

Computer Purchasing Behavior of Working Generation in Bangkok

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Abstract

This study investigates the computer purchasing behavior of the working generation in Bangkok, focusing on the influence of personal demographic factors and marketing mix variables. The research adopts a quantitative approach using a survey methodology, with data collected from 400 respondents aged 15–64 through a structured questionnaire. The independent variables include the 4Ps of Marketing (price, place, product, and promotion), while the dependent variable is purchasing behavior, analyzed through Kotler's 6W1H framework (who, what, when, where, why, whom, and how).

Descriptive and inferential statistics, including ANOVA and multiple regression analysis, were used to assess the data. The findings revealed that all four marketing mix factors had a statistically significant impact on computer purchasing behavior, with promotion being the most influential. Among personal factors, monthly income, education level, and occupation affected specific dimensions of purchasing behavior, whereas age and gender did not show significant influence.

The results emphasize that consumers in the working generation are highly engaged, research-driven, and influenced by promotional strategies, trusted platforms, and product specifications. These insights provide valuable guidance for marketers, retailers, and policymakers aiming to enhance consumer targeting and decision-making support in the digital product market.

Keywords: Computer Purchasing Behavior, Marketing Mix Factors (4Ps), 6W1H Framework, Working Generation, Consumer Behavior, Bangkok

Introduction

In today's digital era, computers have become essential tools in everyday life, significantly influencing how people work, communicate, and access information. According to the International Telecommunication Union (2024), over 5.4 billion people globally use the internet, most of whom rely on

computing devices for daily access. The widespread adoption of digital technology has led to a surge in demand for personal computers, particularly among working individuals who require efficient tools for productivity and connectivity.

In Southeast Asia, the COVID-19 pandemic rapidly accelerated digital transformation, increasing the demand for computers across various sectors. According to Mondejar, Chu, and Gogatz (2021), the crisis triggered an unprecedented surge in digital adoption across the region, with remote work, online education, telemedicine, and e-commerce becoming mainstream. This acceleration condensed years of expected progress into just a few months, reflecting how individuals, businesses, and institutions quickly adapted to digital tools and platforms. The shift created new opportunities for innovation and connectivity, solidifying digital technologies as essential components of everyday life in the post-pandemic era.

In Thailand, and specifically in Bangkok, the capital and economic hub, the computer market continues to grow due to increased digital literacy and the demand for hybrid work solutions. The National Statistical Office (2023) reported that 82.6% of Thai households had internet access in 2022, while 29.0% owned a computer. For the working generation—defined by the Organization for Economic Co-operation and Development as individuals aged 15 to 64 (Organization for Economic Co-operation and Development, n.d.)—the selection of a computer is shaped by both individual needs and external influences such as marketing and technological innovation.

Therefore, with the increasing relevance of computers in both personal and professional life, it is important to understand the purchasing behaviors of working-age consumers in Bangkok. This study focuses on factors such as personal demographics (e.g., age, income, education level), The 4Ps of Marketing (1991) as marketing mix (price, place, product, and promotion), and purchasing decision (6W1H). With this information, electronic businesses may have the necessary insights to effectively target this consumer group. This study period begins in March 2025 and ends in June 2025.

Purpose and Objective

- 1** To identify the personal factors that motivate working generation consumers in Bangkok on how they purchase computers.
- 2** To determine the marketing mix factors involved in the decision of computer purchase of working generation consumers in Bangkok.
- 3** To infer the computer purchasing behaviors of working generation consumers in Bangkok.

Hypothesis

1 Consumers with different personal factors have different purchasing behavior.

2 Marketing Mix Factors impact the purchasing behaviors of consumers.

Scope of Research

1 Content Scope

1.1 Independent variable which is the Marketing Mix Factors, based on The 4Ps of Marketing McCarthy (1960), consisting of Price, Place, Product, and Promotion

1.2 Dependent Variable which is the Purchasing Behavior consisting of **6** variables of those are Who, What, When, Where, Why, Whom, and How.

2 Geographical Scope: Bangkok, Thailand

3 Population and Sample Size: The total population of individuals aged 15 to 64 in Bangkok is 3,818,656 (March 2025) according to The Statistics of The Bureau of Registration Administration

4 Study Period: March – June 2025

Benefit/Outcome

1 Being well informed of the personal factors that motivate working generation consumers in Bangkok to purchase certain types of computers.

