

THE EVALUATION OF CONSUMERS PERCEPTION RELATED TO PRODUCT
ATTRIBUTES AND THE EFFECT ON PRICE SENSITIVITY, BRAND LOYALTY, AND
IMPULSE PURCHASE OF MOBILE PHONES

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Abstract

This independent study, the evaluation of consumers perception related to product attributes and the effect on price sensitivity, brand loyalty, and impulse purchase of mobile phones in Bangkok, aimed to study the factors of product attributes that influence to price sensitivity, brand loyalty, and impulse purchase toward purchasing mobile phones and other recommendations toward the mobile manufacturers and vendors.

The methodology used in this study is the quantitative approach by descriptive research design in order to collect the primary data. The research instrument is the questionnaire and distributed to the population group who use mobile phone in Bangkok, the sample size of this study is 400.

The result of this study found that the factors that the most of respondents believe is quality attribute followed by design attribute, brand attribute, and the last is service attribute. In addition, there are the relationships between the respondents who believe in different of product attributes with the factors of price sensitivity, brand loyalty, and impulse purchase or each group of respondents among those four products attributes including quality, design, brand, and service has a different level of price sensitivity, brand loyalty, and impulse purchase significantly. It is expected that the data contained in this research study will interested and benefit to all readers.

**This Independent Study has been approved by
the Graduate School
Bangkok University**

Title: THE EVALUATION OF CONSUMERS BELIEVE IN PRODUCT ATTRIBUTES
AND THE EFFECT TO PRICE SENSITIVITY, BRAND LOYOTY, AND IMPULSE
PURCHASE ON THE COMMODITIZE MOBILE PHONES

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Chapter 1

Introduction

This chapter provided information of this research that the researcher would like to describe for understand the reasons and objectives of this study. The contents of this chapter are as followings,

1.1 Introduction to the problem

1.2 Background

1.3 Statement of problem

1.4 Purposes of study

1.5 Research questions

1.6 Conceptual framework

1.7 Hypotheses

1.8 Significance of the study

1.9 Benefits of research

1.10 Definitions of terms

1.1 Introduction to the problem

Consumers have differences in believe product attributes for selecting and purchasing their own mobile phones. Each person has their own objectives and value of uses. Some people prefer to use low price of mobile phones that have less functions and applications more than high price mobile phone likes iPhone or Blackberry. Some people prefer on high quality of mobile phone more than design or service. It depends on usage of buyers and their perceptions related to product attributes. Because there are many mobile phone brands in the market therefore consumers have different knowledge and experiences with those products.

There is not only one vendor in the market, many competitions are there. So what factors that consumers use to distinguish each mobile phone provider, every vendors offer many functions and features of their products to consumers such as big memory size, touch screen, two sim cards in one mobile phone, high quality of digital camera, mp3 stereo, games, free software application download, internet Wi-Fi and GPRS, Bluetooth, TV mobile, etc (Phone scoop, 2010). Each mobile phone vendor tries to differentiate their ability and capacity of their products to beat their competitor among consumers in the market. How consumer select one brand of mobile phone if all of them are equally in every things. What factors that consumers use for making their choice and drive their decision.

1.2 Background

The introduction of mobile phone technology started by "Motorola during the early 1940s, developed a backpacked two-way radio or the Walkie-Talkie and later developed a large hand-held two-way radio for the US military" (Wikipedia, 2010).

Nowadays in the globalization age, people can connect together easily around the world by using mobile phone technology. The mobile phone evolution growing continually and rapidly that made mobile phone in the present day has more qualities, capacities, and functions but less size and light weight and also more number of people using mobile phone. Mobile phone serves consumers as an entertainment media and communication tool. Every day people call, send SMS and MMS, chat, e-mail, surf internet, watch TV, play games, download music, video clips, and other applications as their daily lifestyle indispensably.

Through the years, people get benefit from mobile phone increasingly and technologies also improve themselves to go beyond. Manufacturers try to continue deliver more choice to consumers with perfect and complete mobile phone that includes everything that consumers want in one mobile phone. From Walkie-Talkie that has big size and heavy developed to TV mobile phone, internet mobile phone which has smaller size, light weight, and has more applications, functions and features that can serve more choice to many of user targets who have different want and need such as there are many low price mobile phones to serve users who have limited resource and less functions need or complete functions, features, and design of mobile phone that serve users who open to receive all new technology of mobile phone and want to be in trend. With the consumer demand, each manufacturer rapidly reproduces and develops their own products under their brands to meet consumer need superlatively.

Consumers now are more educated and have more knowledge because they are easily to access more information to compare and select competitive product that made manufacturers have to conduct and study consumer behavior to meet the most consumers want and need. Therefore study of decision making process and buyer behavior are necessary to manufacturer that there are five stages of decision making process include need recognition and problem awareness, information search, evaluation of alternatives, purchase and post-purchase evaluation (Tutor2u, 2010).

1.3 Statement of problem

As in mobile phone industry has many high competitions, mobile phone manufacturers rapidly push various type of their products to serve consumers need that made consumers hard to differentiate or compare ability and capacity of mobile phone. With varieties of brands and models made consumers have to find more information and knowledge before make purchase decision that each consumer has each own believe in product attributes depend on each experience, knowledge, education that can affect their price sensitivity, brand loyalty, and impulse purchase in differently.

These reason made mobile phone manufacturers face with how to know what consumers want or need, how to influence consumer believe in product attributes and purchase decision or criteria, how to know internal motivation or impulse among consumers to purchase one brand over others. Therefore to differentiate themselves in mobile phone consumer market, mobile phone vendors have to pay attention to consumer believe and purchase criteria that they use when making purchase decision (McClary, 2006).

1.4 Purposes of study

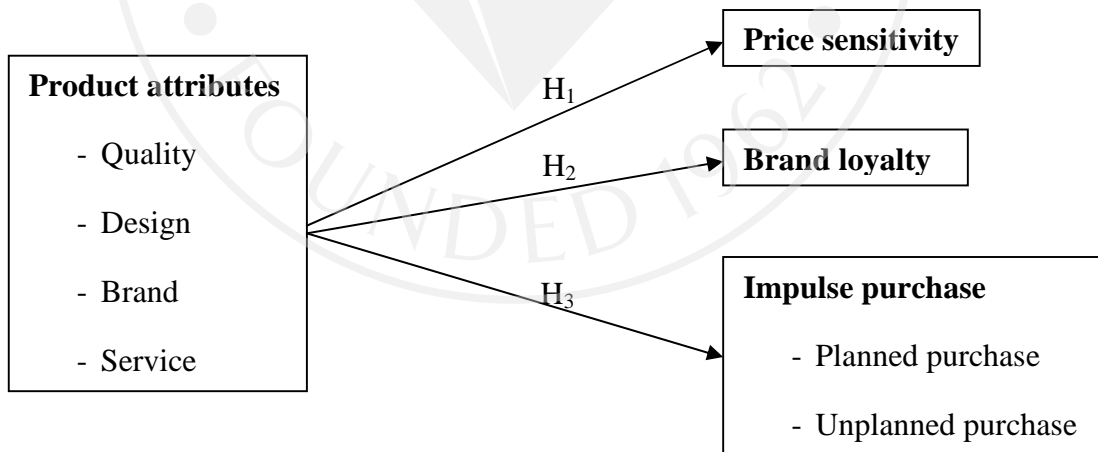
- 1.4.1 To evaluate consumers believe in difference product attributes when purchase mobile phone products that affect various different factors and impacts.
- 1.4.2 To investigate consumer product attributes that they pay the most important to when purchase mobile phone products.
- 1.4.3 To better understanding the relationships of consumer believe in difference product attributes and the relation to their price sensitivity, brand loyalty and impulse purchase that can more exactly target the appropriate value of mobile phone products.

1.5 Research questions

- 1.5.1 Is there a relationship between consumers believe in difference product attributes and the relative of their price sensitivity?
- 1.5.2 Is there a relationship between consumers believe in difference product attributes and the relative of their brand loyalty?
- 1.5.3 Is there a relationship between consumers believe in difference product attributes and the relative of their impulse purchase?

1.6 Conceptual framework

Figure 1.1: Conceptual framework



From figure 1.1, there are variables as following,

Variable:

Independent variable: Product attributes including quality, design, brand, and service

Dependent variable: Price sensitivity, brand loyalty, and impulse purchase including planned purchase and unplanned purchase.

1.7 Hypotheses

From figure 1.1, there are three hypotheses as following,

H₁: Group of people who pay an important to different product attributes tends to have different price sensitivity.

H₂: Group of people who pay an important to different product attributes tends to have different brand loyalty.

H₃: Group of people who pay an important to different product attributes tends to have different impulse purchase.

1.8 Significance of the study

To identify consumers' perspective of their believe in difference product attributes that related to their difference in price sensitivity, brand loyalty, and impulse purchase. What is consumer tendency toward product attributes? What product attributes that they pay the most important to? How they select their product? Each person has their own collecting information and knowledge then evaluates and compares them to help in making buying decision. And to better understanding the

relationship between the differences of their product attributes such as quality, design, brand, and service and their relative with each variable such as their price sensitivity, brand loyalty, and impulse purchase on mobile phone products. This research focus on knowing consumers behavior of their making purchase decision that may help mobile phone manufacturers and vendors more understand consumers mind and can serve the right information or the right products type and product attributes to them.

1.9 Benefits of research

This research shows that how consumers select their own mobile phone, what product attributes that they use to help making purchase decision, what factors that they pay the most important to when buying mobile phone. This information can help mobile phone manufacturers or mobile phone vendors to know what consumers want or need, knowing consumer behavior, consumer buying criteria, and other factors that create their impulse to purchase including the relationship of the difference of consumers believe in product attributes such as quality, design, brand, and service that related to the difference in price sensitivity, brand loyalty, and impulse purchase.

1.10 Definitions of terms

1.10.1 Mobile phone

“A mobile phone or mobile also called cell phone and hand phone is an electronic device used for mobile telecommunications such as mobile telephone, text messaging or data transmission over a cellular network of specialized stations known as cell sites” (Wikipedia, 2010) “and newer phones may also provide Internet services such as Web browsing and e-mail” (Internet.com, 2010).

1.10.2 Believe in product attribute

Consumer believes in the main product features, or major benefit of using that product that give value to the user (Marketing MiMi.hu, 2010). Product attributes are simply properties of a given product such as design, brand, service, quality, advertisement or any object of interest (Asia market research.com, 2010).

1.10.3 Price sensitivity

Consumers who have price sensitivity are people who pay attention to price first “which price is an important criterion in the consumers’ decision making process”. These groups of consumers “are likely to notice a price rise and switch to a cheaper brand or supplier” (Marketing MiMi.hu, 2010).

1.10.4 Brand loyalty

Extent of the trustworthiness of consumers to a particular brand, expressed through their repeat purchases, without regard to the marketing pressure generated by the competitor brands or other brands (Business dictionary.com, 2010).

1.10.5 Impulse purchase

“Impulse purchase can occur when a potential consumer spots something related to a product that stirs a particular passion in them” (Wikipedia, 2009) such as displays at the end of the walkway, sample of cooking that encouraged by smell and sound, or announce special price through store intercom (Montaldo, 2010). Impulse purchase can divided into two types including planned purchase and unplanned purchase. Lee and Kacen (2007) said that consumers are differentially influenced by

others by planned and unplanned purchase situations such as price or culture. Consumers who satisfy in unplanned purchase are people that likely to make their purchase immediately when they see the products by unplanned to buy before. In the other hand, consumers who satisfy in planned purchase are people that likely to make their purchase depend on time condition means that they had plan before they make their purchase.



Chapter 2

Literature review

This chapter describes the theory of product attributes that including quality, design, brand, and service, price sensitivity, brand loyalty, and impulse purchase that including planned purchase and unplanned purchase. The contents of this chapter are as followings,

2.1 Product attributes

2.1.1 Quality

2.1.2 Design

2.1.3 Brand

2.1.4 Service

2.2 Price sensitivity

2.3 Brand loyalty

2.4 Impulse purchase

2.4.1 Planned purchase

2.4.2 Unplanned purchase

2.1 Product attributes

What product attributes that consumers pay the most concern and the most important? What attributes that consumers think about first when they select their product? These reasons force manufacturers and vendors try to understand consumer behavior and their purchase criteria that effected by their believe in product attributes. There are many definitions of product attributes from many authors.

Guttormsen (2010, p.5) said, "different consumers demands affect different attributes" that made manufacturers have to differentiate their product to take advantage of the market demand and serve that demand. It means that manufacturers have to serve the right product attribute to the right consumer.

People don't buy product but they buy expectation of benefits from that product attributes or features. Attributes are inside the product and can be tangible or intangible. Tangible product attributes are attributes that consumers can see or can touch. It is physical characteristic of the product or features and benefit is what that features mean for example, advantages or motives. Intangible product attributes for example are service, brand, or reputation. Product attributes usually be composed of features, functions, benefits, and uses. Each product attribute can offer many benefits depend on its attributes. Consumers that buy product, they will get benefits from product attributes. Therefore why consumers want those attributes and what attributes that very mean to consumer are the questions that manufactures and vendors have to find the right answer (Superaff.com, 2006).

Another source defined product attributes as available attribute values that presented to user. Product attributes are grouped in product attribute sets in the way that product attributes used

(Openbravo wiki, 2009). To get competitive advantage has to go beyond more on product attributes to identify consumers' meaningful way the differentiation of one brand than others (Marketing MiMi.hu, 2010).

To understand more about attribute, Bookshelf Home (2003) referred to attribute definition fields as following,

Name: Consumers use the attribute name to search for the attribute that they want.

Data type: The data type refers to how the system will clarify the attribute value such as date, number, and text.

LOV type: LOV type is the name of the list of value for attributes.

Default value: Specify as default value that consumers see.

Validation: Specifies the range of acceptable attribute values for example, size ranking from 1 to 20 inches.

Display name: Display name is the attribute name that users can see.

Description: Description is for describe attributes that users cannot see.

Searchable: Referred to attributes and their values that can be searched for example, if the attribute is color, consumers can search for products that have color = red.

2.1.1 Quality

Product quality is a product feature that its ability can fulfill consumers need and their expectations which product quality can be defined in the terms of parameters or characteristics. Each

product has its own quality that vary from product to product (UNIDO, 2006). In addition, quality definition may differ from person to person because of different beliefs in quality attributes. But finally there should be some standards that consumers can use to compare each product quality. So quality can be defined as

“Degree of excellence” (Oxford dictionary)

“Fitness for purpose” (Edward Deming)

“Best for the customer’s use and selling price” (Feigenbaum)

“The totality of characteristics of an entity that bears on its ability to satisfy stated or implied needs” (ISO)

(Software testing help, 2007)

Product attributes have to meet and match with consumers’ demand and requirements. Consumers will define quality from functionality that is provided for users in a good and friendly way. Quality attributes can be used to evaluate product performance and lead to quality assurance or quality control that can protect imperfect or defect products and services.

Quality features can be used to measure product reliability that consumers can rely on product confidently. Product reliability can be evaluated by working on a project under different working environments, situations, and different conditions.

Maintainability is one factor that proves product quality which has to easy to maintain or development that also in the same way as durability and should be measured in terms of easy and fit to use or in the way of how well that product can perform (Software testing help, 2007).

2.1.2 Design

“Product design can be defined as the idea generation, concept development, testing and manufacturing or implementation of a physical object or service” (Wikipedia, 2010). Some consumers often tend to interest with design attribute because this attribute can see and touch in the physical way. Manufacturers try to come up with new series of their product to serve their target consumer.

Product design is a combination of art, science, innovation, idea, and technology to create product that suit to consumers need. It is the job of designer to communicate with consumers to analyze and generate the new idea which need designer’s ability and skill including innovative thinking that not only in the box but think out of the box or out of the same situation or condition (Wikipedia, 2010).

