# KEY FACTORS THAT INFLUENCE BABY BOOMER GENERATION TO BUY SMARTPHONES IN THAILAND

BY

MR. PHATRA KAEWJAROENPISAN

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF SCIENCE PROGRAM IN MARKETING
(INTERNATIONAL PROGRAM)
FACULTY OF COMMERCE AND ACCOUNTANCY
THAMMASAT UNIVERSITY
ACADEMIC YEAR 2019
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INDEPENDENT STUDY

BY
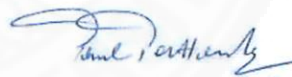
MR. PHATRA KAEWJAROENPISAN

ENTITLED

KEY FACTORS THAT INFLUENCE BABY BOOMER GENERATION TO BUY

SMARTPHONES IN THAILAND

was approved as partial fulfillment of the requirements for

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Chairman

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## ABSTRACT

As Thailand currently ranks third in the world's fastest growing population, with internet penetration and the trend of smartphones, nowadays, smartphones are no longer items that are limited to young generations anymore, but also for older generations. There is an increasing adaptation of smartphone technology among the older population. It is important to understand the smartphone perception and behaviors of Baby Boomers in Thailand, as this community will become the segment that will be important in the future. However, only few studies have been conducted on older adults and none focused on what attribute that effect the purchase of this product for Baby Boomer generation in Thailand. This research will therefore overcome the difference in literature and is hoped that it will help readers who are smartphone companies or wish to be in the industry in Thailand to understand better about Thai Baby Boomer customer key factors upon smartphone and be able to identify the target customers, as well as key factors that influence Baby Boomer generation to buy smartphone in order to strengthen or improve their businesses.

This study implemented exploratory research to obtain a summary of the Baby Boomers business market and insights. Exploratory work included secondary research and in-dept interviews Finally, a qualitative questionnaire was used and the Statistical Package Software for Social Science (SPSS) was employed.

In summary, results showed that there are 3 segments which are expedient concern people who are concerned about the reliability of brand and basic smartphone features that are comfortable to use. Price to value concern people who are concerned about promotion discount and performance of smartphones. Lastly, quality concern people were the group who are concerned about the quality of smartphones with high performance without caring about discount promotion. Which these 3 segments have different behavior, attitude, demographic profile.
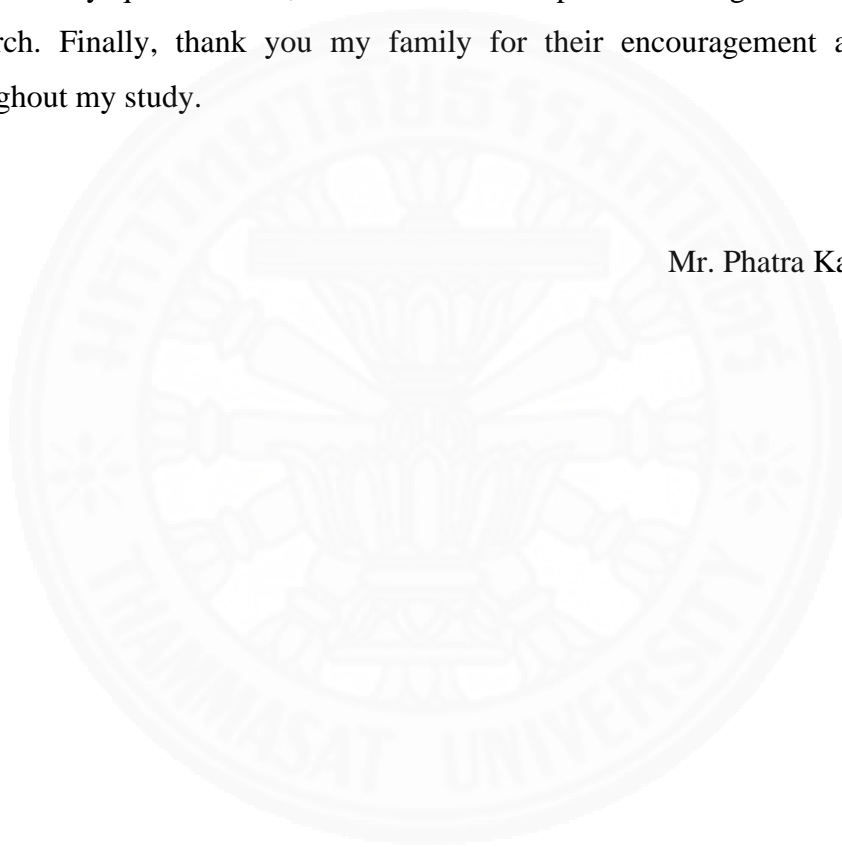
**Keywords**: Smartphone, Baby Boomers, Key factors

# ACKNOWLEDGEMENTS

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# CHAPTER 1

# INTRODUCTION

## 1.1  Introduction to the proposal

The aims of this study are to identify key factors that influence Baby Boomer generation to buy smartphones and to identify the most important product features for Baby Boomer generation.

Nowadays, smartphones are no longer items that are limited to young generations, but available for everyone. With internet penetration, around 30 million Thai people, or almost 50% of total population (Statista, 2019), already use smartphones in 2019 and tend to significantly and continuously increase every year due to the social media usage, price competition and function that meet the needs of customers. Also, Thailand actually ranks third in the world in terms of aging (Ageingasia, 2019). There is an increasing adaptation of smartphone technology among the older population.  It also revealed that 79% of Americans between the ages of 50-64 and 54% of Americans above 65 years old owned smartphones. In addition, the number of smartphone users in Thailand will be 30.05 million within 2022, according to statistics database Statista, it could be the same scenario here. So, Baby Boomer is one of the main targets of smartphone companies in Thailand.

According to Techmark.co.uk (2019), Baby Boomers are the generation that spends time on mobile screens the most, with 47 hours a week, compared to Gen Z and Gen X which have average screen time around 29-30 hours per week. Besides, how Baby Boomers use their smartphone is also different from other generations, according to Herosmyth (2018), the most popular social media site for Baby Boomers and Gen X is Facebook, while Gen Z and millennial most popular is Instragram. Just 27 % of millennials follow the news, compared to Gen X 46 % and Baby Boomers 61%.

Thus, most recent studies focused on working adults or younger generations. Only few studies have been conducted on older adults and none focused on what attributes that effect the purchase of this product for Baby Boomer generation in Thailand.  This study would therefore answer the literature gap, and is hoped to help

readers who are smartphone companies or wish to be in the industry in Thailand to understand better about Thai Baby Boomer customer needs upon smartphone and be able to identify the target customers, as well as key factors that influence Baby Boomer generation to buy smartphone in order to strengthen or improve their businesses.

## 1.2 Background to the proposal

### 1.2.1 Smartphone industry

Smartphones can be described as a mobile device with voice and data capabilities, running an operating system that allows third-party native applications to be installed, capable of handling various general-purpose applications including advanced functionality beyond making calls and sending text messages. Smartphones can access the Internet and run computer-like software programs, and typically use a touch screen to allow users to communicate with them. (Computer Hope, 2019).

The smartphone adoption rate now becomes the fastest consumer technology in history. It is 10 times more than the early personal computer adoption (Mlot, 2012). According to Statista.com (2019), In 2019 the number of smartphone users worldwide amounts to 2.7 billion. That makes every third person in the world owns a smartphone.

According to Canalys (2019), Thailand is Southeast Asia's second-largest Smartphone market with 19.2 million units sold in 2018. Oppo became the top vendor in Thailand with 22.2% market share, followed by Samsung, Huawei and Vivo respectively, while Apple was in fifth place. The competition in the smartphones industry has been intense, as several new players aggressively entered the market such as Redmi, Asus, Oneplus and Poco in the past few years. Nevertheless, demand for smartphones is not rising as the Thai market shifts, with just only 4.1% year-on-year growth in 2019, the major reason is the replacement cycle of the smartphone in Thailand is lengthening, from 18 to 24-36 months, according to estimates by Total Access Communication (DTAC).

### 1.2.2   Aging society in Thailand

According to the United Nations, a country with over 10 percent of population at 60 years of age or over will be recognized for becoming the Aging Society. Nowadays, Thailand is reportedly ranked the world's third fastest-aging population (Ageingasia, 2019). According to Pew Research Center Internet & Technology (2019), with 13 million people who are over 60 years, constitutes 20% of the population, which is projected to rise to 20 million or 35.8% by 2050.

This demographic change poses significant opportunities and challenges for companies and societies. Seniors will therefore become one of the main consumers on the market in Thailand that should be taken into account by any industry. This business segment is also very undeveloped in terms of offering products and services. Companies must understand the value of these wealthy older customers and adapt their services and goods to this segment.

## 1.3   Research objectives

This study aims to establish the key factors that influence Baby Boomer generation to buy smartphone in Thailand. The objectives of this proposed study are as follows.

