级服务”。对于长期租赁项目，允许客户在合同执行中期，根据实际工程需求，申请更换为更高效或更节能的设备型号，仅需支付差价，帮助客户动态优化项目总成本。

3. 便利策略

(1)　在服务流程方面，推行全流程电子化服务，实现从签约、支付到开票的线上化操作。

(2)　在服务网络方面，建立"区域化应急响应机制"，在业务密集区设立移动服务点和备件库。

(3)　在服务创新方面，设立"移动服务快闪站"，在客户项目密集区域提供周期性驻点服务。

4. 沟通策略

(1)在沟通效率方面，建立“多语言标准化工作指令”。将设备操作、报修、交接等常用沟通内容，制作成中泰双语对照的标准化表格和图示，确保双方在现场沟通时信息传递准确无误，克服语言障碍。

(2)　在客户互动方面，建立"项目关键节点关怀"制度，在关键时点主动联系客户。

(3)　在危机管理方面，制定"设备重大故障应急沟通预案"，建立规范的危机处理流程。

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深圳市中小型现代物流代理企业薪酬管理体系研究
A Study on the Compensation Management System of Small and Medium-Sized Modern Logistics Agencies in Shenzhen

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摘要

本文以广东省深圳市J有限公司为研究对象，综合运用文献分析、深度访谈与探索研究方法，系统探讨中小型现代物流代理企业薪酬管理体系的现实状况、存在问题与优化方向。本文从战略协同、制度完善、激励创新、人才培养和管理提升五个维度，提出适用于中小物流企业的薪酬体系优化路径，具体包括：强化薪酬战略与企业发展的协同性，完善薪酬结构与分配机制，创新激励机制与福利体系，健全人才培养与发展体系，提升组织管理水平与专业能力。本研究旨在为同类企业完善薪酬管理体系、提升人力资源效能提供理论参考与实践指引。本论文的创新点在于研究对象的创新，以深圳市J有限公司为具体案例，聚焦中国中小型现代物流代理企业的薪酬管理体系。这在现有研究中较少涉及中小物流企业的微观实证研究，为中小企业薪酬管理提供了可操作的实践参考。

关键词：中小型物流企业；薪酬管理体系；绩效考核；激励机制；职业发展

Abstract

This paper takes Shenzhen J Co., Ltd. in Guangdong Province as its research subject. By comprehensively employing literature analysis, in-depth interviews, and exploratory research methods, it systematically examines the current status, existing issues, and optimization directions of the compensation management system in small and medium-sized modern logistics forwarding enterprises. The paper proposes a path for optimizing the compensation system applicable to small and medium-sized logistics enterprises from five dimensions: strategic alignment, institutional improvement, incentive innovation, talent development, and management enhancement. Specifically, this includes: strengthening the alignment between compensation strategy and corporate development; improving compensation structures and distribution mechanisms; innovating incentive mechanisms and welfare systems; establishing sound talent development and growth systems; and enhancing organizational management levels and professional capabilities. This study aims to provide theoretical references and practical guidance for similar enterprises to improve their compensation management systems and enhance human resource effectiveness. The innovation of this paper lies in its research subject: using Shenzhen J Co., Ltd. as a specific case study, it focuses on the compensation management systems of small and medium-sized modern logistics forwarding enterprises in China. This addresses the scarcity of micro-level empirical research on small and medium-sized logistics enterprises in existing literature, thereby providing actionable practical references for compensation management in SMEs.

Keywords: Small and medium-sized logistics enterprises; Salary management system; Performance appraisal; Incentive mechanism; Career development

一、*引言*

现代物流作为经济运行与产业升级的重要基础，行业增加值占GDP比重持续提升，国际货运代理企业更是提升供应链效率、助力企业降本增效的关键力量。我国中小型物流代理企业数量多、灵活性强，在行业快速发展的同时，普遍面临人才流失、核心岗位不稳、薪酬激励机制不完善等问题，尤其在深圳这类外向型物流枢纽城市，合理设计薪酬体系、吸引留住人才已成为企业发展核心。国际上企业薪酬管理正朝着科学化、精细化、个性化方向发展，借助数字技术优化薪酬水平、提升透明度、强化绩效激励，为我国中小企业提供了重要参考。当前“人工智能+物流”加速行业升级，但中小企业在技术应用与薪酬体系建设上仍显不足，以深圳市J有限公司为代表的中小货代企业，其薪酬管理问题具有典型性，对其开展个案研究，既能揭示行业普遍困境，也能为整体管理优化提供借鉴。

二、*研究目标*

（一）研究问题

1.了解中小型物流代理企业薪酬管理体系的现状，重点分析深圳市J有限公司薪酬管理的具体情况。

2.剖析影响中小型物流代理企业薪酬管理体系效果的内外部因素。

3.提出针对中小型物流代理企业薪酬管理体系的优化策略或方案，为企业实践提供可操作的建议。

（二）研究目的

1.发现中小型物流代理企业在薪酬管理体系构建与运行过程中存在的具体问题。

2.确定影响中小型物流代理企业薪酬管理体系有效性的核心因素。

3.提升中小型物流代理企业的人力资源配置效率、员工满意度及市场竞争力，助力企业可持续发展。

（三）研究意义

1.理论意义

薪酬管理体系研究在管理学、人力资源管理学科中占有重要地位。通过将薪酬管理与物流代理企业的行业特性相结合，本研究可以丰富中小企业薪酬管理的理论探索，补充物流行业尤其是中小型企业在人力资源管理方面的学术空白。同时，结合PEST模型、SWOT分析等经典工具，能够为薪酬管理研究提供新的应用案例与实践路径，拓展薪酬管理理论的应用场景。

近年来，物流行业薪酬水平与人才流动呈现出复杂态势。根据国家统计局发布的数据，在“交通运输、仓储和邮政业”中，2022年私营单位就业人员年平均工资为66059元（折合月均5505元），2023年增长至68051元，同比增长约3%。2024年，全国城镇非私营单位中交通运输、仓储和邮政业就业人员年平均工资达127889元，同比增长4.2%，而私营单位年均工资为69476元，名义增长1.7%。细分岗位来看，2023年该行业规模以上企业中层及以上管理人员年平均工资为226359元，专业技术人员为175260元，但社会生产服务和生活服务人员仅为109480元，岗位间的薪酬差距显著。与此同时，蓝领群体中货车司机的月均收入集中在5000—8000元，受雇驾驶司机中66.89%月均工资在

5000—10000元之间，2024年整体收入较2023年出现下降，61.22%的司机预期2025年收入将进一步减少。

在人才流动方面，物流行业的高离职率问题尤为突出。2024—2025年，仓储管理、供应链物流、运输配送三大传统领域成为人才流失“重灾区”。华南地区供应链物流行业2024年离职率飙升至26.09%，跨境物流行业离职率从2023年的15.06%升至2024年的17.22%，预计2025年进一步升至19.38%。从行业整体来看，据前程无忧发布的《2026离职与调薪调研报告》，2025年交通/运输/物流行业的离职率较2024年的15.4%下降了1.4个百分点，成为降幅最显著的行业，这反映出随着物流体系的成熟和灵活用工模式的渗透，行业正逐步建立起更稳定的用工生态。然而，部分地区和企业的人才流失形势依然严峻，如广东省物流人才缺口超过60万，智能调度算法工程师等关键岗位流失率高达35%。

上述数据表明，物流行业正处于薪酬水平结构性分化与人才流动模式转变的关键时期，中小企业尤其面临薪酬竞争力不足与人才流失的双重压力。本研究聚焦于J公司这一典型案例，将上述行业趋势纳入分析框架，有助于深化对中小型物流代理企业薪酬管理问题的理解，为相关领域提供更具现实针对性的理论支撑。

2.实践意义

从企业层面，科学合理的薪酬体系不仅能够提升员工的工作积极性与满意度，还能够降低人才流失率，增强企业凝聚力与核心竞争力。当前物流行业离职率仍处于相对高位，薪酬水平偏低尤其是中小物流企业普遍存在的核心痛点——私营单位年均工资增长仅1.7%，远低于社会平均水平，且基层岗位与社会生产服务人员的薪酬增长更为有限。本研究通过对J公司薪酬体系的深入剖析，提出切实可行的优化建议，能够直接为企业改善薪酬结构、增强人才黏性提供参考依据。

从行业层面，研究结论能够为深圳乃至全国的中小型物流代理企业提供可复制的经验与借鉴。深圳作为华南地区物流枢纽，物流专员月薪集中在5000—8000元（占比60.84%），而深圳货代行业平均月薪为8000—15000元，较去年上涨约8%。区域间薪酬差距明显，珠三角通用岗位平均年薪15.4万元，较长三角的12.0万元高出28%。与此同时，中小物流企业应届物流专业学生人才流失率高达75%，工作满三年以上的员工仅占10%左右，折射出中小企业在人才留任方面面临的严峻挑战。本研究旨在帮助同类企业系统识别并解决薪酬管理难题，对提升整个行业的人才吸引力和可持续发展水平具有积极意义。

从政策层面，研究发现有助于推动行业组织、政府主管部门制定更具针对性的扶持政策。鉴于中小物流企业在薪酬支付能力方面与大型企业存在显著差距，且面临基层员工流失率高企、技能型人才供给不足等结构性问题，行业组织可据此推动制定区域性薪酬指导标准，政府层面可考虑出台针对中小物流企业的薪酬补贴、社保减免或人才培养专项基金等政策，助力中小型物流企业完善薪酬管理体系，实现健康可持续发展。

（四）概念性研究框架

1.研究框架

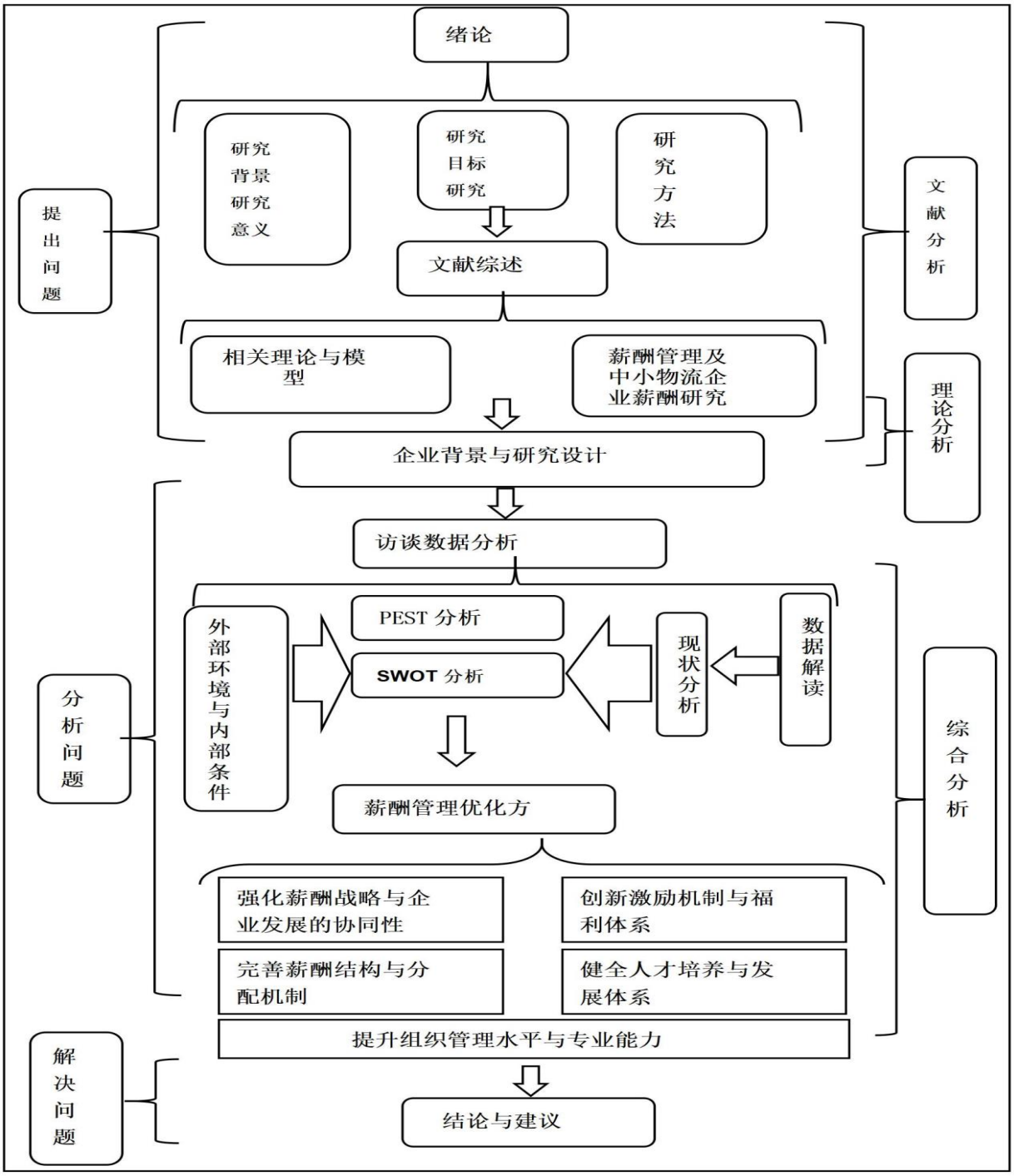

图1：概念性框架

2.理论模型

（1）全面薪酬体系模型

“全面薪酬”概念由埃德·劳勒（1971）提出，指企业给到员工的各种形式的激励薪酬，包括经济性薪酬和非经济性薪酬两部分，除了基本的薪资和福利外，还增加了许

多无形的奖励方式，如职业发展机会、精神激励、员工关怀，工作环境，同事间情感联系等。经济性薪酬包括固定薪酬（工资、津补贴等）和浮动薪酬(如短期激励、长期激励等)。非经济性薪酬是指难以用货币来衡量的形式，诸如员工内在的心理收益，工作的挑战性，成就感，发展机会或是工作环境和组织环境。该模型为分析J公司薪酬体系构成、识别薪酬管理短板提供理论依据。

（2）公平理论模型

亚当斯（1965）提出的“公平理论”认为，劳动者的积极性不仅与报酬实际数量有关，还受报酬分配公平性影响。员工感知的公平性包括分配公平（不同员工报酬数量公平）、程序公平（薪酬政策制定公平）、互动公平（员工与高管沟通公平）。该模型用于分析J公司员工对薪酬公平性的感知，解释员工消极行为产生的原因。

（3）双因素理论模型

赫茨伯格（1959）提出的“双因素理论”将影响员工积极性的因素分为保健因素（如基本薪酬，满足后避免员工不满）和激励因素（如绩效薪酬，满足后提升员工积极性）。刘海涛（2021）将基本薪酬视作“保健因素”，绩效薪酬视作“激励因素”，该模型用于区分J公司薪酬体系中的保健成分与激励成分，指导薪酬结构优化。

马斯洛的需求层次理论提供了一个更全面的视角，包括了人类从基本生存到精神层面的全方位需求。而双因素理论则更专注于工作环境和职业生涯发展对员工满意度和动机的影响，从某种程度上来说，双因素理论可以被看作是在工作场景中对马斯洛理论的一种应用和细化。

（4）PEST与SWOT模型

PEST模型从政治（Political）、经济（Economic）、社会（Social）、技术（Technological）四个维度分析企业外部宏观环境。用于系统梳理政策法规、经济形势、社会文化、技术进步对J公司薪酬管理体系的影响，为薪酬策略调整提供外部环境依据。SWOT模型则从从优势（Strengths）、劣势（Weaknesses）、机会（Opportunities）、威胁（Threats）四个方面评估企业内部条件与外部环境。用于识别J公司在薪酬管理方面的内部优势（如组织灵活）、劣势（如制度不规范），以及外部机会（如跨境电商发展）、威胁（如大型企业人才竞争），为薪酬体系优化提供全面视角。

三、*文献综述*

（一）薪酬管理与薪酬核算的概念和范围界定

在薪酬管理的概念界定方面，Crystal Hoole和Gabi Hotz（2016）指出，企业应构建涵盖经济性报酬（工资、奖金、福利、股权激励）与非经济性激励（职业发展、成长机会等）的综合激励体系，以满足员工多层次需求并提升组织绩效。Mannu Garg和Ashima Bansal（2020）得到结论，薪酬管理是企业通过提供包括工资、奖金、福利和职业发展激励在内的经济性与非经济性回报，以认可员工价值并激发其工作积极性的重要管理机制。孙燕芳与夏嘉一（2022）强调，薪酬制度的内涵应在物质激励的基础上融入精神激励与职业发展支持，以提升员工工作满意度与组织凝聚力。石伟（2023）提出，现代薪酬治理的核心在于以“双赢”为导向，在满足企业发展目标的同时增强员工的获得感和归属感，从而实现组织与个人的良性互动与协同成长。

