

Chapter 3

Methodology

The purpose of this chapter is to describe the research methodology applied for this study. The research design consisted of four major stages. The first stage was to develop a survey instrument, i.e. the questionnaire. The second stage consisted of qualitative work, asking experts' opinions and comments on the measurement items. Then, a pretest interview to check the questionnaire items' reliability was conducted. Finally, the last stage described in this chapter includes the data collection process and sample characteristics for the quantitative survey work.

3.1 Research design

A survey research approach is used to measure the constructs in the proposed model. Data for the study was collected by means of a questionnaire to capture investors' perceptions about electronic service acceptance. The original items were generated from the literature review noted above. Lists of all the items for each construct being studied are presented in Table 3.1.

Table 3.1: Questionnaire items

Constructs	Items
Ease of use	The ISTS ¹ is designed to be used easily. The ISTS uses understandable terms. Each page of the ISTS is easy to read. Each page of the ISTS can be linked to search for other information. The ISTS allows easy navigation to previous and next page.
Information quality	The ISTS provides relevant information. The ISTS provides accurate information. The ISTS provides up-to-date information. The ISTS provides thorough information.

¹ Internet Securities Trading System

Table 3.1: Questionnaire items (Con't)

Constructs	Items
Accessibility	<p>The ISTS provides information for making decision during trading hours.</p> <p>The ISTS provides analysis data of the listed companies that can assist your trading decision.</p>
Flow control	<p>The ISTS can be accessed from any location.</p> <p>The ISTS can be accessed at any time.</p> <p>The ISTS can be downloaded easily.</p> <p>The ISTS makes me feel free to control my own trading activity.</p> <p>The ISTS makes me enjoy being in control of my own trading activity.</p> <p>The ISTS allows me to focus on my own trading activity.</p>
Trust	<p>The broker providing the Internet trading service is honest to investors.</p> <p>The broker providing the Internet trading service keeps the best practice of privacy policy regarding investor information.</p> <p>The ISTS is secure.</p> <p>The ISTS is reliable and can transmit the transaction accurately.</p> <p>The broker providing the Internet trading service has the ability to manage the ISTS efficiently.</p> <p>The broker providing the Internet trading service has the ability to assist investor to solve the online problems.</p>
Perceived ease of use	<p>You are an expert in using the ISTS.</p> <p>You can learn how to use the ISTS in a short period of time.</p>
Perceived usefulness	<p>Trading through the ISTS is cheaper than trading through the staff of the securities brokerage firm.</p> <p>Trading through the ISTS is more flexible than trading through the staff of the securities brokerage firm.</p> <p>The ISTS assists the securities trading more efficiently.</p>
Attitude toward usage	<p>You think the ISTS is an interesting system.</p> <p>You like the ISTS.</p>
Behavioral intention to use	<p>You always choose to use the ISTS.</p> <p>You intend to use the ISTS as much as possible.</p> <p>You intend to have trading transactions through the ISTS in the future.</p>
Actual usage	<p>How many hours do you use the ISTS per week?</p>

To gain deeper understanding of the issues in the Thai context, this research conducted a qualitative in-depth interview with experts to assess the items measured in this study specific to Internet securities trading acceptance among investors. Using a qualitative approach provides richer detail for exploring viewpoints in early stages of research, allowing the researcher to gain a better initial understanding of the problem and to identify phenomena, attitudes and influences (e.g., Healy and Perry 2000; Maxwell 1996, Markus and Lee 1999). It is especially important in the Thai securities service industry to assess whether customers view things similarly or differently, because high-level services depend even more highly on face-to-face interactions in Thailand than in Western countries.

Thus, the initial list of items was discussed with three experts, including two Internet securities trading managers, and one academic in the field of electronic commerce to verify that each item represented the concept it was supposed to measure. The experts provided a critique on content, wording, and relevance of the scale items for the electronic service analysis in the Thai context.