“Successful product design manages to reveal useful functionality beyond its appealing form” (Friedman, 2008) because even though that product is very excellence in design but most consumers are not likely to buy product that they won’t be able to use especially in economic crisis time except people who are very impulse purchase or has some stimulations or motivations to encourage them to buy. In addition, Friedman (2008) mentioned that “the key to a truly successful product design lies in designer’s ability to combine both beautiful design and functionality making it obvious to the customers how the product can be used and which benefits it delivers”.

2.1.3 Brand

“A brand is a name used to identify and distinguish a specific product, service, or business” (Wikipedia, 2010). Consumer can recognize each brand from brand image of that product or known as brand experience. Brand experience is brand that consumers distinguish in psychological aspect referred to brand image (Wikipedia, 2010).

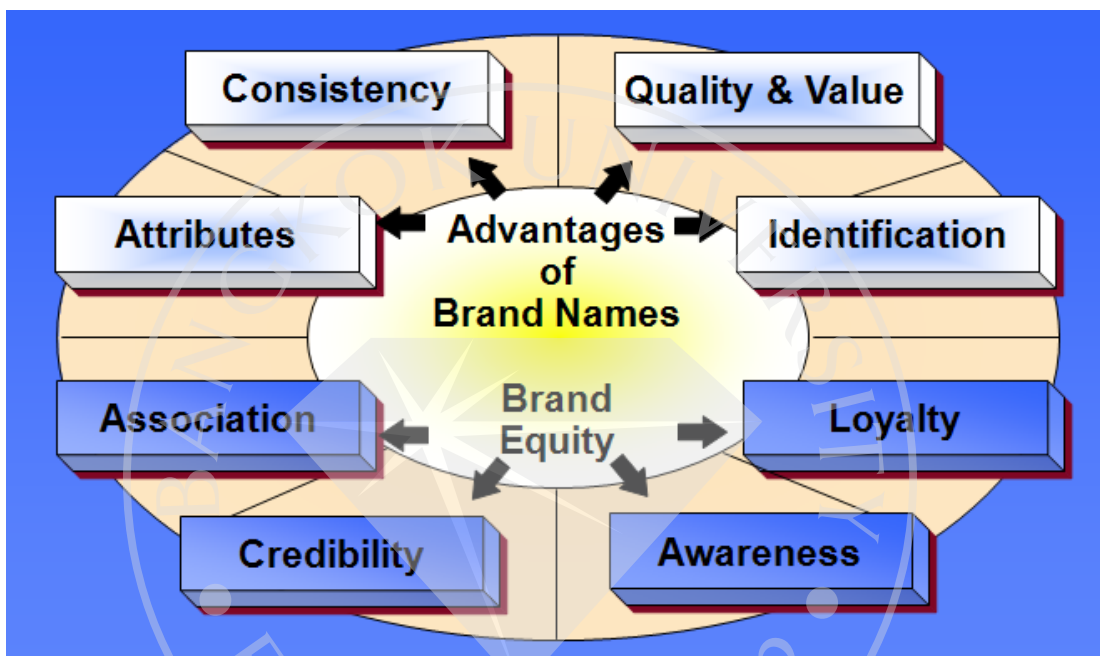
Brand image is the impression in the consumers' mind of the total personality of that brand for example, real or imaginary qualities. Manufacturers try to develop their brand image over time through advertising campaigns with a unique theme that represents product and brand image. Therefore brand image can be compared as consumers' direct experience that also called corporate image (Business dictionary, 2010).

“The key in brand image research is to identify or develop the most powerful images and reinforce them through subsequent brand communications” (Asia marketing research.com, 2010). Brand image can grow the feeling of consumers associate with that brand image which can influence to powerful of consumers' purchase though brand recognition and brand identity (Asia marketing research.com, 2010). About.com marketing (2010) defined brand identity as “how you want the consumer to perceive your product or your brand” means that what do manufacturers want consumers to know or perceive about their product. This reason forces manufacturer try to identify themselves in the way that consumer want to perceive and influence to them.

In addition, Business dictionary.com (2010) defined brand identity as a “visible elements of a brand (such as colors, design, logotype, name, symbol) that together identify and distinguish the brand in the consumers' mind”.

The picture below shows the advantages of brand names that consist of quality and value, identification, loyalty, awareness, credibility, association, attributes, and consistency (Andrew 2010, p.9).

Figure 2.1: The advantages of brand names



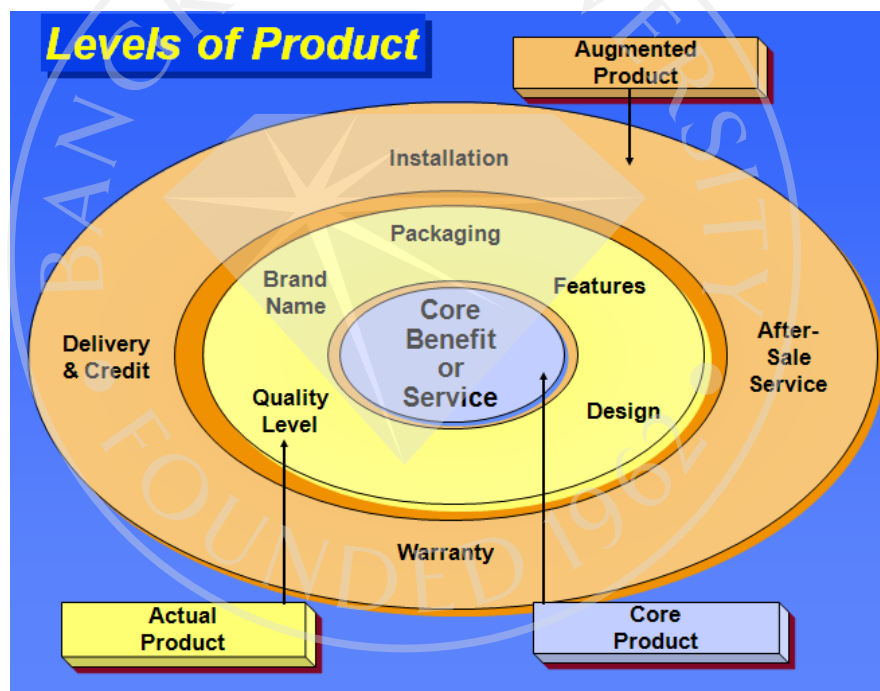
Source: Product and service strategy (Andrew 2010, p.9)

2.1.4 Service

In the high competition market created compression and the increased competition in several industries. The research found that most of new business opportunity focusing on service activity that made after-sales (AS) service plays the important role increasingly. In addition, after-sales service can create differentiation and increase market share for manufacturers and retailers as well as service strategy retains and keeps customers to manufacturers and retailers (Legnani, Ierace, & Cavaliere, 2007).

According to Jamier L. Scott. (2002) supported that “customer service is a series of activities designed to enhance the level of customer satisfaction – that is, the feeling that a product or service has met the customer expectation” (Wikipedia, 2010). In addition, Grisaffe (2010, p.37) said that there is “the relationship between service performance and customer loyalty intentions in a business-to-business context”. His study suggested that service performance directly influences to social trust, economic value, and relationship outcomes that positively influence customer loyalty (Grisaffe, 2010).

Figure 2.2: Core benefit or service



Source: Product and service strategy (Andrew 2010, p.3)

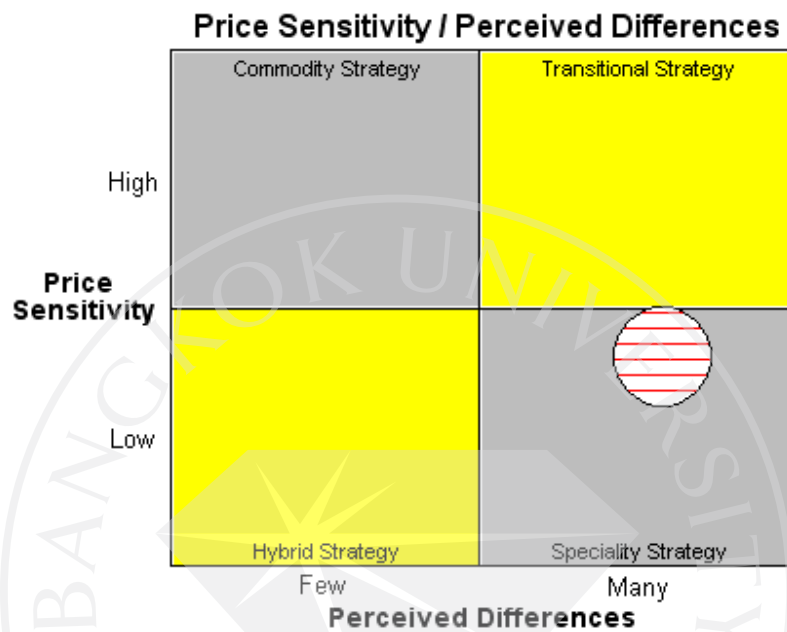
From figure 2.2, shows that service as a core benefit of core product which services consist of installation, after-sale service, warranty, and delivery and credit.

2.2 Price sensitivity

Miller (2006) mentioned about price sensitivity that it is the consumers' awareness in what they purchase in the aspect of cost that is necessary for the marketing professional to be able to assess price sensitivity in the target market by using priceline of companies as their format to the expectation price of consumers and offer the nearest price of consumers' mind with the discount deals in the state of being viable. Each consumer has different in limited price expectation that they willing to pay for the products and services. Marketing professional uses Price Sensitivity Measurement as a method to determine the possible of consumers (Miller, 2006).

Tendency of the demand of products and services are vary depending on the variation of price. Some products are more price sensitivity than others which depend on many factors that consumers face with and the impact of that price to consumers. For example, product that is necessary to consumers likes medicine, or the availability of interchanges like salt vs. bread, and the relative size of the variation in price. Marketer has to test the new price before launching to the market to evaluate the impact on the demand (Marketing dictionary, 2010).

Figure 2.3: Price sensitivity and perceived differences



Source: Business Resource Software (2010)

Description of the Model

From figure 2.3, the table consists of two-dimensional grid that focuses on the alternative between reducing costs or building in more value to the customer. Each of the four quadrants has different implications in terms of suggested strategy (Business Resource Software, 2010).

Table 2.1: Analysis of your enterprise position

Analysis of Your Enterprise Position			
Commodity	Transitional	Hybrid	Specialty
High Price Sensitivity Few Perceived Differences	High Price Sensitivity Many Perceived Differences	Low Price Sensitivity Few Perceived Differences	Low Price Sensitivity Many Perceived Differences
A commodity strategy is recommended. Efforts should be exerted to increase the firm's market share thereby lowering marginal costs.	A transitional strategy is suggested. Emphasize the quality of your product, but be ready to respond to competitor product improvements that attract customers.	A hybrid strategy is recommended. You should avoid price wars and talk quality.	A specialty strategy is recommended. You should initiate or continue efforts to differentiate your offering.

Source: Business Resource Software (2010)

From table 2.1, the table shows the analysis of enterprise position that each strategy should implement in each situation.

For Commodity Strategy, should implement this strategy when consumers are high price sensitivity and have few perceived differences which commodity strategy tries to lowering marginal costs to increase the firm's market share.

For Transitional Strategy, should implement this strategy when consumers are high price sensitivity and have many perceived differences which transitional strategy emphasizes on the quality of your product and also be ready to respond competitors' product improvement that may attract customers.

For Hybrid Strategy, should implement this strategy when consumers are low price sensitivity and have few perceived differences which hybrid strategy recommended to avoid price wars and talk quality.

The last strategy is Specialty Strategy, should implement this strategy when consumers are low price sensitivity and have many perceived differences which specialty strategy recommended to initiate or continue efforts to differentiate your offering product (Business Resource Software, 2010).

2.3 Brand loyalty

Daryl Travis (1995) said that “you learn that creating customer loyalty is neither strategic nor tactic; rather, it is the ultimate objective and meaning of brand equity. Brand loyalty is brand equity.” So what is loyalty of customers? How to make customers repeat purchase? How to influence them to commitment with our brand? These are the questions that manufacturers and retailers have to find the answer (Nissim, 2010).

Brand loyalty involves with consumers behavior that consists of consumer's conscious or unconscious decision or their intention expressed behavior to repurchase the same brand sequentially. It depends on what they perceive on each brand and does that brand offer the right features to consumers need for example, brand image, product quality that is proper to the price. To create brand loyalty, marketer uses advertising to encourage consumers' behavior to repurchase their product. Companies should not view their brand only on product or service but have to look over all company brand image that represent to companies' philosophies. In addition, learning and understanding consumers' motivation, memory, learning, and decision making process can influence consumers buying theory (Essortment, 2002).

Figure 2.4: The Maritz Multidimensional loyalty model



Source: Maritz Research (2007)

From figure 2.4 shows that, there are many factors that affect brand loyalty including attitudinal loyalty, behavioral loyalty, intentional loyalty, market factors, and individual differences. The Maritz Multidimensional Loyalty Model look at carefully on both attitudinal and behavioral loyalty but the most important is investigating attitudinal loyalty from a multidimensional perspective to understand how attitudes developed. The model creates a comprehensive view of loyalty by analyze into loyalty factors such as marketplace factor, the difference of customer experience, and brand factor. This model tries to find the most important drivers of loyalty to focus investing on that your business element that will build strength on customer loyalty (Maritz Research, 2007).

2.4 Impulse purchase

Tirmizi, Rehman, & Saif (2009, p.524) study about impulse purchase that “impulse buying was defined as an unplanned purchase that impulse buying usually takes place, when a consumer feels a forceful motivation that turns into a desire to purchase a commodity instantly”. Marketers and retailers tend to take advantage to these impulses which are tried to basic want for instant fulfillment. For example, most people who go to the supermarket might not have intention to buy candy, gum, or chocolate but there are many displays that show these kinds of product and encourage those people to be impulse buyers that buy product by not have otherwise considered (Wikipedia, 2010).

Impulse purchase can be divided into two types including planned purchase which opposite to unplanned purchase or impulse purchase that already described on the above paragraph.

2.4.1 Planned purchase

Gutierrez (2004, p.1061) referred to planned purchase “is characterized by deliberate, thoughtful search and evaluation that normally results in rational, accurate and better decisions”. Consumers who are planned purchase people tend to have plan in their minds before purchase something they want. They will think carefully about money they that they will lose and the value of product that they will get, mostly on high price products.

2.4.2 Unplanned purchase

The definition of unplanned purchase or impulse purchase is already described before. Now let's take a look at how to encourage impulse purchase, Kyle (2003) mentioned about five ways to encourage impulse purchase for increasing sales as following,

1. Demonstrate an impressive, relevant feature.

This technique try to get people to “live in the moment” which is one key to succeed in impulse purchase demonstration.

2. Try to “time it right”.

To use “time it right” technique should associate with complementary products or services. For example, if someone is researching for monitors, perhaps they need an ink cartridge for their printer. Just showing or highlighting ink cartridge on the shelf with the monitors that may stimulate an impulse purchase.

3. Make it easy.

Make it easy means “make the order process as simple as possible”. For example, Amazon.com use technique “Quick-Click” links to make the ordering easily.

4. Give an enticingly presented discount.

Another way to encourage impulse purchase is giving a discount by sells on bundling or makes products into a bundle or package by offer to reduce the price on a second piece, third piece, or other related products.

5. "Keeping up with the Joneses."

"Keeping up with the Joneses" is the same concept as "others who bought 'x' also bought 'y'" by display both of these products together to encourage impulse purchase (Kyle, 2003).



Chapter 3

Research methodology

This chapter consists of three main parts, the first part review the research methodology, the second part describe the research methodology used in this study, and the third part is the conclusion that summarize the idea of this chapter.