2 Understanding the marketing mix factors involved in the decision of computer purchase of working generation consumers in Bangkok.

3 To infer the computer purchasing behaviors of working generation consumers in Bangkok.

Definitions

1 Personal factors – are the characteristics of working generation respondents in Bangkok consisting of age, gender, income level, educational background, and occupation

1.1 Age – how old the respondents are.

1.2 Gender – consists of male, female, and others.

1.3 Income level – the average monthly earning range.

1.4 Educational Background – the level of education of the respondents, such as high school, undergraduate, bachelor's degree, etc.

1.5 Occupation – the job or profession level of the respondent including the industry they are working in.

2 Population – individuals that presently reside in Bangkok.

3 Working Generation – the common age range of individuals that are currently working which is 15 to 64 years old (Organization for Economic Co-operation and Development, n.d.).

4 Marketing Mix Factors – marketing factors based on The 4Ps of Marketing (1991) which drives the consumer/respondents to purchase computers.

4.1 Price – the price or affordability of the product.

4.2 Place – the distribution channels of the product.

4.3 Product – the products and services of the business.

4.4 Promotion – the methods of communication to convince the consumer to buy the product.

5 Computer purchasing behavior refers to the decision-making process and actions involved in selecting and acquiring a computer to meet personal, professional, or lifestyle needs. This behavior includes the evaluation of various factors such as performance, brand, price, purpose of use (e.g., work, gaming, education), and the available purchasing channels. For working individuals, buying a computer often reflects an investment in productivity, career development, and digital connectivity, especially in an increasingly remote and tech-driven world. Making informed decisions when purchasing computers can lead to better efficiency, reduced long-term costs, and higher user satisfaction.

5.1 Who – the individual making the computer purchase decision such as the individual user, a family member, or an organization purchasing on behalf of an employee.

5.2 What – the type or specification of the computer purchased, such as a laptop, desktop, and the selected configuration (e.g., processor, RAM, storage, GPU).

5.3 Where – the place or platform where the purchase is made, such as electronics retail stores, official brand websites, e-commerce platforms, or resellers.

5.4 When – the timing or frequency of computer purchases, such as during promotional periods, product release cycles, or when the old device becomes obsolete.

5.5 Why – the reasons or motivations behind the purchase, such as the need for remote working efficiency, study requirements, gaming, content creation, or upgrading outdated hardware.

5.6 Whom – the people influencing the purchasing decision, such as family members, friends, IT experts, online reviewers, or influencers.

5.7 How – the process or method of purchasing, such as researching online reviews, comparing prices and specs, trying out devices in-store, or using different purchasing methods such as installment, credit, etc.

Related theories, concepts, and definitions

1 Related theories, concepts, and definitions

1.1 Marketing Mix Factors

1.1.1 Definition of Marketing

According to the American Marketing Association (2017), marketing is defined as “the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large.” This definition highlights the multidimensional nature of marketing, extending beyond selling or advertising to include value creation and long-term relationships with various stakeholders.

1.1.2 Definition of Marketing Mix Factors

Philip Kotler and Gary Armstrong (2018) describe the marketing mix as the blend of marketing strategies and tools used by businesses to create value for customers and build strong customer relationships. They emphasize that effective use of the 4 Ps can influence the consumer’s buying decision and position the brand competitively in the marketplace

1.2 Computer Purchasing Behavior Theories and Concepts

1.2.1 Definition of a Computer

The U.S. National Institute of Standards and Technology (NIST, 2010) defines a computer as a device that accepts digital data and manipulates the information based on a program or sequence of instructions for how data is to be processed. The computer is divided into 3 types, Desktop Computer, Laptop Computer, and All-in-One Computer. A desktop computer is designed to remain on a desk or workstation and typically consists of separate components including a monitor, keyboard, mouse, and a central processing unit (CPU). It offers strong performance, easy upgradeability, and is commonly used in offices and homes (Shelly & Vermaat, 2012). A laptop is a portable personal computer that integrates the display, keyboard, battery, and internal components into a single compact unit. It is ideal for users who require mobility without sacrificing computing power. Laptops are widely used by students, professionals, and travelers (Morley & Parker, 2014). An all-in-one computer combines the monitor and internal components into a single unit, eliminating the

need for a separate CPU tower. It saves space while maintaining decent performance, often used in home and small office environments (Beekman & Quinn, 2014). These types of personal computers are distinguished by their design, functionality, and level of portability, allowing users to choose a system that suits their lifestyle and work requirements.