1. To determine customer Baby Boomer's profiles based on personal information.

1.1    To determine Baby Boomer's profiles based on their demographic: measured by age, gender, educational level, personal income, etc.

1.2    To determine Baby Boomer's profiles based on their geographic: measured by dividing into two main regions: Bangkok Metropolitan Area and Urban cities.

1.3    To determine Baby Boomer's profiles based on their psychographic: measured by lifestyle, value and interest.

2. To determine Baby Boomer's perception and attitude toward smartphones.

3.  To examine and identify Baby Boomer's behavior towards smartphones.

      3.1    To examine and identify current buying smartphone behavior based on customer journey during pre-purchase, purchase and post-purchase, purchase frequency, the price of smartphone, which channel do they buy a smartphone from, what is the influence on their buying decision, and what is the brand of the smartphone do they use.

      3.2    To examine and identify problems from current usage such as smartphone weight that can cause suffering from arthritis, eye problems etc.

      4. To identify key factors that influence Baby Boomer generation to buy smartphone such as price, brand, social influence, product features and product attributes etc.

      The qualitative and quantitative methodologies were used to collect secondary and primary data for this study. Target respondents are seniors who age from 55 - 75 years old, currently have a smartphone or consider to buy their first smartphones.

# CHAPTER 2
# LITERATURE REVIEW

## 2.1  Smartphone features and Applications

The growth of smartphones has been dramatically increased, according to Science Node (adoption 2018), five billion users are projected to reach worldwide smartphone usage by 2019. In the early 1990s, IBM engineer Frank Canova found that chip-and-wireless technology was becoming small enough to be used in handheld devices. Simon Personal Communication was invented and developed the first smartphone in 1992 and released to the market in 1994 (Bloomberg.com, 2019). Then the smartphone market started to grow in the mid-late 1990s with the introduction of PDA, the personal digital assistant device, with early versions of operating systems But not until Macworld 2007 did the real smartphone revolution begin, it was the year that Steve Jobs presented iPhone to the world in the first time, with the large touch screen, support for 3G networks That offer much quicker email and web pages access (Nast, 2019).

According to SearchMobileComputing (2019), smartphone main features include internet access, wireless synchronization, internet browser, QWERTY keyboard, touchscreen display and digital camera. One of the main elements of a smartphone is the ability to run applications from app stores, an app store is a central hub that allows users to access mobile device applications. Google Play and Apple Store are the leading mobile app stores with more than millions of productivities, gaming, word processing, note-taking, organization, social media and more free and paid download apps. Thus, this usability of diverse applications enables smartphones to replace many existing devices such as personal computers, MP3 players, digital cameras, watches, alarm clocks, calculators, voice recorders and GPS navigators (Miller, 2012).

## 2.2 Baby Boomer generation

Baby Boomers are the major target that should be more prioritized by marketers. According to eMarketer (2016), 34% of the total media budget that marketers had allocated to reach millennials, this party, however, accounted for only 24 percent of the expenditure that made millennials one of the most discerning and efficient to pin down. According to Usatoday.com (2019), Baby Boomers are the wealthiest generation in the US accounting for 41.6% of consumer spending, up from 33.5% in 2007 and it tends to increase every year. According to Marketing charts (2019), compared to the Millennials, Baby Boomers have 2 times median income, 15 times net worth and average monthly spending 50 percent higher per household.

Baby Boomers are those born in the years following the Second World War, in particular from 1946 to 1964. The generation of Baby Boomers makes up a significant portion of the world's population, especially in developing nations. It accounts for almost 20 per cent of the American public. According to Pew Research Center Internet & Technology (2019), Baby Boomers are the major age population in the United States and it has had a significant effect on the world economy. According to Thai health (2016), there were around 11 million Baby Boomer people in Thailand in 2016, and by 2050, it expected an rise in the number of people aged 60 and over in Thailand to 20 million, comprising 35.8% of the population. (Ageinasia, 2019).

However, each generation comes with different characteristics that make them distinct from other generations. According to eLearning Industry (2019), Baby Boomer has eight essential characteristics: Good work ethic, self-assured, ambitious, goal-centered, resourceful, mentally concentrated, team-oriented and disciplined. Thus, it is a huge opportunity for businesses and marketers to understand Baby Boomer characteristics, lifestyles, behaviors and their insights to create services and products that meet the needs of this generation as best possible.

According to Pew Research Center (2019), Millennials led older Americans into adopting and using technology on their smartphones. But tech adoption has grown significantly among older generations since 2012–particularly Gen Xers and Baby Boomers. It also revealed that 79% of Americans between the ages of 50-64 and a smartphone owned 54% of Americans over the age of 65. In addition, the number of Thailand users set to hit 30.05 million by 2022, according to statistics database Statista,

it could be the same scenario here. So, Baby Boomer is one of the main targets of smartphone companies in Thailand.

According to Techmark.co.uk (2019), Baby Boomers are the generation that spends time on mobile screens the most, with 47 hours a week, compared to Gen Z and Gen X has average screen time of around 29-30 hours a week. In addition, how Baby Boomer uses the smartphone is different from other generations, according to Herosmyth (2018), the most popular social media site for Baby Boomers and Gen X is Facebook, while Gen Z and millennial most popular is Instragram. Just 27% of millennials are following the news, compared to 46% for Gen X and 61% for Baby Boomers.

## 2.3 Academic Theory Implication

### 2.3.1 Marketing Mix

According to Kotler (2018), Marketing mix is a mixture of four components, the 4P's which are product, price, promotion and place, hat every company has the ability to add, remove or change to create a desired marketing strategy.

However, for business nowadays, especially smartphone business which service is one of the most important criteria for selection, so other 3Ps are required as features for service part which are People, Process and Physical evidence are added to strengthen the business

The 1st P-Product, it can be tangible product or intangible service provided by a marketer to the target audience in order to meet their needs and want. Tangible products are goods like - cellphone, food, or smartphone, for this study, it including the features of the smartphone such as the quality of camera, the width and length of screen, the specification or the memory capacity, whereas intangible products are services such as health treatment, financial service, legal advice or audit service.

The 2nd P-Price, it is the amount charged by the marketer of his offer or the amount paid by the buyer of the product. Price is one of the most important factors that affect customer consideration of buying a product, especially smartphones that are highly competitive. Pricing changes impact consumer demand and sales. Marketers are expected to know the perceived value of the commodity by the consumer

in order to set the appropriate price, if the price is too low it can be referred to as low quality in the mind of the consumer.

The 3rd P-Promotion, it reflects the various communication strategies used by marketers for informing target audiences about the product. Promotion includes-publicity, personal advertising, public relations, promotion of products, brand awareness and digital marketing.

The 4th P-Place or distribution involves making the product or service available to clients in safe and affordable locations. It includes location, the decoration of the service center or the channel that products are available for sale which for smartphone business,

The 5th P-People or employees, it is a part of the quality of the service that the company provides to customers. For smartphone business, it is not just selling a product to the customer and all the responsibilities are gone. But the service such as after sale service or warranty are also important for buying decisions. Besides, for smartphone products whose main channel is still offline, the advice from the sales staff is one of the most important influencers in the buying process. In order to create the satisfaction for the customers, employees need training. Well-trained employees can be one of the keys of a brand that helps the brand differentiate themselves from competitors with their excellent service.

The 6th P-Process, it refers to the processes involved in the delivery of goods and services to the customer, the organizational process may affect the performance of the service provided by the business, including the delivery of the product to consumers. As a smartphone company, making sure it's easy to do company with is crucial, making the comparison effective, accurate, helpful and timely.

The 7th P-Physical evidence, this applies to what the customer sees or experiences when they communicate with the product. It involves branding, product packaging, a physical environment such as a store, and also the manner in which employees and sales representatives behave and dress or the way in which brand physically represents influences customers and may contribute to, or increase, or decrease, sales.

# CHAPTER 3
# RESEARCH METHODOLOGY

The study was separated into 2 parts which were exploratory research and descriptive research. Exploratory consisted of 2 parts which were secondary research and in-depth interviews. For descriptive research, it consisted of survey questionnaires.

## 3.1 Exploratory research

Exploratory research of several qualitative methods was conducted to collect primary information, insight and in-depth data needed to frame the descriptive research.

### 3.1.1 Secondary research

Secondary research was conducted by using related literature reviews in order to understand the industry overview, the revenue of the industry, the growth rate. The related literature review from related studies also showed the relevant results that could be used to interpret and analyze the study itself. The sources of these studies or reports were from credible sources such as reports from the government or studies from universities or institutes. Finding in secondary research was a guideline in doing an in-depth interview and focus group interview.