- 3.1 Literature review:
 - 3.1.1 Research methodology
 - 3.1.2 Research questions
 - 3.1.3 Methods of inquiry
 - 3.1.4 Sampling design
 - 3.1.5 Survey design and development
 - 3.1.6 Coding structures
 - 3.1.7 Reporting
- 3.2 Statement of research method used
 - 3.2.1 Research methodology
 - 3.2.2 Research questions
 - 3.2.3 Methods of inquiry

3.2.4 Sampling design

3.2.5 Survey design and development

3.2.6 Coding structure

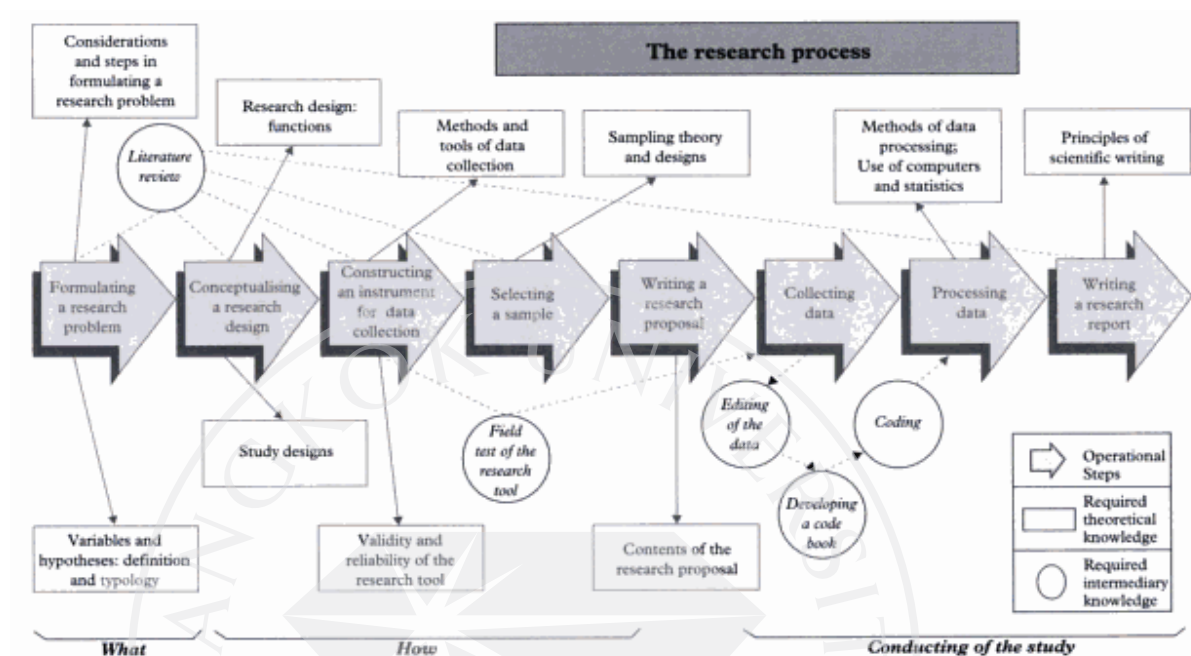
3.3 Conclusion

3.1 Literature review

3.1.1 Research methodology

Market research analyst (2008, p.5) mentioned that “market research is the process of systematic gathering, recording and analyzing of data about customers, competitors and the market” which market research can help organization in creating business plan, launching the new product or service, and expanding product into the new market. Market research can determine market characteristics of target market that companies can learn more about their current customers and potential customers by analyzing the population that will purchase the product or service based on many variables such as age, gender, location, income level, and also their attitudes and opinions.

Figure 3.1: The eight-step model of research process



Source: Research methodology (Kumar 2005, p.19)

From figure 3.1, Kumar (2005) defined an eight-step model of research process, the arrows identify the tasks of operational step in order to conduct a quantitative or qualitative study started from formulating a research problem, conceptualising a research design, constructing an instrument for data collection, selecting a sample, writing a research proposal, collecting data, processing data, and writing a research report. The rectangles identify the required theoretical knowledge needed to perform these steps and the circles identify the required intermediary knowledge that needed to go from one step to another. The beginners have to follow these steps significantly.

Step 1: Formulating a research problem

This step involves identifying the research problem which is the most important stage of marketing research. The research problem should be clearly identified what problem you want to study and what is the possible methods that will affect the solution (Colorado State University, 2010).

Step 2: Conceptualising a research design

Research design is the glue that holds the entire research project together which research design used to structure the research in the major parts of the research project. The researcher has to select the research method, the sample groups, and sampling methodology (William, 2006).

Step 3: Constructing an instrument for data collection

This step means collecting information for your study called research tool or research instrument for example, observation form, interview schedules, questionnaires and interview guides (Kumar, 2005).

Step 4: Selecting a sample

The accuracy of your research depends on the way you select the sample. The basic objective is minimizing the gap of value of the sample within the limitation of cost to provide adequate probability of fairly true that reflect sampling population. There are many sampling strategies such as random probability sampling design, non-random probability sampling design, and mixed sampling design. Researchers have to select the appropriate sampling design for their study and need to understand the strengths and weaknesses of each research situation (Kumar, 2005).

Step 5: Writing a research proposal

Research proposal is planning and outline of the research which presents that how you are planning to investigate and what is the research problems that you want to study. Normally, main function of research proposal is detailing the operational plan for acquiring the answers of your research questions (Kumar, 2005).

Step 6: Collecting data

There are many methods used for collecting the data and required information which depend on the procedure that you designed to collect the data for example, collecting data by using questionnaires, interview, observation, or focused group discussion (Kumar, 2005).

Step 7: Processing data

It is analyzing the data that you collected which depends on two things. The first is type of information such as descriptive, quantitative, qualitative, or attitudinal and the second is the way that you want to communicate your results to the reader. To differentiate quantitative and qualitative data analysis, it is very important to consider what method you use for analyzing for example, analyze the contents manually, or using computer program to analyze (Kumar, 2005).

Step 8: Writing a research report

This is the last step which is the most difficult step of the research process. The report informs what you have done and have discovered and the conclusion of your research. Researchers have to understand all of the process clearly then they can write the report clearly by writing in academic

style and divided into different chapters and sections base on the main themes of your study (Kumar, 2005).

3.1.2 Research questions

Research question are the process that researchers think about the questions that they want to find the answers about the research topic that they selected. The questions should be factual, specific, and clarifying. Asking factual questions are about explaining everything that researchers know to the reader to make them understand what you want to say in your project. Asking specific questions are asking the questions by using words of who?, what?, when?, and where? to specify what you want to know. And the last is asking clarifying questions which consists of hypothetical question, prediction question, solution question, comparison question, and judgment question. The guidelines of each type of these questions are as following (Samuels & Constantine, 2009),

Hypothetical question: "How would things be different today if something in the past had been different?"

Prediction question: "How will something look or be in the future, based on the way it is now?"

Solution question: "What solutions can be offered to a problem that exists today?"

Comparison question: "Find the similarities and differences between your main subject and a similar subject, or with another subject in the same time period or place".

Judgment question: "Based on the information you find, what can you say as your informed opinion about the subject?"

(Samuels & Constantine, 2009)

3.1.3 Methods of inquiry

Washington State University Vancouver (2010) classified the types of research data which divided into four main categories as following,

3.1.3.1 Performance Assessments

The examples of this category are test scores, portfolios, and other “graded” activities

Quantitative data: analyze scores objectively to measure, compare, etc. This type of data concerned with the questions like how much? and how many? (Kaizenlog, 2008)

Qualitative data: describe scores in context of activity, students, classroom, etc (Washington State University Vancouver, 2010) and this data explores the ideas, feelings, and attitudes of respondents that concerned with the questions like why?, what?, and how? (Kaizenlog, 2008)

3.1.3.2 Attitude Scales

This type of research data uses likert scale measures for extent agree or disagree by using questionnaires, surveys, or interviews as the research methods.

Quantitative attitude scale: use closed-ended questions to lock respondents into a particular set of answers.

Qualitative data attitude scale: use open-ended questions for asking the respondents (Washington State University Vancouver, 2010).

3.1.3.3 Observation data

This type of data uses notes as method for recording the data.

Quantitative observation data: count the number of times something happens or doesn't without comment.

Qualitative observation data: observers pay attention to the context and aren't neutral (Washington State University Vancouver, 2010).

3.1.3.4 Content analysis of documents and other media

For example, looking at children's storybooks to determine if, and/or to what extent, things are included.

Quantitative content analysis: observers count the number of instances that the thing appears without comment for example, how many times of boring themes appear in a particular children's storybook?

Qualitative content analysis: observers go further only counting the number of times something appears or doesn't. They also comment on the context of the entire book and how a particular thing fits in the bigger picture for example, the author's information, the students in the class which the book is being read, etc (Washington State University Vancouver, 2010).

In addition, data collection method can be divided in two types which are primary data and secondary data.

Primary data

Primary research involves “the use of immediate data in determining the survival of the market. The popular ways for collecting primary data consist of surveys, interviews and focus groups, which shows that direct relationship between potential customers and the companies” (Adfoster, 2007). This type of data collected directly from the source for example, “if the objective of the research is understanding the demand of a particular product, then collecting feedback directly from the customer by talking to them, is called primary research” (Johnson, 2009).

Secondary data

While secondary research is reprocessing and reusing the collected information as a suggestion for improvement of the service or product. Secondary data involves with the data that already collected in the past period which sometime inadequate value and has to find more information from many sources to support. Whereas primary data is more helpful as it shows latest information (Adfoster, 2007). Secondary data for research can be obtained from a variety of sources such as Chambers of Commerce, Business Information Centers, Trade Associations, Marketing Departments of Local Colleges, wholesalers and manufacturers, magazines and newspapers, or competitors (Johnson, 2009).

3.1.4 Sampling design

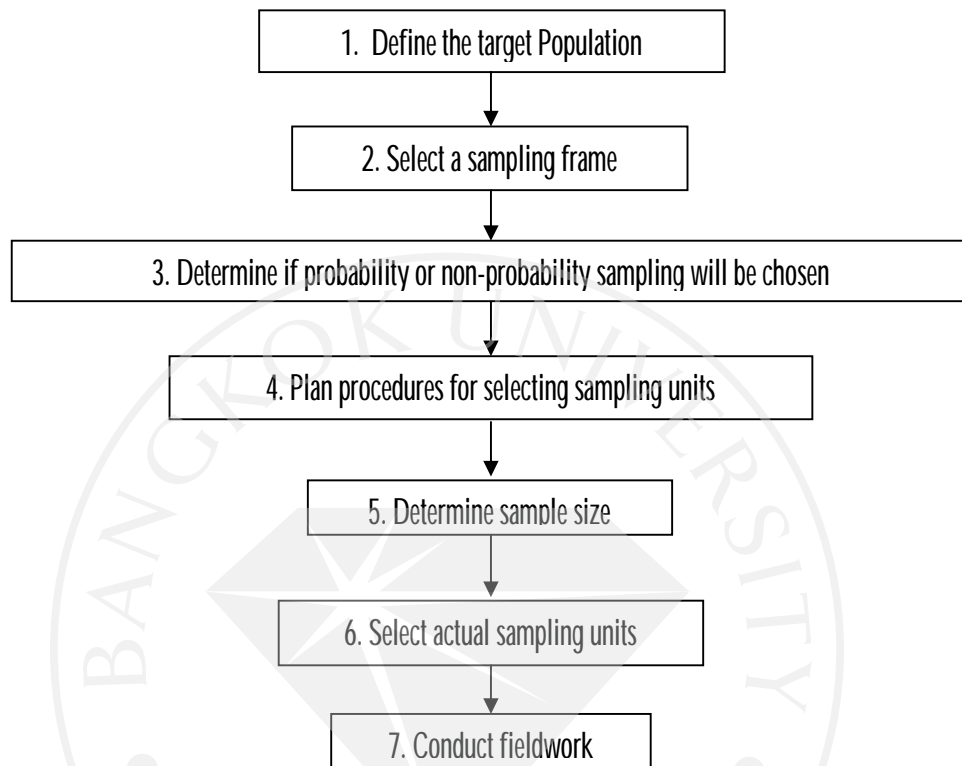
Sampling design is about characteristic of population that be acquired by conducting either a sample or a census which depends on budget and time limits, large population size, and small variants and a characteristic of interest. Sampling design is favor when “the cost of sampling error is low, the cost of non-sampling error is high, the nature of measurement is destructive, and attention must be

focused on the individual cases". Sampling design starts by defining the target population in terms of elements, sampling units, extent, and time (Dawn, 2007). Cunanan & Cruz (2009, p.2) defined sampling design as "measuring a small portion or something and then making a general statement about the whole thing" that means the "process of selecting the number of units represent the larger group from which they are selected".

There are three methods of collecting data for sampling design that can be used for drawing a conclusion of target universe. The first is collecting data from all enterprises which are costly and having great length procedure unless the target universe is small. The second way is collecting data from the sample of units that have been selected from the target universe. This kind of sampling referred to a purposive sample. The last method is collecting data from random sample of units which have been selected with known probabilities of selection from among all units in the target universe (Business tendency survey handbook, 2003).

Nassirpour (2004) referred about sampling design that there are seven stages in selection of a sample as figure 3.2,

Figure 3.2: The seven stages in the selection of a sample



Source: Overview of sample surveys (Nassirpour 2004, p.8)

From figure 3.2,

Stage 1: Define the target Population

This step is selecting of the target population and also indentifies the parameters of that population such as age, gender, race, or religion that suitable to the study (Nassirpour, 2004).

Stage 2: Select a sampling frame

This step is construction of operational sampling frame which is a list of all subjects in the population that defined specifically to almost or exactly identify the entire population (Nassirpour, 2004).

Stage 3: Determine if probability or non-probability sampling will be chosen

There are the differences between probability and non-probability sampling. Therefore this step should determine what type of sampling that appropriate to the study and has advantage for calculating the sampling error of the measurement (Nassirpour, 2004). Zikmund (2010, p.13) defined probability sampling as “known or nonzero probability for every element” and defined non-probability sampling as probability of unknown selecting in any particular member.

Stage 4: Plan procedures for selecting sampling units

This step is the process of selection of a sampling method which including probability sampling method and non-probability sampling method. Probability sampling method consists of simple random sampling, systematic sampling, stratified sampling, and cluster sampling. While non-probability sampling method consists of convenience, judgment, quota, and snowball (Awami & Pharm, 2010).

Stage 5: Determine sample size

After selected the sampling method, this step is determining the appropriate sample size that depends upon a number of factors unique to each survey and researcher has to make the decision

according to these factors. The example of these factors are how accurate you wish to be?, how confident you are in the results?, or what budget you have available? (Birchall 2009, p.3).

Stage 6: Select actual sampling units

To select the accuracy sampling units, researcher has to compare characteristic of the sample that existed in the population and avoid problems during the selection, data collection and data analysis stages. The sampling unit can different depends on the frame used, it is the reason of why the survey population, survey frame and survey units are defined in connection with one another (Statistics Canada, 2009).

Stage 7: Conduct fieldwork

The final stage if the sampling process is conduct fieldwork which researcher has to review covers all of the parts with the sample and also examines every question in the questionnaires to check and correct the possible mistakes (Nassirpour, 2004).

