The Study on Influencing Factors for Selecting Express Delivery Services among Customers in Naresuan University

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Abstract

There are many express delivery service providers around Naresuan University, and express delivery services around Naresuan University are often limited for serving customers. The period of express delivery service can operate for a short time, and then it has been closed down due to the number of consumers with the option of express delivery service. Therefore, in order to find out the factors that affect to select the express delivery service by consumers around Naresuan University, this research aims to analyze the marketing mix factors that influence the decision to select express delivery service around Naresuan University, which will help improve express delivery service to meet consumer needs. Marketing mix factors from related research were reviewed, namely 1) price, 2) process, 3) people, 4) promotion, and 5) physical evidence for use as the main factors. Five factors were used to design the questionnaire, which consisted of related sub-factors belonging to 5 main factors. Experts checked the validity of the content of the questionnaire. The questionnaire was used to collect data from 400 samples, which consisted of students, staff, and residents around the university. Then, the marketing mix factors influencing the decision to select express delivery services were analyzed using multiple regression analysis. The analysis results found four marketing mix factors influencing the decision to select express delivery services around Naresuan University: people, process, price, and promotion, with statistical significance at the 0.05 level. The physical evidence did not influence consumers' choice of express delivery services in Naresuan University.

Keywords: Express Delivery service, Marketing mix, Multiple regression analysis

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1. Introduction

The significance of technology in human life has become increasingly pronounced: as demonstrated by data concerning internet usage for communication among individuals aged six and older, it was reported that from 2019 to 2023, the percentage of internet users rose from 66.7% to 88.4% (National Statistics Office, Ministry of Digital Economy and Society, 2024). This trend signifies that technology has transformed into an essential element of human existence over the past five years, particularly within business management. Technological innovations have facilitated income-generating opportunities, fostering a greater interest among the youth in small enterprises with varied business models. Entrepreneurs can now establish ventures with minimal capital investment, guided by the business proprietor, making use of technological progress and the Internet, which has given rise to a new business framework called Electronic Commerce (e-Commerce).

E-commerce involves the execution of commercial transactions through digital platforms to achieve business goals, which include the exchange of merchandise and services as well as the advertising of products through electronic mediums such as mobile devices, televisions, or the Internet (Agboola, O. et al. 2017). Its fundamental objective is to enhance operational effectiveness while reducing costs associated with location, infrastructure, and human resources. In contemporary Thailand, e-commerce is experiencing a notable increase, particularly within the retail and wholesale domains, which currently account for the highest market value (Electronic Transactions Development Agency, 2022). In light of the COVID-19 pandemic, large and small retail and wholesale businesses have progressively adapted to succeed within the digital marketplace. Concurrently, consumer behaviors concerning online shopping have transformed, thereby facilitating the growth of the logistics sector in conjunction with online commerce. The Department of Business Development estimates that the logistics industry currently possesses a valuation of at least 155,618 million baht, with an annual growth rate ranging from approximately 10 to 20 percent (Department of Business Development, Ministry of Commerce, 2020). As a result, competition in this sector is exceptionally intense, encompassing rivalries among Thai postal services, private logistics companies, and competition among various private logistics providers as an express delivery service. The express logistics sector is distinguished by substantial competitive pressures related to pricing and service provisions. In the year 2020, the parcel logistics market in Thailand was predominantly controlled by three key entities that collectively possessed a market share exceeding 80

percent: Thailand Post Co., Ltd., Kerry Express, and Lazada Express, in addition to several intermediary competitors such as SCG Express, DHL E-commerce, Nim Express, and Ninja Van (Srisawat, S., 2023). Nonetheless, the benefits to consumers arising from this intense competition within the parcel delivery domain encompass decreased shipping costs, improved safety and speed of delivery services, and a diverse array of service providers available for selection. Concerning service excellence, it has been noted that the factors influencing user satisfaction include the quality of the product and the standard of the accompanying service.