### 3.1.2 In-depth interviews

In-depth interviews were conducted with 10 interviewees from December 15, 2019, to December 20, 2019, in order to explore the insights of Baby Boomer's personal profile, behavior, key factor influence and perception towards buying smartphones as well as validate findings from the secondary research. The average time spent on each interview was about 20-30 minutes. The discussion was conducted individually via phone call and face-to-face interview. The result of the in-depth interview was used to frame the questionnaire questions.

## 3.2 Descriptive research

Descriptive research aimed to systematically and accurately describe the facts and characteristics of the target population and was used as a quantitative method to investigate key variables.

The questionnaire was designed based on the exploratory research result and distributed between February 1 and March 1, 2020, through the online survey platform named "Google Form" and as a paper-based questionnaire distributed at convenient locations. I tested our questionnaire by sending it to 10 people to test time to fill and easy to understand.

By using data from the in-depth interview, I generated this questionnaire to define personal information of target, perception and attitude, behavior, and key factors influencing purchasing smartphone.

The questionnaire was separated into 5 parts. The full questionnaire can be found in the Appendix.

Part 1: Screening questions

Part 2: Behavior and problem toward smartphone

Part 3: Attitude and perception towards smartphone

Part 4: Key factors influencing toward buying smartphone

Part 5: Respondent demographics, geographic and psychographics

## 3.3 Sampling Plan and Procedure

The respondents for in-depth interviews was selected with a convenience sampling method and referral method (snowball). It was face-to-face and telephone interviews depending on the convenience of respondents. Also, a questionnaire of 200 respondents was conducted. The sampling method was a non-probability method for the questionnaire and was selected with convenience sampling through personal connections and referral method (snowball).

- Who to recruit?
  - Males/Females aged 55-75 years old
  - Have a smartphone for at least 6 months

## 3.4  Data analysis

Data analysis included both qualitative and quantitative analysis. For the qualitative analysis from in-depth interviews, it was used for explanation, understanding and interpreting the topic of the research. It was used for developing the questionnaire for further study.

For the quantitative analysis, SPSS (Statistical Package for the Social Science) was used to analyze the data because many companies generally use SPSS and were easy to use. The analysis steps were as follows.

1) Respondent finding was used to find count and percentage of nominal and ordinal scale answers.

2) Descriptive analysis was used to find count, missing data, means, and standard deviation of interval scale answers.

3) Factor analysis was used to find the underlying dimensions of the questions of attributes.

4) Hierarchical cluster analysis was used to find a suitable number of clusters.

5) Used a Non-Hierarchical cluster (K-mean) to find an appropriate cluster that can make managerial decisions.

7) Frequency analysis in each cluster was used to find the target market and find the pain point of that target.

8) Crosstab analysis between cluster was used to find the relationship of demographic, attitude and behavior in each cluster.

# CHAPTER 4
# RESULTS AND DISCUSSION

## 4.1 In-Depth Interview Analysis

### 4.1.1 Key Finding Summary

From the total of ten interviewees, Baby Boomers mostly buy smartphone from offline channels. They mainly buy it from mobile service center or mobile phone shop in the department store. They said that the most influence people or things that effect on buying smartphone decision are staff at the store, advertising and the suggestion from their children or acquaintances. The price they are willing to spend for a smartphone are various, from 6,000 Baht to 30,000 Baht. They normally change smartphone in at least 3-5 years. 6 of 10 interviewees are using smartphone with android operating system, four of them using Samsung and two of them using Huawei, other four interviewees are using iPhone.

All interviewees have a positive attitude towards smartphones. Social media, smartphone features, communication, socialization and information update are perceived as a benefit of using smartphones as it can connect them with family, friends, co-workers and help to maintain social relationships. Even though there were some obstacles to learning new technology for Baby Boomers such as lack of knowledge, forgetfulness, or complexity of using new functions, five of ten interviewees said learning new technology such as a new application is difficult for them. However, most of the interviewees said right now, smartphones are a necessary device that they cannot live without. Besides, six of total ten interviewees said they only want smartphones that have basic necessary functions and worth the price, other four said they want the best smartphone in the market even if some features are not used. And only two of them said smartphone is an indicator of status

In general, all interviewees rank brand reliability, stability and durability as the top ranked factors that influence them in purchasing smartphones. Five interviewees out of 10 said that long battery life, high quality of after sale service and long warrant time are important. Two interviewees said camera quality and the quality of voice call are the most important factors for them. Besides, there are some factors

that these interviewees said they are also important for buying decisions such as large internal storage, large display screen, loud speaker, lightweight and the performance of smartphone, promotion discount and giveaways.

## 4.2  Survey Result Analysis

The survey showed the result of the statistical analysis used to investigate Baby Boomers behavior, attitude towards smartphones and personal information including gender, age, education, average household monthly income. The result of 221 datasets was collected. However, 51 datasets were not included as they could not meet the study criteria. Consequently, 200 datasets were used for the statistical analysis, accounting for the response rate of 90.5%. The Statistical Package Software for Social Science (SPSS) was selected to analyze the data. Findings are shown as below.

### 4.2.1  Respondent Profile

Table 4.1

*Respondent's Demographic Profiles*

| n = 200 | Frequency | Percent |
|---|---|---|
| **Own a smartphone** | | |
| Yes | 200 | 100.0 |
| No | 0 | 0.0 |
| **Gender** | | |
| Male | 78 | 39.0 |
| Female | 122 | 61.0 |
| | | |
| **n = 200** | **Frequency** | **Percent** |
| **Age** | | |
| 55-59 | 106 | 53.0 |
| 60-64 | 57 | 28.5 |
| 65-69 | 31 | 15.5 |
| 70-74 | 6 | 3.0 |

Table 4.1

*Respondent's Demographic Profiles*

| Household Income | | |
|---|---|---|
| No income | 4 | 2.0 |
| Less than 15,000 THB | 3 | 1.5 |
| 15,001 - 30,000 THB | 26 | 13.0 |
| 30,001 - 50,000 THB | 49 | 24.5 |
| 50,001 - 80,000 THB | 34 | 17.0 |
| More than 80,000 THB | 84 | 42.0 |
| **Education Level** | | |
| Below Bachelor's degree | 18 | 9.0 |
| Bachelor's degree | 95 | 47.5 |
| Above Bachelor's degree | 87 | 43.5 |
| **Have children or grandchildren that can consult with before buying smartphone** | | |
| Yes | 169 | 84.5 |
| No | 31 | 15.5 |

According to 200 respondents, table 4.1 displays that all respondents own a smartphone (100%), the majority of representative samples of Baby Boomers are female (61.0%). Only 39.0% of them are male respondents and 53% of them are between 55-59 years old, 28.5% are 60-64 years old and 15.5% and 3.0% are between 65-69 years old and 70-74 years old respectively. Furthermore, it shows that the majority earned a degree of education, Bachelor's Degree (47.5 %) and above Bachelor's Degree (43.5%). In addition, 84.5% of them have children or grandchildren that they can consult with before buying a smartphone. When classified by household income per month, 43.5% of them earned more than 80,000 THB.

### 4.2.2 Baby Boomer's Behavior towards Smartphone

Table 4.2

*Distribution channel that Baby Boomers buy a smartphone from*

| n = 250 | Frequency | Percent |
|---|---|---|
| **Service Center (Brand)** | | |
| Yes | 82 | 41.0 |
| No | 118 | 59.0 |
| **Mobile service center** | | |
| Yes | 95 | 47.5 |
| No | 105 | 52.5 |
| **Commart or other IT events** | | |
| Yes | 18 | 9.0 |
| No | 182 | 91.0 |
| **Online Channel** | | |
| Yes | 6 | 3.0 |
| No | 194 | 97.0 |
| **Mobile phone shop in department store (Not brand)** | | |
| Yes | 35 | 17.5 |
| No | 165 | 82.5 |
| **Get a smartphone from other people such as children** | | |
| Yes | 28 | 14.0 |
| No | 172 | 86.0 |

Table 4.3

*Baby Boomer's Behavior towards Smartphone*

| n = 250 | Frequency | Percent |
|---|---|---|
| **Smartphone purchasing amount** | | |
| Less than 3,000 THB | 4 | 2.0 |
| 3,001-6,000 THB | 5 | 2.5 |
| 6,001-9,000 THB | 31 | 15.5 |
| 9,001-12,000 THB | 40 | 20.0 |
| 12,001-15,000 THB | 21 | 10.5 |
| 15,001-18,000 THB | 16 | 8.0 |
| 18,001-25,000 THB | 51 | 25.5 |
| More than 25,000 THB | 32 | 16.0 |
| **Smartphone purchasing frequency** | | |
| Less than 1 Year | 1 | 0.5 |
| 1 Year | 7 | 3.5 |
| 2 Years | 39 | 19.5 |
| 3 Years | 46 | 23.0 |
| 4-5 Years | 35 | 17.5 |
| More than 5 years | 72 | 36.0 |
| **Smartphone brand using** | | |
| iPhone (Apple) | 86 | 43.0 |
| Asus | 1 | 0.5 |
| Huewei | 29 | 14.5 |
| Lenovo | 1 | 0.5 |
| Nokia | 1 | 0.5 |
| Oppo | 8 | 4.0 |
| Samsung | 70 | 35.0 |
| Vivo | 3 | 1.5 |
| Xiaomi | 1 | 0.5 |

As can be seen in table 4.2, 95 respondents (47.5%) regularly buy smartphones at mobile service centers, 82 respondents (41.0%) regularly buy smartphones at service centers from smartphone brand directly but only 3% of total respondents buy smartphones via online channels.