1.2.2 Definition of Behavior

According to the American Psychological Association (APA, 2018), behavior refers to any observable and measurable action, reaction, or activity of a living organism. This includes both voluntary activities—such as speaking, walking, or working—and involuntary responses, like reflexes or physiological reactions. Behavior is often studied in relation to stimuli and can be influenced by internal factors such as emotions, thoughts, and biological conditions.

1.2.3 Definition of Purchasing Behavior

The American Marketing Association (2018) defines purchasing behavior as the actions and decision-making processes of individuals or groups when selecting, buying, using, or disposing of goods and services. This concept focuses on how consumers interact with products and brands throughout the buying journey, from recognizing a need to evaluating alternatives and making a final purchase.

1.3 Principles Applied in determining Computer Purchasing Behavior

1.3.1 McCarthy's Principles (1960)

The Marketing Mix principle, introduced by E. Jerome McCarthy in 1960, presents a foundational model for crafting marketing strategies through four key components, commonly referred to as the 4 Ps (Price, Place, Product, Promotion). Each element serves as a tool to respond to consumer needs and market conditions, and the model remains widely used in business planning and marketing decision-making today.

1.3.2 Kotler's Principles

The 6W1H (Who, What, When, Where, Why, Whom, and How) theory can be applied to extensively analyze individual computer purchasing behavior. It provides various components/factors that influence decision-making and purchasing processes across multiple dimensions.

Conceptual Framework

The conceptual framework of this project is used for studying the personal factors and marketing mix factors that lead to computer purchasing behaviors of working generation consumers in Bangkok. The

marketing mix factors are determined using the 4Ps of Marketing, by McCarthy (1960), and purchasing behaviors (6W1H) are based on the Consumer Behavior Theory by Philip Kotler.

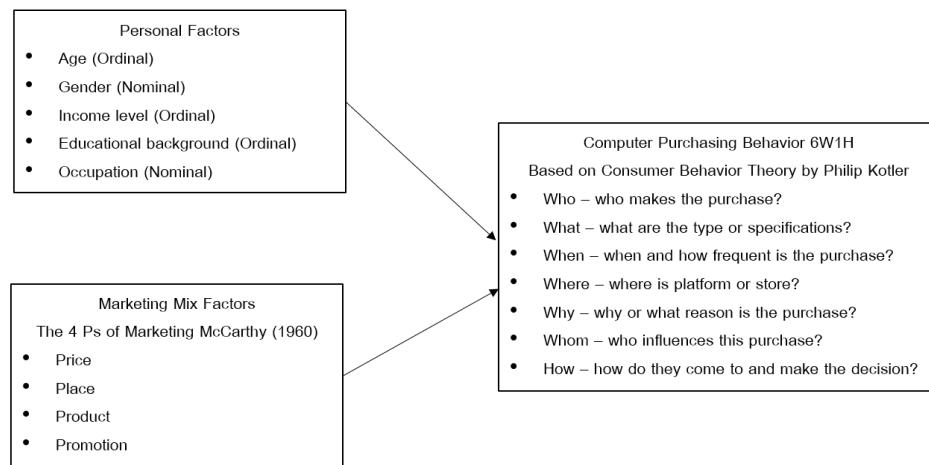


figure: conceptual framework of the study

source: The 4 Ps of Marketing McCarthy (1960) and Computer Purchasing Behavior based on Consumer Behavior Theory of Philip Kotler

Related Works

Kanjanarunsee and Visitnitikija (2023) conducted a study to examine how the marketing mix influences online purchasing behavior, specifically in the context of Korean-style clothing. The research aimed to explore not only consumer behavior in this niche market but also how personal characteristics impact purchasing decisions. A total of 400 respondents were surveyed using a structured questionnaire, and data analysis was carried out using Chi-Square tests and multiple regression analysis. The findings revealed that product, price, distribution channel, and promotional strategies—all elements of the marketing mix—significantly affected consumer decisions at the 0.05 significance level. The study recommends that businesses focus on offering trendy, well-tailored, and quality clothing with a range of prices, clearly stated pricing, and user-friendly online platforms. Regular promotional activities were also advised to better meet customer expectations and enhance competitiveness in the digital marketplace.