Inadequate delivery services can lead to customer dissatisfaction with the product. Consequently, the quality of service is a critical aspect of the product. When service is delivered effectively, it enhances the satisfaction derived from product use and influences consumer decision-making regarding service selection and repeat purchases (Parasuraman et al., 1990). Effective delivery management must consider the requirements of all stakeholders involved and ensure that the quality of service meets the recipient's expectations in the distribution of goods (Pipatchokchaiyo, S., 2022). Furthermore, marketing mix factors play a crucial role in shaping consumer perceptions and choices in the context of express delivery services. Price sensitivity can influence consumers' decisions when selecting a delivery service, particularly among university students who may prioritize cost-effective options. Service quality is another key determinant, as timely and reliable deliveries enhance customer satisfaction and foster brand loyalty. Additionally, well-trained and professional personnel contribute to a positive service experience, as their efficiency and communication skills impact consumer trust and confidence in the service. Promotional strategies, such as discounts, membership programs, and digital marketing efforts, can influence consumer preferences by increasing service awareness and encouraging trial usage. Lastly, the physical evidence of transportation, including vehicle condition, packaging, and technological integration (such as tracking systems), significantly affect customer trust and the perceived reliability of the service. Given these factors, thoroughly analyzing the marketing mix elements in express delivery services around Naresuan University is essential to improving service efficiency and aligning with consumer needs.

Therefore, a study on the factors influencing the selection of express delivery services for customers at Naresuan University is proposed. This study aimed to consider the marketing mix factors influencing the selection of express transport services among target customers

around the university. The results of this study will be a guideline for developing and formulating strategies for express delivery operators in the area of Naresuan University to meet customers' requirements and satisfaction.

2. Objectives

2.1 To study the marketing mix factors affecting the choice of express delivery services.

2.2 To analyze the marketing mix factors influencing the decision to use express delivery services in Naresuan University.

3. Conceptual Framework

Figure 1 shows the conceptual framework of the study on factors influencing the selection of express delivery service companies among customers in the Naresuan University area. In this study, five independent variables belong to marketing mix factors, i.e., price, process, people, promotion, and physical evidence, which are considered as factors influencing customers' choice of service.
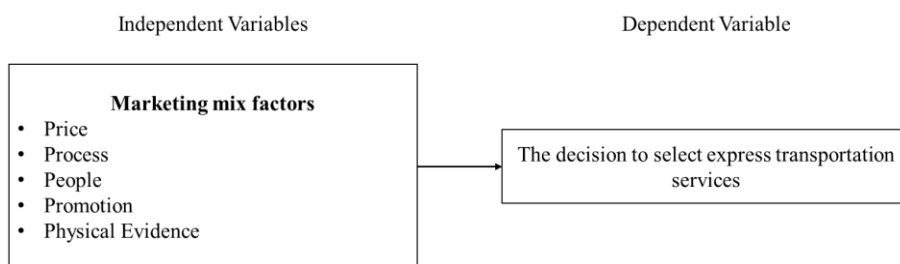

Figure 1 Research Framework

4. Research Methodology

4.1 Population and Samples

In this study, the target population is those living in the Naresuan University area, which consists of students, educational personnel, and people living in the area around Naresuan University. The sample size was determined using the formula for calculating the sample size without knowing the exact population size and needing to estimate the population mean (Cochran W. G., 1953; Cochran, W. G., 1977), as shown in Equation (1) as follows:

$$n = \frac{p(1-p)z^2}{d^2}$$

(1)

Where   *n* is the sample size required

           p is the sample standard deviation

           z is the z value at the significance level. The 95% confidence level or the

           significance level of 0.05 is equal to 1.96

           d is the proportion of error that can be allowed (0.05)

The sample size was calculated using the error of d = 5% and the confidence level of 95%. Based on equation (1), the sample size is 385 samples. Therefore, 400 samples were considered for data collection.

4.2 Research Instrument

In order to complete the objectives of the study, the reliability of the instruments was investigated by examining the validity of the prepared questionnaires by having 3 experts or those with expertise in express transportation aspect consider the appropriateness of the content and the comprehensiveness of the questions (Content Validity) in the questionnaires and using the experts' suggestions to improve the questionnaires to be correct and appropriate. The questionnaires were divided into three parts as follows:

Part 1: Demographic characteristics

Part 2: Factors influencing the selection of express delivery services, which consisted of 5 factors: Price, Process, People, Promotion, and Physical presentation

Part 3: Additional comments or suggestions

4.3 Collection of Data

Data collection in this study included reviewing secondary data and collecting primary data by using questionnaires to obtain data covering both quantitative and qualitative aspects. Secondary data was reviewed from existing sources, such as related research and related principles and theories, to understand the overall factors affecting the choice of express delivery services. Meanwhile, the questionnaire was designed to collect data from a sample group within the study area, namely students, educational personnel, and the people who live around the university. The questionnaire covered factors affecting the choice of express delivery services, such as service quality, service prices, transportation usage behavior, service frequency, and suggestions for future service development for express delivery services. Before collecting data with the questionnaire, a try-out of 30 questionnaires was conducted to test the quality of the

questionnaires before actual data collection, using a small sample of 30 people to check the understanding, validity, and reliability of the research instruments, leading to the improvement of the questionnaires to be more efficient, appropriate for the target group, and to increase the reliability of the research results. Then the questionnaire was employed to collect data from the sample group by using 2 approaches that are face to face data collection and online form (google form). This study uses purposive sampling to select respondents most likely to yield appropriate and useful information.