在薪酬核算的概念界定方面，学者普遍认为其是企业薪酬管理中不可或缺的基础环节。宋国学与齐冀（2024）则从管理视角出发，认为薪酬核算是对职工劳动报酬及相关福利进行计算、分配和管理的全过程，强调其在资源配置和成本控制中的作用。陈序（2025）进一步提出，薪酬核算是企业对职工各种报酬和福利进行确认、计量和披露的综合过程，应确保薪酬数据的真实性与决策支持功能。

（二）企业薪酬管理体系的内容及衡量指标

在薪酬管理体系的内容方面，刘琦（2022）提出，薪酬管理体系可从薪酬满意度、经济性薪酬、非经济性薪酬与薪酬管理机制四个维度加以分析，以实现员工激励与组织绩效的协调统一。吴春艳（2023）则从整体性出发，指出薪酬管理体系应包括薪酬支付原则、支付方式、薪酬水平、结构设计及薪酬功能等内容，强调制度设计的规范化与战略导向性。Hao, Z., Guangli, X., Yuhuan, Z., & Yilong, L. (2012)指出信息化薪酬管理系统，覆盖薪酬全流程，有效解决传统人工管理效率低、易出错的问题，实现薪酬管理标准化与自动化。

（三）企业薪酬管理体系的重要性

对于企业薪酬体系的重要性，Mashal Ahmed和Abu Bakar Ahmed（2014）就提出，间接薪酬是影响员工态度与行为的重要激励因素，合理的间接薪酬设计能够提升员工士气、增强企业生产力、改善员工生活质量，并提高企业对人才的吸引力和留存率。Cross Ogohi Daniel（2019）提出，合理的薪酬管理能够明确员工价值回报，提升员工的工作动力与职业认同感，也能让员工组织绩效得到提升。尤妙娜与林敏怡（2020）、张文东（2025）及邓航（2023）均强调，薪酬管理不仅是激励和回报员工劳动的重要手段，也是吸引与留住人才、提升企业绩效与竞争力的核心工具。

（四）现阶段企业薪酬管理体系的特点及存在的问题

在现阶段企业薪酬管理体系的特点与不足方面，姬雅楠与杨少杰（2021）进一步指出，中小企业薪酬制度缺乏规范化管理与科学规划，薪酬激励效果有限，难以有效提升员工绩效与企业价值创造。李婷婷（2025）强调，薪酬管理面临的核心问题是内部竞争力不足，影响企业整体运营和战略目标的实现。Meng, K., Lu, G., & Shen, M. (2021)指出企业普遍存在薪酬战略滞后、体系不合理、薪资不透明、薪酬与绩效脱节、沟通及晋升机制混乱、整体薪酬福利偏低等问题。

（五）影响企业薪酬管理体系效果的因素

现有研究普遍认为，企业薪酬管理体系的效果受到外部环境与内部管理双重因素的影响。Gaatha Narang（2018）指出，员工对薪酬体系的认知与感知会显著影响其工作投入和幸福感。刘军胜等（2024）强调，内部组织因素、外部市场环境以及技术条件对薪酬管理体系效果均有显著影响。郭思彤与苗连琦（2025）指出，数字化转型为薪酬管理提供技术支撑，使薪酬流程实现系统化串联，提高管理效率与执行精度。王照楠（2025）进一步强调，薪酬公平性是优化薪酬管理体系的重要突破口，它不仅能够激励员工，还能保留关键人才，增强企业核心竞争力。

（六）中小企业薪酬管理体系的优化策略建议

现有研究针对中小企业薪酬管理体系的优化提出了多维度的改进路径。胡一翔（2023）强调，优化薪酬理念、薪酬结构设计、激励性薪酬机制及岗位体系的科学化评估，

是提升薪酬管理体系效果的核心环节。尤蓉蓉（2025）指出，绩效管理在薪酬体系中发挥基础性作用，保障薪酬公平性和竞争力，实现员工发展与企业战略的协同。

四、研究设计规划

（一）研究方法

1.探索性研究法

本研究首先结合薪酬管理的外部环境，考察中小型现代物流代理企业所面临的行业政策、市场竞争与人才流动状况；其次，通过对企业内部薪酬体系运行情况的分析，探索其在薪酬结构、激励机制与公平性方面的优势与不足；最后，进一步结合访谈与调研数据，提出优化深圳市J有限公司薪酬管理体系的可行性建议。

2.文献研究法

文献研究法是根据一定的研究目的或课题，通过调查文献来获得资料，从而全面地、正确地了解掌握所要研究问题的一种方法。通过对已有文献资料的研究，了解研究对象的历史和现状，在已有研究成果的基础上，确定新的研究方向。然后，归纳并总结前人对薪酬管理的研究成果，并作为本研究的理论基础，再通过深度访谈了解企业管理人员对于中小企业薪酬管理体系建设的看法，最后，对访谈结果整理与分析，并且做本次研究的一手数据，两者相互结合，从而达到本次研究的研究目的。

（二）调查方法

1.深度访谈法

本研究选择对深圳市J有限公司的两位高层管理人员进行深度访谈。通过与高层管理人员的面对面交流，研究者能够深入了解企业薪酬管理体系的战略规划、现状问题及优化需求。访谈过程中，研究者可结合观察受访者的肢体语言、面部表情及语气变化进行深层次分析，从而获取更丰富的定性信息，为企业薪酬管理体系的改进提供针对性建议。

2.研究流程说明

本研究采用定性研究，数据不具有统计普适性。本研究主要通过挖掘问题、了解事件现象、分析企业高层管理人员的行为与观点，以及引导受访者回答问题的方式，深入探讨中国中小型现代物流代理企业薪酬管理体系的现状与问题。通过深度访谈收集到高层管理者的一手数据，并结合文献研究法进行归纳总结，本研究能够全面掌握企业薪酬制度设计、激励机制及实施效果的实际情况。选择深度访谈法的原因在于，中小型现代物流代理企业的薪酬管理体系涉及结构设计、绩效考核、激励政策及企业战略匹配等复杂内容，这些信息往往无法通过问卷或二手资料充分获取。高层管理人员作为薪酬体系制定和决策的核心参与者，能够提供直接、深入的见解和实践经验。通过一对一的访谈，可以充分挖掘其对薪酬管理体系运行现状、存在问题及优化策略的认知与思考，同时结合非语言信息（如表情、语气和肢体动作）进行分析，确保研究结论更加贴近企业实际。通过深度访谈收集并分析的数据，本研究能够提出针对性优化建议，不仅有助于提升深圳市J有限公司的薪酬管理水平和人力资源管理能力，增强企业可持续发展能力，也对其他中小型物流企业薪酬体系优化具有参考价值，同时拓展现代物流企业薪酬管理理论的研究领域，为相关学术研究提供实践基础。

五、结论

本研究以深圳市J有限公司为案例，聚焦中小型现代物流企业薪酬管理体系这一主题，通过文献研究、理论探讨和深度访谈等方法，系统考察了企业薪酬管理体系的现状、问题及优化路径。在物流行业竞争日趋激烈、人力资本价值日益凸显的背景下，科学有效的薪酬管理体系已成为中小企业吸引人才、激励员工、提升核心竞争力并支持战略实施的关键支撑。研究过程中，本文从薪酬管理与核算的概念界定入手，逐步展开对薪酬体系构成与评价维度、制度功能定位、现实困境、内外部影响因素以及改进方向等方面的系统分析，旨在为中小物流企业构建兼具科学性、合理性和战略导向的薪酬体系提供实践参考。

基于对企业管理层的实地访谈，本研究将理论框架与企业实际相结合，对中小物流企业薪酬管理实践进行了全面剖析。这一研究工作为完善企业薪酬激励机制、提升员工满意度与工作绩效奠定了扎实的实证基础，也为相关领域的理论研究提供了新的观察视角。通过与深圳市J国际高层管理者的访谈调查及分析，结合相关理论研究和实证研究结果得出分析结论：

（一）薪酬管理与核算的概念和范围界定

在薪酬管理方面，企业不仅关注基本工资、绩效奖金等经济性要素，也逐步将职业发展与培训机会纳入非经济性激励范畴，体现物质与精神激励并重的管理思路。调研显示，约70%以上的中小物流企业已将薪酬管理与绩效考核挂钩，用于强化员工激励与人岗匹配，其核心目标在于提升组织效率与员工积极性。薪酬核算更侧重操作层面，主要包括工资计算、绩效核定、福利发放及成本控制等内容，强调流程规范与数据准确性。调研表明，约80%的企业已建立“部门初核—人事复核—财务审核”的三级核算流程，以提升薪酬发放的准确性与透明度。以深圳J公司为例，其薪酬体系将基础工资与绩效结果直接联动，并通过月度业务数据参与薪酬核算，使薪酬计算更具量化依据，从而减少人为调整空间，提高发放效率与员工公平感知。

（二）企业薪酬管理体系的内容及衡量指标

研究发现，现代中小物流企业的薪酬管理体系已逐步发展为涵盖岗位价值、绩效表现与员工发展三大核心要素的综合性激励机制。体系构成上，企业普遍设置基本工资、绩效奖金、津贴补贴等经济性报酬，同时逐步纳入职业发展通道与培训体系等非经济性激励内容，形成较为完整的“全面薪酬体系”。调研显示，约65%的企业已将培训与晋升机制纳入薪酬激励框架，用于增强员工稳定性与归属感。在体系设计方法上，企业主要基于岗位分析与价值评估进行薪酬分级，通过明确岗位职责与能力要求建立内部薪酬结构，以保障内部公平性。同时，约75%的企业将绩效考核结果作为薪酬分配的核心依据，采用量化指标与综合评价相结合的方式，将员工绩效与薪酬回报直接挂钩，使薪酬更真实反映其价值贡献。

以深圳J公司为例，其薪酬体系以岗位等级为基础，并引入月度运营指标（如配送效率、客户满意度等）作为绩效核算依据，同时将晋升评估与年度绩效结果联动，从而实现薪酬分配与职业发展通道的同步管理，提高了激励的持续性与可预期性。

从衡量维度来看，企业对薪酬体系科学性与公平性的评估主要集中在员工薪酬满意度、薪酬市场竞争力、经济与非经济激励协调程度以及绩效结果与职业发展匹配度等方面。调研结果显示，约68%的管理者认为薪酬体系有效性直接影响员工流失率与组织稳定性。

（三）企业薪酬管理体系的重要性与衡量指标

薪酬管理体系在中小型物流企业中发挥着多重关键作用，其价值不仅体现在传统的员工激励功能上，还进一步延伸至战略执行与组织竞争力提升层面。访谈结果显示，超过80%的管理者认为薪酬体系是连接组织目标与员工行为的重要机制。合理的薪酬制度能够有效提升员工工作投入度，使个人绩效与组织目标形成正向联动，从而为企业持续运营提供稳定动力。

第一，在人才吸引与保留方面，薪酬体系具有基础性作用。在物流行业人才流动较为频繁的背景下，具有竞争力的薪酬结构能够显著降低核心岗位流失风险。以深圳J公司为例，其薪酬结构中固定薪酬约占60%，绩效薪酬约占40%，并针对关键岗位设置专项津贴。实施薪酬优化后，核心岗位人员年度流失率由约18%下降至11%，体现出薪酬制度在稳定人才队伍方面的直接作用。

第二，在组织公平与文化建设方面，薪酬管理通过明确岗位等级与绩效标准，有助于提升制度透明度与员工信任感。调研显示，约72%的员工将“薪酬分配公平性”作为影响满意度的重要因素。深圳J公司在引入月度绩效量化评分体系后，员工薪酬满意度由约68%提升至81%，同时内部对薪酬公平性的投诉明显减少，团队凝聚力得到增强。

第三，在成本控制与资源配置方面，科学的薪酬核算机制有助于平衡激励强度与企业财务承受能力。通过绩效工资与业务指标挂钩，企业能够更精准地调节人力成本结构。深圳J公司在优化绩效薪酬占比后，人力成本占营业收入比重由约22%下降至18%，在保证激励强度的同时提高了成本使用效率。

（四）现阶段企业薪酬管理体系的特点及存在的问题

当前中小物流企业在薪酬管理体系建设方面呈现出“体系框架基本建立、激励机制仍待优化”的阶段性特征。多数企业已构建涵盖岗位价值、绩效表现与职业发展等多维度的薪酬结构，通过基本工资、绩效奖金、福利补贴及培训晋升等复合激励方式，在一定程度上提升了员工稳定性与工作投入度。调研显示，约75%的企业已实现基础绩效考核与薪酬核算流程的制度化运行，表明薪酬管理正在由经验型管理向规范化体系转型。

然而，在薪酬制度实际运行过程中仍存在若干突出问题。首先，薪酬激励与实际贡献匹配度不足。尽管多数企业已建立绩效考核机制，但约60%的受访员工认为考核指标偏定性或过于单一，难以充分反映岗位真实贡献，导致高绩效员工激励不足，削弱了薪酬差异化调节功能。其次，薪酬分配的公平性与透明度仍有待提升。部分企业薪酬构成及差异解释机制不够清晰，约55%的员工表示对薪酬计算依据了解有限，容易产生公平性认知偏差，从而影响组织信任与满意度。再次，薪酬体系与企业战略衔接不够紧密。现有制度更多聚焦短期绩效分配，对核心人才的长期激励设计不足，尤其在股权激励、长期绩效绑定等方面应用较少，制约了人才稳定与组织长期发展能力。

以深圳J公司为例，其在薪酬优化前也曾存在绩效指标粗放、激励差异不明显的问题，员工对薪酬公平性的满意度仅约68%。在优化绩效考核体系并引入岗位量化评分后，满意度提升至81%，但仍存在长期激励机制较弱的问题，反映出中小企业普遍存在的结构性短板。此外，专业管理能力不足也是重要制约因素。受企业规模限制，约70%的中小物流企业未设置专职薪酬管理岗位，相关工作多由人力资源人员兼任，导致薪酬设计专业性与精细化程度有限。同时，在成本约束与市场竞争压力下，企业在激励强度与人力成本控制之间仍面临持续权衡。

（五）影响企业薪酬管理体系效果的因素

中小物流企业薪酬管理体系的实施效果受到多维因素共同影响，既包括企业内部管理机制，也受到外部环境约束，整体呈现出动态交互特征。

第一，从企业内部来看，管理机制的科学性与执行力是薪酬体系有效运行的基础。绩效考核作为核心依据，其指标设计合理性与流程透明度直接影响员工对薪酬公平性的认知。调研显示，约62%的企业仍存在绩效指标偏粗放的问题，导致薪酬差异对激励效果的解释力不足。同时，岗位分析与价值评估的规范程度不足，也限制了薪酬等级体系的科学构建。以深圳J公司为例，在优化岗位价值评估体系后，其薪酬分配与绩效匹配度明显提升，员工对薪酬合理性的认可度由约70%提升至82%。

第二，组织内部沟通机制与员工参与程度对薪酬制度接受度具有显著影响。当企业能够清晰解释薪酬结构设计逻辑，并建立有效绩效反馈机制时，员工满意度明显提高。调研结果表明，约68%的员工认为“薪酬不透明或解释不足”是影响公平感的重要因素，而沟通机制完善的企业，其员工稳定性普遍更高。

第三，企业规模与资源条件对薪酬体系设计具有明显约束作用。中小企业普遍面临资金有限与专业人力不足的问题，约70%的企业未设置独立薪酬管理岗位，导致薪酬设计与管理更多依赖经验判断。这种结构限制使企业在长期激励机制（如长期绩效绑定、职业发展激励等）方面投入不足，从而影响人才保留效果。

第四，外部环境变化同样深刻影响薪酬管理策略。行业竞争强度、劳动力市场供需变化及物价水平波动，都会对薪酬水平调整形成压力。在经济波动或成本上升阶段，中小企业往往面临激励提升与成本控制之间的双重约束，需要不断调整薪酬结构以维持竞争力与财务平衡。

（六）中小企业薪酬管理体系的优化策略方案

中小型现代物流企业在薪酬管理体系优化方面具备现实基础与可行路径。基于企业发展阶段、资源条件及访谈反馈，本研究提出以下总体可行性方案。企业应将薪酬体系与战略目标相衔接，通过明确薪酬定位、构建分层薪酬结构与合理绩效比例机制，使薪酬制度更贴合企业业务发展与人才需求。有必要推进制度化建设，建立规范的岗位评价体系、绩效考核机制与沟通反馈流程，以提升薪酬管理的透明度与执行力。通过完善人才培养与职业发展机制，强化能力提升与内部晋升路径规划，进一步增强薪酬激励的长期导向性与员工归属感。此外，企业可结合自身实际逐步完善福利体系与激励方式，构建多元化、组合型薪酬模式，兼顾物质激励与文化关怀，提升整体薪酬竞争力。