Srikhamhaeng, Thanitbenjasith, and Kamkankaew (2024) explored the factors influencing Generation Z students' purchasing decisions regarding mobile phone cases in Chiang Mai, Thailand. Utilizing a quantitative approach, the study surveyed 385 bachelor's degree students from various universities in the province. Data analysis involved descriptive statistics, correlation, and multiple regression analyses to assess the impact of the marketing mix elements—product, price, place, and promotion—on purchasing behavior. The findings revealed that all four components significantly affect purchasing

decisions, with price being the most influential factor, followed by place, product, and promotion. The regression model explained 40.5% of the variance in purchasing decisions, indicating that while the marketing mix plays a substantial role, other factors also contribute to consumer behavior. The study emphasizes the importance for businesses to develop comprehensive marketing strategies that prioritize pricing and distribution channels to effectively meet the preferences of Generation Z consumers.

Sanarat and Mahamud (2024) conducted a quantitative study to examine the influence of marketing mix factors on the consumption behavior of Pak Mor noodles among Bangkok residents. Utilizing a survey method, data were collected from 400 general consumers in Bangkok. The analysis revealed that personal preferences, such as enjoying thick Tom Yum soup with minced pork filling, and dining at belt-style restaurants, significantly influenced consumption behavior. On average, consumers partook in Pak Mor noodles 3.15 times per month, spending approximately 214.39 baht per occasion. Demographic variables, including gender, age, education, occupation, and income, were found to impact consumption patterns. Among the marketing mix elements, physical characteristics and distribution channels notably affected consumer choices, with statistical significance at the 0.01 level. The study suggests that to attract younger demographics, businesses should introduce unique selling propositions, leverage social media content, and cater to health-conscious groups by offering high-quality ingredients. Additional recommendations include enhancing convenience through online ordering systems, providing ample parking, offering promotions, ensuring secure payment methods, and maintaining a clean, well-decorated dining environment with adequate staffing.

Onto (2020) conducted a study examining how the customer-oriented marketing mix and consumer trust influence the online purchasing behavior of Pomelo clothing among women in Bangkok. A total of 400 female participants, who had previously purchased Pomelo products through online platforms, were surveyed using a questionnaire. The data were analyzed using descriptive statistics (such as mean and standard deviation), as well as t-tests, ANOVA, and Pearson correlation. The study found that the majority of respondents were aged 30–39, single or not currently partnered, held a bachelor's degree or lower, worked in private companies, and earned between 15,000–24,999 THB per month. Overall, respondents rated the marketing mix positively, especially in terms of ease of purchase. Trust in the Pomelo brand was also high across all dimensions—credibility, benevolence, and integrity. The results revealed that demographic characteristics influenced purchase frequency, and that both the marketing mix and brand trust were significantly associated with consumer behavior. Trust and marketing mix

showed moderate to high positive correlations with purchase behavior at 0.01 and 0.05 significance levels.

Research Methodology

In this research, computer purchasing behavior of working generation in Bangkok, the Survey Research design is employed using a quantitative approach. The data are collected through a cross-sectional study with a self-administered questionnaire as a data collection instrument.

Target Population and Sample

1 Target Group

The target population consisted of Thai citizens born between 1961 and 2010 (aged 15–64 years), residing in Bangkok.

1.1 Population and Sample Size

The population of the working generation people in Bangkok aged 15-64 are 3,818,656 (March 2025) according to The Statistics of The Bureau of Registration Administration. With the population size known, Taro Yamane's formula is used for calculating the appropriate sample size. The acceptable margin of error set in this research is no more than 5% (0.05) and a confidence level of 95%. The formula is as follows:

$$n = \frac{N}{1 + Ne^2}$$

Where n = sample size

N = population

e = the margin of error with a value of 0.05

Substituting as follows:

$$n = \frac{3,818,656}{1 + 3,818,656 (0.05^2)}$$

$$\begin{aligned} n &= 399.9581 \\ n &= 400 \end{aligned}$$

Therefore, based on the sample size calculation using Taro Yamane's formula, the sample size for this study is 400 respondents.