From table 4.3, it shows that the price that they are willing to pay for a smartphone is various, from less than 3,000 THB to more than 25,000 THB, 25.5% of 200 respondents are willing to pay between 19,001-25,000 THB for a smartphone, 20% of total respondents are willing to pay between 9,001-12,000 THB and 16% for more than 25,000 THB. Moreover, 36% of Baby Boomers in this survey normally change their smartphone in more than 5 years and only 4% that change their smartphone in less than 2 years. In addition, the smartphones that these 200 respondents are using right now are iPhone 42.5%, Samsung 35.0% and Huewei 14.5%.

Table 4.4

*Person or information affecting smartphone buying decision*

| | % | | | | | Mean | SD |
|---|---|---|---|---|---|---|---|
| | Not really important | Not important | Neutral | Important | Really important | | |
| Store staff | 13.0 | 10.0 | 37.0 | 26.5 | 13.5 | 3.18 | 1.18 |
| Review on the internet | 13.0 | 15.0 | 30.5 | 32.5 | 9.0 | 3.10 | 1.16 |
| Presenter of smartphone brand | 31.5 | 34.5 | 26.0 | 5.5 | 2.5 | 2.13 | 1.00 |
| Advertising | 9.5 | 27.0 | 47.0 | 11.5 | 5.0 | 2.76 | 0.95 |
| Youtube /IT program | 15.5 | 12.0 | 42.0 | 20.0 | 10.5 | 2.98 | 1.17 |
| Children or acquaintances | 7.5 | 7.5 | 30.5 | 37.0 | 17.5 | 3.50 | 1.10 |

Table 4.4 reveals the person or information affecting smartphone buying decision for Baby Boomers, it shows that most of the Baby Boomers ask for advice from their children or acquaintances ($\bar{x} = 3.50$) 37% think it is important and 17.5% think it is really important. Moreover, store staff is important for smartphone buying decision for 26.5% and really important for 13.5% of total respondents ($\bar{x} = 3.18$)

Table 4.5

*Problem from using smartphone*

| | % | | | | | Mean | SD |
|---|---|---|---|---|---|---|---|
| | Not really problematic | Not problematic | Neutral | problematic | Really problematic | | |
| Do not know how to use | 15.5 | 32.0 | 30.5 | 13.5 | 8.5 | 2.68 | 1.15 |
| Full storage space | 14.0 | 20.5 | 28.0 | 20.0 | 17.5 | 3.07 | 1.29 |
| Responding slowly | 7.0 | 19.0 | 29.0 | 28.5 | 16.5 | 3.29 | 1.16 |
| Overheating phone | 12.5 | 22.0 | 27.5 | 20.0 | 18.0 | 3.09 | 1.28 |
| App Crashes/Freezes, | 10.5 | 24.0 | 26.0 | 20.5 | 19.0 | 3.14 | 1.27 |
| Phone freezes | 14.0 | 25.0 | 24.0 | 17.5 | 19.5 | 3.04 | 1.33 |
| Pain, numbness in the hand | 13.5 | 30.5 | 30.5 | 14.5 | 11.0 | 2.79 | 1.18 |
| Eyes pain | 8.0 | 24.5 | 32.5 | 19.0 | 16.0 | 3.11 | 1.18 |
| Poor Battery Life | 11.0 | 21.0 | 24.5 | 20.0 | 23.5 | 3.24 | 1.32 |
| Poor voice call quality | 10.5 | 26.0 | 23.5 | 17.0 | 23.0 | 3.16 | 1.32 |

Table 4.5 reveals the problem from using smartphone for Baby Boomers.

As you can see from the table, smartphone responding slowly, poor battery life and poor voice call quality are ranked as the top three problems from respondents with mean $\bar{x}$ = 3.29, 3.24 and 3.16 respectively. However, "Do not know how to use", pain or numbness in the hand from using smartphone and phone freezes have the lowest mean score which are 2.68, 2.79 and 3.04.

### 4.2.3 Key Factors influence buying smartphones

Table 4.6

*Key factor influence buying smartphones*

| | % | | | | | Mean | SD |
|---|---|---|---|---|---|---|---|
| | Not really important | Not important | Neutral | Important | Really important | | |
| Same brand as previous smartphone | 4.5 | 11.5 | 39.5 | 26.5 | 18.0 | 3.42 | 1.05 |
| Reliability of brand | 1.0 | 3.0 | 17.5 | 41.0 | 37.5 | 4.11 | 0.87 |
| Large internal storage | 1.0 | 4.5 | 22.0 | 37.0 | 35.5 | 4.02 | 0.92 |
| Expandable storage | 2.5 | 8.5 | 30.0 | 35.0 | 24.0 | 3.70 | 1.01 |
| Easy to claim warranty | 2.0 | 5.0 | 13.5 | 37.0 | 42.5 | 4.13 | 0.96 |
| Long warranty time | 2.5 | 6.5 | 13.5 | 38.0 | 39.5 | 4.06 | 1.01 |
| High quality of after sale service | 1.0 | 4.0 | 13.5 | 36.5 | 45.0 | 4.21 | 0.89 |
| Large display screen | 1.5 | 4.5 | 24.0 | 42.5 | 27.5 | 3.90 | 0.91 |
| Large font, easy to read | 0.5 | 4.0 | 22.0 | 39.0 | 34.5 | 4.03 | 0.88 |
| Loud speaker | 1.5 | 5.0 | 23.5 | 37.0 | 33.0 | 3.95 | 0.95 |
| High quality of voice call | 1.0 | 6.0 | 19.5 | 36.5 | 37.0 | 4.03 | 0.95 |
| Long battery life | 0.0 | 6.0 | 10.5 | 37.0 | 46.5 | 4.24 | 0.87 |
| Have 2 sims | 14.5 | 22.0 | 31.5 | 17.5 | 14.5 | 2.96 | 1.25 |
| Rear camera – High quality and realistic | 0.5 | 7.0 | 15.0 | 40.5 | 37.0 | 4.07 | 0.92 |
| Rear camera – Beautiful portrait (Decoration) | 1.0 | 11.0 | 26.0 | 29.5 | 32.5 | 3.82 | 1.04 |
| Front camera – High quality and realistic | 1.5 | 8.0 | 18.5 | 37.5 | 34.5 | 3.96 | 0.99 |
| Front camera – Beautiful portrait (Decoration) | 2.0 | 9.0 | 26.0 | 31.0 | 32.0 | 3.82 | 1.05 |
| Light weight | 2.0 | 5.5 | 21.0 | 39.0 | 32.5 | 3.95 | 0.97 |
| Durability | 1.0 | 2.0 | 13.5 | 38.0 | 45.5 | 4.25 | 0.84 |
| Stability | 0.5 | 2.5 | 10.0 | 39.5 | 47.5 | 4.31 | 0.79 |
| High CPU performance | 0.5 | 8.0 | 15.5 | 40.5 | 35.5 | 4.03 | 0.94 |
| Promotion discount | 2.5 | 4.0 | 24.0 | 34.5 | 35.0 | 3.96 | 0.99 |
| Premium/Giveaway | 4.5 | 14.5 | 34.0 | 26.0 | 21.0 | 3.45 | 1.11 |
| Dedicated speed-dial buttons ex. Emergency button | 5.5 | 10.5 | 33.5 | 30.0 | 20.5 | 3.50 | 1.10 |

This survey includes 23 questions of factors affecting smartphone buying decision. Using mean and standard deviation to summarize the data, these are the five factors that have the highest average score, respectively. Findings are shown as below.

As can be seen in table 4.6, the average score of "Stability" is 4.31 out of 5 and the standard deviation is 0.79. The average score of "Durability" is 4.25 out of 5, and the standard deviation is 0.84. The average score of "Long battery life" is 4.24 out of 5, and the standard deviation is 0.87. The average score of "High quality of after sale service" is 4.21 out of 5, and the standard deviation is 0.89 and the average score of "Easy to claim warranty" is 4.13 out of 5, and the standard deviation is 0.96.