六、建议

针对深圳市J有限公司薪酬管理体系的现状及存在的问题，结合中小型现代物流企业的发展特点，本研究从战略协同、制度完善、激励创新、人才培养和管理提升五个维度提出以下优化建议，为企业构建科学合理、持续有效的薪酬管理体系提供参考。

（一）强化薪酬战略与企业发展的协同性

企业应当将薪酬体系纳入整体战略规划，确立与业务目标相匹配的薪酬策略。建议通过以下措施实现战略协同：一是开展行业薪酬调研，明确企业在人才市场中的薪酬定位；二是建立薪酬动态调整机制，将薪酬增长与企业效益、行业水平和物价指数挂钩；三是根据不同业务板块特点设计差异化薪酬结构，确保薪酬政策既保持内部公平又具备外部竞争力。

（二）完善薪酬结构与分配机制

在制度建设方面，建议从以下环节着手：首先，系统开展岗位价值评估，建立科学的职级体系，为薪酬分配提供客观依据；其次，优化薪酬构成比例，适当提高绩效薪酬占比，强化贡献导向；再次，构建多维度的绩效考核指标体系，将工作质量、客户满意度、团队协作等软性指标纳入评价范围。同时，应建立薪酬透明度机制，通过制度宣讲、薪酬解读等方式，帮助员工理解薪酬决定因素，增强对薪酬公平性的认同。

（三）创新激励机制与福利体系

除经济性报酬外，应大力发展非经济性激励手段：一是完善职业发展通道，建立管理序列与专业序列双轨晋升机制；二是推行长期激励计划，对核心岗位试点项目分红、虚拟股权等激励方式；三是优化福利体系，根据员工需求设计弹性福利方案，如补充医疗保险、职业培训资助、家庭关怀计划等。通过物质激励与精神激励的有机结合，提升员工的获得感和归属感。

（四）健全人才培养与发展体系

建议企业构建系统化的人才发展机制：首先，建立岗位能力模型，明确各职级的胜任力要求；其次，实施个性化发展计划，通过导师制、轮岗培训等方式提升员工专业能力；再次，完善高潜人才识别与培养机制，形成稳定的人才梯队。特别要重视将薪酬激励与职业发展相结合，使员工清晰看到能力提升带来的薪酬增长路径。

（五）提升组织管理水平与专业能力

在管理支撑方面，建议采取以下措施：一是建立常态化的沟通机制，通过定期绩效面谈、员工座谈会等形式促进双向交流；二是完善员工反馈渠道，建立薪酬申诉和绩效复议制度；三是加强人力资源管理专业队伍建设，在条件允许时设立专职薪酬岗位，或通过外部专家支持提升薪酬管理的专业水平。此外，建议定期开展薪酬体系有效性评估，建立持续优化的闭环管理机制。

中小物流企业应当从战略高度审视薪酬管理，通过系统化的制度设计和持续优化，构建既能支撑企业战略、又能激发员工活力的薪酬体系。建议企业根据自身发展阶段和资源条件，分步骤实施上述改进措施，逐步建立以战略为导向、以制度为保障、以员工发展为核心的现代化薪酬管理体系，最终实现企业与员工的共同成长和价值共赢。

七、结论

本研究发现，中小物流企业薪酬管理体系的发展趋势与现有研究结论基本一致，即薪酬管理不仅承担员工激励功能，还在人才吸引、人才保留和企业绩效提升方面发挥重要作用。 然而，与制造业和互联网企业相比，中小物流企业在薪酬管理实践中仍具有明显的行业特殊性。

第一，与制造业企业侧重生产效率和标准化管理不同，中小物流企业受市场环境、客户需求和业务波动影响较大，其薪酬体系更多采用基本工资与绩效奖金相结合的模式，长期激励机制相对不足。

第二，与互联网企业普遍采用高薪酬和股权激励吸引技术人才不同，中小物流企业受规模和资源限制，更注重通过绩效奖励、职业发展机会和福利保障等方式增强员工稳定性和归属感。

第三，本研究发现，中小物流企业普遍存在薪酬管理专业化程度不足、薪酬透明度有待提高等问题，这与现有关于中小企业薪酬管理规范化不足的研究结论基本一致，但在物流行业中表现得更为突出。

因此，中小物流企业的薪酬管理既具有一般企业薪酬管理的共性特征，又受到行业特点和资源条件的制约，需要在有限资源条件下更加注重薪酬公平性、激励性和人才保留效果的平衡。

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泰国高校大学生对性别多样性的认同感研究
The Study on Thai University Students' Recognition of Gender Diversity

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摘要

本论文以泰国H高校大学生为研究对象，聚焦其在多元性别文化背景下对性别多样性与性别认同感的概念理解、特征认知及接纳态度，搭建个人、家庭、学校、社会四维分析框架。采用便利抽样线上发放问卷242份，回收有效问卷188份，有效回收率77.6%；借助SPSS完成信效度、均值、交叉分析，补充独立样本T检验、ANOVA、皮尔逊相关分析，并构建回归模型识别关键影响因素。问卷整体克隆巴赫α系数0.931，KMO=0.719，数据信效度良好。样本中非二元、LGBTQ+群体占比53.72%，高于泰国高校常规人口分布；全维度测项均值介于2.47－3.41，均低于3.5，其中家庭维度是阻碍性别认同的首要来源，社会偏见为外部最大约束，学生自身性别文化认知短板最为突出。研究发现泰国大学生性别多样性认同整体中等偏上，但传统性别规训、家庭教育保守性、校园性别包容制度缺失、社会刻板印象形成多层制约。据此从个体、家庭、学校、社会短期-中期-长期分层提出配套对策。研究创新在于首次将融合社会认同理论、多元文化能力理论的多层分析框架系统性运用于泰国高校学生群体，填补本土细分群体实证空白，提升研究科学性与校园治理实践价值。

关键词:泰国高校大学生；性别多样性认同感现状；增强对性别多样性的认同感

Abstract

This thesis takes undergraduates from H University in Thailand as research subjects, exploring their comprehension, characteristic perception and acceptance of gender diversity and gender identity under the local multi-gender cultural context, and constructs a four-dimensional analytical framework covering individual, family, school and society. A total of 242 online questionnaires were distributed via convenience sampling, with 188 valid responses collected, representing an effective response rate of 77.6%. SPSS software was adopted for reliability and validity tests, descriptive mean analysis and cross-tabulation. Independent sample T-test, one-way ANOVA and Pearson correlation analysis were further conducted, and multiple linear regression was applied to identify core influencing factors. The overall Cronbach's Alpha of the questionnaire reached 0.931, and the KMO value was 0.719, indicating satisfactory reliability and validity. Non-binary and LGBTQ+ respondents accounted for 53.72% of the sample, higher than the average distribution of Thai university populations. The mean scores of all measurement items ranged from 2.47 to 3.41 (all below 3.5). Family factors constitute the primary barrier to gender identity acceptance, social prejudice acts as the major external constraint, and insufficient self-awareness of local gender culture is the most prominent individual limitation. Results demonstrate that Thai university students hold a moderately high overall recognition of gender diversity, yet their acceptance is restricted by traditional gender norms, conservative family gender education, insufficient inclusive campus institutions and pervasive social stereotypes. Short-term, medium-term and long-term targeted strategies are proposed from individual, family, school and social perspectives. This research innovatively integrates Social Identity Theory and Multicultural Competence Theory into a multi-layer analytical framework for Thai college students, filling the empirical research gap of this specific local group and providing scientific references for inclusive campus construction.

Keywords: Thai university students; Current status of gender diversity identity; Enhancing gender diversity identity

一、引言

在泰国，高校大学生对性别多样性的认知与认同感呈现出复杂的社会心理特征。尽管泰国社会整体被认为较为“宽容”LGBT+群体，但研究显示，高校学生在性别角色认知、性取向态度以及多元性别接纳方面仍存在显著差异。2020年，《联合国开发计划署（UNDP）泰国办事处》发布的一项全国性调查显示，高校学生中大多数人对LGBT+群体持正面态度（约69%），但仍有超过一半的学生曾在校园或社交环境中遭遇言语骚扰，约四成的学生表示为了获得接纳，不得不隐藏自己的真实性别认同或性取向。

综上，泰国高校大学生的性别多样性认同感虽已有一定研究基础，但仍存在明显空白：一方面，对少数群体服务组织在高校中如何系统性提升学生认同感与包容性缺乏深入分析；另一方面，对学生自我认同形成机制、心理健康状况与社会支持网络之间的关系仍需进一步探讨。因此，关注高校服务组织在促进性别多样性认同感方面的作用，不仅具有学术价值，也对政策制定和校园实践具有现实意义。

二、研究目标

（一）研究问题

1. 了解泰国高校大学生对性别多样性的认知现状
2. 分析影响泰国高校大学生对性别多样性的认同感的影响因素
3. 提出促进泰国高校大学生在促进性别多样性认同的建议

（二）研究目标

1. 明确泰国高校大学生对性别多样性的认同感的程度及问题
2. 探究影响泰国高校大学生性别多样性认同感的关键因素
3. 帮助泰国高校大学生正确认识性别多样性，促进个人全面发展

（三）研究意义

1.实践意义

本文不仅能够为泰国高等教育机构提供一个深入了解当前大学生对性别多样性认知与态度的重要窗口，而且通过细致入微的研究分析，能够揭示出影响大学生性别多样性认同感的多重因素，包括社会文化背景、教育体系、家庭环境及个体心理因素等。从社会层面来看，该研究能够揭示泰国社会文化背景下大学生对性别多样性的认知与态度，为政策制定者和社会工作者提供实证依据，助力构建更加包容和平等的社会环境。在学校层面，论文通过深入分析影响大学生性别多样性认同感的多重因素，能够为高等教育机构提供宝贵的指导，帮助其优化课程设置，增加性别多样性教育内容，从而培养学生的包容心态和平等观念。同时，该研究还能促进校园文化建设，通过举办多样化的活动，营造尊重差异、倡导多元的校园氛围。从学生层面而言，该研究有助于引导学生正确认识性别多样性，提升其性别认同感，促进个人全面发展。此外，家校社联动的教育机制也是该研究的重要实践意义之一，通过引导家庭和社会共同参与，形成合力，共同促进学生性别多样性认同感的提升。

2.理论意义

本文理论层面上具有深远的意义，丰富了性别多样性研究领域的理论体系，尤

其是在跨文化背景下，对性别认同、社会接纳及教育影响等方面的探讨，为理解不同文化环境中性别多样性的表现形式及其社会心理机制提供了新的视角。通过深入分析泰国高校大学生这一特定群体对性别多样性的认同感，论文揭示了性别认同的多样性和动态性，挑战了传统的二元性别观念，促进了性别理论向更加包容和多元的方向发展。本文有助于深化对性别角色社会化过程的理解。它探讨了社会文化、家庭、学校及个人因素如何共同作用于大学生的性别多样性认同感，揭示了性别角色认同的复杂性和可塑性。这一研究不仅丰富了性别角色社会化理论的内容，也为教育工作者和政策制定者提供了理论支持，以指导他们更有效地促进性别平等和多样性教育。本文的理论意义还体现在对性别平等与包容性社会构建的理论贡献上。它强调了性别多样性认同感的提升对于促进社会和谐与进步的重要性，提出了通过教育干预、政策倡导和文化营造等途径来推动性别平等和包容性社会构建的理论框架。

（四）概念性框架

本文构建的概念性框架图基于社会认同理论和多元文化能力理论，旨在深入探讨影响泰国大学生性别多样性认同感的关键因素。该概念性框架图揭示了性别多样性认同感是一个复杂的心理和社会构建，它受到个体心理特征、社会文化环境和教育背景的共同影响。通过这一框架图，我们可以更全面地理解泰国高校大学生对性别多样性认同感的形成机制，并为促进性别多样性的接受和包容提供策略建议。这不仅有助于提高泰国高校的教育质量，也有助于构建一个更加平等和包容的社会。

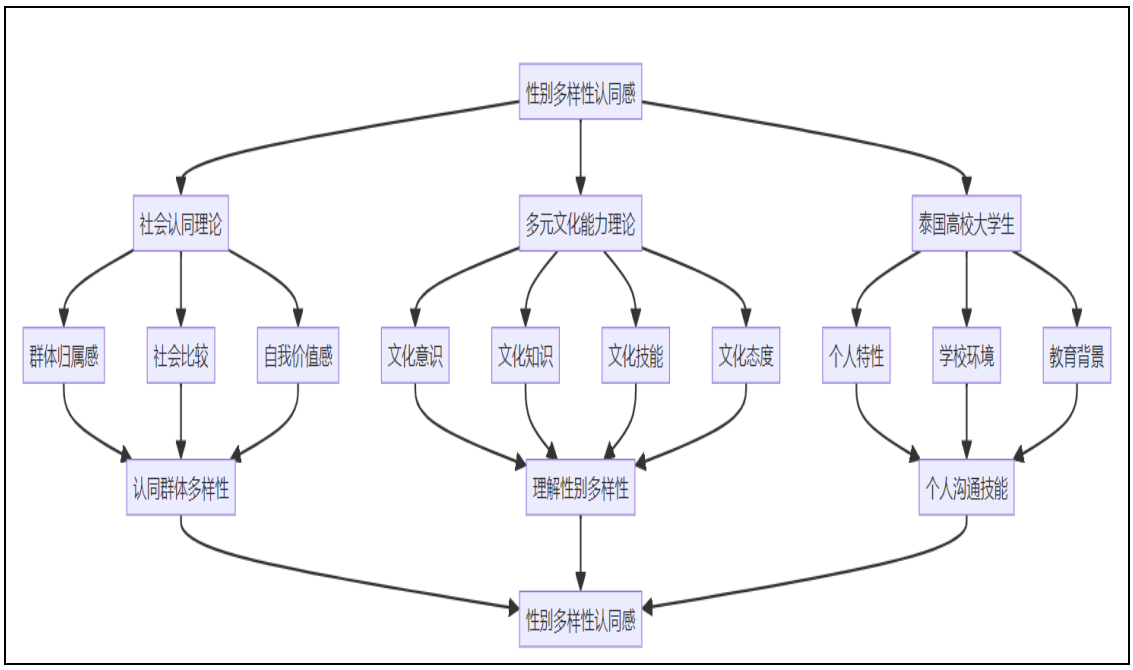

图1：概念性框架

三、文献综述

1.性别多样性与认同感的概念界定

Massimiliano,Bianco,Nicola,et al(2021)指出性别多样性不受传统性别规范的束缚,认同感是个体对自我能力的认同。Cosker-Rowland, R(2023)指出性别认同研究探讨了社会规范和文化期望如何影响个体自我认知的发展，以及个体表达身份的方式。性别认同是动态的，可能随着个人经历和社会环境而演变。

2.泰国高校性别多样性的特征

苏自己（2022）指出 LGBTQ 代表了一个不同认同的性少数群体，他们在性*倾向、性别认同、性身份或性行为等方面与社会上大多数人不同。Klysing A（2024）指出性别多样性个体行为、表达和职业选择上可能表现出非二元化特征。

3.泰国高校大学生对性别多样性认同感的现状与问题

JGlover J, Martin-Storey A.（2023）指出现阶段家庭对性别多样性的接受尚不稳定，情感支持系统结构脆弱。Pew Research Center（2025）指出公众对“二元性别之外”的理解仍薄弱，这直接影响非二元与跨性别者的社会认同与安全感。

4.影响泰国高校大学生性别多样性认同感的因素分析

Trbal Research Institute（2002）指出性别角色、社会结构和文化习俗间接影响高校大学生对性别多样性的认同感。吴愈晓， 王金水， 王旭洋（2022）指出不同年龄、时期和世代群体在性别认同上的差异，并指出男性和女性在性别认同上存在显著差异。

5.提升泰国高校大学生性别多样性认同感的重要性

Wang Y, Hu Z, Peng K 等（2020）指出性别多样性认同感①助于减少校园内的歧视和偏见；②增强学生的社会责任感和公民意识；③推动社会向更加开放和包容的方向发展。肖瑞鹏（2018）指出重视性别多样性认同感可以①促进校园内对跨性别人群的理解与尊重；②助于培养学生的批判性思维和人权意识；③促进学生间的相互理解和合作。

6.促进泰国高校大学生性别多样性认同感的策略建议

丁瑜， 邱博文， 张凯婷（2023）指出①高校性别多样性教育应鼓励学生超越传统性别界限，探索自我潜能；②性别多样性教育融入各专业课程，形成跨学科的教育体系。侯丹（2023）指出通过课堂服务、小组讨论和实践活动等方式，可以有效地提升中职女生对性别多样性的认识和认同