1.2 Sampling Method

The sampling is conducted using non-probability sampling. The accidental sampling method is used as a convenient and fast data collection method.

Research Instrument

The data collection tool used in this study was a questionnaire, designed to investigate the computer purchasing behavior of working generation in Bangkok. The questionnaire was self-administered by the respondents. The data collection was conducted from May 12 to June 2, 2025, spanning a total period of 3 weeks. The structure of the questionnaire is divided into three parts as follows:

Part 1 Questions related to personal factors such as age, gender income, educational level, and occupation

Part 2 This part is based on the level of opinion in a rating scale format regarding the marketing mix factors influencing computer purchasing behavior. It includes price, place, product, and promotion.

Part 3 The part is based on the computer purchasing behavior's opinion of respondents which consists of the following dimensions: Who (Who makes the purchase?), What (What are the type or specifications?), When (When and how frequent is the purchase?), Where (Where is the platform or store?), Why (Why or what reason is the purchase?), Whom (Who influences this purchase?), and How (How do you come to and make the decision?).

Part 2 and 3 scoring system is a 5-point rating scale as follows:

5 means strongly agree

4 means agree

3 means indifferent

2 means disagree

1 means strongly disagree

Afterwards, the total scores from all respondents will be used to calculate the average, which will be interpreted as follows:

$$\begin{aligned} \text{interval} &= (\text{highest score} - \text{lowest score}) / \text{options} \\ &= (5 - 1) / 5 \\ &= 1 \end{aligned}$$

- An average of 4.21-5.00 means strongly agree
- An average of 3.41-4.20 means agree
- An average of 2.61-3.40 means indifferent
- An average of 1.81-2.60 means disagree
- An average of 1.00-1.80 means strongly disagree

Once all the questionnaires were collected, the researcher checked the accuracy and completeness of the dataset by performing data coding, followed by analyzing and processing the data using Python programming language with statistical libraries or modules.

Instrument Validation and Reliability

1 Validity Testing

Content validity was assessed using the Item-Objective Congruence Index (IOC), evaluated by 3 experts. Items were rated:

- 1 = Congruent
- 0 = Uncertain
- 1 = Incongruent

An acceptable IOC score is ≥ 0.5 , calculating using the average score obtained from experts.

$$\text{IOC} = \frac{\text{sum of congruence given by all experts}}{\text{number of experts}}$$

The results from the IOC evaluation by three experts yielded a score of 1, which is more than 0.5. This indicates that the questionnaire items are congruent with the research objectives.

2 Reliability Testing

To assess reliability, the questionnaire was pilot-tested (with a group of 30 individuals who shared similar characteristics with the research sample. After the tryout, the questionnaire was analyzed to determine its reliability using Cronbach's Alpha Coefficient, with the acceptable threshold set at greater than 0.75. Once the reliability was confirmed, the questionnaire was then used for actual data collection.

For the questionnaire used in this study, the calculated Cronbach's Alpha was 0.785, indicating a high level of reliability (0.785 is higher than 0.75). Therefore, the questionnaire was deemed reliable.

Data Collection

Data collection was conducted from May 12 to June 2, 2025, spanning a total period of 3 weeks. The questionnaires are self-administered. Once all questionnaires have been collected, the review for completeness and accuracy is performed, and the data is coded and analyzed using statistical software.

Data Analysis

The descriptive statistical analysis includes frequency distribution, percentage, mean, and standard deviation were used to describe personal factors, perceptions of marketing mix factors, and computer purchasing behavior. Inferential statistics included One-way ANOVA to examine differences in purchasing behavior across personal factors, and Multiple Regression Analysis to assess the relationship between marketing mix factors and purchasing behavior. All hypotheses were tested at a 0.05 significance level.

Research Timeline

The research of the computer purchasing behavior of working generation in Bangkok is conducted approximately in a 6-month period from March 2025 to August 2025.