### 4.2.4  Attitudes Toward Smartphone

Table 4.7

*Attitudes toward Smartphone*

| | % | | | | | Mean | SD |
|---|---|---|---|---|---|---|---|
| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | | |
| Smartphone is an indicator of status? | 11.5 | 13.5 | 56.5 | 16.0 | 2.5 | 2.85 | 0.91 |
| It is difficult to learn new technology? | 4.5 | 22.5 | 34.5 | 32.0 | 6.5 | 3.14 | 0.99 |
| I only want smartphones that have basic necessary functions and worth the price | 4.0 | 5.0 | 22.5 | 42.0 | 26.5 | 3.82 | 1.01 |
| I want the best smartphone in market even some features are not used | 10.0 | 15.5 | 30.5 | 35.5 | 8.5 | 3.17 | 1.11 |
| Smartphone is a necessary device that they cannot live without. | 4.5 | 8.0 | 29.0 | 34.5 | 24.0 | 3.66 | 1.07 |

This survey includes 5 questions of attitudes toward smartphones. Using mean and standard deviation to summarize the data, these are the three questions that have the highest average score, respectively. Findings are shown as below.

As can be seen in table 4.7, the average score of "I only want smartphones that have basic necessary functions and worth the price" is 3.82 out of 5, and the standard deviation is 1.01. The average score of "Smartphone is a necessary device that they cannot live without." is 3.66 out of 5, and the standard deviation is 1.07. The average score of "I want the best smartphone in the market even if some features are not used" is 3.17 out of 5, and the standard deviation is 1.11.

### 4.2.5 Exploratory Factor Analysis

The exploratory factor analysis was applied to extract components to ungroup 23 items of factors influencing smartphone buying decision. In this study, the extraction method applied to all items is principal component analysis with Varimax as the rotation method. Two basic requirements of factor analysis are the Kaiser Meyer Olkin Measure of sampling adequacy must be above 0.70 and a significant level of Bartlett's test must be less than 0.05

Table 4.8

*KMO and Bartlett's Test*

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | 0.926 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 4285.821 |
| | df | 276 |
| | Sig. | 0.00 |

From table 4.8, after applying the Kaiser Meyer Olkin measure of sampling adequacy on the exploratory factor analysis for attitude towards social media consumption, the result is 0.926 and it has statistically significant at 0.00. Therefore, the exploratory factor analysis with these 4 items is acceptable.

Table 4.9

*Total Variance Explained*

| Rotation Sums of Squared Loadings | | | |
|---|---|---|---|
| Component | Initial Eigenvalues | | |
| | Total | % of Variance | Cumulative % |
| 1 | 5.970 | 24.875 | 24.875 |
| 2 | 4.817 | 20.072 | 44.947 |
| 3 | 3.314 | 13.807 | 58.755 |
| 4 | 2.891 | 12.047 | 70.802 |

From table 4.9, after the rotation, the result showed that there were four components with eigenvalue > 1, which accounted for 70.80% of the total variance explained. These factors were defined into attribute factors, as shown in the table and graphs below.

Table 4.10

*Rotated Component Matrix*

| Rotated Component Matrix | | | | |
|---|---|---|---|---|
| | Component | | | |
| | **1** | **2** | **3** | **4** |
| a1-Same brand as previous smartphone | -0.002 | 0.100 | 0.001 | **0.784** |
| a2-Reliability of brand | 0.357 | 0.233 | 0.086 | **0.708** |
| a3-Large internal storage | 0.277 | **0.559** | 0.007 | 0.533 |
| a4-Expandable storage | 0.376 | **0.600** | -0.034 | 0.178 |
| a5-Easy to claim warranty | **0.544** | 0.196 | 0.223 | **0.522** |
| a6-Long warranty time | **0.647** | 0.211 | 0.259 | 0.441 |
| a7-High quality of after sale service | **0.658** | 0.270 | 0.283 | 0.387 |
| a8-Large display screen | **0.742** | 0.363 | 0.120 | 0.092 |
| a9-Large font, easy to read | **0.842** | 0.211 | 0.184 | 0.062 |
| a10-Loud speaker | **0.850** | 0.201 | 0.259 | 0.112 |
| a11-High quality of voice call | **0.824** | 0.239 | 0.241 | 0.129 |
| a12-Long battery life | **0.596** | 0.409 | 0.152 | 0.389 |
| a13-Have 2 sims | 0.103 | **0.569** | 0.364 | -0.311 |
| a14-Rear camera – High quality and realistic | 0.381 | **0.757** | 0.162 | 0.295 |
| a15-Rear camera – Beautiful portrait (Decoration) | 0.291 | **0.771** | 0.323 | 0.164 |
| a16-Front camera – High quality and realistic | 0.255 | **0.788** | 0.236 | 0.288 |
| a17-Front camera – Beautiful portrait (Decoration) | 0.206 | **0.784** | 0.353 | 0.157 |
| a18-Light weight | **0.531** | 0.329 | 0.395 | 0.060 |
| a19-Durability | **0.512** | 0.309 | 0.488 | 0.177 |
| a20-Stability | **0.468** | 0.375 | 0.378 | 0.404 |
| a21-High CPU performance | 0.279 | **0.540** | 0.393 | 0.331 |
| a22-Promotion discount | 0.315 | 0.123 | **0.822** | 0.143 |
| a23-Premium/Giveaway | 0.092 | 0.262 | **0.789** | 0.053 |
| a24-Dedicated speed-dial buttons ex Emergency button | 0.405 | 0.191 | **0.692** | -0.035 |
| Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. | | | | |

From the table 4.10, four components were defined as follows: Component 1 is Basic features for smartphone which contains eleven items (a5, a6, a7, a8, a9, a10, a11, a12, a18, a19, and a20). Component 2 is High performance and specification consisting of eight items (a3, a4, a13, a14, a15, a16 and a17). Component 3 is Promotion discount and giveaways including three items (a22, a23, and a24). Component 4 is Reliability of brand which consists of three items (a1, a2, and a5).

### 4.2.6 Cluster

Using four factors from factor analysis, we categorized into segments by Hierarchical cluster (Ward's method) and K-Means cluster analysis. First, Hierarchical cluster showed that 3 or 5 clusters might be a suitable number of clusters. Next, K-Means was used to find out the most appropriate number of clusters. Finally, we grouped our respondents into 3 clusters, and we defined those clusters as the table below.

Table 4.11

*Mean of factor score in each cluster*

| Mean of factor score | | | |
|---|---|---|---|
| **Factors of attribute** | **Cluster** | | |
| | **Cluster 1** | **Cluster 2** | **Cluster 3** |
| Basic features for smartphone | **0.292** | 0.049 | -0.346 |
| High performance and specification | -0.912 | **0.403** | **0.337** |
| Promotion discount and giveaways | 0.154 | **0.617** | -1.079 |
| Reliability of brand | **0.725** | -0.329 | -0.175 |

Table 4.12

*Number of people in each cluster*

| Segmentation | Number of people (Count) | Number of people (%) |
|---|---|---|
| Cluster 1 | 44 | 27.0% |
| Cluster 2 | 88 | 44.0% |
| Cluster 3 | 58 | 29.0% |
| Total | 200 | 100.0% |

**Cluster 1: Expedient concern people (n = 44, 27%)**

Expedient concern people like favorable and convenient smartphone, they care about the reliability of the brand, easy to claim and long warranty time and high quality of after sale service. They prefer to use the same smartphone brand as previous rather than new brand or operation. For the factors that they think is important for the smartphone are basic features that make them use smartphone comfortably such as large screen, font, loud speaker, high quality of voice call, light weight, high durability and stability.

**Cluster 2: Price to value concern people (n = 88, 44%)**

The first thing in Price to value concern people' mind is promotion discount and giveaways. However, they also give value to the specification of the phone, they want high quality camera both rear and front cameras, with high performance specification, large and expandable storage.

**Cluster 3: Quality concern people (n = 58, 29%)**

The quality concern people think that the most important for buying smartphone is quality of the smartphone, similar to Cluster 2, they give value to the specification of the phone, they want high quality camera both rear and front cameras, with high performance specification, large and expandable storage but the different from Cluster 2 is this cluster do not care about the discount promotion or giveaways.

**Tests for significant differences between 3 segments via an Analysis of Variance (ANOVA):**

To confirm that there were differences between segments, A one-way Analysis of Variance (ANOVA) was used to test for significant differences between the mean factor scores of the three segments (Appendix C).

The result showed that factor scores for "Basic features for smartphone" were significantly different between 3 segments. (F= 6.180, $p < .05$).

Factor scores for "High performance and specification" were significantly different between 3 segments. (F= 45.022, $p < .05$).

Factor scores for "Promotion discount and giveaways" was significantly different between 3 segments. (F= 104.156, $p < .05$).

Factor scores for "Reliability of brand" was significantly different between 3 segments. (F= 24.559, $p < .05$).