四、研究设计规划

(一)研究方法

1. 描述性研究法

本文运用的研究方法之一是描述性研究法.描述性研究法是用于描述所提出问题的现状和产生因素，对该问题进行针对性的调查研究.，根据本文的角度，描述性研究是对秦国高校大学生的个人层面、家庭层面、学校层面和社会层面这四个方面的性别多样性认同感现状以及来自个人角度、家庭角度、学校角度和社会角度这四个角度影响性别多样性认同感的因素的调查研究。

2. 文献研究法

本研究的课题是泰国高校大学生对性别多样性的认同感研究，需要对泰国高校大学生对性别多样性认同感的关键因素有基本了解，依靠大量文献支持。文献研究法为本研究 提供了坚实的权威理论支持，并且便于收集，能够节省调研者的时间，对本研究 具有极大贡献，因此本研究采用文献研究法。

（二）调查方法

1.问卷调查法

本研究所采用的调查方法是以线上问卷调查法的形式进行，线上问卷调查法是以制定详细周密的问卷，要求被调查者据此进行回答以收集资料的方法。首先，确定此次问卷调查的核心目标，“了解泰国高校大学生对性别多样性的认同感”清晰的目标将指导整个问卷的设计、数据收集和分析过程。能够很好地得出泰国高校大学生对性别多样性的认同感状况，并将得到的结果进行定量研究，避免任何的主观偏见，节省时间，人力和资金。为了保证本问卷的质量，问卷中的每一个项目选择都是基于之前对相关文献研究中的理论、资料等，使得本问卷中提到的项目都更加贴切于H大学的学生的实际状况。

2.问卷对象

研究的对象是目前就读在H大学的大学生。研究的内容是泰国高校大学生对性别多样性的认同感研究，之所以调研者将调研地点选择在H大学，主要鉴于来自泰国全国各地的学生，有着代表性；并且调研者作为H大学的在读学生，对该校学生当前对性别多样性的认同感现状有一定的切身体会及感受，身处调查环境有利于进行深入的调查研究。 本次调查问卷发放242份，回收率达100%，其中回收有效问卷为188份，废卷54份，有效问卷回收率达到77.6%，可作为本次研究的数据参考

（三）信度和效度分析

信度分析，即研究者将问卷收集到的数据填入到SPSS或者其他软件中，将这些数据进行可靠性分析，测试这些数据是否具有可靠性、一致性等。所测出的信度越高，其可靠性越强。在0.6-0.7之间的信度，说明问卷的问题设计上还需要进行整改，参考性较弱。在0.7-0.8之间，说明问卷是可以接受的。在0.8 以上的则说明该问卷的数据真实可靠。

从表1可看出，调研者将调查问卷中除单选题和多选题外的其它设计题目的数据进行可靠性分析，得出测试的项目总数为 45个，整体结果的信度值为 0.931， 大于0.7，可得出所有有效样本数据从整体来看可靠性较高。由此可知，受访学生在填写问卷时，在答案的选择和填写上并没有太大的差异性，前后矛盾的地方 也较少，所有数据都真实有效，有较强的一致性。

表 1全部变量可靠性

可靠性统计	
克隆巴赫 Alpha	项数
.931	45

如表2所示，问卷中全部变量的 KMO 值为 0.719，在 0.7-0.8 之间，远大于0.6，且显著性小于 0.05，证明泰国高校大学生对性别多样性的认同感研究的测度变量间的偏相关性较强， 即具有较强的相关性，因子分析效果好，适合做因子分析。

表 2全部变量效度

KMO 和巴特利特检验		
KMO 取样适切性量数		0.719
巴特利特球形度检验	近似卡方	6145.132
	自由度	2485
	显着性	0.000

五、研究结论

（一）基本信息调查

根据调查结果，被调查的H大学学生的情况按性别和年龄进行了详细分类。以下是对该数据的总结与分析：总人数为 188 人，性别方面：其中男生有 30 人，占15.96%，女生有 57人，占30.32%，跨性别者有26人，占13.83%，同性恋者有27人，占14.36%，两性恋者有30人，占15.96%，疑性恋者有9人，占4.79%，其他性别者有9人，占4.79%。女性和男性有87人，占总比例的46.28%，跨性别者，同性恋者，两性恋者，疑性恋者和其他性别者有101人，占总比例的53.72%，产生这种情况的原因为调查者调查的对象是H大学的学生，而且泰国属于性别多样性的国家，所以除男性和女性外的性别的总人数多于男性和女性的总人数；年龄方面：其中17-18岁有41人，19-20岁有76人，21-22岁有45人，23岁及以上有26人。则被调查者中年龄区间在19-20岁的人数最多,在23岁及以上人数最少，因为寻找调查对象时都是以H大学的新生发放，所以被调查者中年龄区间在19-20岁的人数最多,在23岁及以上人数最少。

（二）性别多样性与认同感的概念理解

1.对性别多样性概念的理解

通过本次调查问卷的有效结果得出，在“你认为以下哪一项最符合你对性别多样性概念的理解?”的问题中，多数人选择B“是个体对自我性别身份及所属性别群体的接受与肯定”。而较少人选择D“性别不是固定的身份”，反映了被调查者对于性别多样性概念的理解是个体对自我性别身份的接受和肯定以及所属性别群体的接受与肯定，而并非理解为性别不是固定的传统身份。

2.对性别多样性认同感概念的理解

通过本次调查问卷的有效结果得出，在“你认为以下哪一项最符合你对性别认同感概念的理解?”的问题中，多数人选择D“是个体表达身份的方式”。而较少人选择C“是个体对自我能力的认同”，这意味着多数被调查者将性别认同感理解为一种个体表达与展现自我身份的方式，强调个人对自身性别特质的主动表达与外在呈现。这说明被调查者倾向于从自我表达与社会互动的角度理解性别认同，而非仅仅局限于身体性别差异或自我能力认同。整体上调身份表达的主观能动性。

（三）衡量性别多样性的层面

通过本次调查问卷的有效结果得出，在“你认为以下哪一项最符合你对性别多样性的特征认知？”的问题中，多数人选择B“个体性别表达多样化”，而较少人选择A“个体不认同传统男性或女性”这意味着大多数被调查者认为性别多样性的核心特征在于个体性别表达的多样化，也就是人们能够以多元方式展现自己的性别身份。这显示大众对性别多样性的理解已从传统的“二元划分”转向更开放、灵活的认知，强调外在表达与个人选择的自由。同时，较少人将其仅视为对传统性别的不认同，说明社会对性别多样性的理解正在从“对抗性”转变为“包容性”，重视多样表达而非对立。

（四）了解性别多样性认同感的重要性

通过本次调查问卷的有效结果得出，在“.您认为下列哪一项最能体现性别多样性认同感的重要性?”的问题中，多数人选择A“推动社会向更加开放和包容的方向发展”，而较少人选择C“促进校园文化的多元化发展”。这意味着大多数被调查者认为

性别多样性认同感的重要性在于推动社会的开放与包容，这反映出性别多样性认同感视为促进社会整体进步与平等的重要力量。整体而言，被调查者普遍认可性别多样性认同感对社会包容性与文化多元化具有深远意义。

（五）性别多样性认同感的现状调查

所收集的性别多样性认同感的现状测度问题进行可靠性分析，得出测试的项目总数为 23 个，整体结果的信度值为 0.861，大于 0.7，证明本调查问卷中的全部性别多样性认同感的现状收集到的数据可靠性较高，可以判断出本问卷设计的全部现状测度问题大多数都比较认同泰国高校大学生对性别多样性的认同感现状问题，对于问卷内某一些特定的问题，多数被调查者都会选择同样的答案，无过多差异，具有较高的一致性。

个人角度包含2个指标，分别为“我在传统性别角色与个人追求间有冲突”（均值为2.56）和“我对泰国的性别多样性文化认知不足”（均值为2.47），均值都小于3.5，可见在个人角度被调查者对于性别多样性认同感的现状的问题较小。

家庭角度包含6个指标，分别为“家庭的文化成为性别认同接受的障碍”均值为（3.14）“宗教背景成为性别认同接受的障碍”(均值为3.28）“父母会对性别差异表现出焦虑与否认”(均值为2.93）“家庭对性别多样性的理解滞后”(均值为3.17)“家庭表面接纳，会要求在特定场合“隐藏”性别身份”(均值为2.96)“性别多样性在家庭支持上的缺失”(均值为2.91)均值都小于3.5，在家庭角度被调查者对于性别多样性认同感的现状问题较小

学校角度包含10个指标，分别为“学校没有反欺凌政策”(均值为2.93）“教师对于性别多样性认同的培训不足”(均值为2.91）“关于性别多样性认同的教材更新滞后”(均值为3.13）“学校缺乏对性别多样性认同的制度性支持”(均值为3.16）“学校缺乏性别多样性的可持续性组织资源和行政保障”(均值为3.18）“教师在面对性别歧视时未及时干预”(均值为3.17）“校园存在二元性别偏见”(均值为3.35）“学校缺乏性别包容政策”(均值为3.02）“高校对于性别多样性教育资源分配不均”(均值为3.07）“学校没有建立相关心理健康支持体系”(均值为3.10）均值都小于3.5。在学校角度被调查者对于性别多样性认同感的现状没有问题。

社会角度包含5个指标，分别为“泰国教育传统中存在性别刻板印象”(均值为3.09）“教育系统中面临政策存在但未被执行的困境，缺乏性别多样性支持机制”(均值为3.15）“社会对性别多样性教育不足”(均值为3.26）“学性别多样性服务配套仍不足”(均值为3.28）“社会偏见”(均值为3.41），均值都小于3.5，在社会角度被调查者对于性别多样性认同感的现状没有问题。

由此看出被调查者的性别多样性认同感现状无论在个人角度，家庭角度，学校角度还是社会角度，均值都小于3.5，其中最大值是“社会偏见”为3.41最小值是“我对泰国的性别多样性文化认知不足”为2.47，绝大多数被调查者对于性别多样性认同感的现状没有太大问题。这也意味着泰国高校大学生在性别多样性认同方面总体状况良好，问题较小。其中，社会层面的“社会偏见”均值最高（3.41），显示外部社会环境仍存在一定刻板印象；而个人层面的“对泰国性别多样性文化认知不足”均值最低（2.47）。

总而言之大学生对性别多样性已有较高认知与接受度。总体来看，学生的性别多样性认同感较强。

（六）性别多样性认同感问题产生因素的影响程度

根据表 24 可以看出所有因素的均值都介于2.88到3.47之间，表明所有层面的阻碍都处于“低度”到“中度”之间，没有出现普遍性的、压倒性的负面环境。

个人层面的因素均值相对较低，特别是“同伴关系”均值低于3.0。这表明，个人内在的探索过程和同伴环境，并未被普遍视为强大的压制性力量。也可能在同伴中找到了一定的理解和支持，自我认同的旅程拥有相对宽松的心理和社交空间。

家庭层面是均值最高的层面，说明家庭是主要的阻力来源。但均值并未高于3.5，表明这种负面影响力并非无处不在或强度极高。这意味着有相当数量的家庭提供了中立甚至支持性的环境，为我们聚焦于帮助那些陷入困境的家庭提供了明确的切入点。

学校层面中的“评估体系”“教育理念”和“教育内容”是全部因素中均值最低的。它意味着现行的教育是提升性别多样性认同的主要层面，阻力小并且能减少对于传统性别的观念障碍。

社会层面各个因素的均值未超过3.5，其中，“性别刻板印象”（均值为3.47）虽然是最高值，但没有达到3.5；而“性别平等政策”（均值为3.29）与“性别意识教育”（均值为3.18）因素的均值相对更低，表明整体环境对性别多样性展现出包容。

总体而言性别多样性认同感问题产生因素的影响程度较小，大部分被调查者认为性别多样性认同感问题产生的因素，并不会影响到他们。

（七） 解决性别多样性认同感问题方案

根据调查结果，针对泰国高校大学生对于性别多样性认同感问题，从4个角度提出相应的解决方案。（个人角度，家庭角度，学校角度，社会角度）

1.个人角度的解决方案：

有88名被调查者选择“A.个体保持自己的文化特色”，个案百分比为46.8%；有109名被调查者选择“B.积极展示成就与故事”，个案百分比为58%；有93名被调查者选择“C.参与非传统性别角色体育活动”，个案百分比为49.5%；有97名被调查者选择“D.参与性别议题讨论与决策”，个案百分比为51.6%；有111名被调查者选择“E.超越传统性别界限，探索自我潜能”，个案百分比为59%；

其中选择“A.个体保持自己的文化特色”的被调查者最少，解决方案：个体在尊重自身文化背景的基础上，理解不同文化中的性别表达方式；开展“文化与性别”主题工作坊，探讨如何在传统文化中融入性别平等观念。

2.家庭角度的解决方案

有111名被调查者选择“A.通过家庭教育与辅导干预来帮助家长并支持子女”，个案百分比为59%%；有96名被调查者选择“B.家庭支持可有效减轻污名、歧视和孤立带来的心理负担”，个案百分比为51.1%；有110名被调查者选择“C.家庭通过发展同理心，进而支持子女的身份认同”，个案百分比为58.5%；有134名被调查者选择“D.父母应通过沟通理解多样性别文化，为子女提供尊重与开放的环境”，个案百分比为71.3%；有78名被调查者选择“E.建立家长支持团体以促进性别多样性认同感的形成与巩固”，个案百分比为41.5%；

其中选择“E.建立家长支持团体以促进性别多样性认同感的形成与巩固”的被调查者最少，解决方案：积极建立多元的家长支持团体，如线上社群和线下互助会，并为其提供专业的启动资源和引导。这能将孤立的家庭连接成彼此支撑的网络，通过经验分享和情感共鸣，极大增强家长的支持能力，从而有效巩固子女的性别身份认同。

3.学校角度的解决方案

有140名被调查者选择“A.将性别视角融入教学促进学生对性别多样性的认识与尊重”，个案百分比为74.5%；有67名被调查者选择“B.竞争力课程和游戏化教学的实施干预”，个案百分比为35.6%；有106名被调查者选择“C.建立包容性校园文化”，个案百分比为56.4%；有104名被调查者选择“D.性别多样性教育融入各专业课程”，个案百分比为55.3%；有88名被调查者选择“E.制定适应学生需求的教育策略制定”，个案百分比为17.4%；

其中选择“E.制定适应学生需求的教育策略制定”的被调查者最少；解决方案：将性别多样性知识融入必修课或讲座，营造普遍尊重与理解的氛围。

4.社会角度的解决方案

有124名被调查者选择“A.加强性别平等教育：将性别平等教育纳入课程体系”，个案百分比为66%；有96名被调查者选择“B.建立支持性服务组织： 提供 交流、互助和成长的平台”，个案百分比为51.1%；有101名被调查者选择“C.开展多元文化活动：办多元文化节、性别平等讲座等活动”，个案百分比为53.7%；有108名被调查者选择“D.提升可见度与认可度：通过媒体报道，公共讲座等形式”，个案百分比为57.4%；有97名被调查者选择“E.建立性别友好校园环境：制定性别友好政策”，个案百分比为51.6%；

其中选择“B.建立支持性服务组织： 提供 交流、互助和成长的平台”和“E.建立性别友好校园环境：制定性别友好政策”的被调查者最少，对于“B.建立支持性服务组织： 提供 交流、互助和成长的平台”，解决方案：政府鼓励企业、学校、公共服务机构制定并公布自己的“性别友好政策”，包括反歧视、包容性设施等；对于“E.建立性别友好校园环境：制定性别友好政策”，解决方案：制定一套具体的《校园性别友好指南》，明确反欺凌政策、包容性设施标准和身份尊重规范，让学校有章可循。同时，建立“性别友好校园”认证激励体系，对达标的学校给予认可和资源倾斜，从而激发学校的主动性，确保这些政策能从纸上落到实处，真正为学生创造一个被看见、被尊重的安全环境

六、建议

（一）前置对比讨论

1.与Wang et al.(2020)泰国全国调研对比：全国样本社会刻板印象均值更高，本研究高校学生整体包容度优于社会普通民众，证明高校教育具备正向干预作用；但本研究家庭阻碍影响强度与Wang研究结论一致，家庭是统一核心约束；

2.与Glover & Martin-Storey(2023)欧美青少年家庭研究对比：欧美家庭阻碍多源于亲子观念冲突，而泰国家庭约束根源为佛教传统二元性别伦理、宗族面子文化、长辈固有认知，文化驱动机制存在显著差异，不能直接照搬西方家庭干预方案。

