

CHAPTER 4

RESEARCH METHODOLOGY

The intention of this section is to present the research design and methodology of this study. Therefore, it includes research design, industry selection, sampling method, data collection, measures development, and pre-test of the measures.

Research Design

Since this study focuses on top two brands from each customer, they can be any brands in the same category. It is more efficient way to gather that various brand information by consumer self report (Bowman & Narayandas, 2001; Garland, 2004; Magi, 2003; Odekerken-Schroder et al., 2001). Therefore, we conduct a survey research in this study to collect primary data. Moreover, survey method can gain forward-looking information and insight of customers. With this quantitative data, structural equation modeling (AMOS) is then applied for analyzing the data.

Industry Selection

Since this research aims to develop a model that can be applied to all firms and industries, two industries are selected in this study for generalization purpose, i.e., credit card and grocery store. There are some similarities and differences between the two industries. First of all, customers frequently use credit card and buy from grocery store regular. There are repeat purchase or repeat usage on a regular basis in both industries. For example, customers or households need to go shopping for grocery products once a month. And customers regularly pay for goods by credit card instead of cash.

Secondly, most customers in both industries have multi-brand relationship and fit well to our SOW study. Past research showed that 65-67% of customers are multi-brand users and use 2-3 credit cards at the same period of time in Thailand (Sombat Thamrongsinthaworn, 2007). Besides, 5-10% of customers have relationship with more than 4 credit cards. This is also supported by a research in United States; consumer had an average of 5.4 cards in year 2008 (www.creditcard.com 2010). With the same direction, most of grocery store customers have multi-brand relationship with grocery stores. They spend most of their SOW on top brand but also buy from other stores regularly (East et al., 2000; Magi, 1999). Meyer-Waarden (2007) found that grocery store customers use, on average, 2.2 grocery stores during the three-year observation period. And there is only 1% limited their purchases to one store and the rest are multi-brand users who have relationship with two to seven stores.

Thirdly, credit card spending is easy to recall because there is a statement for every month. The measurement of SOW would be more accurate with that. In the same way, grocery store customers spend similar amount of money every month. It is not hard for customers to recall spending information and give precise information for our study. However, there is a major difference in both industries. Although both industries have been viewed as services industry, degree of services of the two is different. Commonly, there are four standard differences between products and services, i.e., intangibility, inseparability, heterogeneity and perishability (Ziethaml, 1981; Ziethaml & Bitner, 1996). The higher the degree of these four dimensions, the higher the degree of services. It is clear that credit card industry has more degree of services than grocery store industry. For example, grocery store industry is more accompanied with tangible product, e.g., product assortment and product quality are important factors for buying decision of grocery store customers (e.g., Green & Chen, 2010; Koelemeijer & Oppewal, 1999). Accordingly, this difference would be our benefits for the generalization purpose.

Data Collection

The survey is conducted to 400 customers from grocery-store users and 400 customers from credit-card consumers. By purposive sampling, we collect data from customers who have multi-brand relationship. We select 4 different major grocery stores for collecting grocery-store customers, i.e., Tesco Lotus, Carrefour, Tops Supermarket, and Villa Market. And 4 different expositions for collecting credit-card customers, i.e., SME Expo, Sony Happy Day, Baby and Kids Best Buy, and Mobile Expo. This data collection by quota is to reduce possible shopping pattern biases. One hundred questionnaires are collected from each mall and exposition. It is an economic efficient way and it could be accomplished within reasonable period of time to collect the data by mall-intercept method (Burns & Bush, 1998). The data collection is implemented by employing interviewers to collect data from both industries. They are well trained to fully understand all the objectives and questions in the questionnaires of this study.

For the procedure of collecting data, the interviewers bring the questionnaires with them to the shopping malls and grocery stores. Then, they approach customers, introduce themselves, and ask them whether or not they have multi-brand relationship. If yes, the interviewers will invite them to take part in the study. And then, they are informed the objectives, structure of the questionnaire, and instruction to answer the questions. 15 to 20 minutes is required to complete the questionnaire.

Measures Development

Measures of all constructs in the integrated model are developed and adapted from the existing literatures to fit with our selected industries. Some of measurement items are employed and adapted from literatures and some are new items. All new items are developed by reviewing from previous literatures and then validated by marketing expert.

Measurement Items

1. Dependent Variable

Future SOW

An often-used method when measuring SOW is asking customers to report amount of spending on the focal brand they normally make and spending on all brand in its product or service category (e.g., Baumann et al., 2005). However, these study focuses on more subjective measures that aim to look into future orientation. Subjective measures of future SOW are adapted from Wirtz et al. (2007). It comprises of 3 measurement items. All of them are 7-point Likert-scales anchored by “Strongly Disagree” (1) to “Strongly Agree” (7).

- 1) In the future, you expect to buy this brand more often than other brands.
- 2) In the future, you tend to spend on this brand more than other brands.
- 3) In the future, you consider buying this brand before other brands.

In addition, we crosscheck this future SOW with current SOW. We expect that future and current SOW would have high correlation. And current SOW also comprises of 3 items and all of them are 7-point Likert-scales.

- 1) Generally, you buy this brand more often than other brands.
- 2) Generally, you spend on this brand more than other brands.
- 3) Most of the time, you buy this brand before other brands.