### 4.2.7 Segmentation Analysis

Table 4.13

*Segmentation Analysis*

| | | Cluster Number of Case | | | | | |
| | | Expedient concern | | Price to value concern | | Quality concern | |
| | | Count | % | Count | % | Count | % |
|---|---|---|---|---|---|---|---|
| **Gender** | Male | 32 | 59% | 32 | 36% | 14 | 24% |
| | Female | 22 | 41% | 56 | 64% | 44 | 76% |
| **Age** | 55-59 | 30 | 56% | 53 | 60% | 23 | 40% |
| | 60-64 | 16 | 30% | 23 | 26% | 18 | 31% |
| | 65-69 | 6 | 11% | 9 | 10% | 16 | 28% |
| | 70-74 | 2 | 4% | 3 | 3% | 1 | 2% |
| **Household Income** | No income | 1 | 2% | 2 | 2% | 1 | 2% |
| | Less than 15,000 THB | 0 | 0% | 1 | 1% | 2 | 3% |
| | 15,001 - 30,000 THB | 8 | 15% | 10 | 11% | 8 | 14% |
| | 30,001 - 50,000 THB | 8 | 15% | 21 | 24% | 20 | 34% |
| | 50,001 - 80,000 THB | 7 | 13% | 20 | 23% | 7 | 12% |
| | More than 80,000 THB | 30 | 56% | 34 | 39% | 20 | 34% |
| **Education Level** | Below Bachelor's degree | 4 | 7% | 8 | 9% | 6 | 10% |
| | Bachelor's degree | 24 | 44% | 43 | 49% | 28 | 48% |
| | Above Bachelor's degree | 26 | 48% | 37 | 42% | 24 | 41% |
| **Channel to buy smartphone** | Service Center (Brand) | 22 | 41% | 34 | 39% | 26 | 45% |
| | Mobile service center | 27 | 50% | 44 | 50% | 24 | 41% |
| | Commart or other IT events | 3 | 6% | 13 | 15% | 2 | 3% |
| | Online Channel | 2 | 4% | 2 | 2% | 2 | 3% |
| | Mobile phone shop in department store (Not brand) | 8 | 15% | 14 | 16% | 13 | 22% |
| | Get a smartphone from other people such as children | 9 | 17% | 12 | 14% | 7 | 12% |

Table 4.13

*Segmentation Analysis*

| | | Cluster Number of Case | | | | | |
|---|---|---|---|---|---|---|---|
| | | Expedient concern | | Price to value concern | | Quality concern | |
| | | Count | % | Count | % | Count | % |
| **Smartphone purchasing amount** | Less than 3,000 THB | 0 | 0% | 3 | 3% | 1 | 2% |
| | 3,001-6,000 THB | 1 | 2% | 3 | 3% | 1 | 2% |
| | 6,001-9,000 THB | 8 | 15% | 14 | 16% | 9 | 16% |
| | 9,001-12,000 THB | 10 | 19% | 18 | 20% | 12 | 21% |
| | 12,001-15,000 THB | 4 | 7% | 14 | 16% | 3 | 5% |
| | 15,001-18,000 THB | 5 | 9% | 4 | 5% | 7 | 12% |
| | 18,001-25,000 THB | 12 | 22% | 23 | 26% | 16 | 28% |
| | More than 25,000 THB | 14 | 26% | 9 | 10% | 9 | 16% |
| **Smartphone purchasing frequency** | Less than 1 Year | 1 | 2% | 0 | 0% | 0 | 0% |
| | 1 Year | 0 | 0% | 1 | 1% | 6 | 10% |
| | 2 Years | 9 | 17% | 19 | 22% | 11 | 19% |
| | 3 Years | 15 | 28% | 17 | 19% | 14 | 24% |
| | 4-5 Years | 11 | 20% | 17 | 19% | 7 | 12% |
| | More than 5 years | 18 | 33% | 34 | 39% | 20 | 34% |
| **Smartphone brand using** | iPhone (Apple) | 35 | 65% | 27 | 31% | 24 | 41% |
| | Asus | 0 | 0% | 1 | 1% | 0 | 0% |
| | Huewei | 4 | 7% | 19 | 22% | 6 | 10% |
| | Lenovo | 0 | 0% | 1 | 1% | 0 | 0% |
| | Nokia | 1 | 2% | 0 | 0% | 0 | 0% |
| | Oppo | 2 | 4% | 4 | 5% | 2 | 3% |
| | Samsung | 12 | 22% | 32 | 36% | 26 | 45% |
| | Vivo | 0 | 0% | 3 | 3% | 0 | 0% |
| | Xiaomi | 0 | 0% | 1 | 1% | 0 | 0% |

Table 4.13

*Segmentation Analysis*

| | | Cluster Number of Case | | | | | |
|---|---|---|---|---|---|---|---|
| | | Expedient concern | | Price to value concern | | Quality concern | |
| | | Mean | SD. | Mean | SD. | Mean | SD. |
| **Person or information affecting smartphone buying decision** | Store staff | 3.13 | 1.24 | 3.10 | 1.19 | 3.33 | 1.11 |
| | Review on the internet | 3.17 | 1.15 | 3.10 | 1.25 | 3.02 | 1.05 |
| | Presenter of smartphone brand | 1.85 | 0.90 | 2.19 | 1.03 | 2.29 | 1.03 |
| | Advertising | 2.81 | 0.91 | 2.88 | 1.04 | 2.52 | 0.82 |
| | Youtube /IT program | 3.11 | 1.21 | 3.11 | 1.26 | 2.66 | 0.91 |
| | Children or acquaintances | 3.70 | 0.92 | 3.53 | 1.21 | 3.24 | 1.03 |
| **Problem from using smartphone** | Don't know how to use | 2.89 | 1.19 | 2.67 | 1.20 | 2.48 | 1.00 |
| | Full storage space | 2.85 | 1.38 | 3.25 | 1.30 | 2.98 | 1.18 |
| | Your phone is responding slowly | 3.28 | 1.35 | 3.51 | 1.05 | 2.95 | 1.05 |
| | Overheating phone | 3.11 | 1.36 | 3.25 | 1.31 | 2.83 | 1.14 |
| | App Crashes/Freezes | 3.00 | 1.40 | 3.36 | 1.22 | 2.91 | 1.17 |
| | Phone freezes | 2.98 | 1.50 | 3.17 | 1.27 | 2.88 | 1.26 |
| | Pain or numbness in the hand | 2.74 | 1.15 | 2.75 | 1.20 | 2.90 | 1.19 |
| | Eyes pain | 3.13 | 1.17 | 3.05 | 1.23 | 3.17 | 1.13 |
| | Poor Battery Life | 3.43 | 1.35 | 3.20 | 1.36 | 3.12 | 1.23 |
| | Poor voice call quality | 3.26 | 1.25 | 3.15 | 1.36 | 3.09 | 1.35 |
| **Attitude towards Smartphone** | Smartphone is an indicator of status? | 3.13 | 0.93 | 2.72 | 0.95 | 2.78 | 0.80 |
| | It is difficult to learn new technology? | 3.20 | 1.02 | 3.32 | 1.00 | 2.79 | 0.85 |
| | I only want smartphones that have basic necessary functions and worth the price | 3.83 | 0.88 | 4.02 | 0.91 | 3.30 | 1.19 |
| | I want the best smartphone in market even some features are not used | 3.06 | 1.23 | 3.41 | 0.93 | 3.61 | 1.17 |
| | Smartphone is a necessary device that they cannot live without. | 3.69 | 1.13 | 3.83 | 0.96 | 3.36 | 1.12 |

Table 4.13, Segmentation Analysis reveals the descriptive findings of the demographic, behavior, attitude and problems toward using smartphone of each segment. For the nominal scale questions which are demographic and behavior questions, frequency analysis, count and percentage are used to analyzed for these questions. In addition, for the interval scale questions which are attitude and problems toward using smartphone, frequency analysis which is mean and standard deviation are used to analyze these questions.

### Cluster 1: Expedient concern people (n = 44, 27%)

The majority of cluster 1, Expedient concern people are male (59%) age 55-64 years old for 86%, have average household income more than 80,000 THB for 56% and have education level above Bachelor's degree for 48%. They mostly buy smartphones from offline channel which are Mobile service center and Brand service center for 50% and 41% respectively and they are willing to buy a smartphone for more than 18,000 THB for 48% and they normally change a smartphone in more than 3 years (53%). For the brand of smartphones, they use, 65% of them are using iPhone (Apple).

In addition, for the person or information affecting smartphone buying decision, Children or acquaintances has the highest mean 3.70 and the second highest is Review on the internet (3.17). The issues that are the most problematic for this cluster are Poor battery life with the highest mean 3.43 and Smartphone responding slower 3.28. For the attitude towards smartphone questions, the highest mean for this cluster are 3.83, "I only want smartphones that have basic necessary functions and worth the price" and 3.69, "Smartphone is a necessary device that they cannot live without."