3.1.5 Survey design and development

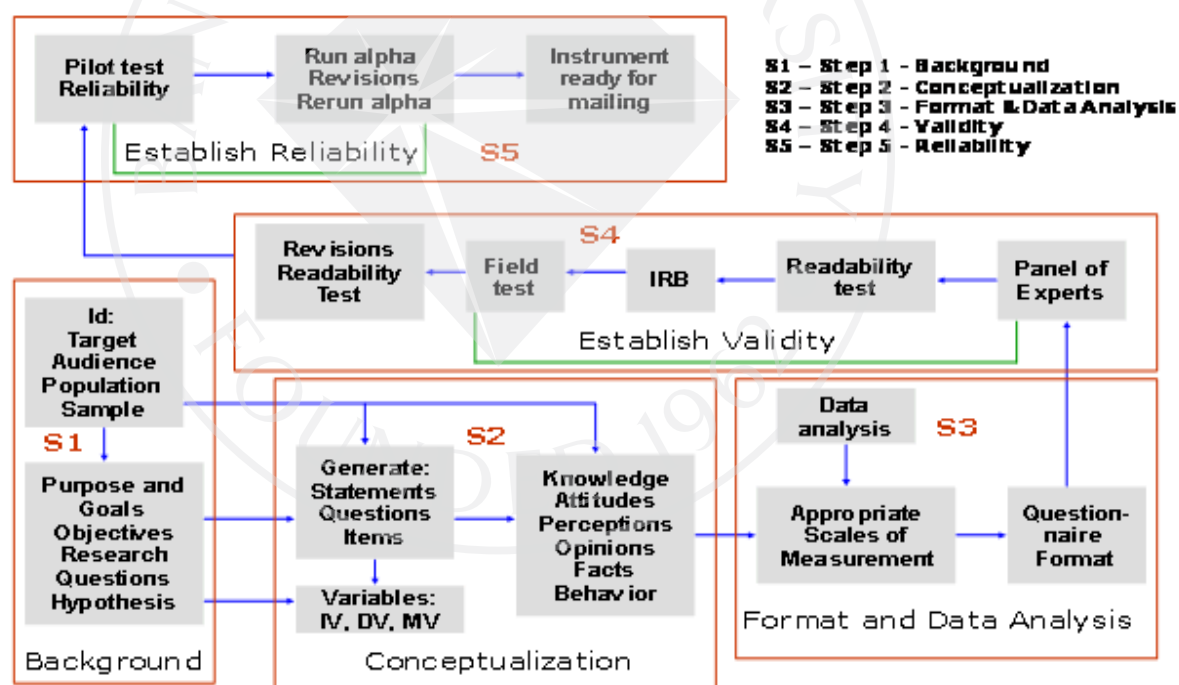
Survey research method is one of the most important measurements for applying social research which totally of survey research encloses with many measurements procedures that engages with asking questions of respondents to collect feedbacks of them (William, 2006).

Colorado State University (2010) mentioned about survey research “represent one of the most common types of quantitative, social science research” that researcher will select a group of respondents from their population to be a standardize questionnaire for them. Survey can be

conducted through written document questionnaire, online questionnaire, face-to-face interview, or telephone interview.

Before conduct the real survey, researcher has to do “Pilot Test” which is developing and testing questionnaire to represent that questionnaire can reliable or not which Pilot Test has five sequential steps as figure 3.3 following,

Figure 3.3: Sequence for questionnaire/Instrument development



Source: The Pennsylvania State University (Radhakrishna, 2010)

From figure 3.3,

Step 1: Research background

This step is examining “the purpose, objectives, research questions, and hypothesis of the proposed research” and determining the respondents’ background and their readability levels (Radhakrishna, 2010).

Step2: Questionnaire conceptualization

After understanding the respondents’ background of research, “the next step is to generate statements questions for the questionnaire” which transformed from the literature review and theoretical framework into statements and questions. This step is measuring knowledge, attitudes, opinions, perceptions, and behavior of respondents including identifying independent and dependent variables (Radhakrishna, 2010).

Step 3: Format and data analysis

This step focus on “writing statements or questions, selecting the appropriate scales of measurement, questionnaire layout, format, question ordering, font size, front and back cover, and proposed data analysis”. The important of this step is understands the relationship between the level of measurement and the suitability of data analysis (Radhakrishna, 2010).

Step 4: Establishing validity

The result from step 1-3 is a draft for establishing validity which “is the amount of systematic or built-in error in measurement” by “using a panel of experts and a field test”. Step 4 has addressed questions as following,

1. Is the questionnaire valid? In other words, is the questionnaire measuring what it intended to measure?
2. Does it represent the content?
3. Is it appropriate for the sample or population?
4. Is the questionnaire comprehensive enough to collect all the information needed to address the purpose and goals of the study?
5. Does the instrument look like a questionnaire?

(Radhakrishna, 2010)

Step 5: Establishing reliability

The final step using pilot test for measuring reliability that refers to random and error measurement. Reliability shows the accuracy of measuring tool which tries to answer that does the questionnaire is consistent in measuring. Reliability using pilot test collecting data from 20-30 persons that not included in the sample by using SPSS (Statistical Package for Social Sciences) software for calculating. If the result of reliability coefficient (alpha) equal to 0.70 or higher is considered as acceptable reliability. All of this systematic from step 1-5 tries to reduce many measurement errors and enhances data quality and utilizes the research (Radhakrishna, 2010).

UCLA Researchers (2010) referred to the Cronbach's alpha as a measuring how well a set of items or variables measures a single one-dimensional of latent construct. The formula for the standard of Cronbach's alpha as following,

Figure 3.4: The formula for the standard of Cronbach's alpha

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}}$$

N is equal to the number of items

c-bar is the average inter-item covariance among the items

v-bar equals the average variance

Source: UCLA Researchers (2010)

According to research hypotheses, to solve the hypotheses of this research need to use ANOVA method or analysis of variance which is testing for significant differences between means of each variable and uses an F test to compare the means of the groups. An F test in ANOVA can tell the result only if there is a relationship between two variables but cannot tell about what the relationship is. In mathematical way, this means can tell the result only if there is a difference of the means in the groups but cannot tell which mean is different (University of North Carolina Wilmington, 2010).

The hypotheses that test with an F-test in ANOVA including null and research which the meaning of each hypotheses are as following,

Null: There is no relationship between independent variables and dependent variables or the means are equal for example, $\text{mean}_1 = \text{mean}_2 = \text{mean}_3 \dots$ which is a mean for each category of independent variables and $F = 0$.

Research: There is a relationship between independent variables and dependent variables which the means are not equal for example, $\text{mean}_1 \neq \text{mean}_2 \neq \text{mean}_3 \dots$ which is a mean for each category of independent variables and $F \neq 0$.

When calculate ANOVA on the computer by using SPSS program, concern the P value associated with α value ($\alpha = 0.05$). If P value is lower than or equal to alpha means Sig. that reject the null hypotheses or accept the alternative hypotheses. On the other hand, if P value is higher than alpha means not Sig. that accept the null hypotheses or reject the alternative hypotheses. And then give the explanations as following,

If reject the null hypotheses, says that there is a relationship and then look at the means to determine which mean is higher or lower than the others.

If accept the null hypotheses, says that there is no relationship, and state what the mean is about for all of the groups (University of North Carolina Wilmington, 2010).

3.1.6 Coding structures

Quantitative research results represented in large amounts of context number and detail data and have to minimize to describe in major themes or categories. "Qualitative data analysis consists of identifying, coding, and categorizing patterns found in the data" (Bryne 2001, p.1). Foss & Waters

(2003) mentioned that coding and analyzing data process is very important and critical part for quantitative research which has 4 steps as following,

Step 1: Coding the data

Step 2: Developing theme from the data

Step 3: Developing conceptual schema from the data

Step 4: Writing up the analysis

3.1.7 Reporting

The report should contain certain features that help conveying the information and ideas in the clearest and easily obtainable way for readers. The first thing that researcher should think about is the big picture of possible part of the report and then tries to fit it with the whole that will be easier to imagine that report (McLaine, 1998).

The University of Hong Kong (2010) suggested that when doing the reporting process should planning the report first which including preparing a preliminary outline of your report at least the major issues and then revising the rough outline during investigation, after that establishing content hierarchy in the main body of your text and need to differentiate by using level of generality in terms of headings and sub-headings. The next step is inductive and reductive structure of an argument and balancing them. They suggested the sections of the report as the table 3.1,

Table 3.1: Sections of a Report

Section	Key Aspects
Abstracts	Function of an Abstract (or Summary) Structure of an (IMRAD) Abstract
Introduction	What is an Introduction? Sequence of "moves" in an Introduction
Methods	Reporting What you Did Questionnaires: Procedures & Factors Checking for Bias
Results	Findings & Interpretation
[General] Discussion	Matching Claims to evidence Making Recommendations
Conclusions	Content of a conclusion The perspective of a conclusion

Source: The University of Hong Kong (2010)

3.2 Statement of research method used

The study of the evaluation of consumers believe in product attributes and the effect to price sensitivity, brand loyalty, and impulse purchase of mobile phones with people around metropolitan area in Bangkok had applied the research method as following,

3.2.1 Research methodology

In this study, the researcher used quantitative approach by using survey technique to collect data from a sample of people by using questionnaire in order to understand the attitudes and opinions of people around metropolitan area in Bangkok about their different believe in product attributes which affect to different in their price sensitivity, brand loyalty, and impulse purchase toward purchasing mobile phone products.

3.2.2 Research questions

- 3.2.2.1 Is there a relationship between consumers believe in difference product attributes and the relative of their price sensitivity?
- 3.2.2.2 Is there a relationship between consumers believe in difference product attributes and the relative of their brand loyalty?
- 3.2.2.3 Is there a relationship between consumers believe in difference product attributes and the relative of their impulse purchase?

3.2.3 Methods of inquiry

The primary data will be collected from people around metropolitan area in Bangkok by using descriptive research design and data collection method is self-administered survey by distributing the questionnaires to the respondents.

3.2.4 Sampling design

The sampling group was sketched from the population of people around metropolitan area in Bangkok by using the simple random sampling technique that everyone in the population has equal chance to be selected.

The average number of population in Bangkok approximately is 11,971,000 in January 2008 (Wikipedia, 2010). The sampling size of this study is calculated from the average population of people in Bangkok by using Taro Yamane technique which has a formula as following (Israel, University of Florida, 2009),

$$n = N/(1+N(e)^2)$$

Where, n = Sample size

N = Population size

e = The error of sampling ($\pm 5\%$, or at 95% confidence level)

So the sample size of this study has been calculated according to the recommendation as following,

$$n = 11,971,000/\{1+11,971,000(0.05)^2\}$$

$$n = 399.99$$

Then, the sample size of this study is 400 respondents.

3.2.5 Survey design and development

From this research, after doing pilot test the result of reliability statistics that calculate questionnaire in part3 which represent respondents' attitudes and opinions toward purchasing mobile phones from question number 1-12. Question number 1-4 ask about respondents' price sensitivity, question number 5-8 ask about respondents' brand loyalty, and the last 4 questions, number 9-12 ask about respondents' impulse purchase (see appendix).

Table 3.2: Total statistics from calculating by SPSS software

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
q1	31.87	51.499	.332	.788
q2	31.50	55.845	.188	.797
q3	32.40	47.628	.686	.750
q4	30.93	53.651	.245	.795
q5	31.43	55.013	.225	.794
q6	31.50	49.086	.581	.761
q7	31.50	49.638	.509	.768
q8	31.33	52.782	.379	.781
q9	32.07	49.995	.413	.779
q10	31.60	50.869	.482	.771
q11	32.47	46.464	.713	.746
q12	32.73	51.444	.479	.772

Table 3.3: Reliability statistics from calculating by SPSS software

Cronbach's Alpha	Number of Items
.791	12

From table 3.3 shows that the number of Cronbach's Alpha is equal to 0.791 which greater than 0.70 and considered as acceptable reliability.

For proving the hypotheses of this research that using ANOVA method or analysis of variance will present in the next chapter, chapter 4.

3.2.6 Coding structure

The coding structures of this research for each part are as following,

Part 1: Demographic information of respondents

Table 3.4: Coding Structures of demographic information of respondents

Variable	Coding
1. Gender	1 = Male 2 = Female

(Continued)

Table 3.4 (continued): Coding Structures of demographic information of respondents

Variable	Coding
2. Age	1 = Below 20 years 2 = 20-25 years 3 = 26-35 years 4 = 36-45 years 5 = 46-55 years 6 = Over 56 years
3. Education	1 = Under Bachelor's degree 2 = Bachelor's degree 3 = Master's degree or higher
4. Occupation	1 = Student 2 = Company's employee 3 = Government Enterprises 4 = Business owner 5 = Unemployed
5. Salary	1 = Lower than 10,000 Baht 2 = 10,001-20,000 Baht 3 = 20,001-30,000 Baht 4 = 30,001-40,000 Baht 5 = 40,001-50,000 Baht 6 = Over 50,000 Baht

Part 2: Respondents' information about mobile phone

Table 3.5: Coding Structures of respondents' information about mobile phone

Variable	Coding
6. Source of information	1 = Internet 2 = Magazine 3 = Newspaper 4 = Dealer shop 5 = Friends 6 = Family 7 = Boyfriend or girlfriend 8 = Brochure
7. The most important reason for purchasing mobile phone	1 = Calling 2 = Sending SMS or MMS 3 = Games 4 = Chat 5 = Taking photo 6 = Browsing the web 7 = Checking and sending e-mail 8 = Enjoying multimedia 9 = Download music or video clips 10 = Others

(Continued)

Table 3.5 (continued): Coding Structures of respondents' information about mobile phone

8. Brand of mobile phone that use now	1 = Nokia	2 = Samsung
	3 = i-mobile	4 = iPhone
	5 = Blackberry	6 = HTC
	7 = TWZ	8 = Motorola
	9 = LG	10 = Sony Ericson
	11 = Asus	12 = SKG
	13 = Google	14 = G-Net
	15 = Vertu	16 = Master
	17 = Phone one	18 = AJ
	19 = HP	20 = MFA
	21 = Philips	22 = Hutch
	23 = O2	

(Continued)

Table 3.5 (continued): Coding Structures of respondents' information about mobile phone

<p>9. Brand of mobile phone that recognize the first</p>	<p>1 = Nokia 2 = Samsung 3 = i-mobile 4 = iPhone 5 = Blackberry 6 = HTC 7 = TWZ 8 = Motorola 9 = LG 10 = Sony Ericson 11 = Asus 12 = SKG 13 = Google 14 = G-Net 15 = Vertu 16 = Master 17 = Phone one 18 = AJ 19 = HP 20 = MFA 21 = Philips 22 = Hutch 23 = O2</p>
<p>10. Ranking mobile phone attributes from 1-4</p>	<p>1 = Ranking number 1 2 = Ranking number 2 3 = Ranking number 3 4 = Ranking number 4</p>

Part 3: Respondents' attitudes and opinions toward purchasing mobile phone

Table 3.6: Coding Structures of respondents' attitudes and opinions toward purchasing mobile phone

The scale ratings for this part are as following,

Attitudes and opinions	Points
Strongly agree	equaled 5 points
Agree	equaled 4 points
Uncertain	equaled 3 points
Disagree	equaled 2 points
Strongly disagree	equaled 1 point

3.3 Conclusion

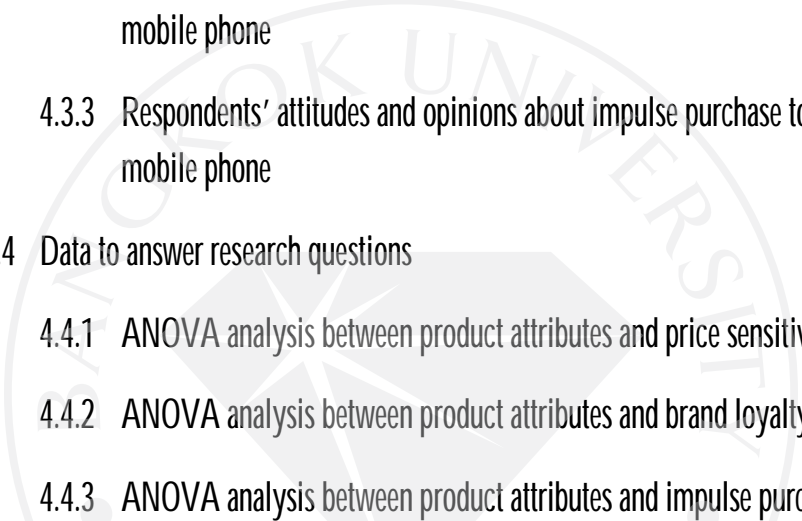
This chapter reviews the process of conducting marketing research, and describe research methodology that be used for this study of "the evaluation of consumers believe in product attributes and the effect to price sensitivity, brand loyalty, and impulse purchase of mobile phones" which used quantitative approach describing the research design and collecting primary data by distributing questionnaires to the respondents around metropolitan area in Bangkok with a require sample size at 400 people. The data that collected from the respondents was analyzed by using The Statistical Package for the Social Science Program (SPSS) version 17.0 and the results will be presented in the next chapter 4: Data presentation and analysis.