4.4 Data Analysis

After collecting data by questionnaire, the questionnaire data were entered into the Statistical Package for the Social Science (SPSS) for statistical analysis as follows:

This study employs Likert scales, a type of Summated Rating Scale, to measure respondents' attitudes by asking them to indicate their level of agreement or disagreement with various statements. The Likert scale used in this research consists of five response options: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree, arranged in a continuous order. Each response is assigned a numerical score to reflect the level of agreement, allowing for the summation of scores to assess overall respondent attitudes.

The study categorizes the average score ranges for each factor as follows:

4.21 – 5.00: Represents the highest level of importance

3.41 – 4.20: Represents a high level of importance

2.61 – 3.40: Represents a moderate level of importance

1.81 – 2.60: Represents a low level of importance

1.00 – 1.80: Represents the lowest level of importance

Descriptive statistics analysis: This is the analysis of demographic data to determine the respondents' characteristics. It uses frequency distributions displayed as percentages, frequencies, mean, and standard deviation (S.D.) to analyze the factors affecting the choice of express delivery services.

Inferential statistics analysis: Multiple linear regression analysis has been used to test the hypothesis to study the influence between independent variables: price, process, people, promotion, and physical evidence on the dependent variable, the decision to use express delivery services in Naresuan University area by selecting the variable and entering all variables (Enter Regression) at a confidence level of 95 percent, error 0.05 (Montgomery, D. C., et al, 2021).

5. Results

5.1 Factors affecting the choice of express delivery services

The decision to select an express delivery service is influenced by various marketing mix factors, which include product quality, pricing strategies, promotional activities, and service processes. These elements are crucial in shaping consumer attitudes and purchase intentions, as they directly impact consumer satisfaction and brand loyalty. The marketing mix, often referred to as the 7Ps (Product, Price, Place, Promotion, People, Process, and Physical Evidence), plays a significant role in consumer decision-making processes across different industries, including logistics and delivery services. Below are the key factors influencing the choice of express delivery services:

Product Quality: High-quality service offerings are essential in attracting and retaining customers in the express delivery sector. Customers prioritize reliability and speed in delivery services, which are critical components of product quality (Wibowo, A. A. P., & Aprianingsih, A., 2024).

Pricing Strategies: Competitive pricing is a significant determinant in the selection of express delivery services. Customers often weigh the cost against the perceived value of the service, making pricing strategies a crucial factor in decision-making (Wibowo, A. A. P., & Aprianingsih, A., 2024).

Promotional Activities: Effective promotional strategies can enhance brand visibility and influence consumer choices. Promotions can include discounts, loyalty programs, and advertising campaigns that highlight the unique benefits of the service (Wibowo, A. A. P., & Aprianingsih, A., 2024).

Service Processes: Efficient and streamlined processes are vital in ensuring timely deliveries and customer satisfaction. The process element of the marketing mix involves the operational aspects that facilitate smooth service delivery (Wibowo, A. A. P., & Aprianingsih, A., 2024).

Customer Service: The quality of customer service, including responsiveness and problem-solving capabilities, significantly affects consumer perceptions and decisions. Positive interactions with service personnel can enhance customer loyalty (Wibowo, A. A. P., & Aprianingsih, A., 2024).

While these factors are influential, it is important to consider the heterogeneity in consumer preferences. Different customer segments may prioritize different aspects of the

marketing mix, such as cost-conscious consumers focusing more on price, while others may value service quality and reliability more highly (Lian, L., et al., 2015). Understanding these nuances can help companies tailor their marketing strategies to better meet the diverse needs of their customer base.