### Cluster 2: Price to value concern people (n = 88, 44%)

The majority of cluster 2, Expedient concern people are female (64%) age 55-64 years old for 86%, have average household income more than 80,000 THB for 39% and between 50,001-80,000 THB for 23%. Their education levels are Bachelor's degree for 49%. They mostly buy smartphones from offline channel which are Mobile service center and Brand service center for 50% and 39% respectively and they are willing to buy a smartphone between 6,001-15,000 THB for 52% and they normally change a smartphone every 2-3 years (41%). For the brand of smartphones

that they use, 36% of them are using Samsung and 31% using iPhone (Apple) and Huewei 22%.

In addition, for the person or information affecting smartphone buying decision, Children or acquaintances has the highest mean 3.53. The issues that are the most problematic for this cluster are Smartphone responding slower with the highest mean 3.51 and 3.36 for App crashes/freezes. For the attitude towards smartphone questions, the highest mean for this cluster are 4.02, "I only want smartphones that have basic necessary functions and worth the price" and 3.83, "Smartphone is a necessary device that they cannot live without."

### Cluster 3: Quality concern people (n = 58, 29%)

The majority of cluster 3, Quality concern people are female (76%) age 55-64 years old for 71% and 65-69 years old for 28%, they have average household income between 15,001-50,000 THB for 48%. Their education levels are Bachelor's degree for 48%. They mostly buy smartphones from offline channel which are Mobile service center and Brand service center for 41% and 45% respectively and they are willing to buy a smartphone more than 15,000 THB for 56% and they normally change a smartphone every 1-3 years (53%). For the brand of smartphones that they use, 45% of them are using Samsung and 41% using iPhone (Apple)

In addition, for the person or information affecting smartphone buying decision, Store staff has the highest mean 3.33. The issues that are the most problematic for this cluster are Eyes pain with the highest mean 3.17 and 3.12 for Poor battery life. For the attitude towards smartphone questions, the highest mean for this cluster are 3.61, "I want the best smartphone in market even some features are not used"

# CHAPTER 5
# CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Conclusion

From the result of research, there are 4 factors, including Basic features for smartphones, High performance and specification, Promotion discount and giveaways, and Reliability of the brand, which were consolidated from 23 factors that influence Baby Boomers to buy smartphones. These factors were categorized by using hierarchical cluster analysis and K-Means analysis into 3 clusters, they were defined as the three segments which were "Expedient concern people", "Price to value concern people", and "Quality concern people".

Expedient concern people were the group that was concerned about the reliability of brand and basic smartphone features that are comfortable to use. Price to value concern people were the group that was concerned about promotion discount and performance of smartphone. Lastly, quality concern people were the group who was concerned about the quality of smartphone with high performance without caring about discount promotion. For the comparison, expedient concern people are mostly male while other segments are female. This segment has the highest average amount that they are willing to pay for buying a smartphone, followed by quality concern people and price to value concern people respectively. Baby boomers who are respondents in this study normally change their smartphone every more than 4 years, which the quality concern people have the highest turnover rate, then expedient concern people and price to value concern people respectively. Only expedient concern people that have the majority using iPhone from Apple, the majority smartphones for price to value and quality concern people are android smartphones from Samsung and Huewei. Only quality concern people that think store staff is the best person or information that affect buying decision, for other segments they think children or acquaintances are the best for finding information before buying smartphone.

Each segment has different problems from using smartphone, the most problematic problem for expedient concern people is poor battery life, while the problem for price to value concern people is the smartphone responds slowly furthermore, the problem for quality concern people is eyes pain. And they all agreed that smartphone is a necessary device that they cannot live without.

## 5.2 Limitation

Firstly, the researcher distributed questionnaire mostly via only social media, Line application, by sending to family and friend groups then ask for forwarding by using the convenience sampling method. So, there was no diversity of respondents in terms of age, average household income, lifestyle, attitude, education level and social status.

Secondly, the researcher could not reach the people who have not had a smartphone yet. All of the respondents in this survey already had smartphones and the researcher could not get insights from those people, thus there was a limitation on result which cannot reflect to non-user's attitude

Thirdly, the number or total respondents in this questionnaire are 200 respondents when consider with the number of factors that were used in this study which are 23 factors, the researcher has an opinion that it may be slightly smaller than it should, 230 respondents.

## 5.3 Recommendations

For the smartphone companies or people who are interested in this market, this study does not recommend which segment is the best to market or sell smartphones to. But this study helps segmenting Baby Boomers into 3 segments, finding what are their demographic profiles, their behaviors, what are the sources they value the most for searching information before buying, what are their problems and what are the key factors influencing them to buy smartphones.

Thus, smartphone companies or people who are interested in this market should look into the key factors which are important and influencing buying smartphone decision from table "4.6: Key factor influence buying smartphone" to find

what are the basically core benefits of the smartphone, then after deciding which segment you want to market or sale product to that are corresponding to your product. Eventually, looking for what are their profiles, behaviors, key factors and attitudes.

For the future studies, the objective of this study is to identify key factors that influence Baby Boomer generation to buy smartphone. However, the area of this study is limited to Bangkok, besides there was no diversity of respondent enough Thus, it cannot reflect the whole Baby Boomers of Thailand. The future studies should therefore expand the area of study to other provinces or other societies that have more diversity. It is important to investigate whether the diversity of respondents has a possible effect on the attitude, behavior and key factors influencing buying smartphones or not.
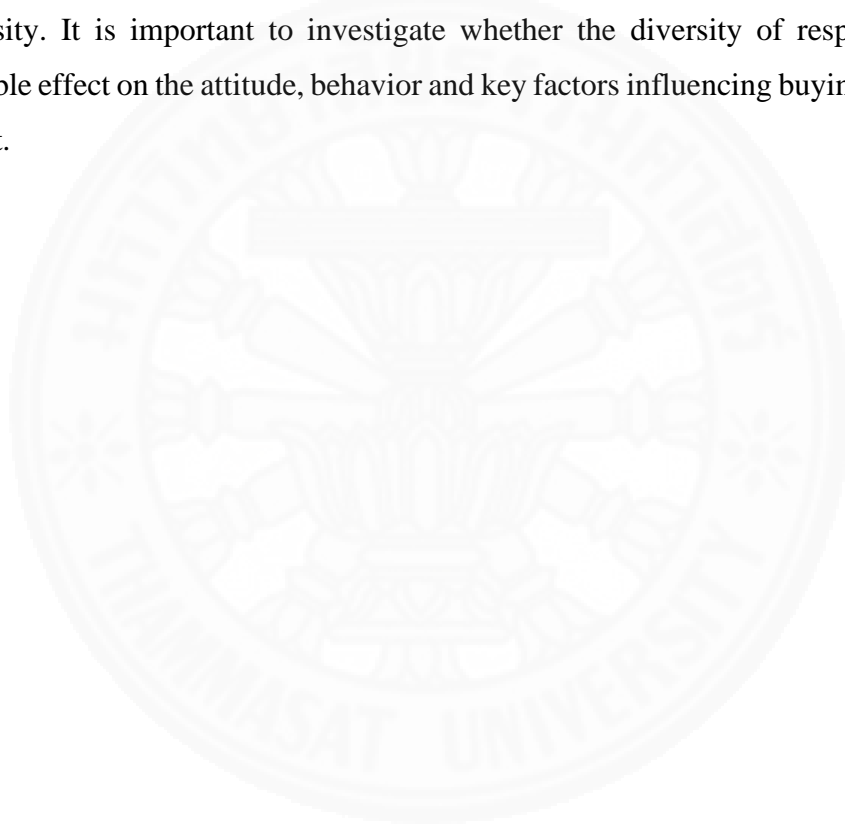
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# APPENDICES

# APPENDIX A
# QUESTIONNAIRE QUESTIONS

Section I: Screening Question

**The following questions were designed to ask about your experience when buying smartphones..**

1.  Do you have any smartphone?

    a.  Yes

    b.  No

2.  If no, do you have a plan to buy a smartphone in 6 months?

    a.  Yes

    b.  No

3.  How old are you?

    a.  Less than 55 years old

    b.  55-59 years old

    c.  60-64 years old

    d.  65-69 years old

    e.  70-74 years old

    f.  More than 75 years old

4.  Have you ever worked or are you currently working in the marketing research field?

    a.  Yes

    b.  No

Section II: Smartphone Buying Behavior

5. Which channel did you buy a smartphone from? (Can answer more than 1)

    a. Service Center (Brand)

    b. Online channel

    c. Commart or other events

    d. Mobile phone shop (Not brand)

    e. Mobile service center (True, AIS, Dtac)

    f. Get a smartphone from other people such as children.

