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# Marketing Mix Factors Affecting Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province

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## Abstract

The objectives of this research were to (1) study demographic characteristics affecting online shopping behavior of private company employees in Nakhon Pathom Province and (2) study marketing mix factors affecting online shopping behavior of private company employees in Nakhon Pathom Province. This research employed quantitative research methodology. The population was private company employees in Nakhon Pathom Province. The sample consisted of 385 private company employees who had purchased products online in Nakhon Pathom Province, selected through simple random sampling. Data were collected using questionnaires. The statistics used for analysis included percentage, mean, and standard deviation. The statistics used for hypothesis testing included Independent T-test, One-way Analysis of Variance, and Multiple Regression Analysis.

The research findings revealed that (1) demographic characteristics including gender, age, education level, and income did not affect online shopping behavior of private company employees in Nakhon Pathom Province differently, and (2) marketing mix factors including product, price, place, promotion, people, physical evidence, and process affected online shopping behavior of private company employees in Nakhon Pathom Province differently at the statistical significance level of 0.05.

**Keywords:** Marketing Mix, Online Shopping

## 1. Introduction

Currently, online shopping has become increasingly popular in Thai society due to its convenience in accessing products and services, while saving time and travel expenses. (Setthachotsombut, Sommanawat, & Sua-iam 2024) This phenomenon clearly correlates with changing consumer behavior across different eras, particularly among private company employees who need to manage their time efficiently. Online shopping has therefore become part of their daily routine and plays a significant role in their decision-making process for purchasing products and services. Although the online market has grown rapidly, various marketing factors affect consumer purchasing decisions differently, such as product, price, place, promotion, people, physical evidence, and process. These factors are crucial components that entrepreneurs must consider when creating marketing strategies to attract consumer interest and maintain competitive advantage in business (Wonwarun Wiwantniti and Chitpong Ayasanond, 2022).

In the context of Nakhon Pathom Province, which is one of the provinces with significant economic growth and serves as a regional trade and service center, studying factors affecting online shopping behavior of private company employees is particularly important. This group represents consumers with high purchasing power and plays a vital role in the local economic system (Thongrawd, Rittiboonchai, & Pringle, 2021).

This research therefore focuses on studying demographic characteristics affecting online shopping behavior, as well as marketing mix factors influencing purchasing decisions, to obtain in-depth information beneficial for developing effective marketing strategies. The research results can be applied commercially to enhance business potential for entrepreneurs and serve as guidelines for improving online service quality to meet the needs and expectations of consumers in the digital era.

### **1.1 Research Objectives**

1. To study demographic characteristics affecting online shopping behavior of private company employees in Nakhon Pathom Province
2. To study marketing mix factors affecting online shopping behavior of private company employees in Nakhon Pathom Province

### **1.2 Research Hypotheses**

1. Different demographic characteristics affect online shopping behavior of private company employees in Nakhon Pathom Province differently
2. Different marketing mix factors affect online shopping behavior of private company employees in Nakhon Pathom Province differently

## **2. Literature Review**

### **2.1 Demographic Concepts**

Bencharongkit (1999) discussed that human behavior is stimulated by external factors, based on the belief that individuals with different demographic characteristics tend to exhibit different behaviors. Serirat (1995) explained that demographic characteristics comprise key factors including gender, age, education level, and income, which are commonly used as criteria for market segmentation, with details as follows

1. Sex differences between males and females can affect behavior in multiple dimensions, such as physical differences, thinking patterns, mental state, emotions, and feelings, which may be factors causing different lifestyle patterns between genders.
2. Age serves as an indicator of life experience for each individual. Age differences affect concepts and behaviors in various aspects. People of different age groups often have different perspectives, attitudes, and behaviors.
3. Education level is a factor affecting an individual's thoughts and attitudes. Different education levels lead to differences in attitudes, knowledge, and decision-making. Generally, those with higher education levels tend to have broader concepts and perspectives than those with lower education levels.
4. Income level influences behavior and lifestyle patterns, especially in consumption and product selection. High-income individuals often have more freedom to choose expensive or

higher-quality products, while those with lower income typically choose less expensive products according to their financial capacity.

## **2.2 Consumer Behavior Concepts**

Consumer behavior refers to individuals' actions related to deciding to purchase, use, and dispose of products or services to meet their needs. This behavior can change continuously due to internal factors such as attitudes and external factors such as environment, technology, and society (Schiffman & Kanu, 1994). Consumer behavior involves value exchange, such as the exchange of goods and services between buyers and sellers, which is an interaction between consumers' thoughts, feelings, and actions with the environment, making the purchasing decision process dynamic (Villarruel & Delgado, 2024). There are 3 forms

1. Dynamic Consumer Behavior: Due to changes in external environment such as communication, technology, society, etc., affecting consumers' thought factors and feelings. Consumer behavior is influenced by both internal and external factors, making it not static but constantly changing and evolving.