In addition, one expert pointed out that individual difference of the user and non-user respondents (e.g., age, education, Internet experience) may have an impact on perception of the constructs being studied. Although the user type issue is beyond the scope of this study, the researcher includes it in the data analysis by assessing the user-type main impacts on dependent variables and interaction effects on the independent variables of the hypothesis being measured.

The final version of the questionnaire can be found in Appendix 1. Since the data was collected in Thailand, the Thai version of the questionnaire was used. The research questionnaire is divided into three sections, the first of which investigated the various types of

services which Internet trading users used in Internet securities trading. This list of services used questions on a simple checklist scale. In section two, thirty-four statements were used to measure investors' perception toward Internet securities trading. The items are measured by a Likert's scale ranging from 1 = strongly disagree to 5 = strongly agree. The final section asks general information about respondent characteristics and plans on future use of the Internet. The questions were designed with fixed-alternative for answering demographic data such as gender, education, age, and a question about respondent uses Internet channel to search for securities trading information. In addition, this section explores respondents' intention about service adoption and usage in the coming year, as well as their position and working industry.

3.2 Questionnaire test and scale purification

A small pretest survey was used to assist in purifying the scale. To purify the survey scale a pretest interview was conducted. The thirty test questionnaires were distributed equally among Internet securities trading users and non-users. Scale reliability of the items of each sub-concept was verified by measuring the Cronbach's alpha coefficients (see Table 3.2). The test results proved statistical relevance of the developed questionnaire.

Table 3.2: Cronbach's Alpha measured in the pretest

Construts	Alpha
Ease of use	.923
Information quality	.909
Accessibility	.817
Flow control	.889
Trust	.840
Perceived ease of use	.649
Perceived usefulness	.710
Attitude toward usage	.703
Behavioral Intention to use	.788

3.3 Data collection

The target population for this study is composed by the Internet securities trading users and non-users. The focus respondents are Thai securities investors. They would have the capability and the volume which would make it feasible to be Internet securities trading if they chose to do so (e.g. they joined the Internet securities trading training course or they have experience in using Internet channel to search securities trading information). They would have perceptions about both the Internet and the traditional interpersonal service provided by brokerage firms. Respondents were selected by judgement sampling from the securities investors from the securities brokers of The Stock Exchange of Thailand during the first quarter of 2005. The data was collected with the cooperation of managers from brokerage firms who assisted by informing their investors about the study and encouraging them to respond. A total of 500 questionnaires have been distributed to securities investors. Consequently, 208 questionnaires of Internet trading users and 234 questionnaires of non-Internet trading users were responded, for a total number of 442 respondents, equivalent to a response rate of 88.4% (see Table 3.3).

Table 3.3 shows that about 53% of the respondents are Internet trading users and about 47% are non-users. The respondents consisted more of men than women.

The survey results do not strongly represent the senior population, with about 40% of the respondents being in the age category of 30 and below, 38% in the age category of 31 to 40, and another 22% above 40 years. Nearly all respondents (around 95%) had university education, and about 42% held a graduate degree. Overall, this sample represents the targeted population of Internet securities trading investors. The Internet securities trading users and non-users were compared on several characteristics, such as age, gender, and education

profile. Overall, the comparison of sub-samples showed no significant difference between Internet securities trading users and non-users based on demographic data (at $p = .05$).

Table 3.3: Respondents' profile

Characteristics	N	Percent ¹	Sig. ²
Internet securities trading			
Users	208	47.1	
Non-users	234	52.9	
Age			
< 25	56	12.7	.079
25-30	123	27.9	
31-40	167	37.9	
41-50	70	15.9	
51-60	21	4.8	
> 60	4	.9	
Gender			
Male	264	61.8	.135
Female	163	38.2	
Education			
Less than bachelor	20	4.6	.413
Bachelor	235	53.7	
Graduate	168	38.4	
PhD	15	3.4	

Note:

1. Valid percents are presented because of occasional missing data.
2. No difference between Internet securities trading users and nonusers in Chi-square test