（二）家庭成为主要阻碍的泰国文化特殊成因

1.泰国传统佛教文化强调男女二元社会分工，家庭代际传递传统性别角色规范；

2.本土家庭属于宗族本位，子女性别身份表达会被视作影响家族声誉，家长普遍存在隐藏、否认倾向；

3.泰国缺乏普及性家长性别平等教育，多数父母仅通过传统社会认知形成性别

观念，缺少专业知识支撑。

（三）泰国本土文化对研究结果的特殊影响

泰国对外呈现包容的性别文化氛围，但表层包容与家庭、教育系统深层二元刻板印象存在割裂；社会允许多元性别表达，但家庭、学校制度未配套包容支持，形成“社会宽松、家庭约束、校园制度缺位”的独特矛盾，也是本研究均值整体偏低但家庭维度阻力突出的核心文化诱因。

（四）分层对策（全部对策按短期、中期、长期划分）

1.个人层面

短期（1年内）

（1）开展校园性别知识工作坊，补充泰国本土多元性别文化科普，弥补学生认知短板；

（2）搭建校内同辈交流社群，依托同伴支持缓解个体身份冲突。

中期（1－3年）

（3）常态化性别议题课堂讨论，引导学生反思自身刻板印象；

（4）开放校内心理咨询渠道，为身份困惑学生提供支持。

长期（3年以上）

（5）形成终身自我教育习惯，持续跟进性别平等社会议题，培养稳定包容共情能力。

2.家庭层面

短期（1年内）

（1）开设线上家长科普讲座，普及性别多样性基础概念，缓解父母焦虑；

中期（1－3年）

（2）组建区域性家长互助社群，分享接纳子女多元身份的家庭案例；

（3）家校联动发放家庭沟通指导手册，引导开放式亲子对话；

长期（3年以上）

（4）推动社区老年性别平等宣讲，弱化跨代传统二元性别观念传递。

3.学校层面

短期

（1）完善校内反性别欺凌明文政策，建立校园性别歧视干预流程；

（2）开展全体教师性别多样性专项培训，填补师资认知缺口；

中期

（3）将性别多样性内容纳入通识必修课，均衡分配性别教育资源；

（4）设立校园性别友善社团、专属活动场地，打造包容校园文化；

长期

（5）建立标准化校园性别友好认证机制，形成长效行政保障体系。

4.社会层面

短期

（1）官方媒体投放多元性别正向宣传内容，消解社会刻板印象；

中期

（2）政府扶持性别互助社会组织，提供运营资源与场地支持；

（3）把性别平等教育纳入国民基础公共教育体系；

长期

（4）完善高校性别平等配套法律法规，推动政策落地执行，解决“政策空转”问题。

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在泰中国留学生文化冲突现状与对策分析
The Current Situation and Countermeasures of Cultural Conflicts Among Chinese Students Studying in the Universities in Thailand

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摘要

本文以在泰中国留学生群体为调研对象,帮助中国留学生泰国对文化差异与文化冲突的概念理解、文化冲突产生的影响以及产生文化冲突因素等方面。本文采用描述性研究法、文献研究法、定量分析法、问卷调查法和数据分析法，再通过发放调查问卷的形式，对留学生的文化冲突现状进行调查。在将问卷进行回收分析后得出结论:在泰中国留学生遇到跨文化冲突问题主要分为3个层面:个人层面、学校层面和社会层面。给出建议：个人层面：针对语言基础薄弱的问题，应积极参加语言培训班或与当地学生结伴练习等。学校层面：高校应改进教学模式，采用更多互动式、情境化教学等。社会层面：社会应营造包容友好的生活环境，提供语言交流平台与文化活动等。
关键词:文化冲突；在泰中国留学生；文化差异

Abstract

Against the backdrop of intensifying Sino-Thai educational cooperation, the rapidly expanding population of Chinese international students in Thailand has rendered cross-cultural conflict a pressing concern for academic success and psychological adjustment. This study empirically examines the multifaceted nature of cultural conflict among this cohort, drawing on Hofstede's cultural dimensions theory and Berry's acculturation framework. Using a validated questionnaire (Cronbach's $\alpha = 0.909$) administered to a representative sample, the research identifies that conflicts are most pronounced at the individual level, with significant predictors including language proficiency, academic system disparities, and sociocultural distance. The findings contribute to cross-cultural adaptation literature by contextualizing existing models within the Southeast Asian higher education setting. Practically, the study offers targeted recommendations for universities, policymakers, and students to mitigate conflict and foster adaptive strategies, thereby supporting the well-being and academic integration of Chinese students in Thailand.

Keywords：Cultural conflict; Chinese students in Thailand; cultural differences

一、引言

全球化推动国际教育交流日益频繁，跨国文化碰撞也随之增多。近年来赴泰留学人数大幅增长，2025年1月中国在泰留学生已达28025人，预计当年将突破7万人。中泰文化、习俗与社会环境存在诸多不同，中国留学生在泰学习生活中普遍面临各类文化冲突，易引发心理不适、学业受阻等问题，甚至滋生矛盾事件。文化冲突不仅影响留学生身心健康与成长，也对中泰教育文化交流形成阻碍。因此本文以泰国多所高校中国留学生为调研对象，采用多种研究方法开展调研，分析文化冲突现状、影响因素并制定对应对策，帮助留学生提升跨文化交际能力，更好地适应在泰学习与生活。

二、研究目的

（一）研究问题

1. 分析在泰中国留学生文化冲突的现状
2. 针对在泰中国留学生所遇到的文化冲突问题提出相应对策或建议

（二）研究目标

1.发现在泰中国留学生所遇到的文化冲突问题
2.帮助中国留学生提升跨文化交际能力以更好地适应在泰国的学习与生活

（三）研究意义

1.实践意义

从社会层面看，研究可以明确留学生在文化适应过程中最集中、最严峻的挑战是什么。这些结论可以反馈给中国教育部、驻泰大使馆等，帮助其完善行前培训内容，增强领事保护中的心理和文化支持服务，制定更具有针对性的留学生管理和援助政策。同时，也能帮助留学生更有效地传播中国文化，减少误解，成为连接两国民间桥梁。从学校层面看，本研究可以积累丰富中国留学生赴“东盟国家”留学的实证资料，填补了特定区域研究空白，丰富了高等教育国际化理论。其案例也可成为相关专业课堂上生动、贴切的教材。同时，学校可以依据研究结论改进服务，如开设针对性泰语和文化课程等，从而提升国际化办学水平和吸引力。从个人层面看，通过对策研究，学生可以学会如何适应新的教学风格，如何与泰国的老师与学生进行有效的交流，减少学习生活上的障碍，确保学有所成。同时，良好的文化适应能让留学生更深入体验泰国社会，收获一段充实、愉快的留学经历。

2.理论意义

近年来，全球化加速，中外交往愈发密切，文化碰撞现象频发。文化差异带来的各类问题，阻碍跨国沟通与合作。开展针对在泰中国留学生文化冲突的研究，剖析现状、成因并构建应对框架，对跨文化交际、国际教育领域均具备理论价值。

目前国内外现有研究多聚焦中西方留学生文化冲突，专门针对泰国及东盟区域中国留学生的专题研究偏少；同时多数同类文献以定性描述为主，缺少大样本量化分析与多理论结合的实证探索。因此开展本项研究，既能补充东南亚跨境留学领域的研究成果，也能依托霍夫斯泰德文化维度、Berry文化适应、AUM等多重理论搭建分析框架，完善相关研究范式。本文希望通过研究与调研，为在泰中国留学生群体等提供有针对性的对策和建议，助力留学生提升跨文化交际能力，也为同类后续研究提供思路、数据与框架参考。

（四）概念性框架

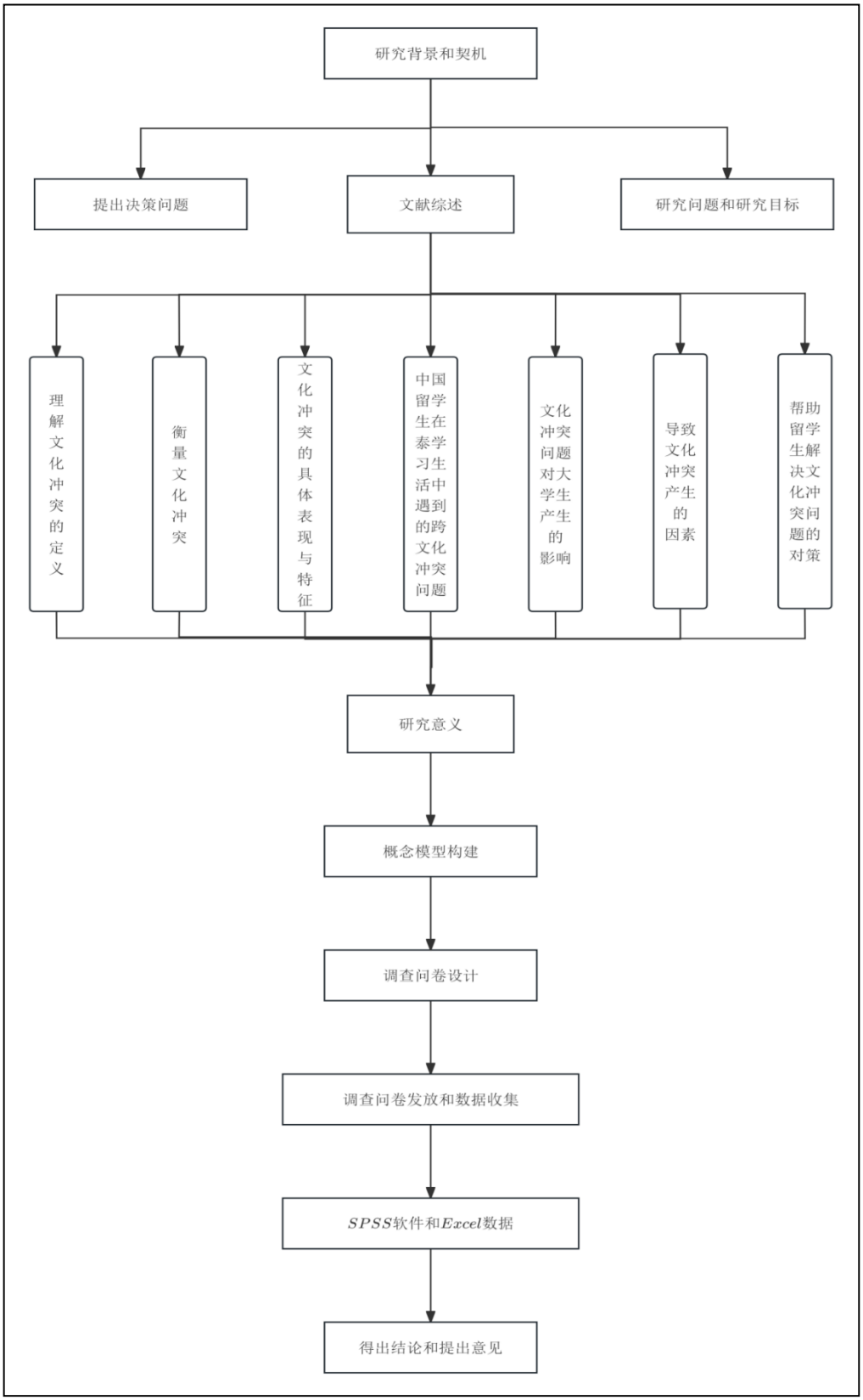

图1：概念性框架图

三、文献综述

1. 文化差异与文化冲突的概念界定

狄静（2021）指出文化差异即不同文化背景的持有的文化区别。于珍妮（2024）指出文化冲突本质第一，文化冲突是政治、经济利益冲突。 第二，文化冲突是社会转型与文化转型过程中的文化反弹。第三，文化冲突是意识形态、价值观念与宗教信仰的对抗。王光斌（2025）指出文化冲突本质上是价值理念的冲突。

2.衡量文化冲突

肖娴,张长明（2016）留学生教育中的文化冲突不仅有技术层面的表层冲突，还有关乎时空观、价值观、社会规范的深层信仰冲突。Xuliang Z, Zhao J.（2019）指出跨文化冲突维度分为社会文化适应维度、 心理适应维度以及学术适应维度。跨文化适应问题分为语言问题、饮食方面的问题、气候问题、社会交往、从心理适应性、语言适应性、文化适应性、生活适应性出发。

霍夫斯泰德文化维度理论也是学界常用的文化冲突衡量工具，该理论提出六大文化维度，分别为个人主义和集体主义、权力距离、不确定性规避、短期取向与长期取向、男性文化和女性文化、放纵与克制，能够从宏观层面对不同国家、地区的文化特质进行量化对比，是分析国别文化差异与冲突根源的经典理论。

3.文化冲突具体表现与特征

张欢,文铭,孟浩（2019）指出我国高校留学生日常管理中跨文化冲突主要表现在以下几个方面:(1) 言语冲突；(2) 非言语 (交际) 冲突；(3) 价值观冲突价值观。鲁钊阳（2023）指出师生文化冲突问题第一，语言层面的冲突；第二，沟通方式层面的冲突；第三，价值观层面的冲突。

4.中国留学生在泰学习生活中遇到的跨文化冲突问题

Ahmed A H, Hamed O A O, Gocheva S.（2020）指出留学生在国外学习时面临困难包括文化冲击和变化、语言障碍、感知到的文化差异、思乡之情、缺乏社会支持、自我效能感下降和压力以及其他心理健康问题。陈晓东,佘昕懿（2022）指出新环境下来华留学生面临的主要问题：（1）人际交往单调；（2）语言交流障碍；（3）中外文化冲突；（4）自然环境不适应。

5.文化冲突问题对大学生产生的影响

朱苏静（2013）指出“文化休克” 的心理症状：（1）孤独无助；（2）焦虑担心，会产生焦虑、担心、急躁情绪；（3）精神紧张，再加上学习压力，就可能导致精神紧张、学习效率低下。赵厦（2017）指出中国留学生海外留学应对问题：（1）生活学习压力；（2）文化落差造成心理压力。

6.导致产生文化冲突产生的原因

Ahmed A H, Hamed O A O, Gocheva S（2020）指出语言技能不足被认为是 阻碍留学生顺利适应的最大问题之一，直接影响学术和非学术方面。于金力（2021）指出非洲来华留学生非言语交际问题成因有主观原因：情感因素影响有学习动机不明确、态度消极和性格内敛三种。客观原因有留学生管理方面：交际双方的理解方面。Zheng X（2025）指出导致国际学生身份认同不清的因素：（1）文化差异；（2）课程设计与课堂互动；（3）学生的自我适应和协调能力。

7．帮助留学生解决文化冲突问题的对策

Jing L, Jotikasthira N（2023）指出泰国政府机构应制定相应的政策和法律来保护国际学生；泰国当地高校应积极为中国学生安排精通中泰双语的导师；国外大学可以尝试举办中外学生社团、中外美食文化节等校园活动；对国外大学教职员工进行中国文化培训。Zihan L, Caizhi L.（2025）指出关于预防和解决中东欧国际学生在中国跨文化适应问题的建议政策建议（1）增加文化交流活动（2）多元文化教育的发展。操作建议（1）优化语言教学与培训。（2）加强信仰与社会实践指导。（3）建立健全的社会支持网络。

Berry文化适应策略模型是跨文化适应领域的重要理论，该模型以“是否保留本土文化”“是否融入东道国文化”两个维度，划分出整合、同化、分离、边缘化四种个体适应模式，常被用于分析留学生面对文化差异时的行为选择与适应状态，也为制定差异化帮扶对策提供理论支撑。

四．文献综述总结

现有研究围绕文化冲突的概念、衡量标准、表现特征、影响、成因及解决对策展开了大量探讨，多数文献立足于现象描述，总结留学生在语言、生活、学业、社交等方面的现实问题，并提出普适性应对方案。本文研究同时引入霍夫斯泰德文化维度理论与Berry文化适应策略模型作为理论支撑。霍夫斯泰德文化维度理论、Berry文化适应策略模型与以往研究中用到的相关理论存在明显区别。以往研究多聚焦文化冲突的表层现象、沟通逻辑与个体综合能力，霍夫斯泰德理论偏向从宏观国家文化层面追溯冲突根源，Berry模型则聚焦微观个体的文化适应行为与选择，二者从全新视角补充了现有研究的分析维度。

四、研究设计规划

（一）研究方法

1.描述性研究法

根据本文的角度，描述性研究是对在泰中国留学生的个人层面、学校层面和社会层面这三个层面的文化冲突现状以及来自个人角度、学校角度和社会角度这三个角度的文化冲突产生因素的调查研究。

