CHAPTER III

RESEARCH METHODOLOGY

When a researcher has reviewed literatures of global strategic management competency, firms have several principles on enhancing operations and manage various essential factors to efficiently encourage firm performance in export business. Additionally, this chapter will mention thorough research methods and provide hypothesis testing to identify and answer following research objectives and research questions. The details of research methods are able to organize as follows: Firstly, the sample selection and data collection procedures are described with the population and sample, data collection along with the test of non-response bias. Secondly, the measurement of each variable is presented and each is developed from literature reviews. Thirdly, the instrument verifications comprise of the test of validity, reliability, and statistical analysis. Fourthly, the summary of definitions and the operations of all variables is demonstrated in Table 3.

Sample Selection and Data Collection Procedure

<u>Population and Sample</u>

This paper is a survey research that studies the textiles - exporting businesses in Thailand, totally 566 companies. Accordingly, this research is able to seek for information of exporters from the database of Thailand's exporter directory of Department of Export Promotion, Ministry of Commerce of Thai government in July, 2014 (http://www.depthai.go.th). The tendency of textile industries has been extensible, consumers' demands are constant, and it becomes necessary to life. Prior research indicated that strategic management and implementation were concerned with utilizing knowledge to effectively increase quality, adaptability, and transportation system in order to ensure textile industries viable (Bilalis, et al., 2006). Especially, the entrepreneur has added the value of textile through improving new technology to be appropriate with taking strategies to upgrade existing resources and

production competency, and it is a competitive strategy on international business (Bingham and Hague, 2013). Several countries have developed mechanism to advocate advanced technology to respond to the globalization in conjunction with creating supply networks to link world businesses together (Oh and Suh, 2003). Therefore, each firm should have the great management system and prepares plans to determine strategies in both operation and competition. About growth rate on 2011, Thailand textile institute (www.thaitextile.org) has informed that the value of exports of textile subsector equals 152,158 million baht, and it increases continuously when compared with the value of exports last year. Likewise, Department of Export Promotion of Thai government reported that, in the first trimester in 2015, textile exports have grown by 3.3 percent. Moreover, international trade should employ research and development to understand consumers' behaviors along with adapting knowledge that is sustainably associated with all operations of the firm (Connell and Kozar, 2012). Currently, the policy of the public sector will encourage textile enterprises to get more facilities in exports to stimulate economy and create incomes. This is an origin of investigating the role of global strategic management competency of textiles-exporting businesses to be accomplished effectively.

Here, a researcher has operated a survey through a set of questionnaires mailed to all 566 enterprises of textile exports, in Thailand, selected as population and sample of this study. Furthermore, the findings of a survey demonstrated that the 132 questionnaires are responded, but 32 questionnaires are undeliverable because there are no recipients and business dissolution, thus 127 questionnaires are usable. When the survey is completed, the response rate is at least 20% (Aaker, Kumar and Day, 2001). To evaluate the effectiveness of reply, this research has response rate by 23.78% that reflects creditability and suitableness for further analysis. The details are shown in Table 2:

Table 2: Details of Questionnaire Mailing

Details	Numbers
Number of questionnaire mailing	566
Number of undelivered questionnaires	32
Number of successful questionnaire mailing	534
Received questionnaire	132
Unusable questionnaires	5
Usable questionnaires	127
Response rate (127/534)x100	23.78%

Data Collection

In this section, the detail of data collection procedures described comprise of the instrument for collecting data, such as a set of questionnaires because it facilitates action by oneself with low cost adequate for collecting data across the country. Therefore, the process of data collection is provided by mailing questionnaires directly to the president, executive, or managerial manager of the firms who possess proficiency and business experiences highly. They are appropriately selected as the key informants of this research. The unit of analysis, justified by firms, is it the textiles - exporting businesses in Thailand.

Questionnaire are designed and developed from related literatures and previous research and definitions. Besides, particular questionnaires have been organized as following: Section one, a cover letter to introduce about a topic and aims to study the importance of global strategic management competency. Section two, the information of key participation, including gender, age, status, education, work experience, income, and position. Section three, the information of operational business, i.e. business form, nature of business, type of business, number of employees, operation capital, average income of business, period of operation, experience to exports, and the main market. Section four, measure by check list about potential in operational strategy of exports business which adopt a five-point Likert scale items that ranges from 1 = strongly disagree to 5 = strongly agree. Section five,

suggestion and opinion on exports business. Furthermore, the researcher has prepared an envelope with sender's address to facilitate key participants to respond questionnaires immediately and give information completely. Hence, the period to collect data is three months when will be separated after questionnaires have been delivered to various enterprises and performed through checking the answers returned from specify code in questionnaires of the second month. Questionnaires will be tracked by send a postcard to enterprises which did not respond.

