



## Marketing mix factors affecting the frequency and loyalty in online transactions of Nakhon Pathom teenagers

Wisit Rittiboonchai

Department of General Management, Faculty of Management Sciences, Nakhon Pathom Rajabhat University,  
Nakhon Pathom, Thailand

---

### Abstract

This research is aimed at 1. To compare the frequency and loyalty in online transactions of Nakhon Pathom teenagers when classified by personal factors and 2. To study the influence of marketing mix factors affecting the frequency and loyalty in online transactions of Nakhon Pathom teenagers. The researchers collected data from a sample of 400 teenagers interested in buying and doing online transactions in Nakhon Pathom Province by snowball sampling. The statistics used in the research were frequency, percentage, mean, standard deviation, T-test, one-way variance analysis and multiple regression analysis.

The findings of the research are as follows. (1) The frequency and loyalty in online transactions of Nakhon Pathom teenagers were different when classified by gender, age, education and income with statistical significance. (2) The marketing mix factors affecting the frequency of online transactions of Nakhon Pathom teenagers comprised the price ( $b = 0.21$ ), distribution promotion ( $b = 0.16$ ) and product ( $b = 0.15$ ). The equation has a predictive power equal to 41 percent. This can be written as follows:  $Y = 1.46 + 0.15X_1^{**} + 0.21X_2^{**} + 0.03X_3 + 0.16X_4^{**}$  (3) The marketing mix factors affecting loyalty in online transactions of Nakhon Pathom teenagers consisted of the product ( $b = 0.45$ ), price ( $b = 0.30$ ) and distribution promotion ( $b = 0.13$ ). The equation has a predictive power equal to 44 percent. This can be written as follows:  $Y = 1.85 + 0.45X_1^{**} + 0.30X_2^{**} + 0.01X_3 + 0.13X_4^{**}$

**Keywords:** Marketing mix, loyalty, online transactions

**Article history:** Received 11 October 2020, Revised 4 December 2020, Accepted 9 December 2020

---

### 1. Introduction

Online trading plays a role and is very important nowadays because of convenient and fast trading. [1] The online world is like a meeting and trading point that meets the needs of consumers the most today. Obviously, the groups of manufacturers, merchants, including retailers or wholesalers use the online channel to distribute the products to consumers because this channel can expand the customer base more than before. Therefore, at present, it is found that the transactions in selling goods and recommending the products can be done online with no limitations on the type of product. The traders do not need a storefront. Meanwhile, the buyers just want to purchase goods. Despite not going to purchase by oneself, the online channel is able to meet the needs easily by simply clicking and choosing to buy the products, thus causing the trend of continuously higher competition in this business.

In the past, for many types of businesses, especially buying-selling businesses, the business owners always needed a storefront or a shop fixed to market for finding customers, including marketing plans as well as new ideas about publicity for serving and offering to customers. However, for modern times with

much technological progress, the internet network has a greater role in communication. As a result, this whole world is able to be connected together through the Internet network. So, there are inventors who can operate businesses by using the Internet network as a medium just by having the Internet inside the house and starting a business [2].

The opening of online stores is currently remarkable. There are online restaurants, online candy shops, clothing shops and even general goods stores. Many online shops are further developments of the original business base so as to provide convenience to customers. Also, this marketing method is not expensive and can last for a long time. Doing online business will not look difficult, but the competition is very high because many new stores will open in the online world daily. [3] The Internet network currently covers all areas. It is possible to click at home so as to buy the desired products and have goods delivered to the home without wasting time going to buy. As a result, many people are interested in buying products through the Internet network. The largest consumer group will be teenagers because the teenagers behavior doing online transactions tends to easily change decision-making to buy. The teenagers are active in using online media. However, due to limited money,

---

\*Corresponding author; email: wisitson@webmail.npru.ac.th

**Table 1.** Average, marketing mix factors, frequency of transactions per week and loyalty in transactions overall.

Marketing mix	Mean	S.D.	Level
Product	4.20	0.35	High
Price	4.20	0.49	High
Distribution channel	4.05	0.58	High
Promotion	4.14	0.51	High
<b>Loyalty in transactions</b>	<b>4.01</b>	<b>0.28</b>	<b>High</b>
<b>Frequency of transactions</b>	<b>2.86</b>	<b>11.25</b>	

the teenagers are likely to be disloyal to when deciding to buy the products. [4] Therefore, the attempts to find the right marketing mix for stimulating the frequency of buying and building loyalty are essential as Aaker [5] proposed the importance of loyalty as an expression of consumers who insist on buying the same products and do not change their mind to buy the goods of new brands.