Based on a review of related research on the factors affecting the selection of express delivery services (Wibowo, A. A. P., & Aprianingsih, A., 2024; Lian, L., et al., 2015 Chienwattanasook, K., & Thungwa, S., 2019; Choeicharoen, T., & Maskasin, P., 2017; Supamit, S., 2023; Mallika, I., 2021; Suryawardani, B., 2020; DO, Q. H., 2021; Chen, Y., et al., 2018), sub-factors have found, that are consistent with the research were applied to create a questionnaire for the creation of sub-factors. The sub-factors were collected and adapted to be consistent with the content. The sub-factors were compiled and included as questions in the questionnaire. The details of the sub-factors are shown in Table 1.

Table 1 Factors affecting the choice of express delivery services

Factor	Sub-Factor	Source	
		Related work	Expert
Price	The service charge rate is inexpensive.	✓	✓
	The packaging price is reasonable.	✓	✓
	The price is suitable for the quality.		✓
	The service rate is suitable for the distance and weight.	✓	✓
	The price is clearly stated.		✓
	The service charge for packing is reasonable.	✓	✓
Process	Product safety is guaranteed.	✓	✓
	Products are delivered to the correct destination.	✓	✓
	Customers receive the same standard of service every time.		✓
	Assistance is always provided whenever there is a problem.	✓	✓
	Parcel deliveries are carried out promptly.	✓	✓
People	Staff provide accurate information.	✓	✓
	Staff are polite.	✓	✓

Factor	Sub-Factor	Source	
		Related work	Expert
	Staff are enthusiastic.		✓
	Staff are reliable and can answer questions and provide advice.	✓	✓
	Staff maintain good and consistent service standards.		✓
Promotion	There are promotions such as collecting points to exchange for discounts.	✓	✓
	There are applications to facilitate tracking products.	✓	✓
	Promotional information is promoted through online channels.	✓	✓
	Some services can be adjusted according to customer needs.		✓
Physical Evidence	The location of the express delivery service is easy to access.	✓	✓
	Availability of service equipment, such as tape, pens, and scissors.	✓	✓
	Distribution of various sizes of parcel boxes.		✓
	The display of shipping rates and service charges is explicit.	✓	✓
	Sufficient number of service counters.		✓

5.2 Descriptive statistical data analysis

Analysis of general data of the sample group classified by gender, age, occupation, and experience in using express delivery services. The general data of the sample group is shown in Table 2. In addition, the importance level of marketing mix factors that influence the selection of express delivery services in Naresuan University was analyzed using the principle of dividing the interpretation range according to the principle of stratification by dividing the highest score into five levels from the average score obtained from the questionnaire. The results of the importance level analysis of marketing mix factors that influence the selection of express delivery services in Naresuan University are shown in Table 3.

Table 2 Summary of demographic characteristics of the sample

Demographic Characteristic	Number	Percentage
Gender		
- Male	124	31
- Female	276	69
Age		
- 19 year or younger	48	12
- 20 – 29 years	264	66
- 30 – 39 years	44	11
- 40 – 49 years	28	7
- 50 – 59 years	12	3
- 60 year or older	4	1
Occupation		
- Student	268	67
- Educational personnel	12	3
- Self-employed	64	16
- State enterprise employee	12	3
- Freelance	20	5
- Unemployed	8	2
- Others	16	4
Experience in using express delivery services		
- Thailand Post	92	23
- Flash Express	144	36
- Kerry Express	64	16
- J&T Express	72	18
- Others (never used the service)	28	7
Frequency of using the service		
- 1 – 5 times per month	304	76
- 6 – 10 times per month	44	11

Demographic Characteristic	Number	Percentage
- 11 – 15 times per month	12	3
- 16 – 20 times per month	4	1
- More than 20 times per month	8	2
- Others (never used the service)	28	7

Table 3 Mean and standard deviation of factors

Factor	$\bar{\mathbf{x}}$	**S. D.**	Satisfaction level
1. Price	**4.27**	**0.70**	**Highest**
1.1 The service charge rate is inexpensive.	4.11	0.74	High
1.2 The packaging price is reasonable.	4.11	0.73	High
1.3 The price is suitable for the quality.	4.32	0.69	Highest
1.4 The service rate is suitable for the distance and weight.	4.30	0.68	Highest
1.5 The price is clearly stated.	4.39	0.69	Highest
1.6 The service charge for packing is reasonable.	4.40	0.68	Highest
2. Process	**4.35**	**0.68**	**Highest**
2.1 Product safety is guaranteed.	4.20	0.73	High
2.2 Products are delivered to the correct destination.	4.50	0.63	Highest
2.3 Customers receive the same standard of service every time.	4.34	0.71	Highest
2.4 Assistance is always provided whenever there is a problem.	4.28	0.68	Highest
2.5 Parcel deliveries are carried out promptly.	4.45	0.67	Highest
3. People	**4.39**	**0.63**	**Highest**
3.1 Staff provide accurate information.	4.40	0.62	Highest
3.2 Staff are polite.	4.43	0.60	Highest
3.3 Staff are enthusiastic.	4.35	0.67	Highest
3.4 Staff are reliable and can answer questions and provide advice.	4.40	0.63	Highest