6. How much are you willing to buy a smartphone?

    a. 0-3000

    b. 3001-6000

    c. 6001-9000

    d. 9001-12000

    e. 12001-15000

    f. 15001-18000

    g. 18001-25000

    h. 25001-30000

7. Normally, how many years do you change your smartphone?

    a. Less than 1 year

    b. 1 year

    c. 2 years

    d. 3 years

e. 4 years

f. 5 years

g. More than 5 years

8.     Which smartphone brand do you use right now?

a. Apple (iPhone)

b. Samsung

c. Huawei

d. Xiaomi

e. Oppo

f. Others
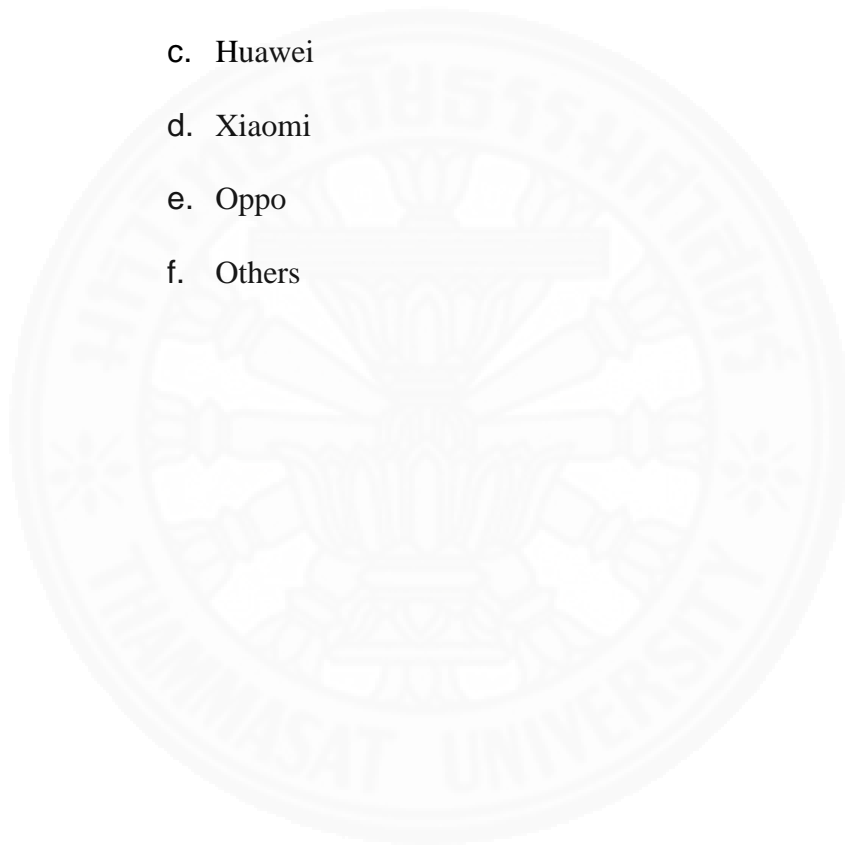
9. On the scale of 1 to 5, how much of the following factors influence on your buying smartphone decision? (from 1 = least important, to 5 = most important)

|  | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 9.1 Staff at the store |  |  |  |  |  |
| 9.2 Review on the internet |  |  |  |  |  |
| 9.3 Presenter of smartphone brand |  |  |  |  |  |
| 9.4 Children or acquaintances |  |  |  |  |  |
| 9.5 Advertising |  |  |  |  |  |
| 9.6 Youtube /TV program |  |  |  |  |  |
| 9.7 Others |  |  |  |  |  |

10.    On the scale of 1 to 5, how much of the following issue you think is a problem

from using smartphones? (from 1 = Not a problem at all, to 5 = Very problematic)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 10.1 Full storage space | | | | | |
| 10.2 Your phone is responding slowly | | | | | |
| 10.3 Overheating phone | | | | | |
| 10.4 App Crashes/Freezes | | | | | |
| 10.5 Phone freezes | | | | | |
| 10.6 Connecting problem with Bluetooth, WiFi, cellular network | | | | | |
| 10.7 Pain or numbness in the hand | | | | | |
| 10.8 Eyes pain | | | | | |
| 10.9 Poor sound quality | | | | | |
| 10.10 Poor Battery Life | | | | | |
| 10.11 Don't know how to use | | | | | |
| 10.12 others (Please be specify) | | | | | |

Section III: Factors affecting smartphone purchasing decision

**In this section, we would like to know your attitude toward the**

**smartphone purchasing decision.**

11. On the scale of 1 to 5, how much of the following factors affect your decision

to buy a smartphone? (from 1 = least important, to 5 = most important)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 11.1 Large internal storage | | | | | |
| 11.2 Expandable storage | | | | | |
| 11.3 Long warranty time | | | | | |
| 11.4 High quality of after sale service | | | | | |
| 11.5 Have many locations and easily to access of service center | | | | | |
| 11.6 Large display screen | | | | | |
| 11.7 Loud speaker | | | | | |
| 11.8 High quality of voice call | | | | | |
| 11.9 Long battery life | | | | | |
| 11.10 Have 2 sims | | | | | |
| 11.11 Rear camera – High quality and realistic | | | | | |
| 11.12 Rear camera – Beautiful portrait (Decoration) | | | | | |
| 11.13 Front camera – High quality and realistic | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 11.14 Front camera – Beautiful portrait (Decoration) | | | | | |
| 11.15 Light weight | | | | | |
| 11.16 Good material | | | | | |
| 11.17 Operation system (iOS, Android) | | | | | |
| 11.18 Brand | | | | | |
| 11.19 Presenter of the brand | | | | | |
| 11.20 Same brand as previous smartphone | | | | | |
| 11.21 Durability | | | | | |
| 11.22 Stability | | | | | |
| 11.23 High CPU performance | | | | | |
| 11.24 High GPU (graphic) performance | | | | | |
| 11.25 Worth the price | | | | | |
| 11.26 Promotion discount | | | | | |
| 11.26 Premium/Giveaway | | | | | |
| 11.27 Dedicated speed-dial buttons ex. Emergency button | | | | | |

Section V: Psychographic Questions

In this section, the following questions were created to ask your attitude toward smartphones.

12. On the scale of 1 to 5, how much do you agree to the following sentences?

(from 1 = Strongly Disagree, to 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 12.1 Smartphone is an indicator of status? | | | | | |
| 12.2 It is difficult to learn new technology? | | | | | |
| 12.3 I only want smartphones that have basic necessary functions and worth the price | | | | | |
| 12.4 I want the best smartphone in market even some features are not used | | | | | |
| 12.5 Smartphone is a necessary device that they cannot live without. | | | | | |

Section VI: Demographic Questions

13.    What is your gender?

      a.  Male

      b.  Female

14.    How old are you?

      a.  Less than 55 years old

      b.  55 - 59 years old

      c.  60 - 64 years old

      d.  65 - 69 years old

      e.  70 - 74 years old

      f.  More than 74 years old

15.    What is your average/last monthly household income?

      a.  Less than 15,000 baht

      b.  15,001 - 30,000 baht

      c.  30,001 - 50,000 baht

      d.  50,001 - 80,000 baht

      e.  More than 80,000 baht

16.    What is your educational level?

      a.  Below Bachelor's degree

      b.  Bachelor's degree

      c.  Above Master's degree

17.     How many children do you have?

        a.  None

        b.  1

        c.  2-3

        d.  More than 3

# APPENDIX B

# FACTOR ANALYSIS

**Total Variance Explained**

| Component | Rotation Sums of Squared Loadings | | |
|---|---|---|---|
| | Total | % of Variance | Cumulative % |
| 1 | 5.970 | 24.875 | 24.875 |
| 2 | 4.817 | 20.072 | 44.947 |
| 3 | 3.314 | 13.807 | 58.755 |
| 4 | 2.891 | 12.047 | 70.802 |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |

**Component Transformation Matrix**

| Component | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | .641 | .550 | .408 | .347 |
| 2 | -.059 | .046 | .663 | -.744 |
| 3 | -.663 | .745 | -.027 | .075 |
| 4 | -.383 | -.375 | .627 | .566 |

# APPENDIX C

# ANOVA of factor for each cluster

**ANOVA**

|  | Cluster | | Error | | | |
|---|---|---|---|---|---|---|
|  | Mean Square | df | Mean Square | df | F | Sig. |
| REGR factor score  1 for analysis 1 | 5.874 | 2 | .951 | 197 | 6.180 | .002 |
| REGR factor score  2 for analysis 1 | 31.213 | 2 | .693 | 197 | 45.022 | .000 |
| REGR factor score  3 for analysis 1 | 51.138 | 2 | .491 | 197 | 104.156 | .000 |
| REGR factor score  4 for analysis 1 | 19.857 | 2 | .809 | 197 | 24.559 | .000 |

# BIOGRAPHY

| | |
|---|---|
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