2.文献研究法

研究文献中有关留学生文化冲突的研究以及前人对文化冲突这一方面领域的具有权威性的研究成果,再结合调研对在泰中国留学生产生文化冲突问题的行为表现、文化冲突问题给留学生个人和生活环境带来的影响、社会文化冲突问题的影响因素等有关问题作为一手数据，两者相结合，最终达到本文研究的目的,评估在泰高校中国留学生的文化冲突现状以及对这些问题提出具有针对性的相应对策。

（二）调查方法

1.问卷调查法

本研究所采用的调查方法是问卷调查法。调研者将所要研究的在泰高校中国留学生的文化差异现状与对策研究相关问题编制成选择题和问题表格等题目类型，以调查问卷的形式分发给调查对象。通过发放纸质问卷调查的文化冲突现状、分析影响留学生文化冲突问题的因素以及了解其对文化冲突问题对策分析的看法与意见。为了保证问卷的效度，在泰中国留学生的文化冲突现状与对策研究及影响因素调查问卷中的项目是建立在已有文化冲突相关研究文献中的理论构成、文献分析、问卷统计结果等

的基础之上，这使问卷中的项目较大限度地贴近在泰中国留学生文化冲突现状和影响因素的研究范畴。本研究采用了描述性研究的研究方法，因此采用问卷调查法是合理的，贴合本研究需求。选用问卷调查法，目的是为了能够很好地收集在泰高校中国留学生的文化冲突现状。通过问卷调查法，收集问卷数据，了解中国留学生的个人层面、学校层面和社会层面的文化冲突以及个人角度、学校角度和社会角度对中国留学生的文化冲突的影响。通过问卷调查的方式收集来自在泰中国留学生的第一手数据将调查结果进行总结并用于论文研究。结合文献研究法中关于留学生文化冲突的相关理论和模型，提出克服文化差异的解决方案，并且帮助留学生。

（三）调查问卷的样本说明

项目	份数
发放问卷	223
回收问卷	223
无效问卷	41
有效问卷	182
有效率	81.61%

表1 问卷回收情况表

本次问卷调查发放问卷共223份，回收率达到100%，其中废卷共41份，有效问卷182份，问卷的有效性达到81.61%，可作为本次研究的数据参考。

（四）信度分析

信度即可靠性，指检验调查问卷的数据可靠性。本次关于在泰中国留学生的文化冲突现状与对策研究的调查问卷，依靠 SPSS 分析软件进行信度分析，检验问卷数据的一致性、 可靠性和一贯性。在将问卷数据输入SPSS分析软件中，所测出的信度，即表明问卷的可靠性。当信度在0.6-0.7之间,说明问卷的可靠性不高,可参考性较弱,需要进行修改;当信度在0.7-0.8 之间,说明问卷的可靠性一般,问卷可以接受但需要调整;当信度在0.8以上，说明问卷的可信性高，问卷的数据真实且可靠。

表2 全部变量的可靠性

可靠性统计	
克隆巴赫 Alpha	项数
.909	34

从表2可看出，调研者将调查问卷中除单选题和多选题外的其它设计题目的数据进行可靠性分析，得出测试的项目总数为34个，整体结果的信度值为0.909，大于0.7，可得出所有有效样本数据从整体来看可靠性较高。由此可知，受访学生在填写问卷时，在答案的选择和填写上并没有太大的差异性，前后矛盾的地方也较少，所有数据都真实有效，有较强的一致性。

（五）抽样方式

1.样本结构

表3 样本抽样数目表

学院	男生人数	女生人数	样本总数	抽取比例
商学院	34	41	75	41.20%
医学院	0	0	0	0
旅游学院	0	0	0	0
语言学院	40	55	95	52.20%
传媒、艺术设计学院	7	5	12	6.60%
总数	81	101	182	100%

本次调研采用的是全部抽样及非概率抽样中的判断抽样，根据研究的目标和自己主观的分析来选择和确定调查对象;调查对象是在泰国H大学、A大学、D大学、U大学、B大学、N大学、C学院、M大学商学院、医学院、语言学院、旅游学院、传媒、艺术设计学院的中国留学生。样本数量为商学院总75人，男生34人、女生41人；医学院总0人；语言学院总95人，男生40人、女生55人；旅游学院总0人；传媒、艺术设计学院总12人，男生7人；女生5人。

五、研究结论

（一）基本信息调查

表4 样本基本信息之性格

	概率	百分比	有效百分比	有效百分比
A.外向开朗型	43	23.6	23.6	23.6
B.稳重理性型	30	16.5	16.5	40.1
C.内向敏感型	41	22.5	22.5	62.6
D.随性自由型	68	37.4	37.4	100.0
总计	182	100.0	100.0	

根据调查结果，在有效样本中，商学院的留学生有75人，占总样本的41.20%，语言学院的留学生有95人，占样本的52.20%，传媒、艺术设计学院中国留学生有12人，占样本的6.60%，从数据看，语言学院的中国留学生是最多的。性格方面，统计被调查者填写性格可知，外向开朗型有43人，稳重理性型有30人，内向敏感型有41人，随性自由型有68人。被调查者随性自由型性格人数是最多的，稳重理性型性格人数是最少的。

（二）文化差异与文化冲突概念界定

5 文化冲突的理解

	概率	百分比	有效百分比	有效百分比
A.是价值理念的冲突	14	7.7	7.7	7.7
B.是各文化间存在的差异	47	25.8	25.8	33.5
C.是意识形态、价值观念与宗教信仰冲突	86	47.3	47.3	80.8
D.是发生在受文化界限分隔的个人或社会群体之间的冲突	35	19.2	19.2	100.0
总计	182	100.0	100.0	

通过本次调查问卷的有效结果得出，在“以下哪一项最符合您对于文化冲突的理解?”的问题中，多数人选择C“是意识形态、价值观念与宗教信仰的冲突”。而少数人选择A“是价值理念的冲突”，这说明是意识形态、价值观念与宗教信仰的冲突最符合中国留学生对文化冲突的理解，而是价值理念的冲突不符合中国留学生对文化冲突的理解。

通过本次调查问卷的有效结果得出，在“以下哪一项最符合您对于文化差异的理解?”的问题中，多数人选择D“是价值观、认知方式、社会取向等方面表现的差异”。而少数人选择B“是不同文化背景持有的文化区别”，这说明是价值观、认知方式、社会取向等方面表现的差异最符合中国留学生对文化冲突的理解，而是不同文化背景持有的文化区别不符合中国留学生对文化差异的理解。

（三）衡量文化冲突

通过本次调查问卷的有效结果得出，在“以下您认为哪项最适合用来衡量文化冲突?”的问题中，多数人选择D“从语言问题、饮食、气候、社会交往、心理适应性、文化适应性、生活适应性七个方面”，而较少人选择A“从时空观、价值观、社会规范的深层信仰三个方面”，这意味着大多数受访者认为衡量文化冲突的最佳方法是从语言问题、饮食、气候、社会交往、心理适应性、文化适应性、生活适应性七个方面，这表明大多数受访者认为，衡量文化冲突的最佳方式应从语言交流、生活方式及社会交往等具体层面进行考量。这一选择反映出受访者更关注文化冲突在实际生活中的具体表现，如语言沟通障碍、饮食习惯差异、气候不适、社会交往方式以及心理与文化适应性等。这些因素直接影响个体在跨文化环境中的互动与适应，是文化冲突的主要来源和显性体现。相较之下，较少的被调查者选择从时空观、价值观及社会规范的深层信仰三个方面来衡量文化冲突。虽然这些深层次的文化因素在理论上具有重要意义，但它相对抽象，不易在短期的跨文化交往中被直接感知。因此，整体来看，受访者普遍倾向于从可观察、可体验的实际生活层面来衡量文化冲突，而非仅停留在深层文化结构的理论层面。

表6 衡量文化冲突

	概率	百分比	有效百分比	有效百分比
A.从时空观、价值观、社会观范的深层信仰三个方向	20	11.0	11.0	11.0
B.从教育环境、文化传统、社会礼仪、时间观念和婚恋态度五个方面	51	28.0	28.0	39.0
C.从生活适应性、语言障碍、制度理解偏差、行为和精神五个文化方面	32	17.6	17.6	56.6
D.从语言问题、饮食、气侯、社会交往、心理适应性、文化适应性、生活适应性七个方面	79	43.4	43.4	100.0
总计	182	100.0	100.0	

（四）文化冲突的具体表现与特征

通过本次调查问卷的有效结果得出，在“您认为以下哪一项最能体现现阶段您的跨文化冲突问题？”的问题中，多数人选择D“思维方式、价值观念、审美趣味、语言表达和行为方式冲突”，而较少选择A“语言文化和课堂文化冲突”。这一结果表

明，大多数中国留学生认为他们在跨文化交往中面临的主要困难来自于更深层次的文化差异，而不仅仅是语言或课堂环境的适应问题。

（五）文化冲突问题对大学生产生的影响

通过本次调查问卷有效结果得出，“您认为以下哪一项最能体现出文化冲突对大学生产生的影响？”的问题中。多数人选择B“影响大学生价值观选择”，而较少人选择C“对行为规范产生负面冲击”。这意味着文化冲突往往会促使大学生重新审视自身的价值取向和判断标准，影响他们在学业、生活和人际交往中的决策。而行为规范的变化相对直接且可控，因此受访者认为其影响较小。这说明学生更关注文化冲突对内在思维方式和价值选择的潜移默化作用，而非外在行为的调整。

（六）中国留学生在泰学习生活中遇到的跨文化冲突问题

从个人、学校和社会三个层面分析中国留学生在泰国学习生活中遇到的跨文化冲突问题，个人层面的取值范围在1.10到4.70之间，平均水平为2.77，标准差为0.6254；学校层面的取值范围在1.00到4.83之间，平均水平为2.29，标准差为0.7561；社会层面的取值范围在1.00到5.00之间，平均水平为2.06，标准差为0.8862。个人层面的平均值最高（2.77），说明学生在个人适应方面的困难较为明显，如语言、生活习惯等；学校层面次之（2.29），反映出部分学生在学习方式、教学语言等方面存在一定不适；社会层面的平均值最低（2.06），表明大多数学生在社会交往中的文化冲突相对较少。总体来看，三方面均处于中等偏低水平，说明学生整体适应情况较好，但个体差异仍存在。

（七）导致文化冲突产生的因素

个人角度的平均值为3.16，标准差为0.8567，说明多数学生在个人层面上对文化差异的感受处于中等偏上水平。个体在价值观、性格及生活方式上的差异，是影响文化适应的重要因素。部分学生在面对新文化时表现出较好的开放性与包容性，但也有一些人因认知方式或自我标准不同而产生适应困难。学校角度的平均值为2.70，标准差为0.7839，显示学生在学校环境中的文化差异感受相对较轻。多数学生能较好地适应学校的教学方式与校园文化，但仍存在少部分学生在教学语言、学习方法或课堂氛围方面感到不适。这反映出教育环境在促进文化融合方面虽有积极作用，但仍需进一步关注学生的个体差异。社会角度的平均值为3.13，标准差为0.8631，表明学生在社会层面的文化差异体验较为明显。社会交往、生活习惯及文化制度的不同，使部分学生在跨文化沟通中面临一定挑战。标准差较大说明个体差异显著，一些学生已较好地融入当地社会，而另一些则仍处于适应阶段。

总体来看，三个层面均处于中等水平，说明学生普遍能适应文化冲突，但仍存在不同程度的挑战。其中个人与社会层面差异感受更强，提示在跨文化教育与社会融入中应加强心理调适和社交支持，以帮助学生更好地适应多元文化环境。

（八）帮助在泰中国留学生解决文化冲突问题的对策

根据调查结果，针对在泰中国留学生的文化冲突问题提出相应的解决方案。首先，从个人角度：选项 A“入乡随俗”得到了113人（占比 62.1%）的认同。这表明大多数学生认为适应当地的生活习惯和文化规范是应对文化差异的关键。入乡随俗不仅能帮助留学生更快融入当地社会，也能减少因行为方式或礼仪差异带来的误解与冲突。建议学校在新生入学初期加强文化适应指导，如举办“本地文化体验周”或“生

活礼仪讲座”，帮助学生了解并实践当地文化习俗。选项 B“加强泰语以及英语的语言文化学习”得到了154人（占比 84.6%）的高度认同，是最受支持的应对方式。语言是文化理解和交流的核心，良好的语言能力不仅能提升课堂学习效果，还能促进社会交往与文化融合。建议在课程体系中增加实用性语言课程，如日常沟通、学术写作与文化语境理解，并鼓励学生积极与本地人交流，以强化语言实际运用能力。选项 C“出国前做好经济和心理方面的准备”得到124人（占比 68.1%）的支持，反映出留学生普遍认识到经济规划与心理建设的重要性。充足的经济准备有助于减轻生活压力，而良好的心理准备则能增强适应力与抗压性。建议高校与派出机构在出国前提供经济预算指导和心理适应培训，如“跨文化心理调适讲座”，帮助学生建立积极的应对心态。选项 D“多与学习汉语的泰国学生开展联谊活动”得到了112人（占比67.3%）的选择。跨文化交流是双向的过程，通过与当地学生互动，留学生不仅能了解泰国文化，也能传播自己的文化，增进相互理解。建议学校定期组织中泰学生联谊活动、语言交换项目或文化节，让双方在交流中实现文化共融。选项 E“选择真正感兴趣的专业，并努力学习泰语”获得了107人（占比 58.8%）的支持。这说明学生普遍意识到兴趣与语言能力在文化适应中的积极作用。学习感兴趣的专业能提升学习动力，而熟练掌握泰语能促进学业与生活上的融入。建议在选专业阶段提供充分的学术咨询与兴趣测评，并鼓励学生在学习期间持续提升语言水平。

总体来看，中国留学生在个人层面上对文化适应已有较成熟的认知，其中语言能力与心理准备被视为核心要素。为提高文化适应的有效性，建议学校从语言培训、文化融入、心理辅导和学术指导等多方面建立支持体系，帮助学生实现更加平稳和高质量的跨文化过渡。

其次，从学校角度：选项 A“合理控制招生质量”共有 66 人选择，（占比36.3%）。这表明部分学生认为学校应在招生环节加强把控，确保录取的留学生具备一定的语言基础和文化适应能力。合理的招生标准不仅有助于维持教学质量，也能减少学生在学习和生活中因差异过大而产生的适应困难。建议学校在招生过程中适当引入语言水平测试或文化适应评估，并在录取后提供必要的入学前辅导，帮助学生提前了解学习环境。选项 B“组织中泰学生联谊会”共有135人选择，占比（74.2%）。这说明大多数学生认为跨文化交流活动是促进理解与融合的重要途径。中泰学生联谊活动能为双方提供相互学习与沟通的平台，增强友谊和文化认同感。建议学校定期举办交流活动，如文化节、节日庆典、志愿项目等，让中外学生在互动中加深对彼此文化的理解，营造包容的校园氛围。选项 C“着力开放跨文化教育课程”得到138人支持，占比（75.8%），是最受欢迎的选项。多数学生认为跨文化教育课程能帮助他们深入理解不同文化背景下的价值观和思维方式，从而提升跨文化沟通与合作能力。建议学校在课程体系中开设跨文化交际、国际理解教育或区域文化研究等课程，结合课堂教学与实践活动，增强学生的文化敏感性与包容性。选项 D“安排精通中英泰三语的导师”被130人选择，占比71.4%。这一结果显示，学生普遍期望能在学习和生活中获得更具针对性的语言支持。多语导师的存在不仅能帮助学生更好地理解课堂内容，还能在生活和心理方面提供及时的指导。建议学校在师资配备上适当增加具有多语能力的教师或辅导员，建立语言与文化双向沟通机制，提升教学服务的有效性。选项E“规范和完善学生的管理规章制度”共有 107 人选择，占比 58.8%。这一比例反映出学生普遍关注学校管理制度的公平性与透明度。完善的制度有助于明确行为准则，减少因文化差异引发的误解与冲突。建议学校在制定管理政策时充分考虑国际学生的文化背景，确保规章内容合理、易懂，并通过多语言渠道向学生解释制度内容，帮助他们更好地遵守和适应。

总体来看，留学生学希望学校在招生标准、语言支持、课程设置及管理制度等方面提供更具系统性和包容性的支持。通过加强招生质量管理、推动跨文化课程建设、配置多语导师以及完善管理体系，学校能够为国际学生创造更加开放、平等、融洽的学习环境，促进他们在学术与文化层面的全面适应与发展。