Factor	$\bar{x}$	S. D.	Satisfaction level
3.5 Staff maintain good and consistent service standards.	4.39	0.63	Highest
4. Promotion	**4.17**	**0.75**	**High**
4.1 There are promotions such as collecting points to exchange for discounts.	3.85	0.88	High
4.2 There are applications to facilitate tracking products.	4.37	0.68	Highest
4.3 Promotional information is promoted through online channels.	4.09	0.75	High
4.4 Some services can be adjusted according to customer needs.	4.35	0.70	Highest
5. Physical Evidence	**4.38**	**0.67**	**Highest**
5.1 The location of the express delivery service is easy to access.	4.23	0.74	Highest
5.2 Availability of service equipment, such as tape, pens, and scissors.	4.41	0.69	Highest
5.3 Distribution of various sizes of parcel boxes.	4.43	0.67	Highest
5.4 The display of shipping rates and service charges is explicit.	4.50	0.69	Highest
5.5 Sufficient number of service counters.	4.33	0.69	Highest
Overall	**4.31**	**0.69**	**Highest**

From Table 3, in the analysis of the mean and deviation of the overall five aspects, namely 1) price, 2) process, 3) people, 4) promotion, and 5) physical evidence, it was found that all five factors had a mean of 4.31, which was the most important. When analyzing the overall picture, each factor had the most and the most important levels. The most important factor was people, with a mean of 4.39, which was the most important. The second most important factor was physical evidence, with a mean of 4.38, which was the most important. Process had a mean of 4.35, which was the most important. Price had a mean of 4.27, which was the most important. Promotion had a mean of 4.17, which was the least important factor in the overall picture of each aspect.

5.3 Factors influencing the decision to select express delivery services

The independent and dependent variables were interpreted according to the research hypothesis using multiple regression analysis by importing data for analysis with the Statistical Package for the Social Science (SPSS). This study input data using the Enter method to interpret the research results and present the results of the research hypothesis analysis using multiple regression analysis, including the P-value or Significance to test the hypothesis. The analysis results are shown in Table 4.

Table 4 Factors influencing the decision to select express delivery services

Factor	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	VIF
Constant	0.188	0.233		0.807	0.420	
Price (X_1)	0.213	0.059	0.181	3.624	0.000	1.776
Process (X_2)	0.192	0.067	0.165	2.870	0.004	2.343
People (X_3)	0.320	0.064	0.264	4.965	0.000	2.008
Promotion (X_4)	0.136	0.052	0.128	2.587	0.010	1.730
Physical Evidence (X^5)	0.091	0.061	0.081	1.148	0.140	2.129

R = 0.667, R^2 = 0.445, P-value ≤ 0.05, Durbin Watson = 2.047

From Table 4, the results of data analysis found that there are four factors influencing the decision to select express delivery services in Naresuan University i.e., price (ß = 0.213, p<0.05), process (ß = 0.192, p<0.05), people (ß = 0.320, p<0.05), and promotion (ß = 0.136, p<0.05), with the decision coefficient (R2) is 0.445 at a statistical significance level of 0.05. The physical evidence does not affect the decision to select express delivery services among customers in the Naresuan University area. It can be concluded that the variables that have a positive relationship with the decision to select express delivery services among customers in the Naresuan University area with a statistical significance level of 0.05 consist of 4 factors. The people are the most important factor, and the highest coefficient is 0.320. Secondly, the price has a coefficient of 0.213. Thirdly, the process has a coefficient of 0.192. Fourthly, the promotion has a coefficient of 0.136. Based on the data analysis, the regression equation can be presented as follows:

$$Y = 0.188 + 0.213(X_1) + 0.192(X_2) + 0.320(X_3) + 0.136(X_4) \qquad (2)$$

Where	Y	=	The decision to select express delivery services
	X_1	=	Price
	X_2	=	process
	X_3	=	People
	X_4	=	Promotion