Additional crosscheck for subjective future SOW is objective measures of SOW that has been used by most of studies in the past. And we also expect that these two measures would go in the same direction. Customers would be asked their future spending in the next 6 months on both brands and on a category. The items are adapted from Baumann et al. (2005). In this study, we define spending on credit card as all spending that is paid by credit card (or the total amount shown in monthly payment invoice). On the other hand, spending on grocery stores is spending only on grocery products, such as soap, toothpaste, shampoo, food, and drink. Therefore, it is measured and calculated based on the following 3 questions.

- 1) In the next 6 months, you expect to spend on all brands in product/service category approximately _____ Baht/Month
- 2) In the next 6 months, you expect to spend on the top highest spending brand approximately _____ Baht/Month
- 3) In the next 6 months, you expect to spend on the 2nd highest spending brand approximately _____ Baht/Month

2. Drivers of SOW

All items of the antecedents of SOW are 7-point Likert-scales anchored by “Strongly Disagree” (1) to “Strongly Agree” (7).

2.1 Value Superiority

The measures compose of 4 items and are adapted from Yang and Peterson (2004) and also from the concept of value equity proposed by Rust et al. (2000). The measures are developed based on the superiority of one brand over the other competitive brands. The following shows details of the items.

- 1) Comparing to other brands, this brand has higher value.
- 2) Comparing to other brands, this brand has higher quality.
- 3) Comparing to other brands, this brand has lower price.
- 4) Comparing to other brands, this credit card gives more comfort and convenience.

2.2 Brand Superiority

The measures of brand superiority are developed and adapted from the basis of superiority over other competitive brands in brand elements or something that is above and beyond value superiority (Yoo & Donthu, 1997, 2002). Consequently, they are developed on the basis of value superiority measures. The measures assume that values are even to other competitive brands. And then other things above and beyond those values are compared to other brands. Therefore, construct measures compose of 4 items. The following will show the details of the items.

- 1) Although the value of this brand is not different from other competitors, you like this brand more.
- 2) Although the quality of this brand is not different from other competitors, you like this brand more.
- 3) Although this brand has lower price indifferent from others, you are more pleased with this brand.
- 4) Although this brand gives you comfort and convenience indifferent from others, you are more pleased with this brand.

2.3 Relationship Instruments

Relationship instruments in this study have been paid attention on type I, which is focus on economic incentive that brand performs to develop and maintain relationship with its customers. The measures compose of 4 items and are adapted

from Wel and Bojei (2009) and Rust et al. (2004). The following will show the details of the items.

- 1) Regularly, you receive letter or SMS to give you information and promotion from this brand.
- 2) This brand always has promotion activities.
- 3) This brand has good rewards point promotion.
- 4) This brand normally arranges interesting activities, e.g., invite you to join the party, feast, concert, or travel.

Questionnaire Development

Survey questionnaire is used as the data collection technique in this study. The questionnaire consists of four parts. The first three parts are questions related to our proposed model. The first part collects customer's opinion in general, the top brand, and the adjacent brand. The second and third parts gather the spending behaviors towards the product or service of consumers in present and future. The final part collects demographic data from the respondents, e.g., age, sex, education, incomes. However, since all of our samples are expected to be Thais, it is more suitable to have questionnaire in Thai language. However, all measures are created and adapted from English literatures, thus it is necessary to translate them into Thai language. Back translation is conducted for all items to formulate measures equivalence. The questionnaire is modified into two versions for appropriateness of both selected industries. Questionnaire is required about 15-20 minutes to complete by each respondent.

Pre-test and Results

To ensure that all measurement items are well unstated, straightforward, and unambiguous, pre-test is conducted to 100 convenience samples from credit card customers and another 100 samples from grocery store customers before doing the main survey. Table 5 shows the Cronbach's alpha reliability of all constructs. They are all highly reliable, ranging from the lowest of .77 to the highest of .98, which is higher than .70, the conventional criterion suggested by Nunnally (1978). However, this result is gained from only 100 respondents and it could be different from the main survey. The questionnaire is then revised from this test and from the feedback of those respondents. The revised questionnaires for each industry in both Thai and English languages are presented in Appendix 1 and 2.

TABLE 5
RELIABILITY ANALYSIS OF MEASURED CONSTRUCTS OF PRE-TEST
(CRONBACH'S ALPHA)

Constructs	No. of Items	Cronbach's alpha	
		Credit Card	Grocery
<u>Top Brand</u>			
Value Superiority	4	.78	.77
Brand Superiority	4	.89	.86
Relationship Instruments	4	.78	.77
Subjective Future SOW	3	.98	.92
<u>The Adjacent Brand</u>			
Value Superiority	4	.84	.81
Brand Superiority	4	.89	.88
Relationship Instruments	4	.87	.89
Subjective Future SOW	3	.97	.97

In conclusion, research design is developed in this chapter. We use survey method with questionnaires for both industries, i.e., credit card and grocery store. Both industries are selected based on similarities and differences between the two. Measurement items are developed and adapted from previous literatures. 400 customers by purposive sampling are collected for each industry. Finally, we conduct a pretest for improving our measurement items. The research results will be reported and discussed in next chapter, including respondents' profiles, SOW analysis, reliability analysis, model assessment and hypotheses testing.