2. Interactive Consumer Behavior (Interaction): Between thoughts, feelings, and actions with the external environment. Therefore, understanding consumer behavior requires studying both internal and external factors to understand what, how, and why consumers decide to purchase products/services.

3. Exchange-Related Consumer Behavior (Exchanges): Meaning consumers behave to exchange certain values with others. In this case, it's the exchange between buyers (consumers) and sellers (product owners) to satisfy their needs. (Paisarnvirosrak et al., 2022)

## **2.3 The 7Ps Marketing Mix Concept**

The 7Ps marketing mix concept is a model developed from Philip Kotler's 4Ps to provide more comprehensive coverage in modern business. The key components include Product that must effectively meet consumer needs, appropriately set Price, and Place that provides convenient access to customers (Villarruel & Delgado, 2024). Promotion is viewed as an essential tool for creating awareness and stimulating target group interest (Shinasharkey & Wattanasiri, 2024). Additionally, People are crucial in creating positive customer experiences, while Process should be designed to be convenient and reduce complexity to achieve maximum satisfaction (Sattayawaksakul et al., 2024). In some businesses, such as schools or educational institutions, credibility and Physical Evidence, such as atmosphere or actual location, can effectively enhance image and trust. Sales negotiations must be polite and easily understood, and service delivery must be prompt (Sattayawaksakul et al., 2024).

## **2.4 Related Research**

Surayut maneethai, Suriya Phonglar, and Decha Phalalert (2024) studied factors affecting consumer attitudes towards online purchase decisions in Tha Mai District, Chanthaburi Province. The research found that online purchase decision attitudes: 1) depended on personal gender status at a statistical significance level of 0.01 regarding the suitability of online shopping channels with current lifestyle, 2) depended on personal age status at 0.01 significance level regarding product quality meeting requirements through online channels, 3) depended on education level at 0.01 significance level regarding online shopping suitability with current lifestyle, 4) depended on income level at 0.01 significance level regarding convenience of 24-hour online shopping availability, and 5) depended on occupation at 0.05

significance level regarding simple, uncomplicated online shopping processes. Marketing mix factors significantly influenced purchase decision attitudes: 1) price, distribution channels, promotion, process, and physical evidence had significance at 0.05 level, and 2) product had significance at 0.01 level.

Kumboon, Bunyaboon, PrajitLavan, and Tonesakulrungruang (2024) studied the Relationship Between Marketing Mix Factors and Purchasing Decision Behavior of Consumer Online Products In Bangkok. The research found that online shopping behavior differed according to gender, age, education level, occupation, monthly income, and marital status. Regarding marketing mix levels, consumers placed high overall importance on them, aligning with Kotler and Armstrong's (2009) buyer behavior model stating that marketing mix stimulates buyers' product or service selection. Consumers prioritized process factors most when deciding to purchase online. Marketing mix factors including product, price, distribution channels, promotion, staff, process, and physical environment were related to online shopping behavior only in certain aspects.

Kantuum, Sanmuang, & Puangthammarat (2019) studied Marketing Mix Affecting Consumers Purchase Of Online Products In Mueang District Ratchaburi Province. The result showed that the consumers in Mueang District, Ratchaburi Province had opinion towards the overall and each marketing mix aspect affecting online product purchase in high level, which these aspects can be arranged based on highest mean as follows: Price, Distribution, Product and Promotion, respectively. In terms of comparing the consumers' opinion towards marketing mix aspect categorized by personal factors, the study revealed that consumers with different gender, age, education, occupation, and monthly income did not have different opinion towards marketing mix aspect affecting online product purchase at statistically significant level as of 0.05.

Yaithet, et al. (2016) studied digital marketing mix factors affecting consumers' decisions to purchase products through social media in Nakhon Sawan Province. Data was collected through questionnaires from 400 samples and analyzed using descriptive statistics, percentage, mean, standard deviation, and multiple statistics for hypothesis testing. The research found that: 1) digital marketing mix factors were at high level overall, 2) personal factors did not affect consumers' decisions to purchase through social media in all aspects, 3) regarding purchase decisions through social media, consumer information search and alternative evaluation were at the highest level overall, while purchase decisions and post-purchase behavior were at high level overall. Factors affecting consumers' decisions to purchase through social media were not different at 0.05 statistical significance level.