Results

The study on computer purchasing behavior of the working generation in Bangkok found that most respondents were male (64%), aged 27–38 (83.5%), earning 30,001–45,000 THB monthly (48%), and holding a bachelor's degree (75.25%). The largest occupational group was corporate employees (36%). This reflects a predominantly educated, mid-income, working-age consumer profile. All four marketing mix (4Ps) components—price, product, place, and promotion—had high agreement levels (overall mean = 4.4368) in influencing purchases. Price was most influential (mean = 4.5217), with emphasis on brand/seller comparison (4.9775) and value for money. Product factors (4.4331) prioritized specifications (4.5525) and brand reputation (4.4275). Place (4.3842) showed preference for physical store visits (4.475) alongside online convenience, while promotion (4.4083) highlighted free gifts (4.5425) and major sales events. Purchasing behavior measured via the 6W1H framework had an overall mean of 4.3798. "Why" scored highest (4.4015), with work and education as main purchase drivers. Most respondents bought computers for themselves (4.95), valued performance specifications, purchased during promotions, favored reputable

brand stores or e-commerce, were influenced by family, friends, and online reviews, and engaged in extensive pre-purchase research. Hypothesis 1, that personal factors affect purchasing behavior, was partially supported. Age and gender showed no significant differences, while income affected five of seven behavior dimensions (Who, What, When, Whom, How), education influenced Who, What, and overall behavior, and occupation affected Who and What. Hypothesis 2, that marketing mix factors influence purchasing behavior, was fully supported. Regression analysis ($R^2 = 0.329$, $p = 0.000$) showed all four factors significant, with promotion ($\beta = 0.2260$) and place ($\beta = 0.1475$) as strongest predictors, followed by price ($\beta = 0.0887$) and product ($\beta = 0.0788$).

Discussions

The study found that gender and age had no statistically significant influence on any purchasing behavior dimension, indicating similar decision-making patterns across these groups, consistent with Onto (2020). Monthly income, education level, and occupation showed significant effects on specific aspects. Income influenced Who, What, When, Whom, and How, aligning with Kanjanarunsee & Visitnitikija (2023) and Sanarat & Mahamud (2024). Education level affected Who, What, and overall behavior, supporting Klantong (2021), while occupation impacted Who and What, consistent with Pitri et al. (2025). All four marketing mix variables—price, place, product, and promotion—were significant in the regression model, with promotion and place having the strongest influence, supporting Srihamhaeng et al. (2024), Hanifah et al. (2022), and Asdi & Putra (2020). Purchasing behavior showed strong agreement across all 6W1H dimensions. Most respondents made their own decisions (Who), prioritized performance specifications over design (What), purchased during promotions or upgrades (When), preferred trusted brand stores and e-commerce platforms (Where), cited work and education as main reasons (Why), were influenced by multiple sources (Whom), and researched extensively before buying (How). These patterns align with prior studies such as Onto (2020), Sicong (2022), Zhang (2023), Klantong (2021), Elfadel et al. (2024), Pongsamran et al. (2021), and Phonchai (2023). Overall, consumers demonstrated a rational, value-conscious mindset, consistent across gender and age but varying by income, education, and occupation.

Recommendations

Businesses and retailers should enhance product and pricing strategies, focusing on performance specifications (CPU, RAM, storage) and transparent, value-based pricing. Additional benefits such as warranties and after-sales services should be emphasized. E-commerce platforms should improve delivery speed, reliability, and transparency, provide detailed product information, customer reviews, and videos,

and maintain consistent brand presentation across channels. Promotion, having the strongest statistical influence, should remain a key strategy, with seasonal campaigns, influencer collaborations, free gifts, bundled offers, and time-limited discounts targeted at mid-income, bachelor's degree holders. Government agencies should promote digital literacy, price comparison, product evaluation, and seller verification, while enforcing transparent pricing and fair practices. Initiatives such as subsidies or brand partnerships could improve computer access for students and professionals, helping reduce the digital divide.

Suggestions For Future Research

Future studies should expand beyond Bangkok to rural provinces or smaller cities to examine regional differences in income, infrastructure, and technology access. Incorporating qualitative methods such as interviews or focus groups could capture deeper motivations, psychological drivers, and cultural aspects. Research should also explore other product categories (e.g. smartphones, tablets, subscription services) to test the consistency of purchasing patterns. Extending analysis beyond the 4Ps and 6W1H—using frameworks like 7Ps or 4Cs—could provide more consumer-centric insights. Longitudinal studies are recommended to track behavioral changes over time in response to technological, economic, or global events, helping businesses and policymakers develop adaptive strategies.