Consequently, the research team was interested in studying the marketing mix factors affecting the frequency and loyalty in online transactions of Nakhon Pathom teenagers. The researchers have hoped that the results of this study will be useful for online business operators so that information from this research will be used to develop marketing strategies to suit the needs of such consumer groups or that the people interested in investing in this business will use the information from this study as guidelines or a tool for helping to decide on investments, work management and strategic planning for doing business later.

### Research objectives

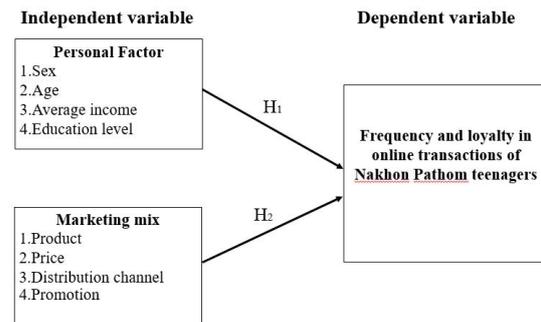
1. To compare the frequency and loyalty in online transactions of Nakhon Pathom teenagers when classified by personal factors.
2. To study the influence of marketing mix factors affecting the frequency and loyalty in online transactions of Nakhon Pathom teenagers.

### Hypotheses in the study

1. The frequency and loyalty in online transactions of Nakhon Pathom teenagers are different when classified by personal factors.
2. The marketing mix factors affect the frequency and loyalty in online transactions of Nakhon Pathom teenagers.

## 2. Related Documents and Research

The researchers used the concepts and theories related to marketing mix [6, 17]; consumer behavior [7, 8], loyalty-related concepts [9 – 12] and electronic marketing [1, 13, 14, 18, 19] for development into research framework. The details are shown in Figure 1.

**Figure 1:** Research framework.

## 3. Research Methodology

### 3.1 Sample population

The population used in this research were the teenagers interested in buying and doing online transactions in Nakhon Pathom Province. Because no true numeric data collection has been found yet, the researchers used the determination of sample size without the known population by Cochern's formula [15] resulting in the sample size of 385 persons. The researchers increased the sample size to 400 persons by means of Snow ball sampling.

### 3.2 Research tool

The Questionnaire was created by the researchers that tested the content validity and tested the reliability by Cronbach's alpha coefficient with 30 Ramkhamhaeng University students, resulting in the validity of 0.74 – 0.88.

### 3.3 Data analysis

As to data analysis in this research, information from the questionnaire was processed by means of data analysis with frequency, percentage, mean, standard deviation, T-test, one-way variance analysis and multiple regression analysis.

## 4. Research Results

The research results comprise the results of analyzing descriptive statistics and reference summary statistics as follows.

4.1 According to research results based on personal factors of the respondents, the majority were male, accounting for 58.75 percent. Most of them were aged between 19 – 21 years, representing 69.25 percent, mostly graduated with a bachelor's degree, accounting for 75.50 percent. The majority had incomes lower than 12,000 baht per month, equivalent to 52.00 percent.

4.2 Results of analyzing the average, marketing mix factors, frequency of transactions per week and loyalty in online transactions of Nakhon Pathom teenagers.

**Table 2.** Results of testing the hypothesis 1: Frequency and loyalty in online transactions of Nakhon Pathom teenagers are different when classified by personal factors.

	Gender	Age	Education	Income
Frequency of transactions	-2.23**	88.44**	67.10**	91.54**
Loyalty in transactions	5.35**	36.77**	18.84**	20.87**

**Table 3.** Results of testing the hypothesis No. 2.1: Marketing mix factors affecting the frequency of online transactions of Nakhon Pathom teenagers.

	B	SE	Beta	t	Sig
(Constant)	1.46	0.33		4.41	0.00
Product X <sub>1</sub>	0.15	0.05	0.15	2.92**	0.00
Price X <sub>2</sub>	0.21	0.04	0.30	5.31**	0.00
Distribution channel X <sub>3</sub>	0.03	0.03	0.05	0.93	0.36
Promotion X <sub>4</sub>	0.16	0.03	0.24	4.89**	0.00

**R<sub>2</sub> = 0.41**

According to Table 1, the overall marketing mix factors were at the high level. When considering each individual aspect, it was found that the product and the price were Mean = 4.20, followed by the marketing promotion (Mean = 4.14) and distribution channel (Mean = 4.05), respectively. As to dependent variables, the frequency of transactions per week was found to be at 2.86 times per week and loyalty in transactions was at the high level (Mean = 4.01).