### **3. Methods**

#### **3.1 Population and Sample**

##### **Population**

The study population consists of private company employees who have experience purchasing products online within the past 6 months in Nakhon Pathom Province, with an unknown exact number.

### Sample

The sample consists of private company employees who have purchased products online within the past 6 months in Nakhon Pathom Province, with an unknown exact number. Therefore, the researcher determined the sample size through estimation in the case of unknown population size using Cochran W.G.'s formula (1977).

The calculated sample size is 384.16, which the researcher has set to 385 people.

### 3.2 Research Instruments

In this research study, the researcher used questionnaires as tools to collect data about marketing mix factors affecting online shopping behavior of private company employees in Nakhon Pathom Province, with details as follows:

The questionnaire used in the study consists of the following parts: Part 1: General information of respondents, including 1) Gender 2) Age 3) Education level and 4) Income Part 2: Information about marketing mix factors affecting online shopping behavior of private company employees in Nakhon Pathom Province, consisting of 1) Product 2) Price 3) Place and 4) Promotion Part 3: Information about online shopping behavior factors of private company employees in Nakhon Pathom Province Part 4: Other suggestions

The questionnaire in parts 2-3 is a closed-ended 5-level rating scale based on Likert's scale, interpreting opinion levels as follows (Best & Kahn, 1993):

Opinion Level	Interpretation
Level 5	Means Highest
Level 4	Means High
Level 3	Means Moderate
Level 2	Means Low
Level 1	Means Lowest

The criteria for determining service users' opinion levels to interpret mean values at 5 levels are calculated as follows: Mean level = Highest score - Lowest score Number of classes =  $(5-1)/5 = 0.8$

From this calculation, the criteria for measuring opinion levels are set as follows:

Mean 4.21 - 5.00	means Highest opinion level
Mean 3.40 - 4.20	means High opinion level
Mean 2.61 - 3.40	means Moderate opinion level
Mean 1.81 - 2.60	means Low opinion level
Mean 1.00 - 1.80	means Lowest opinion level

### 3.3 Research Instrument Quality Assessment

1. Content Validity Testing: Index of Item-Objective Congruence (IOC) calculation. The researcher will use expert evaluations to calculate IOC for each question. Questions with IOC values of 0.5 or higher are considered to have acceptable content validity and will be retained in the research instrument. Questions with IOC values below 0.5 will be considered for

revision or removal (Rovinelli and Hambleton, 1977) (In this research, all questions have IOC = 0.67 or higher)

2. Preliminary Testing: After improving the research instrument according to expert suggestions, the researcher will conduct preliminary testing with a small sample group similar to the actual sample group to check question comprehension and response time.

3. Reliability Assessment: Using Cronbach's alpha coefficient analysis (Cronbach, 1951) (In this research, Cronbach's Alpha = 0.968) according to Nunnally & Bernstein's criteria (1994)

### 3.4 Data Collection

1. Prepare questionnaires improved according to advisor's recommendations for the sample population of 385 people

2. Collect data by distributing questionnaires to the sample group via Google Form online questionnaire

3. Online questionnaire distribution period: July 10 - July 31, 2024

4. Check completeness and content thoroughness of answered questionnaires before coding for recording in computer software

### 3.5 Statistics Used in Data Analysis

1. Basic Statistics: 1.1 Percentage 1.2 Mean 1.3 Standard Deviation

2. Statistics Used for Hypothesis Testing: 1) t-test 2) F-test (ANOVA) 3) Multiple Correlation Analysis 4) Multiple Regression Analysis

## 4. Results and Discussion

### 4.1 Research Results

1) Demographic Characteristics Affecting Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province

General information of respondents, which includes gender, age, education level, and monthly income, shows that most respondents were female (194 people, 50.4%), aged 18-30 years (163 people, 42.30%), held bachelor's degrees (145 people, 37.7%), and had monthly income of 15,001-20,000 baht (174 people, 45.2%).

2) Marketing Mix Affecting Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province

*Table 1: Mean, Standard Deviation, and Opinion Level towards Marketing Mix Factors Affecting Online Shopping Behavior, Overall*

Marketing Mix	Mean	S.D.	Opinion Level
Product	4.27	0.482	Highest
Price	4.38	0.455	Highest
Place	4.42	0.446	Highest
Promotion	4.40	0.452	Highest
People	4.38	0.451	Highest
Process	4.37	0.449	Highest
Physical Evidence	4.31	0.448	Highest
<b>Total</b>	<b>4.36</b>	<b>0.453</b>	<b>Highest</b>

From Table 1, opinions towards marketing mix factors affecting online shopping behavior were at the highest level overall (mean = 4.36). When considering individual aspects, place had the highest mean at the highest level (mean = 4.42), followed by promotion at the highest level (mean = 4.40), price at the highest level (mean = 4.38), and lastly, product at the highest level (mean = 4.27), respectively.