In order to obtain precise information, collected data from questionnaire will be verified by three specialist of global strategic management to confirm that an instrument is great and efficient. Additionally, 30 questionnaires will be administered in pre-test to evaluate the validation of these questionnaires by confirmatory factor analysis (CFA) to ensure validity of constructs. Moreover, the reliability of measurement is estimated via Cronbach alpha coefficients (Nunnaly and Berstein, 1994). If found that great results from the sample, the researcher will conduct data collection on the total population throughout mentioned details of validation and measurement in the next section.

Test Non-Response Bias

This research executes to collect the data completely and is concerned with response bias problems about respondents who may affect analysis. There is test non-response bias for ensuring that the research without differences between early and late respondents (Armstrong and Overtan, 1977). The procedure to estimate non-response bias is conducted via t-test statistic, comparing the demographic information of textile businesses, i.e. type of business, nature of production, working capital, and market area which were demonstrated that they not distinct of early and late responses.

Here, 127 questionnaires were obtained from key informants of textile businesses that questionnaires are separated into two groups. The first group, 64 returned questionnaires, was referred as early respondents, and the second group, 63 returned questionnaires, was defined as late respondents. The result exhibited that no significant difference between the response from early and late respondents on all the characteristics of constructs that were able to be shown as follows: type of business

(t = 0.270, p>0.10), nature of production (t = -0.316, p>0.10), working capital
(t = -0.142, p>0.10), and market area (t = 0.597, p>0.10), sequentially.

Measurements

The measurement has been designed by definitions and is related to literatures
of each constructs Items were created appropriately with constructs which should
cover contents to be easier to understand and uncomplicated. The particular measure
will present dependent variable, independent variables, and control variables,
respectively:

Dependent Variable

Firm Performance (FPE): firm performance is evaluated by ability to operate
firms successfully in the viewpoints of both finance and non-finance, such as
earnings, competitive advantages, and customer acceptance (Kim, Song, and Koo,
2008). This construct has developed a new scale from definitions and literatures,
including a five-item scale.

Independent Variables

Business Collaboration Effectiveness (BCE): business collaboration
effectiveness is estimated by the degree of capability to creatively participate to
familiarity in cooperating and sharing knowledge reciprocal within the firms. Existing
resources are utilized to create strength operation to be superior to the rivals and
reflect good relations so as to be competitive advantages to the firms (Meunier-
FitzHugh, Massey, and Piercy, 2011). This construct has developed a new scale from
definitions and literatures, including a five-item scale.

Modern Management Excellence (MME): Modern management excellence is
assessed by the level of potential to develop technology and acquire new knowledge
to be integrated with operation system to enhance qualities and standards to
innovation which is consistent to global contexts along with intelligent technique
operations (Liu and Chin, 2010). Currently, global business has changed rapidly

which firms require modernity to operate business to stimulate interests of consumers in both communicating and accessing products and services of the firms. This construct has developed a new scale from definitions and literatures including a four-item scale.

Proactive Operational Management (POM): Proactive operational management is rated by capabilities of the firms to practice, learn things useful to their work continuously, and lead to preparedness and proficient that are precise on deciding to meet environmental variations as well (Srinivasan, Rangaswamy, and Lilien, 2005). Likewise, the proactive operation of the firms will focus on achieving goals and overcoming competition which they must depend on the ability of executive to make a decision and select strategies related to business conditions. Hence, the construct has developed a new scale from the definitions and the literatures, including a four-item scale.

Global Strategic Management Competency (GSM): Global strategic management competency is measured by the level of flexibility and adaptability to cope with various situations that orient to accomplishment through operations standardized to be generally acceptable (Gecikova and Papcunova, 2014). The potential of the firms to implement strategies is difficult to be conducted because global business is high unstable and complicated while it is a key success of strategic management if able to be used timely. This construct has developed a new scale from the definitions and the literatures, including a five-item scale.