According to research results, the frequency per week of online transactions of Nakhon Pathom teenagers varied according to gender, age, education and income.

Loyalty in online transactions of Nakhon Pathom teenagers varied according to gender, age, education and income

According to the research results, the marketing mix factors affecting the frequency of online transactions of Nakhon Pathom teenagers comprised the price (b = 0.21), distribution promotion (b = 0.16) and product (b = 0.15). The equation has a predictive power equal to 41 percent.

This can be written as follows  $Y = 1.46 + 0.15X_1^{**} + 0.21X_2^{**} + 0.03X_3 + 0.16X_4^{**}$ .

According to the research results, the marketing mix factors affecting loyalty in online transactions of Nakhon Pathom teenagers consisted of the product (b = 0.45), price (b = 0.30) and distribution promotion (b = 0.13). The equation has a predictive power equal to 44 percent.

This can be written as follows:  $Y = 1.85 + 0.45X_1^{**} + 0.30X_2^{**} + 0.01X_3 + 0.13X_4^{**}$ .

## 5. Conclusion, Discussion of the Results and Recommendations

### 5.1 Conclusion and discussion of the results

1. According to research results, the frequency of online transactions of teenagers per week and loyalty in online transactions of Nakhon Pathom teenagers when classified by personal factors were consistent

with the research of Chantawiwuttikul [16] who studied the behavior of group purchasing of goods and online services on ENSOGO website of customers in Bangkok Metropolis. The research results showed that different demographic characteristics of consumers will vary in behavior of group purchasing of goods and online services on ENSOGO website in a statistically significant manner.

2. The marketing mix factors affected the frequency of transactions per week and loyalty in online transactions of Nakhon Pathom teenagers in terms of product, price and distribution promotion. Such research results revealed that the use of marketing mix is still necessary for online transactions. This was consistent with the research of Watthanakun [8] who studied the factors related to buying behavior of consumers through Thailand's popular electronic commerce website. The research results proposed that the marketing mix affects the creation of website components and causes relationships with the consumers buying behavior via the electronic commerce website of customers.

### 5.2 Suggestions for use in this research

1. Interesting findings revealed that the highest frequency of online transactions per week of Nakhon Pathom teenagers was the female aged between 22 – 24 years, who graduated with a bachelor's degree and earned 15,001 – 18,000 baht per month. Meanwhile, the highest loyalty in transactions was the male aged between 19 – 21 years, who graduated with a bachelor's degree and earned 12,001 – 15,000 baht per month. This shows some differences of consumers. That is to say, in terms of frequency of online transactions, the females' frequency of access was higher than the males. However, the males' loyalty, no change of access to services was higher. Meanwhile, the persons aged 22 – 24 years had the highest frequency of transactions. Loyalty was the group aged 19 – 21 years. The incomes with the frequency of transactions were 15,001 – 18,000 baht per month. The loyalty group consisted of people with incomes

**Table 4.** Results of testing the hypothesis No. 2.2: Marketing mix factors affecting loyalty in online transactions of Nakhon Pathom teenagers.

	<b>B</b>	<b>SE</b>	<b>Beta</b>	<b>t</b>	<b>Sig</b>
(Constant)	1.85	0.35		5.28	0.00
Product X <sub>1</sub>	0.45	0.06	0.41	8.11**	0.00
Price X <sub>2</sub>	0.30	0.04	0.39	7.16**	0.00
Distribution channel X <sub>3</sub>	0.01	0.03	0.02	0.37	0.71
Promotion X <sub>4</sub>	0.13	0.04	0.17	3.54**	0.00

**R<sub>2</sub> = 0.44**

of 12,001 – 15,000 baht. Such differences are likely to be the results that enable the operators to focus on the correct target groups so as to boost sales in online transactions of teenagers in the future.

2. The use of marketing mix factors affecting the frequency of online transactions of Nakhon Pathom teenagers was comprised of the price, distribution promotion and product. The marketing mix factors affecting loyalty in online transactions of Nakhon Pathom teenagers was comprised of the product, price and distribution promotion. From the research, it was found that the distribution channel factor did not affect the frequency and loyalty in transactions because online transactions had not yet made a difference in the feelings of teenage consumers. The highlights of online transactions depend on three marketing mix factors by building loyalty with need to focus on the products because good products will make a good impression and cause repeated purchases. Meanwhile, creating the buying frequency will focus on the price factor because the price factor will cause the buying decisions to be faster and more frequent. Therefore, people who do online transactions must decide to focus on the marketing mix factors classified by consumer behavior.