最后，从社会角度：选项 A“增加文化交流的活动”得到了 157 人（占比 86.3%）的认同。这表明大多数受访者认为，丰富多样的文化交流活动是促进理解与融合的重要途径。通过组织文化节、艺术展览、语言交流会、体育比赛等活动，不仅能帮助国际学生深入了解当地文化，还能展示自身文化特色，增进不同文化之间的互相理解与尊重。例如，学校和社会组织可以联合举办中泰文化交流节、传统艺术体验活动等，让学生在参与中学习并感受文化多样性，从而有效缓解文化差异带来的隔阂。选项 B“创建留学生与社会交流平台”有 144 人选择，占比 （79.1%）。这说明多数学生希望有更多与社会沟通和互动的渠道。通过建立线上与线下相结合的交流平台，如留学生服务中心、社会志愿活动平台等，可以促进留学生与当地社区的联系，帮助他们更好地融入社会生活。该平台还可以作为信息交流与情感支持的桥梁，使留学生在生活与学习中遇到问题时能够及时获得帮助和指导，增强归属感和安全感。选项 C“对大学教职员工进行跨文化培训”得到了90人（占比 49.5%）的支持。这一结果反映出，受访者普遍认为教师和管理人员的跨文化理解能力直接影响国际学生的学习体验。通过系统的跨文化培训，教职员工可以更好地了解不同文化背景学生的需求和行为习惯，从而在教学、管理和沟通中展现出更高的文化敏感度与包容性。建议高校定期举办跨文化教育讲座和工作坊，提高教师在教学中的国际化意识和沟通能力，为留学生营造更具理解和支持的学习环境。选项 D“加强对留学生的政策宣传和政策教育”被107人（占比 58.8%）选择。这说明留学生群体普遍关注政策知情度和信息透明度。通过加强政策宣传，能够帮助留学生了解签证、住宿、医疗、就业等方面的相关规定，避免因信息缺乏而引发的不必要问题。学校和相关部门可以通过多语言宣传册、官方网站、线上宣讲会等形式，向留学生提供全面的政策信息和应对指导，增强他们的安全意识与法律意识。选项 E“泰国政府机构应制定相应的政策和法律来保护国际学生”得到了131人（占比 72.0%）的支持。这表明学生普遍期望政府层面能提供更系统的制度保障。制定并完善针对国际学生的法律法规，有助于维护他们在学习、生活、就业等方面的合法权益，防止歧视和不公正待遇。政府相关部门还可以设立专门的国际学生事务办公室，提供政策咨询、权益申诉和紧急援助服务，确保留学生能够在安全、公正和包容的社会环境中生活和学习。

综上所述，从社会角度出发，增加文化交流活动、创建留学生与社会交流平台、加强高校教职员工跨文化培训、强化政策宣传与教育，以及建立完善的政府支持与法律保障体系，都是促进留学生文化适应和社会融入的关键举措。这些措施不仅有助于减少文化差异带来的冲突，也为建设更加开放、多元与和谐的国际教育环境奠定了基础。

六、建议

（一）短期建议（入学0-3个月）

1.个人层面

1) 入学1个月内参与校内基础泰语、日常英语速成班，优先掌握购物、就医、课堂基础对话，解决即时语言沟通障碍。
2) 主动领取学校中文版生活、礼仪指南，快速熟悉泰国宗教、王室、社交基础禁忌，规避日常文化误会。

3) 建立新生互助小团体，遇到饮食、气候、课业不适及时沟通疏导，缓解思乡与焦虑情绪。
4) 课堂主动向授课教师请教教学模式差异，记录作业考核要求，快速适配泰国课堂节奏。

2.学校层面

1) 新生入学统一开展为期1周的跨文化迎新培训，讲解中泰习俗、校园规章制度、签证流程。
2) 设立中英泰三语新生服务窗口，配备专职辅导老师，即时解决生活、学业、沟通问题。
3) 开展一对一泰语学生结对帮扶，每周固定语言交流时段，降低日常交际尴尬。
4) 开设短期心理疏导门诊，针对新生文化休克、孤独感提供即时情绪支持。

3.社会层面

1) 当地华人社群、留学生协会组织新生线下见面会，提供生活采购、就医便民信息。
2) 社区增设多语种便民标识，简化留学生日常办事沟通门槛。
3) 短期文化体验活动（美食市集、校园小型文化分享会），轻量化促进双向了解。

二、中期建议（入学3—12个月）

1.个人层面

1) 系统学习泰语实用课程，兼顾学术交流用语，主动参与课堂小组讨论，打破沉默回避状态。
2) 常态化参与中泰学生社团、节日活动，深入了解当地价值观、交往逻辑，主动调整自身思维与表达习惯。
3) 建立稳定运动、阅读解压方式，持续调节长期跨文化压力，提升自我协调能力。
4) 梳理中泰教学差异，主动规划学习计划，借助导师、学长资源补齐课业短板。

2.学校层面

1) 常态化开设跨文化交际选修课，结合霍夫斯泰德、Berry理论讲解中泰文化差异，针对性解决价值观冲突。
2) 完善长效心理辅导体系，定期开展留学生心理测评，对长期适应困难学生持续跟进干预。
3) 丰富中泰文化交流活动（拜师节、水灯节体验、中外学生联谊会），搭建稳定交往平台。
4) 优化课程设置，增设中国学生适配型教学模块，教师开展跨文化教学培训，改善课堂沟通体验。

3.社会层面

1) 文旅、教育机构联合开展长期中泰文化科普讲座，普及双边风俗、价值差异。
2) 完善面向留学生的政策宣讲渠道，多语种解读居留、就业、医疗相关法规。
3) 联动高校、社区开展月度文化交流活动，持续缩小社交层面文化隔阂。

三、长期建议（入学1年以上）

1.个人层面

1) 形成成熟跨文化思维，客观看待中泰文化优劣，做到和而不同，主动传播中国文化、尊重本土文化。
2) 长期维持泰语应用习惯，主动参与本地志愿、社会实践，深度融入当地社会。
3) 沉淀跨文化适应经验，可为新生提供经验分享，形成留学生互助传承。
4) 结合留学经历规划职业，将跨文化沟通能力转化为自身核心竞争力。

2.学校层面

1) 建立完整留学生跨文化教育体系，从预科到高年级分层设置语言、文化、心理配套课程。
2) 搭建中泰校际长期交换项目，双向输送学生，形成常态化文化互鉴渠道。
3) 留存历年留学生适应调研数据，持续优化管理制度、课程体系、服务配套，形成动态优化机制。
4) 建立留学生校友联络机制，长期跟踪跨文化适应长期效果，完善长效支持方案。

3.社会层面

1) 泰国政府完善国际学生权益保护相关政策法规，建立留学生维权渠道。
2) 搭建常态化中泰民间文化交流平台，推动两国青年长期深度互动。
3) 持续优化多语种公共服务体系，将留学生配套服务纳入城市长效建设规划。
4) 教育、文旅部门长期联合开展中泰跨文化研究，完善适配两国留学生的文化支持体系。

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在泰中国留学生的跨文化冲突解决策略研究
Research on Cross-Cultural Conflict Resolution Strategies Among Chinese International Students in Thailand

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摘要

全球化背景下，中泰教育交流日益频繁，在泰中国留学生因宗教信仰、社交规范及生活习惯差异，在学习与生活中常面临跨文化冲突。这些冲突不仅损害学生的心理健康和学业表现，也制约中泰人文交流的深化发展。

本研究以190名在泰中国留学生为研究对象，采用问卷调查与SPSS统计分析方法。研究发现，跨文化冲突主要体现在生活、社会与心理三个层面，其中心理层面的个体差异最为明显；环境因素对跨文化冲突影响最大。研究从个人、学校和社会三个层面提出解决策略，为提升中国留学生跨文化适应能力及高校国际化管理提供参考。

关键词：跨文化冲突；在泰中国留学生；文化差异

Abstract

Against the backdrop of globalization, educational exchanges between China and Thailand have become increasingly frequent. Chinese students studying in Thailand often encounter cross-cultural conflicts in their academic and daily lives due to differences in religious beliefs, social norms, and lifestyle habits. These conflicts not only harm students' mental health and academic performance but also hinder the deepening of people-to-people exchanges between the two countries. This study surveyed 190 Chinese students in Thailand using a questionnaire and SPSS statistical analysis. The findings reveal that cross-cultural conflicts manifest mainly in three dimensions—daily life, social interaction, and psychological well-being—with individual differences at the psychological level being the most prominent, while environmental factors exert the greatest impact on such conflicts. The study proposes coping strategies from three perspectives—individual, institutional, and societal—so as to provide references for enhancing Chinese students' cross-cultural adaptability and for improving internationalization management in host universities.

Keywords : Cross-cultural conflict, Chinese students studying in Thailand, Cultural difference

一、引言

在全球化不断深化的背景下，各国在经济、文化和政治等领域的联系日益紧密，但文化交流与融合过程中也不可避免地产生差异与冲突，如宗教信仰、语言、价值观念和生活方式等方面的不同，跨文化差异引发的冲突已成为国际交流与合作中值得重视的重要议题。随着中国经济发展和国内升学压力增加，越来越多中国学生选择出国留学，跨文化冲突问题也随之更加突出。中国学生长期受本土文化、语言习惯和交往方式影响，在海外学习与生活中容易与东道国文化发生碰撞，从而影响学习效果与心理适应。与此同时，来华留学生的经历也表明，跨文化冲突是国际学生普遍面临的问题，其成因既包括人格特质、文化知识、认知方式等内部因素，也包括社会支持、时间变化及偏见歧视等外部因素。在泰中国留学生的跨文化冲突尤其具有研究价值。近年来，中国赴泰留学生人数持续增长，目前已成为泰国最大的留学生来源群体。虽然中泰同属亚洲国家，但两国在文化背景、社会习俗、宗教信仰和生活方式等方面仍存在明显差异。中国留学生在泰国适应过程中，普遍面临语言使用困难、缺乏

跨文化交际策略、不熟悉当地礼仪与饮食习惯，以及对教学方式不适应等问题。因此，研究在泰中国留学生的跨文化冲突现象及其解决策略，不仅有助于促进中泰教育与文化交流，也能为留学生跨文化适应提供理论支持和实践指导，对提升其跨文化交际能力和心理健康水平具有重要意义。

二、研究目标

（一）研究问题

1. 在泰中国留学生跨文化冲突现状有哪些
2. 影响在泰中国留学生的跨文化冲突因素
3. 哪些策略可以解决在泰中国留学生的跨文化冲突

（二）研究目标

1. 分析在泰中国留学生的跨文化冲突现状
2. 找在泰中国留学生的跨文化冲突影响因素
3. 提出在泰中国留学生跨文化冲突解决策略

（三）研究意义

1. 实践意义

在社会层面，本研究有助于促进中泰两国文化交流与相互理解，为减少文化偏见提供经验参考，并为相关政策制定部门优化国际教育政策提供实证依据。在学校层面，研究成果能够为泰国高校改进跨文化教育管理提供思路，提升留学生学习体验与高校国际化水平。对留学生个人而言，本研究有助于其提升跨文化沟通能力与心理韧性，更快融入当地学习与生活环境，为未来国际化职业发展奠定基础。

2. 理论意义

本文通过了解在泰中国学生生活情况，学习，人际关系等进行调查，研究跨文化冲突的现状以及影响因素，提出对在泰中国留学生面临跨文化冲突时的应对策略，通过向泰国高校中国留学生发放调查问卷的方式收集数据，现有研究主要集中于欧美、日韩等国家，中国留学生在泰国情境下的跨文化冲突研究相对不足。本文以泰国为研究场域，丰富了东南亚地区跨文化适应研究成果，为国际学生跨文化冲突研究提供新的实证证据。

（四）概念性框架

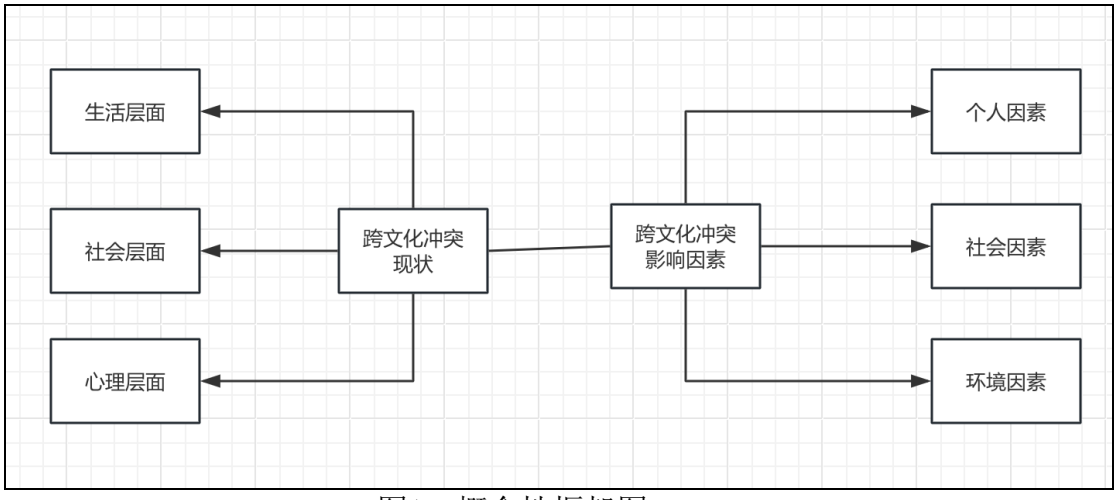

图1：概念性框架图

三、文献综述

1.文化差异与与跨文化冲突的概念的界定

成瑾（2006）侧重价值观与信念层面的差异。J.Na, I. Grossmann, M.E.W. Varnum, S. Kitayama, R. Gonzalez, & R.E. Nisbett（2010）强调认知方式与社会取向的差异。肖娴,张长明（2016）指出跨文化冲突是主要表现在教育环境、文化传统、社会关系、社会礼仪、时间观念和婚恋态度等方面的差异。刘梅（2021）指出跨文化冲突即是不同的文化主体由于价值观念、思维认知、目标认同、意识形态等方面的文化差异。杨国旺（2021）指出文化中出现相互反对和反抗的现象和过程就是“跨文化冲突”。抗的现象和过程就是“跨文化冲突”。综合来看，文化差异可从价值观念、认知方式和行为模式三个核心维度加以理解。

2.跨文化冲突的衡量

在衡量方法上，学者们形成了两类取向：一类侧重文化内容维度，如付静（2021）提出的个人/集体主义、权力距离等五维度框架，尹爱华（2021）从社交礼仪、隐私观念、时间观念等方面进行分析；另一类侧重冲突过程特征，如Doucet等（2009）强调应考虑行为的文化意图与文化价值背景。本文综合两类取向，从文化内容（生活、社会、心理层面）与影响因素（个人、环境、社会层面）两个维度构建分析框架。

3.跨文化冲突的表现与特征

已有研究揭示了跨文化冲突的多层次表现。在表层行为上，表现为沟通障碍、交际风格差异和餐饮习惯不同（吉娜，2011；王颖，2011；李鹏阁，2016）；在深层结构上，Gunkel等（2016）指出其具有文化嵌入性、情绪中介性及行为与心理并存的复杂性特征。这表明跨文化冲突不仅是表面的行为不适应，更涉及深层的价值认知与情感体验，本文据此将冲突划分为生活、社会和心理三个递进层面进行分析。

4.现阶段在泰中国留学生遇到的跨文化冲突问题

关于留学生跨文化冲突的表现，学界的研究视角经历了从“表层生活适应”向“深层心理与社会交往”的拓展。早期研究多聚焦于语言障碍、气候不适等显性的生存与学习困扰（Lewthwaite, 1996；马丹丹，2016）；随着研究深入，学者们逐渐关注到隐性的社会交往困难与行为模式碰撞，认为文化差异导致的交际规范冲突是留学生面临的核心痛点（陈凤兰，2012；胡炯梅，2016）。现有研究揭示了冲突的多层次特征，但针对泰国独特佛教社会情境下的冲突表现尚缺乏细致的维度划分。因此，本文将其系统划分为生活、社会和心理三个递进层面进行考察。

5.解决跨文化冲突对于在泰中国留学生的重要性

跨文化冲突的有效化解对留学生的全面发展具有深远影响。现有文献主要从三个维度论证其重要性：在心理与社会适应方面，积极应对冲突能显著降低文化休克带来的负面情绪，提升社会适应力（Chen 等，2018；Kang 等，2019）；在学业表现方面，掌握冲突解决策略有助于增强跨文化交际能力与校园归属感（Lan 等，2022）；在长远发展方面，跨文化适应质量更直接关系到留学生未来的自我职业生涯管理与社会融入（Zhao 等，2025）。上述研究表明，冲突解决不仅关乎短期心理调适，更影响长期职业发展。这为本文构建解决策略提供了价值依据，即策略需兼顾即时适应与长远能力培养。