Chapter 4

Data presentation and analysis

This chapter will present the data of the results from the questionnaires that distributed to 400 respondents. The data was collected and present based on the research objectives in order to answer the research questions that state in chapter1. The results of the study of the evaluation of consumers believe in product attributes and the effect to price sensitivity, brand loyalty, and impulse purchase of mobile phones will present into three main parts as following,

- 4.1 Demographic information of respondents
 - 4.1.1 Gender of respondents
 - 4.1.2 Age of respondents
 - 4.1.3 Education of respondents
 - 4.1.4 Occupation of respondents
 - 4.1.5 Salary of respondents
- 4.2 Respondents' information about mobile phone
 - 4.2.1 Source of information of respondents
 - 4.2.2 Reason for purchasing mobile phone of respondents
 - 4.2.3 Brand of mobile phone that respondents use now
 - 4.2.4 Brand of mobile phone that respondents recognize the first

- 4.2.5 Ranking of respondents' mobile phone attributes
 - 4.3 Respondents' attitudes and opinions toward purchasing mobile phone
 - 4.3.1 Respondents' attitudes and opinions about price sensitivity toward purchasing mobile phone
 - 4.3.2 Respondents' attitudes and opinions about brand loyalty toward purchasing mobile phone
 - 4.3.3 Respondents' attitudes and opinions about impulse purchase toward purchasing mobile phone
 - 4.4 Data to answer research questions
 - 4.4.1 ANOVA analysis between product attributes and price sensitivity
 - 4.4.2 ANOVA analysis between product attributes and brand loyalty
 - 4.4.3 ANOVA analysis between product attributes and impulse purchase
- 
- A large, faint watermark of the Sun Yat-sen University logo is centered on the page. The logo is circular and contains the university's name in Chinese characters and English, along with the founding year 'FOUNDED 1962'.

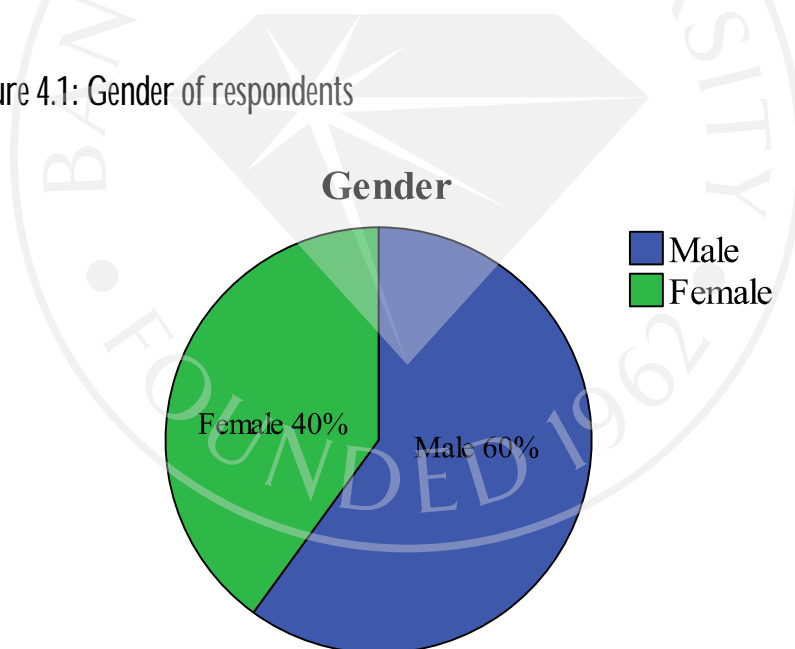
4.1 Demographic information of respondents

4.1.1 Gender of respondents

Table 4.1: Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	240	60	60	60
	Female	160	40	40	100
	Total	400	100	100	

Figure 4.1: Gender of respondents



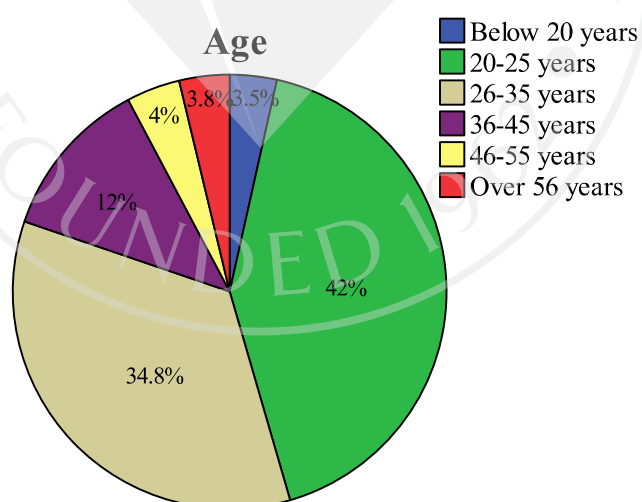
Refer to table 4.1 and figure 4.1; the majority of respondents were male (60%) whereas (40%) were female.

4.1.2 Age of respondents

Table 4.2: Age of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20 years	14	3.5	3.5	3.5
	20-25 years	168	42	42	45.5
	26-35 years	139	34.8	34.8	80.3
	36-45 years	48	12	12	92.3
	46-55 years	16	4	4	96.3
	Over 56 years	15	3.8	3.8	100
	Total	400	100	100	

Figure 4.2: Age of respondents



Refer to table 4.2 and figure 4.2; most of respondents' aged between 20-25 years (42%) from all respondents, (34.8 %) were aged between 26-35 years, (12%) were aged between 36-45 years, (4%)

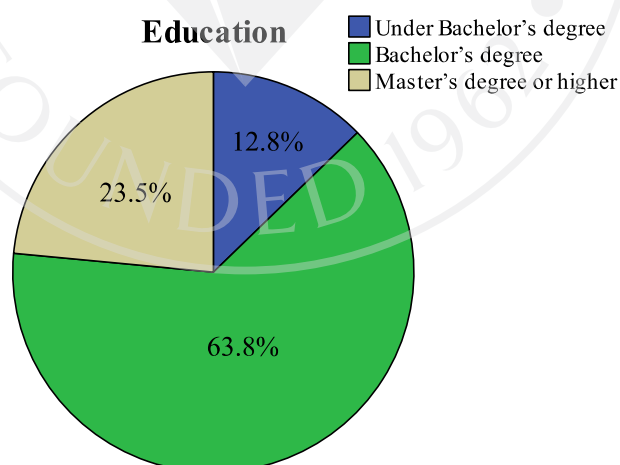
were aged between 46-55 years, (3.8%) were aged over 56 years, and only (3.5%) of respondents were aged below 20 years.

4.1.3 Education of respondents

Table 4.3: Education of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under Bachelor's degree	51	12.8	12.8	12.8
	Bachelor's degree	255	63.8	63.8	76.5
	Master's degree or higher	94	23.5	23.5	100
	Total	400	100	100	

Figure 4.3: Education of respondents



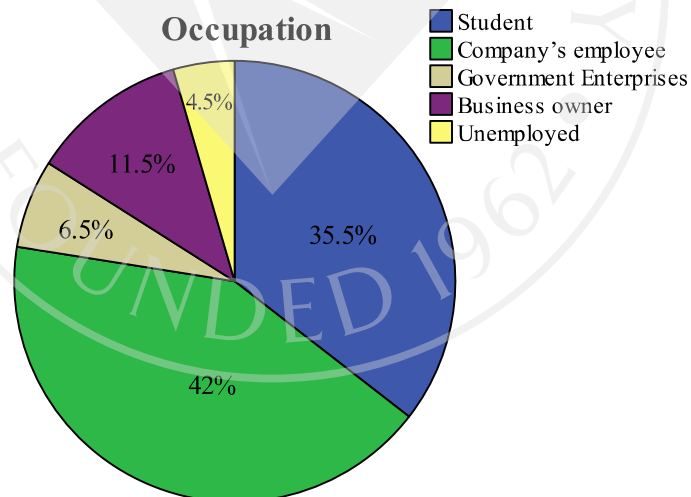
Refer to table 4.3 and figure 4.3; Bachelor's degree was the most of respondents (63.8%), (23.5%) were Master's degree or higher, and only (12.8%) were under Bachelor's degree.

4.1.4 Occupation of respondents

Table 4.4: Occupation of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	142	35.5	35.5	35.5
	Company's employee	168	42	42	77.5
	Government Enterprises	26	6.5	6.5	84
	Business owner	46	11.5	11.5	95.5
	Unemployed	18	4.5	4.5	100
	Total	400	100	100	

Figure 4.4: Occupation of respondents



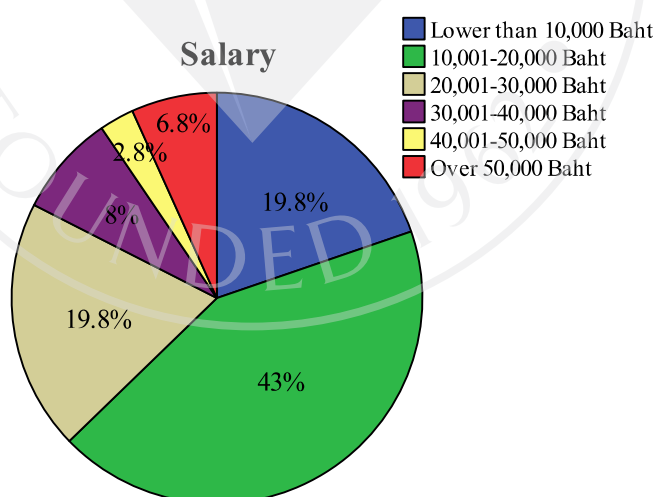
Refer to table 4.4 and figure 4.4; Most of respondents were company's employees (42%), Students were (35.5%), business owners were (11.5%), Government Enterprises were (6.5%), and only (4.5%) were unemployed.

4.1.5 Salary of respondents

Table 4.5: Salary of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lower than 10,000 Baht	79	19.8	19.8	19.8
	10,001-20,000 Baht	172	43	43	62.8
	20,001-30,000 Baht	79	19.8	19.8	82.5
	30,001-40,000 Baht	32	8	8	90.5
	40,001-50,000 Baht	11	2.8	2.8	93.3
	Over 50,000 Baht	27	6.8	6.8	100
	Total	400	100	100	

Figure 4.5: Salary of respondents



Refer to table 4.5 and figure 4.5; the majority of respondents' salary per month was between 10,001-20,000 Baht (43%), salary lower than 10,000 Baht and between 20,001-30,000 Baht were (19.8%) equally, salary between 30,001-40,000 Baht was (8%), salary over 50,000 Baht was (6.8%), and only (2.8%) was salary between 40,001-50,000 Baht.

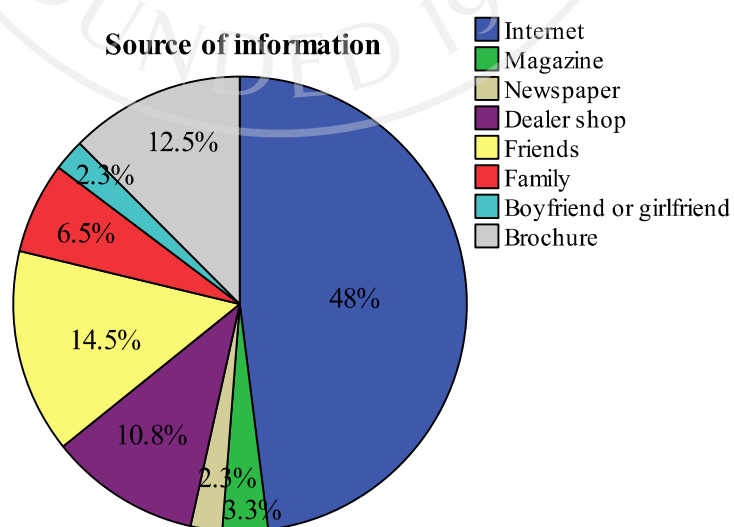
4.2 Respondents' information about mobile phone

4.2.1 Source of information of respondents

Table 4.6: Source of information of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Internet	192	48	48	48
	Magazine	13	3.3	3.3	51.3
	Newspaper	9	2.3	2.3	53.5
	Dealer shop	43	10.8	10.8	64.3
	Friends	58	14.5	14.5	78.8
	Family	26	6.5	6.5	85.3
	Boyfriend or girlfriend	9	2.3	2.3	87.5
	Brochure	50	12.5	12.5	100
	Total	400	100	100	

Figure 4.6: Source of information of respondents



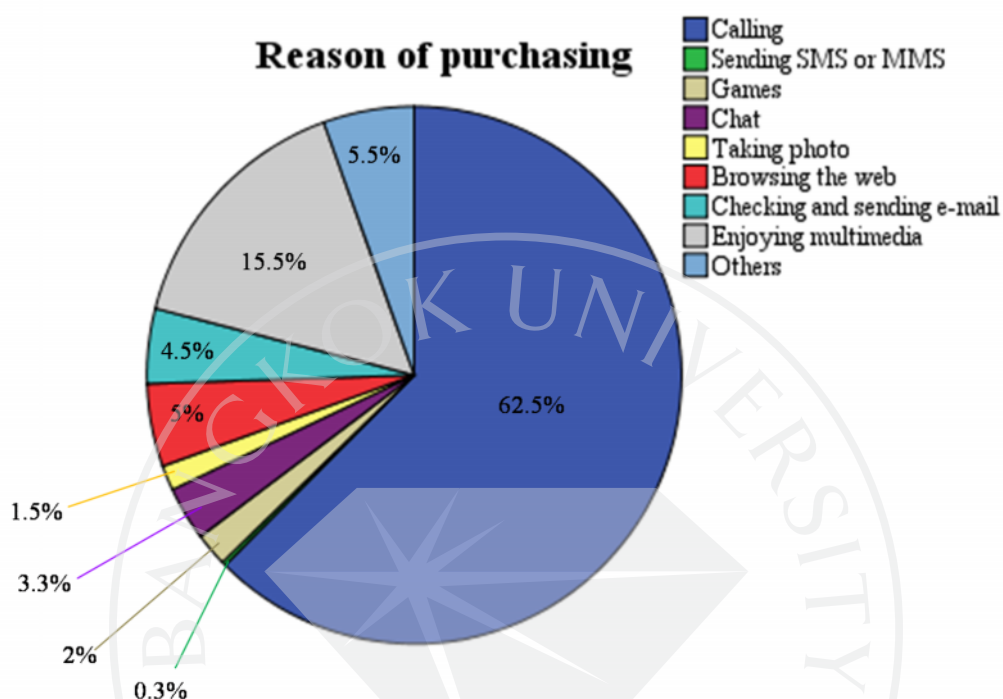
Refer to table 4.6 and figure 4.6; the majority of respondents' source of information toward purchasing mobile phone was internet (48%), friends were (14.5%), brochure was (12.5%), dealer shop was (10.8%), family was (6.5%), magazine was (3.3%), and only (2.3%) were newspaper and boyfriend or girlfriend equally.