### 5.3 Suggestions for further research

1. This research limited the study area to teenagers in Nakhon Pathom Province only. Interested people may extend to other consumer groups and the boundaries in other provinces so as to get a wider range of discoveries.

2. The conceptual framework of other academics should be used in order to compare and use the study results as guidelines for developing the studies on such topics later.

3. This research is a cross- section study during the given period only. Interested persons may conduct research in the form of time series so as to compare the differences in each period.

## References

- [1] S. A. Olaleye, The role of mobile devices in online retailing: empirical evidence from Finland and Nigeria, Doctoral Dissertation, University of Oulu, Finland, 2019.
- [2] K. Srivistiyakun, Electronic marketing. <https://www.gotoknow.org/posts/335685>, 2019 (accessed 19 February 2019).
- [3] M. Lönnberg, and A.Milton. Impulse-buying Behaviour of Groceries Online: An exploratory of Generation Y regarding their perception of impulse purchases of groceries online. Bachelor's Thesis, International Business administration, Marketing. Umeå universitet, Företagsekonomi, Umeå universitet, Företagsekonomi, 2019.
- [4] M. Nachar, Factors that predict the adoption of online shopping in Saudi Arabia, Walden Dissertations and Doctoral Studies, 2019.
- [5] D. A. Aaker, Managing brand equity: Capitalizing on the value of a brand name, New York: Free press, 1991.
- [6] P.Kotler, K. Keller, Marketing management, 12th ed., New Jersey: Pearson Education, 2006.
- [7] S. Serirat et al., Consumer Behavior, Bangkok: A.N. ,1998.
- [8] A. Watthanakun, Factors related to the purchasing behavior of consumers through popular electronic commerce website of Thailand, Master of Business Administration Program, Marketing Program, Srinakharinwirot University, 2007. (in Thai)
- [9] J. Kim, J. D. Morris, J. Swait, Antecedents of true brand loyalty, Journal of Advertising 37(2) (2008) 99 – 117.
- [10] A. Sirikit, Channel Conflict and relationships for building the long-term business-to-business relationship in teleco business, Executive Journal 27(1) (2007) 95 – 104. (in Thai)
- [11] S. Dilokhaichanwut, Comparing multiplication of the values of global and local brands. Master's Degree Thesis, Chulalongkorn University, 2014. (in Thai)
- [12] W. Rittiboonchai, S. Srikong, J. Uthaiwannasri, E. Chai-chotchuang, W. Bonpo, Loyalty guidelines for Rachaburi Mitr Phol Fan Club, The 4th Prachachuen Research Network National and International Conference (4th PRN-CON 2019), pp. 80 – 84.
- [13] K. Siripanlop, Electronic marketing. <https://www.hitpages.com/doc/6440348557508608/9#pageTop>, 2019 (accessed 19 February 2019).
- [14] S. Kitiyanan, et. al., Marketing mix factors on the purchasing decision of goods and services through electronic commerce of undergraduate students, Faculty of Management Science, Kanchanaburi Rajabhat University, Journal of Management Science Nakhon Pathom Rajabhat University 5(2) (2019) 75 – 90. (in Thai)
- [15] W. G. Cochran, Sampling techniques, Oxford, England: John Wiley, 1953.
- [16] S. Chaitthawiwutkul, Group buying behavior and online services on ENSOGO website of customers in Bangkok, Master of Business Administration Program, Marketing Program, Srinakharinwirot University, 2012. (in Thai)
- [17] S. Saiyasarn, Marketing principles, Bangkok: PA Living Company Limited, 2000. (in Thai)
- [18] W. Rittiboonchai, et al., Factors affecting decision making in choosing the parcel delivery service company from online marketing of Nakhon Pathom Rajabhat University students, Humanities and Social Science Research Promotion Network Journal 3(1) (2020) 15 – 26. (in Thai)
- [19] T. Sumananusorn, Baby boomers and their shopping behaviors: the decision process to purchase all product through social media, Journal of Management Science Nakhon Pathom Rajabhat University 6(2) (2019) 175 – 188. (in Thai)