6.跨文化冲突的影响因素

关于跨文化冲突的影响因素，学界已构建起“个体—社会—环境”的多维分析框架。在个体层面，语言能力、性格特质与心理适应力被视为核心变量（张仕欣，2020；罗李曼，2021）；在社会与文化层面，国家文化价值观对冲突管理风格具有底层决定作用，而社会支持网络则是缓冲冲突的关键资源（Akanji 等，2021）；在系统整合层面，学者将影响因素归纳为涵盖政经文化背景的宏观社会因素，以及涵盖性别、滞留时间的微观个体因素（梁宥安，2021）。尽管现有研究已识别出众多影响因素，但各因素在泰国特定情境下的相对重要性尚缺乏实证检验。基于此，本文将影响因素整合为个人、社会和环境三个维度进行量化评估。

7.跨文化冲突问题的解决策略

针对跨文化冲突的干预，现有研究提出了涵盖个体、学校与社会的多元策略。在个体层面，学者强调行前文化认知准备的必要性（寇珂，2019），并主张留学生应通过主动参与校园活动、拓展本地社交网络来积极建构跨文化能力（Wang & Tananuraksakul， 2023）。在学校与社会层面，研究指出高校应优化教学模式、开展针对性的跨文化教育（覃素香，2016；袁茜，2016），并通过组织文化活动和提供语言支持来搭建社会融合平台。总体而言，现有解决策略多侧重于宏观的原则性建议，缺乏针对在泰中国留学生群体的微观操作机制。本文将在前人基础上，结合实证结果提出更具针对性的实施路径。

8.文献综述总结

综上所述，国内外学者已从文化差异、跨文化适应及冲突管理等角度进行了大量研究，但现有研究主要集中于欧美国家，对泰国情境下中国留学生群体关注不足。同时，多数研究侧重问题描述，对跨文化冲突影响因素与解决策略的系统分析相对有限。因此，本文以在泰中国留学生为研究对象，探讨其跨文化冲突现状、影响因素及解决路径，以弥补相关研究不足。

四、研究设计

（一） 研究方法

1.描述性研究法

本文主要采用描述性研究法与定量研究法相结合的方式开展研究。其中，描述性研究法用于对在泰中国留学生在生活、社交和心理层面的跨文化冲突现状，以及个人、环境和社会层面的影响因素进行客观描述与分类，在初步了解问题的基础上，梳理其主要表现、成因及相应解决方向；定量研究法则通过问卷调查收集一手数据，对在泰中国留学生跨文化冲突的现状、相关性与差异性进行分析，总结样本群体的一般规律，进一步归纳问题及其成因，并为提出有针对性的解决方案提供数据支持。

2.文献研究法

本研究采用文献研究法，通过系统搜集和整理与跨文化冲突、中国留学生海外适应及泰国教育环境相关的期刊文章、书籍、学位论文和研究报告，为论文提供理论基础与研究依据。将文献研究所得与问卷调查获得的一手数据相结合，以更全面地分析在泰中国留学生跨文化冲突的表现、影响因素及其后果，并为提出针对性的对策提供理论支持。

（二）调查方法

1.问卷调查法

本研究采用便利抽样法，通过面对面发放问卷，共回收问卷200份，有效问卷190份，有效率95%。问卷内容主要围绕生活、社会和心理层面的文化差异，以及个人、环境和社会因素对跨文化冲突的影响展开，并在已有跨文化冲突相关理论、文献分析和既有研究成果的基础上设计，以保证问卷的科学性与有效性。通过对问卷数据的整理与分析，研究能够较为系统地了解在泰中国留学生跨文化冲突的具体表现、影响因素及其对解决策略的看法，从而为论文提出有针对性的对策提供现实依据。

（三）信度分析

信度即可靠性，指检验调查问卷的数据可靠性。本次关于在泰中国留学生的跨文化沟通障碍研究的调查问卷，依靠 SPSS 分析软件进行信度分析，检验问卷数据的一致性、可靠性和一贯性。在将问卷数据输入 SPSS 分析软件中，所测出的信度,即表明问卷的可靠性。当信度在 0.6-0.7 之间,说明问卷的可靠性不高,可参考性较弱,需要进行修改;当信度在 0.7-0.8 之间,说明问卷的可靠性一般,是问卷最常用的最低可接受标准;当信度在 0.8 以上，说明问卷的可信性高，问卷的数据真实且可靠。

表1 全部变量的可靠性

克隆巴赫系数α	项数
0.893	39

从表 1 可以看出克隆巴赫 Alpha 系数为 0.893，项数为 39，这表明全部变量的测量具有较高的可靠性。通常，克隆巴赫 Alpha 系数在 0。8以上被认为是可靠性高的测量。这意味着在对涉及的所有变量进行测量时，所使用的测量工具和方法具有高度的稳定性、一致性和准确性。39个项数涵盖了多个方面的变量，共同作用下得出这个的可靠性系数，说明这些变量能够全面、有效地反映研究对象的特征和情况。

五、研究结论

（一）基本信息调查

根据调查结果，在有效样本中，男性留学生有98人，占比51。58%，女性留学生有92人，占比48.42%。从数据上看，男性留学生与女性留学生的样本数量相差无几。在在泰停留时间方面，统计出停留一年以内的留学生有69人，占比36.32%，停留一年至两年的留学生有71人，占比37.37%，停留三年至四年的留学生有31人，占比16.32%，停留四年以上的留学生有19人，占比10.0%。从数据可以看出，被调查者的在泰停留时间基本集中在一年以内或是一年至两年。

（二）对文化差异概念的界定

通过本次调查问卷的有效结果得出，在“下列哪一项最符合您对文化差异的理解？”的问题中，选择A选项“是价值观和信念的差异”，有50人。选择B选项“是行为方式上的冲突”有49人。选择C选项“是价值观、认知方式、社会取向”，有50人。选择D选项“是不同和思维方式和行为习惯”。有41人。四个选项选择的人数说明留学生们对文化差异概念的界定有不同的看法。

（三）对跨文化冲突概念的界定

通过本次调查问卷的有效结果得出，在“下列哪一项最符合您对跨文化冲突的理解？”的问题中，较多数人选择C选项“是文化中出现相互反对和反抗的现象”，而较少人选择A选项“是分享思想、感情和信息所发生的对立、排斥过程”。这说明是文化中出现相互反对和反抗的现象更符合学生对跨文化冲突概念的界定，而分享思想、感情和信息所发生的对立、排斥过程不符合学生对跨文化冲突概念的界定。

（四）跨文化冲突的衡量

通过本次调查问卷的有效结果得出，在“您认为以下哪一项最适合用来衡量跨文化冲突？”的问题中，较多数人选择C选项“从社交礼仪、隐私观念、时间观念及社交用语以及价值观念差异五个方面”，而较少人选择D选项“从冲突的频率、强度以及解决的困难程度三个方面”。这说明从社交礼仪、隐私观念、时间观念及社交用语以及价值观念差异五个方面更符合学生对跨文化冲突的衡量方式，而从冲突的频率、强度以及解决的困难程度三个方面不符合学生对跨文化冲突的衡量方式。

（五）跨文化冲突的表现与特征

通过本次调查问卷的有效结果得出，在“您认为下列哪一项最符合您现阶段产生的跨文化冲突问题？”的问题中，较多数人选择B选项“思维模式、隐私观念、餐饮习惯的不同”，而较少人选择D选项“课堂文化、语言、饮食习惯、情感方面”。这说明思维模式、隐私观念、餐饮习惯的不同更符合学生现阶段遇到的跨文化冲突体现，而课堂文化、语言、饮食习惯、情感方面不符合学生现阶段遇到的跨文化冲突体现。

（六）解决跨文化冲突对于在泰中国留学生的重要性

通过本次调查问卷的有效结果得出，在“下列哪一项对您来说最能体现跨文化冲突的重要性？”的问题中，选择D选项“增强在学习和社会交往中的适应力与融入感”人数最多，这说明增强在学习和社会交往中的适应力与融入感最能体现解决跨文化冲突对于在泰中国留学生的重要性。

（七）跨文化冲突现状调查

上述结果与Berry（1997）的文化适应理论相一致。Berry指出，个体在跨文化适应过程中会经历心理适应和社会适应两个维度，其中心理适应受个体差异（如人格特质、应对策略）影响较大，而社会适应则更多受外部社会支持和文化距离的影响。本研究中心理层面冲突标准差最大（SD=1.056），印证了心理适应的高度个体差异性；而生活层面冲突标准差最小（SD=0.615），表明日常生活中的文化冲突具有更强的普遍性和一致性。

（八）跨文化冲突影响因素

从三个影响因素的均值排序来看，环境因素（M=2.832）> 个人因素（M=2.751）> 社会因素（M=2.690），说明外部环境对跨文化冲突的影响最为直接。这与Kang等（2019）的研究发现一致，即东道国的制度环境、学校支持和生活便利程度是影响留学生跨文化适应的关键外部变量。个人因素的标准差最小（SD=0.687），表明受访者对个体因素影响的认知较为一致，可能与留学生群体普遍具备一定的文化自觉意识有关。

（九）解决在泰中国留学生跨文化冲突方案

根据调查结果，针对在泰中国留学生的文化差异问题提出相应的解决方案。

1.从个人角度：

选择选项A“通过行为改变和心理适应调适”有106人（占比55.79%）。行为改变和心理适应是解决跨文化冲突的策略之一。留学生需要主动调整自己的行为模式和心理状态，以应对文化差异带来的挑战。例如，他们可以学习当地的社会规范和沟通方式。这种行为调整有助于留学生更快速地融入新环境，减少误解和冲突。

选择选项B“在出国前做一些基本的了解”有122人（占比64.21%）。在出国前对目标文化进行基本了解，能够为留学生提供重要的心理和知识准备。通过了解关于泰国的风俗习惯和习惯法律规定或与有经验的学长学姐交流可以提前熟悉当地文化，避免常见的文化误区。这种前期准备不仅减轻了抵达后的适应负担，还增强了应对跨文化冲突的信心。

选择选项C“通过主动学习和参加与泰国及国际化的校园活动”有125人（占比65.79%。主动参与校园活动是深化文化理解和融入的有效途径。留学生可以积极参加学校组织的泰国文化节、国际学生联谊会或语言交换项目，通过这些活动与本地学生和国际学生互动，学习泰国的传统文化和现代生活方式。这种实践性学习不仅拓宽了视野，还培养了跨文化沟通能力，从而更好地解决文化冲突。

选择选项D“观看影视作品与阅读文化书籍”有122人（占比64.21%）。通过影视作品和书籍了解文化是一种生动且深入的方式。留学生可以观看泰国电影、电视剧或纪录片，阅读泰国文学、历史或社会评论书籍，从而直观地理解当地的价值观念和日常生活。这种方法不仅娱乐性强，还能在潜移默化中提升文化敏感度，帮助留学生更自然地应对文化差异。

选择选项E“扩大社交网络与本地学生建立关系”有84人（占比44.21%）。虽然认同比例较低，但扩大社交网络对于解决跨文化冲突至关重要。通过结交本地朋友，留学生可以获得直接的文化支持和生活指导，更快地适应新环境。这种社交互动不仅缓解了孤独感，还提供了跨文化交流的实践机会，从而减少文化冲突的影响。

2.从学校角度：

选择选项A“针对学生具体情环境进行跨文化教育”有112人（占比58.95%）。学校应开发针对性的跨文化教育项目，根据留学生的具体背景和环境需求，提供个性化的文化适应指导。例如提供一对一的跨文化适应咨询，帮助学生理解当地文化规范和社会习惯，从而减少文化冲突，促进更快融入。

选择选项B“教师结合留学生学习特点，灵活调整教学方法”有142人（占比74.74%）。大多数被调查者认为此措施重要，学校应优先鼓励教师采用灵活的教学策略，适应留学生的学习特点。例如组织教师进行培训，修改课程设计和评估方法，使其更包容。

选择选项C“教师要做好面对截然不同的课堂教学文化的心理建设”有106人（占比55.79%）。学校应为教师提供心理支持和培训，帮助他们应对文化差异带来的挑战。例如让教师了解不同课堂文化的特点，可以减少课堂上发生跨文化冲突

选择选项D“对留学生管理人员进行跨文化培训”有104人（占比54.74%）。学校应加强对留学生管理人员的跨文化培训，提升他们的跨文化沟通。这可以通过开设专门培训课程、邀请跨文化专家讲座，确保管理人员能有效处理留学生的日常问题，促进学术和社交融合。

选择选项E“通过实习增加语言实践机会”有80人（占比42.11%）。学校应与企

业或当地组织合作，为留学生提供实习机会，从而增加语言使用机会和跨文化交流机会。例如举办招聘会或提供语言辅导结合实习，以增强实际沟通技能和职业准备。

3.从社会角度：

选择选项A“建立交流平台”有107人（占比56.32%）。学校应建立多样化的交流平台，如在线论坛、社交媒体群组或学生社团，促进留学生与本地学生之间的互动。这些平台应设计为安全、包容的空间，鼓励文化分享、经验交流和问题讨论，从而减少留学生的孤立感，增强归属感和支持网络。

选择选项B“组织文化活动和节日庆祝促进相互融合”有122人（占比64.21%）。学校应定期组织文化活动和节日庆祝，例如传统美食节、艺术表演、体育赛事或节日派对等，让留学生和本地学生共同参与。这些活动不仅能展示多元文化，还能提供非正式的学习和社交机会，促进相互理解、尊重和友谊，帮助留学生快速融入新环境。

选择选项C“提供详细的生活指南”有116人（占比61.05%）。学校应编写并提供详细的生活指南，涵盖住宿、医疗、交通、法律、购物等实用信息。确保留学生能快速获取所需信息，减少初来乍到的困惑和压力，提高生活适应性。

选择选项D“改善课程设置与教学管理”有122人（占比64.21%）。学校应审查并优化课程设置与教学管理，使其更适应留学生的需求。例如，提供灵活的选课系统、调整教学进度和评估方法、使用包容性教学方法，并培训教师处理多元文化课堂。这能提高留学生的学术参与度和成就感，缓解文化差异带来的学习障碍。

选择选项E“提供语言支持和社交机会”有85人（占比44.74%）。学校应提供语言课程、对话伙伴项目等社交活动，以帮助留学生提高语言技能并扩大社交圈。这能增强他们的沟通能力和自信心，促进更深层次的文化融合。

六、建议

（一）个人角度：

1.行为调适与心理建设并举：留学生应主动学习泰国社会规范（如合十礼、佛教禁忌等），同时通过正念冥想、心理咨询等方式增强心理韧性。建议建立"文化适应日志"，定期记录跨文化体验并进行自我反思。

2.出国前系统性文化准备：通过线上课程、留学经验分享会等渠道，提前了解泰国文化。建议高校或留学中介开设"泰国文化预习工作坊"，纳入行前培训体系。

3.主动参与校园跨文化活动：积极参加泰国文化节、语言交换项目等。建议设定"每学期至少参与3次跨文化活动"的个人目标。

4.借助媒体深化文化理解：通过泰国影视作品和文学书籍提升文化敏感度。

5.拓展本地社交网络：主动结交泰国本地朋友，获取第一手文化支持。建议加入学校的中泰学生交流社团或志愿者组织。

（二）学校角度：

1.建立制度化跨文化教育体系：开发针对中国留学生的跨文化适应课程，并将其纳入新生入学教育必修环节。设立"跨文化适应咨询室"，配备具有中泰双语能力的专职咨询人员。

2.教师教学方法弹性化：组织教师参加"多元文化教学"专题培训，鼓励采用小组合作学习、案例教学等包容性教学方法，并在课程评估中增设"跨文化包容度"指标。

3.教师课堂文化心理建设：为教师提供跨文化课堂管理培训，定期举办"中泰课堂文化对比"研讨会。

4.管理人员跨文化能力提升：将跨文化沟通培训纳入管理人员年度考核体系，每学期至少开展一次专题培训。

5.拓展实习与语言实践渠道：与中泰企业建立校企合作关系，设立"留学生实习专项计划"，将语言实践与职业发展相结合。

（三）社会角度：

1.搭建多元化交流平台：由泰国教育部或中国驻泰使馆教育处牵头，建立"在泰中国留学生服务信息平台"，整合生活指南、法律咨询、心理支持等功能。

2.定期组织文化融合活动：建议高校每学期举办至少一次大型中泰文化交流活动（如"中泰文化节"），并将其纳入学校国际化评估指标。

3.编制系统性留学生活指南：由高校国际处联合中国留学生联谊会编写《在泰中国留学生生活手册》，每年更新一次。

4.优化课程设置与教学管理：提供灵活选课系统，调整评估方法以适应留学生需求。

5.强化语言支持体系：开设"泰语角"和"中泰语言互助计划"，由泰国学生与中国留学生结对学习。

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