4.2.2 Reason for purchasing mobile phone of respondents

Table 4.7: Reason for purchasing mobile phone of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Calling	250	62.5	62.5	62.5
	Sending SMS or MMS	1	0.3	0.3	62.8
	Games	8	2	2	64.8
	Chat	13	3.3	3.3	68
	Taking photo	6	1.5	1.5	69.5
	Browsing the web	20	5	5	74.5
	Checking and sending e-mail	18	4.5	4.5	79
	Enjoying multimedia	62	15.5	15.5	94.5
	Others	22	5.5	5.5	100
	Total	400	100	100	

Figure 4.7: Reason for purchasing mobile phone of respondents



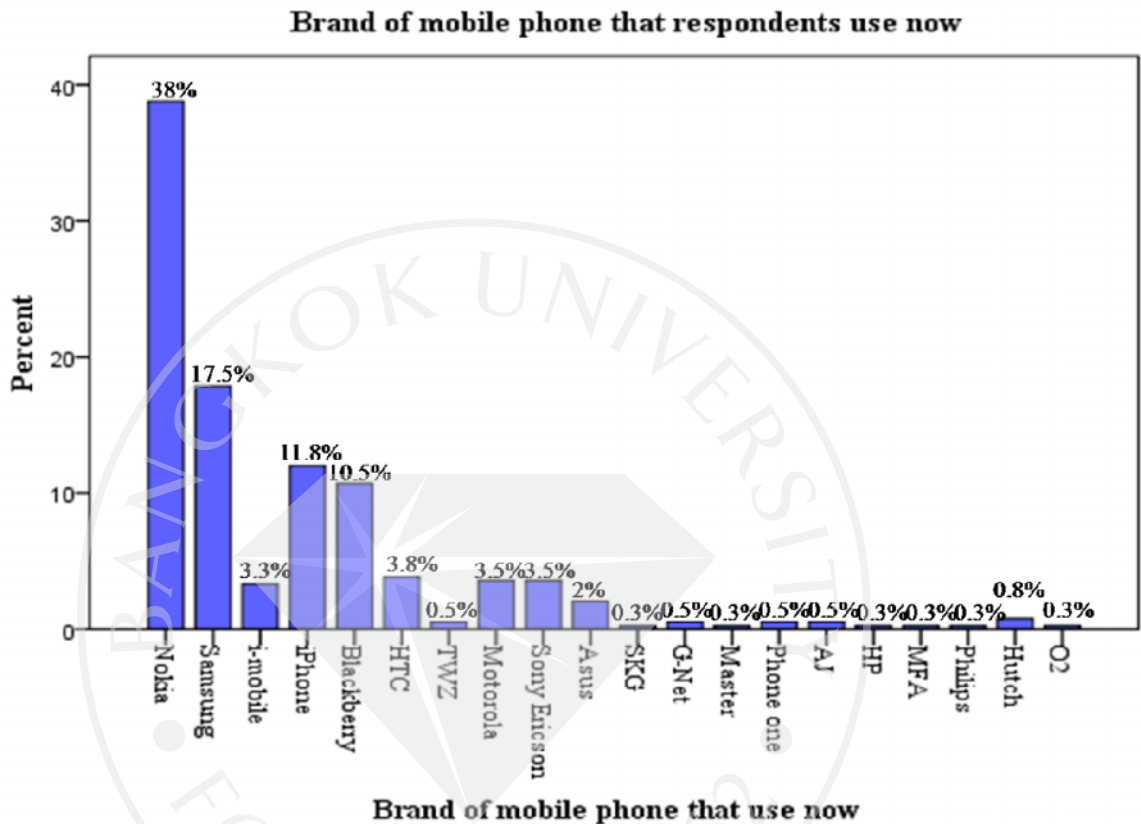
Refer to table 4.7 and figure 4.7; calling was the most reason for purchasing mobile phone of respondents (62.5%), enjoying multimedia was (15.5%), other reasons were (5.5%), browsing the web was (5%), checking and sending e-mail were (4.5%), chat was (3.3%), games were (2%), taking photo was (1.5%), and only (0.3%) was sending SMS or MMS. For other reasons that respondents purchased mobile phone such as, searchlight, the old one broke down, like the design, and want to update new trend of mobile phone technology.

4.2.3 Brand of mobile phone that respondents use now

Table 4.8: Brand of mobile phone that respondents use now

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nokia	152	38	38.8	38.8
	Samsung	70	17.5	17.9	56.6
	i-mobile	13	3.3	3.3	59.9
	iPhone	47	11.8	12	71.9
	Blackberry	42	10.5	10.7	82.7
	HTC	15	3.8	3.8	86.5
	TWZ	2	0.5	0.5	87
	Motorola	14	3.5	3.6	90.6
	Sony Ericson	14	3.5	3.6	94.1
	Asus	8	2	2	96.2
	SKG	1	0.3	0.3	96.4
	G-Net	2	0.5	0.5	96.9
	Master	1	0.3	0.3	97.2
	Phone one	2	0.5	0.5	97.7
	AJ	2	0.5	0.5	98.2
	HP	1	0.3	0.3	98.5
	MFA	1	0.3	0.3	98.7
	Philips	1	0.3	0.3	99
Hutch	3	0.8	0.8	99.7	
O2	1	0.3	0.3	100	
	Total	392	98	100	
Missing	LG	8	2		
Total		400	100		

Figure 4.8: Brand of mobile phone that respondents use now



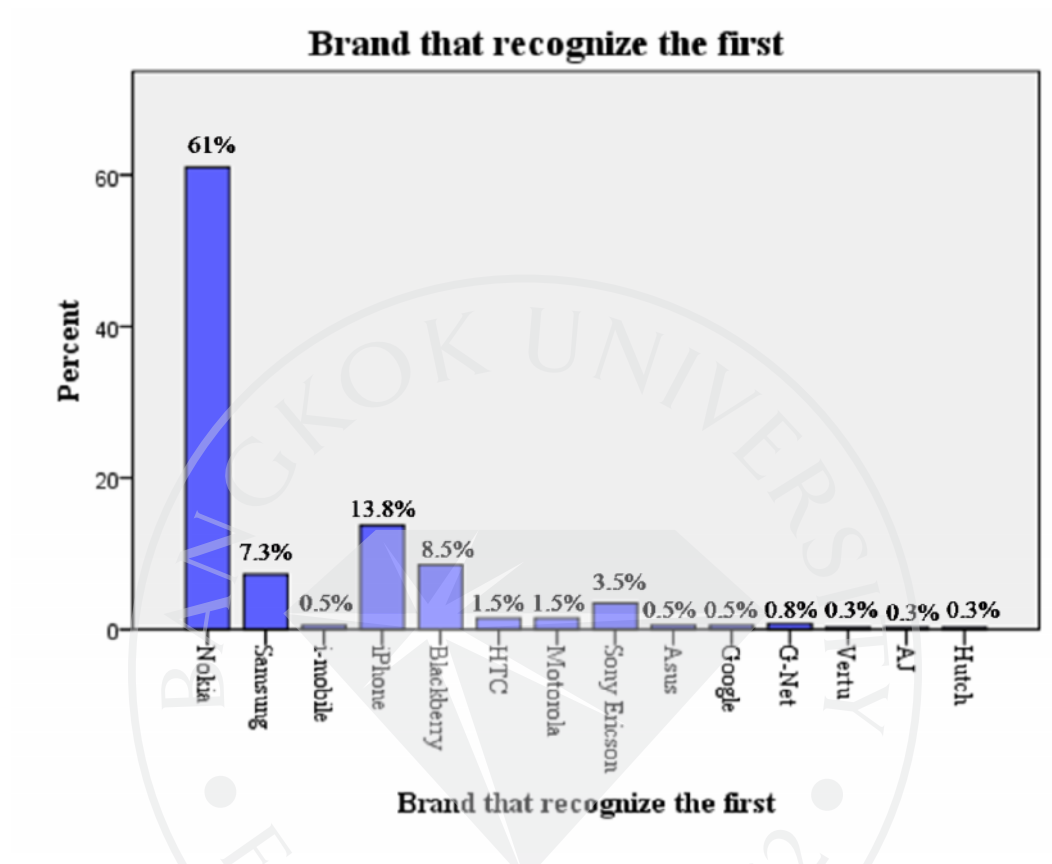
Refer to table 4.8 and figure 4.8; the majority of respondents used Nokia (38%), (17.5%) used Samsung, (11.8%) used iPhone, (10.5%) used Blackberry, (3.8%) used HTC, (3.5%) used Motorola and Sony Ericson, (3.3%) used i-mobile, (2%) used Asus and LG, (0.8%) used Hutch, (0.5%) used TWZ, G-Net, Phone one, and AJ, and only (0.3%) that used SKG, Master, HP, MFA, Phillips, and O2.

4.2.4 Brand of mobile phone that respondents recognize the first

Table 4.9: Brand of mobile phone that respondents recognize the first

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nokia	244	61	61	61
	Samsung	29	7.3	7.3	68.3
	i-mobile	2	0.5	0.5	68.8
	iPhone	55	13.8	13.8	82.5
	Blackberry	34	8.5	8.5	91
	HTC	6	1.5	1.5	92.5
	Motorola	6	1.5	1.5	94
	Sony Ericson	14	3.5	3.5	97.5
	Asus	2	0.5	0.5	98
	Google	2	0.5	0.5	98.5
	G-Net	3	0.8	0.8	99.3
	Vertu	1	0.3	0.3	99.5
	AJ	1	0.3	0.3	99.8
	Hutch	1	0.3	0.3	100
	Total	400	100	100	

Figure 4.9: Brand of mobile phone that respondents recognize the first



Refer to table 4.9 and figure 4.9; the majority of respondents recognized Nokia as the first brand (61%), iPhone (13.8%), Blackberry (8.5%), Samsung (7.3%), Sony Ericson (3.5%), HTC and Motorola (1.5%), G-Net (0.8%), i-mobile, Asus, and Google (0.5%), and only (0.3%) recognized Vertu, AJ, and Hutch as the first brand.

4.2.5 Ranking of respondents' mobile phone attributes

Table 4.10: Ranking of respondents' mobile phone attributes

			Gender		Total
			Male	Female	
Quality	1	Count	104	59	163
		% within Gender	43.30%	36.90%	40.80%
	2	Count	72	48	120
		% within Gender	30.00%	30.00%	30.00%
	3	Count	54	46	100
		% within Gender	22.50%	28.80%	25.00%
	4	Count	10	7	17
		% within Gender	4.20%	4.40%	4.30%
Total	Count	240	160	400	
	% within Gender	100.00%	100.00%	100.00%	
			Gender		Total
			Male	Female	
Design	1	Count	66	59	125
		% within Gender	27.50%	36.90%	31.30%
	2	Count	72	41	113
		% within Gender	30.00%	25.60%	28.30%
	3	Count	71	38	109
		% within Gender	29.60%	23.80%	27.30%
	4	Count	31	22	53
		% within Gender	12.90%	13.80%	13.30%
Total	Count	240	160	400	
	% within Gender	100.00%	100.00%	100.00%	

(Continued)

Table 4.10 (continued): Ranking of respondents' mobile phone attributes

			Gender		Total
			Male	Female	
Brand	1	Count	63	38	101
		% within Gender	26.30%	23.80%	25.30%
	2	Count	74	64	138
		% within Gender	30.80%	40.00%	34.50%
	3	Count	66	40	106
		% within Gender	27.50%	25.00%	26.50%
	4	Count	37	18	55
		% within Gender	15.40%	11.30%	13.80%
Total	Count	240	160	400	
	% within Gender	100.00%	100.00%	100.00%	
			Gender		Total
			Male	Female	
Service	1	Count	7	4	11
		% within Gender	2.90%	2.50%	2.80%
	2	Count	22	7	29
		% within Gender	9.20%	4.40%	7.30%
	3	Count	49	36	85
		% within Gender	20.40%	22.50%	21.30%
	4	Count	162	113	275
		% within Gender	67.50%	70.60%	68.80%
Total	Count	240	160	400	
	% within Gender	100.00%	100.00%	100.00%	

Refer to table 4.10; the majority of respondents ranked quality attribute as the number one has 163 respondents (40.8%) from total 400 respondents, the majority of respondents ranked design attribute as the number one has 125 respondents (31.3%) from total 400 respondents, the majority of respondents ranked brand attribute as the number two has 138 respondents (34.5%) from total 400 respondents, and the majority of respondents ranked service attribute as the number four has 275 respondents (68.8%) from total 400 respondents.

4.3 Respondents' attitudes and opinions toward purchasing mobile phone

4.3.1 Respondents' attitudes and opinions about price sensitivity toward purchasing mobile phone

Table 4.11: Respondents' attitudes and opinions about price sensitivity toward purchasing mobile phone

1. If there is the nice promotion in your working time, you will not hesitate to leave your job to buy that product for safe your money.			
		Frequency	Percent
Valid	Strongly disagree	126	31.5
	Disagree	66	16.5
	Uncertain	106	26.5
	Agree	55	13.8
	Strongly agree	47	11.8
	Total	400	100.0

(Continued)

Table 4.11(continued): Respondents' attitudes and opinions about price sensitivity toward purchasing mobile phone

2. If your favorite mobile phone brand rises the price with any reason, you will change your mind to buy other brands that cheaper but has same functions and features.			
		Frequency	Percent
Valid	Strongly disagree	52	13
	Disagree	68	17
	Uncertain	145	36.3
	Agree	82	20.5
	Strongly agree	53	13.3
	Total	400	100
3. Normally, you always buy the cheapest mobile phone.			
		Frequency	Percent
Valid	Strongly disagree	110	27.5
	Disagree	133	33.3
	Uncertain	115	28.8
	Agree	25	6.3
	Strongly agree	17	4.3
	Total	400	100

(Continued)

Table 4.11(continued): Respondents' attitudes and opinions about price sensitivity toward purchasing mobile phone

4. If there is one shop that offers the cheapest price for you than others but that shop is very far away from you, you will calculate the cost of journey add up with that price to compare before making purchase decision.			
		Frequency	Percent
Valid	Strongly disagree	26	6.5
	Disagree	37	9.3
	Uncertain	77	19.3
	Agree	130	32.5
	Strongly agree	130	32.5
	Total	400	100

Refer to table 4.11; if the respondents select strongly agree means that they are very price sensitivity, on the other hand if they select strongly disagree means that they are very not price sensitivity.

From question number1, there are 53 respondents (13.3%) that very price sensitivity, 82 respondents (20.5%) are price sensitivity, 106 respondents (26.5%) are uncertain, 66 respondents (16.5%) are not price sensitivity, and 126 respondents (31.5%) that very not price sensitivity.

From question number2, there are 47 respondents (11.8%) that very price sensitivity, 55 respondents (13.8%) are price sensitivity, 145 respondents (36.3%) are uncertain, 68 respondents (17%) are not price sensitivity, and 52 respondents (13%) that very not price sensitivity.

From question number3, there are 17 respondents (4.3%) that very price sensitivity, 25 respondents (6.3%) are price sensitivity, 115 respondents (28.8%) are uncertain, 133 respondents (33.3%) are not price sensitivity, and 110 respondents (27.5%) that very not price sensitivity.

From question number4, there are 130 respondents (32.5%) that very price sensitivity, 130 respondents (32.5%) are price sensitivity, 77 respondents (19.3%) are uncertain, 37 respondents (9.3%) are not price sensitivity, and 26 respondents (6.5%) that very not price sensitivity.