6. Conclusion

Based on a review of related research, relevant factors were found to apply to creating the questionnaire. It was found that the factors affecting the selection of express delivery services consist of 5 main factors as follows: 1) price, 2) process, 3) people, 4) promotion, and 5) physical evidence. After collecting the data, the demographic data was analyzed. It was found that the majority of the sample group was female, 69 percent; 65.5 percent were between 20-29 years old; and 66.8 percent were students. Most of the sample had experience with express delivery services; 92.8 percent and 7.2 percent of the sample never had experience with express delivery services. The questionnaires were used to collect data on important factors for the customers to rank their level of satisfaction. It was found that the factors affecting the choice of using express delivery services were at the highest level overall, with an average value of 4.31. In addition, the independent and dependent variables were interpreted according to the research hypothesis using multiple regression analysis. The analysis of factors influencing the selection of express delivery services of the sample group in the Naresuan University area found that the price ($\beta = 0.213$, $p<0.05$), process ($\beta = 0.192$, $p<0.05$), people factor ($\beta = 0.320$, $p<0.05$), and promotion ($\beta = 0.136$, $p<0.05$) influenced the selection of express delivery services in Naresuan University area with the decision coefficient (R^2) is 0.445 at a statistical significance level of 0.05. The physical evidence factor did not affect the choice of express delivery services among customers in the Naresuan University area.

The decision coefficient (R^2) of 0.445 indicates that approximately 44.5% of the variation in the selection of express delivery services among customers in the Naresuan University area can be explained by the independent variables included in the regression model namely, price, process, people, and promotion. This suggests that these factors play a significant role in influencing customer decisions. However, the remaining 55.5% of the variation is attributed to

other factors not included in the model, such as personal preferences, convenience, technological integration, or external influences like traffic conditions and competitor services.

A moderate R^2 value like this implies that while the model provides meaningful insights into the key determinants of express delivery service selection, other variables may also contribute to consumer decisions. Further research could explore additional factors, such as service accessibility, environmental concerns, or digital service integration, to enhance the explanatory power of the model.

From the analysis of factors affecting the selection of express delivery services, the following guidelines are proposed for entrepreneurs who are the owners of the firm to improve the satisfaction level of customers and make loyalty to use the service:

- Express delivery service pricing should be set appropriately for distance and weight, with prices adjusted according to the transported parcels. Prices should be clearly and transparently announced from the beginning, along with advance price calculations, so customers can make informed decisions.

- Increase product safety measures, provide customer support services when problems arise, and improve the speed of product delivery. Focus on using technology to track product status in real-time, providing 24-hour customer service channels, and adding express delivery services to support the demand for fast delivery.

- Increase employee training activities in communication skills, providing the same standard of customer service every time, and managing parcels as efficiently as possible.

Organize special activities or promotions related to the service, such as reduced shipping costs, free shipping, lucky draws, and point collection, by publicizing them through applications, websites, or various platforms so that customers can access information through all channels.

7. Limitation and Future Research

This study has certain limitations regarding the study area and sample population, which should be considered when interpreting the findings:

Study Area Limitation: The research focuses exclusively on express delivery service users within the Naresuan University area. As a result, the findings are specific to the transportation preferences and behaviors of individuals within this academic environment. The conclusions drawn may not be fully representative of consumer behavior in other parts of Phitsanulok province or other urban areas where factors such as infrastructure, competition, and consumer demographics may differ significantly.

Sample Population Limitation: The sample population consists primarily of students, faculty, and staff affiliated with Naresuan University. Their decision-making factors, priorities, and service expectations may not align with those of the broader population, such as business users, residents in commercial districts, or consumers in other provinces. Therefore, the results should not be generalized to the entire province or nationwide customer behavior without further studies incorporating diverse demographic groups and geographical locations.

Future research should expand the scope to include a wider geographic area and a more diverse sample group to enhance the generalizability of the findings and provide a more comprehensive understanding of consumer behavior in express delivery services. Qualitative research should be conducted by interviewing express transportation company owners from the perspective of additional service providers to make the study more comprehensive and complete, including discovering new factors that may affect the selection of express delivery services. Further studies should be conducted on other factors that affect the selection of express delivery services so that companies can use the information to adjust their strengths and weaknesses in their business operations and create differences from other competitors to best meet service customers' needs.

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