Table 2: Mean, Standard Deviation, and Opinion Level Classified by Online Shopping Behavior

Online Shopping Behavior	Mean	S.D.	Opinion Level
Your lifestyle affects online shopping behavior	4.28	.668	Highest
Your personal product search and price comparison affects your online purchase decisions	4.38	.645	Highest
Product publicity and regular information updates affect online shopping behavior	4.22	.578	Highest
Attractive appearance and packaging affect online shopping behavior	3.99	.651	High
Convenience and ease of purchasing affect your online shopping decisions	4.19	.522	High
<b>Total</b>	<b>4.22</b>	<b>.772</b>	<b>Highest</b>

From Table 2, regarding online shopping behavior, most respondents expressed opinions about private company employees' online shopping behavior at the highest level overall (mean = 4.22). When considering individual items, personal product search and price comparison affecting online purchase decisions had the highest mean at the highest level (mean = 4.38), followed by lifestyle affecting online shopping behavior at the highest level (mean = 4.28), and lastly, attractive appearance and packaging affecting online shopping behavior at a high level (mean = 3.99), respectively.

Table 3: Comparison of Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province, Classified by Gender

Online Shopping Behavior	Gender				t	Sig.
	Male		female			
	Mean	S.D.	Mean	S.D.		
	4.13	.881	4.02	.926		
					1.142	.253

Note: \* indicates statistical significance at 0.05 level

From Table 3, the Sig value is 0.253, which is greater than 0.05, indicating that different demographic characteristics in terms of gender do not affect online shopping behavior of private company employees in Nakhon Pathom Province differently. This does not support the established hypothesis.

Table 4: Comparison of Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province, Classified by Age

Online Shopping Behavior	Age								t	Sig.
	18-30 years		31-40 years		41-50 years		Over 50 years			
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
	4.00	0.682	4.13	.0.679	4.07	.801	4.03	.860		

Note: \* indicates statistical significance at 0.05 level

From Table 4, the Sig value is 0.864, which is greater than 0.05, indicating that different demographic characteristics in terms of age do not affect online shopping behavior of private company employees in Nakhon Pathom Province differently. This does not support the established hypothesis.



Table 5: Comparison of Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province, Classified by Education Level

Online Shopping Behavior	Education Level								t	Sig.
	Lower Secondary		Upper Secondary		Bachelor's Degree		Higher than Bachelor's			
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
	4.06	.952	4.05	.922	4.10	.817	4.21	.893		
								.165	.921	

Note: \* indicates statistical significance at 0.05 level

From Table 5, the Sig value is 0.921, which is greater than 0.05, indicating that different demographic characteristics in terms of education level do not affect online shopping behavior of private company employees in Nakhon Pathom Province differently. This does not support the established hypothesis.

Table 6: Comparison of Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province, Classified by Monthly Income

Online Shopping Behavior	Monthly Income								t	Sig.
	Less than 10,000 baht		10,000-15,000 baht		15,001-20,000 baht		Over 20,000 baht			
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
	4.31	.843	4.06	.936	3.99	.883	4.1	.902		

Note: \* indicates statistical significance at 0.05 level

From Table 6, the Sig value is 0.592, which is greater than 0.05, indicating that different demographic characteristics in terms of monthly income do not affect online shopping behavior of private company employees in Nakhon Pathom Province differently. This does not support the established hypothesis.

Table 7: Multiple Regression Analysis of Different Marketing Mix Factors Affecting Online Shopping Behavior of Private Company Employees in Nakhon Pathom Province

Marketing Mix Factors	B	Beta	t	Sig
Constant	.347		2.669	.008
Product	.206	.191	2.661	.008*
Price	.211	.223	4.294	.000*
Place	.472	.460	7.311	.000*
Promotion	.214	.190	2.847	.005*
People	.180	.175	2.750	.010*
Process	.192	.200	3.201	.001*
Physical Evidence	.210	.187	2.903	.004*

$R^2 = 0.745$ , Adjusted  $R^2 = 0.742$ ,  $F = 221.847$ ,  $*p < 0.05$

The research results from Table 7 show that the analysis of independent variables of marketing mix factors overall indicates that different marketing mix factors affect online shopping behavior of private company employees in Nakhon Pathom Province differently at a statistical significance level of 0.05.