4.3.2 Respondents' attitudes and opinions about brand loyalty toward purchasing mobile phone

Table 4.12: Respondents' attitudes and opinions about brand loyalty toward purchasing mobile phone

5. You always repeat purchase your favorite brand.			
		Frequency	Percent
Valid	Strongly disagree	27	6.8
	Disagree	51	12.8
	Uncertain	116	29.0
	Agree	128	32.0
	Strongly agree	78	19.5
	Total	400	100.0

(Continued)

Table 4.12 (continued): Respondents' attitudes and opinions about brand loyalty toward purchasing mobile phone

6. If competitors of your favorite brand offer the better choices for you, you will not change your mind from your favorite brand.			
		Frequency	Percent
Valid	Strongly disagree	23	5.8
	Disagree	61	15.3
	Uncertain	163	40.8
	Agree	104	26
	Strongly agree	49	12.3
	Total	400	100
7. You will persuade or suggest your friends or your family to buy your favorite brand.			
		Frequency	Percent
Valid	Strongly disagree	28	7
	Disagree	51	12.8
	Uncertain	101	25.3
	Agree	157	39.3
	Strongly agree	63	15.8
	Total	400	100

(Continued)

Table 4.12 (continued): Respondents' attitudes and opinions about brand loyalty toward purchasing mobile phone

8. If there is no your favorite brand in the place that you stay at that time, you will try to find that brand even it will very far away from you.			
		Frequency	Percent
Valid	Strongly disagree	30	7.5
	Disagree	50	12.5
	Uncertain	90	22.5
	Agree	103	25.8
	Strongly agree	127	31.8
	Total	400	100

Refer to table 4.12; if the respondents select strongly agree means that they are very brand loyalty, on the other hand if they select strongly disagree means that they are very not brand loyalty.

From question number5, there are 78 respondents (19.5%) that very brand loyalty, 128 respondents (32%) are brand loyalty, 116 respondents (29%) are uncertain, 51 respondents (12.8%) are not brand loyalty, and 27 respondents (6.8%) that very not brand loyalty.

From question number6, there are 49 respondents (12.3%) that very brand loyalty, 104 respondents (26%) are brand loyalty, 163 respondents (40.8%) are uncertain, 61 respondents (15.3%) are not brand loyalty, and 23 respondents (5.8%) that very not brand loyalty.

From question number7, there are 63 respondents (15.8%) that very brand loyalty, 157 respondents (39.3%) are brand loyalty, 101 respondents (25.3%) are uncertain, 51 respondents (12.8%) are not brand loyalty, and 28 respondents (7%) that very not brand loyalty.

From question number 8, there are 127 respondents (31.8%) that very brand loyalty, 103 respondents (25.8%) are brand loyalty, 90 respondents (22.5%) are uncertain, 50 respondents (12.5%) are not brand loyalty, and 30 respondents (7.5%) that very not brand loyalty.

4.3.3 Respondents' attitudes and opinions about impulse purchase toward purchasing mobile phone

Table 4.13: Respondents' attitudes and opinions about impulse purchase toward purchasing mobile phone

9. Normally, you often don't have a plan in your mind before you purchase mobile phone.			
		Frequency	Percent
Valid	Strongly disagree	154	38.5
	Disagree	112	28
	Uncertain	61	15.25
	Agree	47	11.75
	Strongly agree	26	6.5
	Total	400	100

(Continued)

Table 4.13 (continued): Respondents' attitudes and opinions about impulse purchase toward purchasing mobile phone

10. You often don't collect your money sequentially to purchase your target mobile phone.			
		Frequency	Percent
Valid	Strongly disagree	122	30.5
	Disagree	88	22
	Uncertain	73	18.25
	Agree	72	18
	Strongly agree	45	11.25
	Total	400	100
11. Even though you don't have willingness to buy mobile phone but you have a chance to see those products and very like or impress that product but you don't have enough money to buy, you will borrow your friend money to buy it.			
		Frequency	Percent
Valid	Strongly disagree	241	60.25
	Disagree	68	17
	Uncertain	46	11.5
	Agree	24	6
	Strongly agree	21	5.25
	Total	400	100

(Continued)

Table 4.13 (continued): Respondents' attitudes and opinions about impulse purchase toward purchasing mobile phone

12. You often don't learn or find more information about product before making purchase decision.			
		Frequency	Percent
Valid	Strongly disagree	202	50.5
	Disagree	94	23.5
	Uncertain	50	12.5
	Agree	37	9.25
	Strongly agree	17	4.25
	Total	400	100

Refer to table 4.13; if the respondents select strongly agree means that they are very impulse purchase, on the other hand if they select strongly disagree means that they are very not impulse purchase.

From question number9, there are 26 respondents (6.5%) that very impulse purchase, 47 respondents (11.75%) are impulse purchase, 61 respondents (15.25%) are uncertain, 112 respondents (28%) are not impulse purchase, and 154 respondents (38.5%) that very not impulse purchase.

From question number10, there are 45 respondents (11.25%) that very impulse purchase, 72 respondents (18%) are impulse purchase, 73 respondents (18.25%) are uncertain, 88 respondents (22%) are not impulse purchase, and 122 respondents (30.5%) that very not impulse purchase.

From question number11, there are 21 respondents (5.25%) that very impulse purchase, 24 respondents (6%) are impulse purchase, 46 respondents (11.5%) are uncertain, 68 respondents (17%) are not impulse purchase, and 241 respondents (60.25%) that very not impulse purchase.

From question number 12, there are 17 respondents (4.25%) that very impulse purchase, 37 respondents (9.25%) are impulse purchase, 50 respondents (12.5%) are uncertain, 94 respondents (23.5%) are not impulse purchase, and 202 respondents (50.5%) that very not impulse purchase.

4.4 Data to answer research questions

Testing hypotheses with an F-test in ANOVA including null and research which the meaning of each hypotheses and the results are as following,

4.4.1 ANOVA analysis between product attributes and price sensitivity

Table 4.14: Descriptives of product attributes and price sensitivity

Descriptives

Mean of price sensitivity

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Quality	163	3.0368	.70941	.05557	2.9271	3.1465	1.3	4.8
Design	125	2.8040	.77550	.06936	2.6667	2.9413	1.0	5.0
Brand	101	2.8639	.61900	.06159	2.7417	2.9861	1.5	4.5
Service	11	2.6136	.87581	.26407	2.0253	3.2020	1.0	3.8
Total	400	2.9088	.72079	.03604	2.8379	2.9796	1.0	5.0

Table 4.15: ANOVA of product attributes and price sensitivity

ANOVA

Mean of price sensitivity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.206	3	1.735	3.401	.018
Within Groups	202.088	396	.510		
Total	207.294	399			

H_1 : Group of people who pay an important to different product attributes tends to have different price sensitivity.

Null H_1 : There is no relationship between people who pay an important to different product attributes and price sensitivity. The average of price sensitivity for each product attribute is equal. $Mean_1 = mean_2 = mean_3 = mean_4$. $F = 0$.

Research H_1 : There is a relationship between people who pay an important to different product attributes and price sensitivity. The average of price sensitivity for each product attribute is not equal. $Mean_1 \neq mean_2 \neq mean_3 \neq mean_4$. $F \neq 0$.

Refer to table 4.15; P value is 0.018 which lower than alpha value (0.05) means reject the null hypotheses₁ or accept the alternative hypotheses₁ which presents that each group among those four product attributes has a different level of price sensitivity significantly.

4.4.2 ANOVA analysis between product attributes and brand loyalty

Table 4.16: Descriptives of product attributes and brand loyalty

Descriptives

Mean of brand loyalty

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Quality	163	3.2853	.78512	.06150	3.1638	3.4067	1.0	5.0
Design	125	3.4160	.72258	.06463	3.2881	3.5439	1.5	5.0
Brand	101	3.7550	.72799	.07244	3.6112	3.8987	1.0	5.0
Service	11	2.9545	.69658	.21003	2.4866	3.4225	1.8	4.0
Total	400	3.4356	.77400	.03870	3.3595	3.5117	1.0	5.0

Table 4.17: ANOVA of product attributes and brand loyalty

ANOVA

Mean of brand loyalty

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.577	3	5.526	9.837	.000
Within Groups	222.452	396	.562		
Total	239.030	399			

H_2 : Group of people who pay an important to different product attributes tends to have different brand loyalty.

Null H_2 : There is no relationship between people who pay an important to different product attributes and brand loyalty. The average of brand loyalty for each product attribute is equal. $\text{Mean}_1 = \text{mean}_2 = \text{mean}_3 = \text{mean}_4$. $F = 0$.

Research H_2 : There is a relationship between people who pay an important to different product attributes and brand loyalty. The average of brand loyalty for each product attribute is not equal. $\text{Mean}_1 \neq \text{mean}_2 \neq \text{mean}_3 \neq \text{mean}_4$. $F \neq 0$.

Refer to table 4.17; P value is 0 which lower than alpha value (0.05) means reject the null hypotheses₂ or accept the alternative hypotheses₂ which presents that each group among those four product attributes has a different level of brand loyalty significantly.

4.4.3 ANOVA analysis between product attributes and impulse purchase

Table 4.18: Descriptives of product attributes and impulse purchase

Descriptives

Mean of impulse purchase

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Quality	163	2.2301	.87400	.06846	2.0949	2.3652	1.0	4.8
Design	125	2.2340	.87629	.07838	2.0789	2.3891	1.0	5.0
Brand	101	1.7698	.73543	.07318	1.6246	1.9150	1.0	3.5
Service	11	2.5455	1.33612	.40286	1.6478	3.4431	1.0	4.8
Total	400	2.1238	.87984	.04399	2.0373	2.2102	1.0	5.0

Table 4.19: ANOVA of product attributes and impulse purchase

ANOVA

Mean of impulse purchase

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.971	3	5.990	8.155	.000
Within Groups	290.903	396	.735		
Total	308.874	399			

H_3 : Group of people who pay an important to different product attributes tends to have different impulse purchase.

Null H_3 : There is no relationship between people who pay an important to different product attributes and impulse purchase. The average of impulse purchase for each product attribute is equal. $\text{Mean}_1 = \text{mean}_2 = \text{mean}_3 = \text{mean}_4$. $F = 0$.

Research H_3 : There is a relationship between people who pay an important to different product attributes and impulse purchase. The average of impulse purchase for each product attribute is not equal. $\text{Mean}_1 \neq \text{mean}_2 \neq \text{mean}_3 \neq \text{mean}_4$. $F \neq 0$.

Refer to table 4.19; P value is 0 which lower than alpha value (0.05) means reject the null hypotheses₃ or accept the alternative hypotheses₃ which presents that each group among those four product attributes has a different level of impulse purchase significantly.

From the results of testing the three hypotheses with an F-test in ANOVA present that each group among those four product attributes including quality, design, brand, and service has a different level of price sensitivity, brand loyalty, and impulse purchase significantly for all three hypotheses.

Chapter 5

Discussions, conclusions, and recommendations

This chapter presents the discussions, conclusions and recommendations of this research study to solve the research questions and prove the research hypotheses of the relationship between four product attributes including quality, design, brand, and service with price sensitivity, brand loyalty, and impulse purchase. All of the three null hypotheses were rejected. The results of the analysis and research suggest that each group among those four product attributes including quality, design, brand, and service has a different level of price sensitivity, brand loyalty, and impulse purchase significantly for all three hypotheses.

Presented first within this chapter are the research questions and supporting the hypotheses followed by the summarized conclusions based on the results of the study. Recommendations for mobile manufacturers and vendors and future research by the researcher will complete the presentation of this chapter.

- 5.1 The research questions
- 5.2 The hypotheses
- 5.3 Conclusions
- 5.4 Recommendations for mobile manufacturers and vendors

5.1 The research questions

The research study sought to answer the series of three research questions focus on the existence of relationship between independent variables and dependent variables. The first research question dealt with respondents' believe in different product attributes and price sensitivity. The second research question dealt with respondents' believe in different product attributes and brand loyalty. The last research question dealt with respondents' believe in different product attributes and impulse purchase toward purchasing mobile phone.

5.2 The hypotheses

A total of three hypotheses were tested to answer the three research questions examining the existence of a relationship between respondents' believe in different product attributes including quality, design, brand, and service with price sensitivity, brand loyalty, and impulse purchase toward purchasing mobile phone.

H_1 : Group of people who pay an important to different product attributes tends to have different price sensitivity.

Research question₁: Is there a relationship between consumers believe in difference product attributes and the relative of their price sensitivity?

To support research question₁ in answering the existence of a relationship between people who pay an important to different product attributes and price sensitivity, using ANOVA testing to test the hypotheses, the research was able to reject the null hypotheses₁ or accept the alternative hypotheses₁ concluding that each group among those four product attributes has a different level of price sensitivity significantly.

H₂: Group of people who pay an important to different product attributes tends to have different brand loyalty.

Research question₂: Is there a relationship between consumers believe in difference product attributes and the relative of their brand loyalty?

To support research question₂ in answering the existence of a relationship between people who pay an important to different product attributes and brand loyalty, using ANOVA testing to test the hypotheses, the research was able to reject the null hypotheses₂ or accept the alternative hypotheses₂ concluding that each group among those four product attributes has a different level of brand loyalty significantly.

H₃: Group of people who pay an important to different product attributes tends to have different impulse purchase.

Research question₃: Is there a relationship between consumers believe in difference product attributes and the relative of their impulse purchase?

To support research question₃ in answering the existence of a relationship between people who pay an important to different product attributes and impulse purchase, using ANOVA testing to test the hypotheses, the research was able to reject the null hypotheses₃ or accept the alternative hypotheses₃ concluding that each group among those four product attributes has a different level of impulse purchase significantly.

5.3 Conclusions

According to the results of this study, group of people who believe in different product attributes including quality, design, brand, and service have a different level of price sensitivity, brand loyalty, and impulse purchase significantly. Quality attribute is the most important that the respondents pay an

important to, followed by design attribute, brand attribute and service attribute is the last. This result can tell that most of people intend and interest to quality of mobile phone more than others that can help manufacturers and vendors to focus and concentrate on the right customers' need. Most people interest on quality, it may be because of they want to use their mobile phone as long as they can so they want only high quality product that worth with money they paid and because the effect of economic crisis that made people have to think more about their spending carefully. Product attribute of mobile phone that respondents pay the least important to is service, this can tell that people don't care much about this attribute, they care more on quality that they will get because if they buy the high quality of product, means that product tends to be durable and long uses which no need to care much on after sale service. For brand of mobile phone can tell consumers about trust that they can assure because it was well known by many people and also show image of that brand which consumers can imagine to.

The results told that group of people who believe in different product attributes including quality, design, brand, and service have a different level of price sensitivity, brand loyalty, and impulse purchase significantly. It shows that there are the relationships of people perception related to different product attributes and the effect on price sensitivity, brand loyalty, and impulse purchase. People, who pay the most important to quality, may not tend to care about price sensitivity. Even that mobile phone is expensive but has very high quality as they want, they will be pleased to buy it. For people who pay the most important to design, they care about design that they like more than others. Therefore, people in design group tend to don't care about price sensitivity and brand loyalty. If they impress with that design even what price and what brand it is, they are willing to buy it. These can present that people in each group of attributes have their reasons and perceptions that related to price sensitivity, brand loyalty, and impulse purchase.

5.4 Recommendations for mobile manufacturers and vendors

Recommendations are present here for manufacturers and vendors to more efficiently target to whom that manufacturers and vendors are sending the message and how they are delivering it. Getting the right message to the right audience is the critical success factor in development of marketing strategy that every manufacturers and vendors have to concern and focus on it. From the result of this study told that people concern and pay an important to quality of mobile phone the most followed by design and brand and the least important is service. This can help manufacturers and vendors to send the right message to the right audience or customers that they should develop mobile phone that suitable to them. In addition, manufacturers and vendors can know that people who have who believe in different product attributes including quality, design, brand, and service have a different level of price sensitivity, brand loyalty, and impulse purchase that they can adjust and develop product to match to customers.

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Appendix

The evaluation of consumers perception related to product attributes and the effect on price sensitivity, brand loyalty, and impulse purchase of mobile phones

This questionnaire is intended to study the effects of the difference of consumers perception related to product attributes and the relative to the difference of price sensitivity, brand loyalty, and impulse purchase of mobile phone products. This study is a part of Independent Study, Master's Degree of Business Administration, International Program, Bangkok University and conducted 400 persons in metropolitan area in Bangkok.

This questionnaire is divided into three parts as following,

Part 1: Demographic information of respondents

Part 2: Respondents' information about mobile phone

Part 3: Respondents' attitudes and opinions toward purchasing mobile phone

Part 1: Demographic information of respondents

Please check ✓ the appropriate category at the

1. Gender:

1. Male

2. Female

2. Age:

- | | |
|--|---|
| <input type="checkbox"/> 1. Below 20 years | <input type="checkbox"/> 2. 20-25 years |
| <input type="checkbox"/> 3. 26-35 years | <input type="checkbox"/> 4. 36-45 years |
| <input type="checkbox"/> 5. 46-55 years | <input type="checkbox"/> 6. Over 56 years |

3. Education:

- | | |
|---|---|
| <input type="checkbox"/> 1. Under Bachelor's degree | <input type="checkbox"/> 2. Bachelor's degree |
| <input type="checkbox"/> 3. Master's degree or higher | |

4. Occupation:

- | | |
|--|--|
| <input type="checkbox"/> 1. Student | <input type="checkbox"/> 2. Company's employee |
| <input type="checkbox"/> 3. Government Enterprises | <input type="checkbox"/> 4. Business owner |
| <input type="checkbox"/> 5. Unemployed | |

5. Salary:

- | | |
|--|--|
| <input type="checkbox"/> 1. Lower than 10,000 Baht | <input type="checkbox"/> 2. 10,001-20,000 Baht |
| <input type="checkbox"/> 3. 20,001-30,000 Baht | <input type="checkbox"/> 4. 30,001-40,000 Baht |
| <input type="checkbox"/> 5. 40,001-50,000 Baht | <input type="checkbox"/> 6. Over 50,000 Baht |
-

Part 2: Respondents' information about mobile phone

6. Which source of information that you use for making decision on purchasing mobile phone?
(Please select only one)

- | | |
|---|---|
| <input type="checkbox"/> 1. Internet | <input type="checkbox"/> 2. Magazines |
| <input type="checkbox"/> 3. Newspaper | <input type="checkbox"/> 4. Dealer shop |
| <input type="checkbox"/> 5. Friends | <input type="checkbox"/> 6. Family |
| <input type="checkbox"/> 7. Boyfriend or girlfriend | <input type="checkbox"/> 8. Brochure |

7. What is your most important reason for purchasing mobile phone? (Please select only one)

- | | |
|--|--|
| <input type="checkbox"/> 1. Calling | <input type="checkbox"/> 2. Sending SMS or MMS |
| <input type="checkbox"/> 3. Games | <input type="checkbox"/> 4. Chat |
| <input type="checkbox"/> 5. Taking photo | <input type="checkbox"/> 6. Browsing the web |
| <input type="checkbox"/> 7. Checking and sending e-mail | |
| <input type="checkbox"/> 8. Enjoying multimedia (playing music, watching video clip or TV, etc.) | |
| <input type="checkbox"/> 9. Download music or VDO clips | |
| <input type="checkbox"/> 10. Others (Please fill)..... | |

8. Which brand of mobile phone that you use now?

(Please fill).....

9. Which brand of mobile phone that you recognize the first?

(Please fill).....

10. Please ranking from 1-4 of your mobile phone attributes that you pay the most important to the less.

.....Quality

.....Design

.....Brand

.....Service

Part 3: Respondents' attitudes and opinions toward purchasing mobile phone

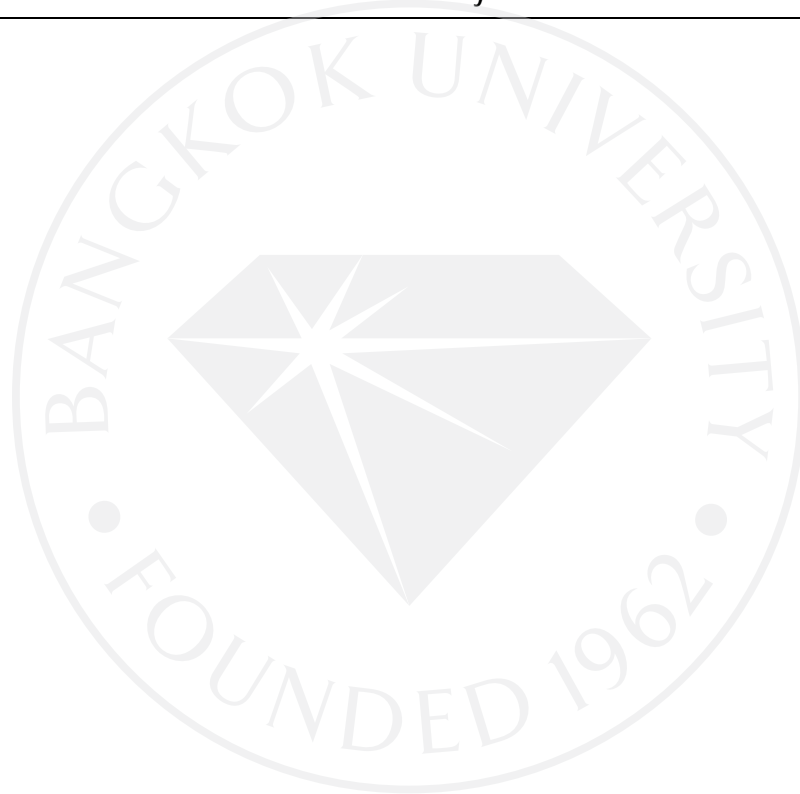
1 = Strongly disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, and 5 = Strongly agree

Attitudes and opinions toward purchasing mobile phone	1	2	3	4	5
1. If there is the nice promotion in your working time, you will not hesitate to leave your job to buy that product for safe your money.					
2. If your favorite mobile phone brand rises the price with any reason, you will change your mind to buy other brands that cheaper but has same functions and features.					
3. Normally, you always buy the cheapest mobile phone.					

Attitudes and opinions toward purchasing mobile phone	1	2	3	4	5
4. If there is one shop that offers the cheapest price for you than others but that shop is very far away from you, you will calculate the cost of journey add up with that price to compare before making purchase decision.					
5. You always repeat purchase your favorite brand.					
6. If competitors of your favorite brand offer the better choices for you, you will not change your mind from your favorite brand.					
7. You will persuade or suggest your friends or your family to buy your favorite brand.					
8. If there is no your favorite brand in the place that you stay at that time, you will try to find that brand even it will very far away from you.					
9. Normally, you often don't have a plan in your mind before you purchase mobile phone.					
10. You often don't collect your money sequentially to purchase your target mobile phone.					
11. Even though you don't have willingness to buy mobile phone but you have a chance to see those products and very like or impress that product but you don't have enough money to buy, you will borrow your friend money to buy it.					

Attitudes and opinions toward purchasing mobile phone	1	2	3	4	5
12. You often don't learn or find more information about product before making purchase decision.					

*****Thank you*****



แบบสอบถามฉบับนี้มีวัตถุประสงค์เพื่อศึกษาพฤติกรรมเกี่ยวกับความเชื่อในคุณสมบัติของตัวสินค้าของผู้บริโภคที่แตกต่างกัน ทำให้มีผลต่อความอ่อนไหวต่อราคาของสินค้า, การจงรักภักดีต่อตราสินค้า และแรงกระตุ้นในการซื้อสินค้าที่แตกต่างกัน

การศึกษานี้เป็นส่วนหนึ่งของวิชา Independent Study,
, และทำการสำรวจกับกลุ่มตัวอย่างจำนวน 400

แบบสอบถามนี้ประกอบด้วยคำถาม 3 ส่วน ดังนี้

ส่วนที่ 1: ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

ส่วนที่ 2: ข้อมูลเกี่ยวกับโทรศัพท์มือถือของผู้ตอบแบบสอบถาม

ส่วนที่ 3: ทักษะคิดและความคิดเห็นเกี่ยวกับการซื้อโทรศัพท์มือถือของผู้ตอบแบบสอบถาม

ส่วนที่ 1: ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

ในช่องว่าง

ามความคิดเห็นที่ตรงกับตัวท่านมากที่สุด

11. :

1.

2.

12. :

- | | |
|---|---|
| <input type="checkbox"/> 1. ต่ำกว่า 20 ปี | <input type="checkbox"/> 2. 20-25 ปี |
| <input type="checkbox"/> 3. 26-35 ปี | <input type="checkbox"/> 4. 36-45 ปี |
| <input type="checkbox"/> 5. 46-55 ปี | <input type="checkbox"/> 6. 56 ปีขึ้นไป |

13. :

- | | |
|--|-----------------------------|
| <input type="checkbox"/> 1. ต่ำกว่าปริญญาตรี | <input type="checkbox"/> 2. |
| <input type="checkbox"/> 3. | |

14. :

- | | |
|------------------------------------|---|
| <input type="checkbox"/> 1. | <input type="checkbox"/> 2. |
| <input type="checkbox"/> 3. | <input type="checkbox"/> 4. ธุรกิจส่วนตัว |
| <input type="checkbox"/> 5. วางงาน | |

15. รายได้ต่อเดือน:

- | | |
|--|---|
| <input type="checkbox"/> 1. ต่ำกว่า 10,000 | <input type="checkbox"/> 2. 10,001-20,000 |
| <input type="checkbox"/> 3. 20,001-30,000 | <input type="checkbox"/> 4. 30,001-40,000 |
| <input type="checkbox"/> 5. 40,001-50,000 | <input type="checkbox"/> 6. 50,000 |
-

ส่วนที่ 2: ข้อมูลเกี่ยวกับโทรศัพท์มือถือของผู้ตอบแบบสอบถาม

16. แหล่งข้อมูลใดที่คุณใช้ประกอบการตัดสินใจซื้อโทรศัพท์มือถือ (_____ 1 ข้อ)

- | | |
|--|---|
| <input type="checkbox"/> 1. อินเทอร์เน็ต | <input type="checkbox"/> 2. |
| <input type="checkbox"/> 3. หนังสือพิมพ์ | <input type="checkbox"/> 4. ตัวแทนจำหน่าย |
| <input type="checkbox"/> 5. | <input type="checkbox"/> 6. |
| <input type="checkbox"/> 7. | <input type="checkbox"/> 8. โบรชัวร์ |

17. เหตุผลที่สำคัญที่สุดที่ท่านซื้อโทรศัพท์มือถือคืออะไร (_____ 1 ข้อ)

- | | | |
|---|--------------------------------------|-----|
| <input type="checkbox"/> 1. | <input type="checkbox"/> 2. ส่ง SMS | MMS |
| <input type="checkbox"/> 3. | <input type="checkbox"/> 4. | |
| <input type="checkbox"/> 5. ถ่ายรูป | <input type="checkbox"/> 6. ท่องเว็บ | |
| <input type="checkbox"/> 7. เช็กและส่งอีเมลล์ | | |
| <input type="checkbox"/> 8. | (ฟังเพลง, |) |
| <input type="checkbox"/> 9. | | |
| <input type="checkbox"/> 10. | ()..... | |

18. คุณใช้โทรศัพท์มือถือยี่ห้ออะไรอยู่ตอนนี้

().....

19. โทรศัพท์มือถือยี่ห้ออะไรที่คุณจะนึกถึงเป็นอันดับแรก

().....

20. โปรดจัดอันดับคุณสมบัติของโทรศัพท์มือถือที่คุณให้ความสำคัญมากที่สุดเป็นอันดับสูงสุดท้าย (_____ 1 4)

.....

.....ดีไซน์

.....ยี่ห้อ

.....

ส่วนที่ 3: ทศนคติและความคิดเห็นเกี่ยวกับการซื้อโทรศัพท์มือถือของผู้ตอบแบบสอบถาม

1 = ไม่เห็นด้วยอย่างยิ่ง, 2 = ไม่เห็นด้วย, 3 = ไม่แน่ใจ, 4 = เห็นด้วย, 5 = เห็นด้วยอย่างยิ่ง

ทัศนคติและความคิดเห็นเกี่ยวกับการซื้อโทรศัพท์มือถือ	1	2	3	4	5
13. ถ้ามีการจัดโปรโมชั่นลดแลกแจกแถมในช่วงเวลางานของคุณ ไม่ดังเลที่จะทำงานแล้วมาซื้อโทรศัพท์ในช่วงจัด โปรโมชั่นนั้นเพื่อประหยัดเงินในกระเป๋าคุณ					
14. ถ้ายี่ห้อโทรศัพท์มือถือที่คุณชอบเกิดขึ้นราคาขึ้นมาไม่ว่าด้วย เหตุผลใดก็ตาม คุณก็จะเปลี่ยนใจไปซื้อยี่ห้ออื่นที่ถูกลงกว่า ที่ได้ คุณภาพและฟังก์ชันต่างๆเหมือนกัน					
15. โดยปกติแล้วคุณจะเลือกซื้อโทรศัพท์มือถือที่ถูกที่สุดเสมอ					
16. ถ้ามีร้านขายโทรศัพท์มือถือร้านหนึ่ง เสนอราคาที่ถูกกว่าร้าน อื่นมากๆ แต่ร้านนั้นตั้งอยู่ไกลมากจากที่คุณอยู่ คุณก็จะคำนวณ ค่าใช้จ่ายในการเดินทางรวบรวมเข้าไปด้วยเพื่อเปรียบเทียบ ราคาก่อนตัดสินใจซื้อ					

ทัศนคติและความคิดเห็นเกี่ยวกับการซื้อโทรศัพท์มือถือ	1	2	3	4	5
17. คุณจะซื้อโทรศัพท์มือถือยี่ห้อโปรดที่คุณชอบซ้ำๆ					
18. ถ้ายี่ห้อคู่แข่งของยี่ห้อโปรดของคุณเสนอราคาที่ดีกว่าหรือของแถมต่างๆให้กับคุณ คุณก็จะไม่เปลี่ยนใจไปจากยี่ห้อที่คุณ					
19. คุณจะชักชวนหรือแนะนำเพื่อนๆ หรือครอบครัวของคุณให้ซื้อโทรศัพท์มือถือยี่ห้อโปรดที่คุณชอบ					
20. ถ้าเกิดในที่ที่คุณอยู่ตอน ไม่มียี่ห้อโปรดที่คุณชอบวางขาย คุณก็จะพยายามหาซื้อยี่ห้อโปรดของคุณนั้นให้ได้ ไม่ว่าร้านนั้นจะอยู่ไกลแค่ไหนก็ตาม					
21. โดยปกติแล้วคุณมักจะ ไม่ค่อยวางแผนล่วงหน้าก่อนตัดสินใจซื้อโทรศัพท์มือถือ					
22. ไม่ค่อยสะสมเงินเก็บของคุณเรื่อยๆ เพื่อซื้อมือถือที่คุณตั้งเป้าไว้					
23. ถึงแม้ว่าคุณจะไม่ได้อยากได้โทรศัพท์มือถือเลข ณ เวลานั้น แต่คุณมีโอกาสได้เดินดูโทรศัพท์มือถือที่วางขายอยู่ แล้วเกิดชอบหรือถูกใจเครื่องใดเครื่องหนึ่งขึ้นมามากๆ แต่คุณไม่ _____ สัพท์เครื่อง นั้นให้ได้					
24. ไม่ค่อยเรียนรู้หรือหาข้อมูลเกี่ยวกับโทรศัพท์มือถือที่คุณจะซื้อก่อนตัดสินใจซื้อ					

***** ขอขอบคุณที่สละเวลาและให้ความร่วมมือเป็นอย่างดีค่ะ *****