When considering the impact weight of marketing mix factors, it was found that place (Beta = 0.460) had the greatest effect on online shopping behavior of private company employees in Nakhon Pathom Province, followed by price (Beta = 0.223), product (Beta = 0.191), and promotion (Beta = 0.190), process, physical evidence, and people, respectively.

Analysis of the coefficient of determination (R Square = 0.745) shows that marketing mix factors affect the dependent variable, online shopping behavior, by 74.5%, while the remaining 25.5% comes from other factors. The statistical analysis shows an F-value of 221.847 with a Sig. value of 0.000, which is less than 0.05, indicating that at least one independent variable influences the dependent variable.

In conclusion, different marketing mix factors affect online shopping behavior of private company employees in Nakhon Pathom Province at a statistical significance level of 0.05.

#### **4.2 Results of Hypothesis Testing**

Hypothesis 1: Different demographic characteristics affect online shopping behavior of private company employees in Nakhon Pathom Province differently.

Results of hypothesis testing found that demographic characteristics including gender, age, education level, and monthly income do not affect online shopping behavior of private company employees in Nakhon Pathom Province differently.

Hypothesis 2: Different marketing mix factors affect online shopping behavior of private company employees in Nakhon Pathom Province differently.

Results of hypothesis testing found that marketing mix factors including product, price, place, and promotion affect online shopping behavior of private company employees in Nakhon Pathom Province differently at a statistical significance level of 0.05

#### **4.3 Discussion**

Regarding demographic characteristics, the research found that differences in gender, age, education level, and income do not affect online shopping behavior of private company employees in Nakhon Pathom Province. This aligns with the research of Kantuam, Sanmuang, & Puangthammarat (2019), who studied marketing mix affecting online product purchases in Mueang District, Ratchaburi Province, finding that consumers with different gender, age, education, occupation, and monthly income did not have different opinions towards marketing mix factors. It also corresponds with Kumboon et al. (2024)'s study on the relationship between marketing mix factors and online purchase decision behavior of consumers in Bangkok, which found that different demographic characteristics did not affect purchasing decisions.

Regarding marketing mix factors, the research found that all aspects significantly affect online shopping behavior, particularly place having the most influence (Beta = 0.460). This aligns with Sattayawaksakul et al. (2024)'s finding that convenient service channels with reduced complexity help create maximum customer satisfaction, and with Villarruel & Delgado (2024)'s indication that easily accessible distribution channels are crucial components of the marketing mix. Price was the second most influential factor (Beta = 0.223), corresponding with Shinasharkey & Wattanasiri (2024)'s finding that price is an important tool in stimulating target group interest. Product, promotion, people, process, and physical evidence all affected purchasing behavior as well, aligning with Kotler and Armstrong (2009)'s concept that marketing mix stimulates buyers' product or service selection.

This research also corresponds with Yaithet et al. (2016)'s study, which found that digital marketing mix factors overall were at a high level and affected consumers' decisions to purchase through social media, particularly in information search and alternative evaluation being at the highest level. This reflects that consumers prioritize searching and comparing information before making online purchase decisions.

## 5. Conclusion

This research examining marketing mix factors affecting online shopping behavior of private company employees in Nakhon Pathom Province has yielded several significant insights. The study revealed that while demographic characteristics (gender, age, education level, and income) did not significantly affect online shopping behavior, the marketing mix factors played a crucial role in shaping consumer decisions.

The research findings demonstrate that all components of the marketing mix significantly influence online shopping behavior, with place (distribution channels) emerging as the most influential factor (Beta = 0.460). This emphasizes the critical importance of providing easily accessible and user-friendly online shopping platforms. Price ranked as the second most influential factor (Beta = 0.223), highlighting consumers' sensitivity to pricing strategies and value propositions in their online purchasing decisions.

The study also found that product quality, promotional activities, people, process, and physical evidence all contributed significantly to shaping online shopping behavior. The overall marketing mix factors explained 74.5% of the variance in online shopping behavior, indicating their substantial collective impact on consumer decision-making.

These findings have important implications for businesses operating in the online retail space. Companies should prioritize developing efficient and accessible distribution channels while maintaining competitive pricing strategies. Additionally, they should focus on creating comprehensive marketing strategies that effectively integrate all seven components of the marketing mix to enhance their competitive advantage in the growing online marketplace.

For future research, it is recommended to explore additional factors beyond the marketing mix that might influence online shopping behavior, particularly given the rapid evolution of digital technology and changing consumer preferences in the post-pandemic era. Furthermore, investigating specific industry sectors or product categories could provide more detailed insights for targeted marketing strategies.

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