Control Variables

The control variables comprise of firm size and firm age which are assumed that they may impact on associations among three independent variables (e.g. business collaboration effectiveness, modern management excellence, and proactive operational management), global strategic management competency, and firm performance which are clarified as follows:

Firm Size (FSI): Firm size is assessed by the number of employees in the present time. It is possible that achievement to implementing strategies in operation of small or large businesses is a different outcome because the capability to employ strategies must be consistent with size. Especially, the size of business will show credibility in another factor to consider global consumers which firm will manage internal networks to create relationship and the power for negotiation (Pernu, Mainela, and Puhakka, 2014). Therefore, firm size is important to design global strategic management competency to be accomplished to the firms. Here, firm size is represented by a dummy variable which 0 represents firms with 100 employees or less, and 1 represents firms with more than 100 employees.

Firm Age (FAG): firm age is estimated by the period to operate business from embarking to present. The period of operation will identify accumulated business experiences that enhance the potential to create strategy and new operational approaches. Indeed, the period of operation should count exporting experiences creditably. Thus, firm age is represented by a dummy variable in which 0 represents firm with 15 years or less, and 1 represents firm with more than 15 years.

Methods

The collected data through questionnaires mailed   were appropriate with single researcher. This conceptual framework attempted to link the relationship among variables together and design new items to investigate literature reviews of global strategic management competency. Hence, the research will perform pre-test by thirty questionnaires received to evaluate the validity and reliability on the measurement of each variable. Furthermore, 30 questionnaires will be integrated with all questionnaires for analyzing and testing hypotheses that are described as below.

Validity and Reliability

Validation and reliability were often used to verify the effective measurement of the instrument in empirical research. The instrument of this research was a set of questionnaires that had been developed to be a new scale and items from literature

reviews and definitions to collect data. This research conducted to check validity and reliability to ensure that it was the great, acceptable instrument when verified (Houston, 2004; Ping, 2004; Pesamaa, Ericksson, and Hair, 2009). Validity is preliminary examination of constructs to show the performances of measuring instruments. Also, validity will demonstrate statistical data which are able to consider that the degree of credibility is more or less to meet the criteria. This study will operate to inspect the validity, comprising of face, content, and construct validity as below.

Face validity is operated by respondents rating items to be appropriate and consistent with the goals or objectives. Likewise, content validity is conducted by respondents estimating items to be suitable and associated with the content of theories. The proved accuracy is adherent to the aims of the study, and the essence of theories is necessary for the measurement that it has been informed exactly as desired (Nunnally and Berstein, 1994).

Construct validity is assessing measure's correspondence with the target measure that should be possible in theories (Ping, 2004). This research has primarily developed a new scale involved in literatures to test via exploratory factor analysis (EFA) to evaluate the construct validity of instrument by checking the relationship of many numbers of items. Furthermore, estimating developed items and adapted items from previous research through confirmatory factor analysis (CFA) is to ensure measuring items precisely. Thus, when the items have been extracted, there should be only one factor. The rule-of thump mentioned that factor loading should be greater than 0.40 as statistically significant (Nunnally and Berstein, 1994).

Reliability is assessing the consistent level of large variables that reflect stability although repeatedly (Ping, 2004). The statistics which shows reliability is Cronbach alpha coefficients, investigating of all constructs, and it should be greater than the 0.60 cut-off value (Hair and other, 2006).

Accordingly, this research has been proved by experts of strategic management and pre-test by 30 questionnaires sent back along with completely checking validity and reliability and found that our instrument creditably.

Statistical Technique

The researcher will conduct the raw data to prepare the data for analyzing hypothesis testing via checking, encoding, and recording data file systemically. Systemically estimating the basis assumption of regression analysis comprises of normality, heteroscedasticity, autocorrelation, and linearity along with outliner problems which do not appear in this study.

Correlation analysis: Pearson correlation coefficient is utilized to test correlation among variables in the research which exhibited the relationship as paired systematically. The relationship between variables should not be high because there might be multicollinearity problems, analyzed on the correlation between variables. Coefficient value is not 0.80 (Hair and other, 2006).

Variance inflation factor (VIF): identifying multicollinearity problems is able to use VIF values as indicators of independent variables. In this case, VIF values have less than 10 which were demonstrated through independence variables (Neter, William, and Michael, 1985). It was ensured that there were no multicollinearity problems on this research.

Regression analysis: the study selected the hierarchical multiple regression analysis to test all hypotheses of this conceptual model which focused on global strategic management competency in the role of a mediator. Results in each procedure presented the influence of variables on firm performance in both direct and indirect clearly. In addition, the model of relationship among variables is able to be shown in equation models depicted below.

Equation 1: $FPE = \alpha_{01} + \beta_1 BCE + \beta_2 FSI + \beta_3 FAG + \varepsilon_1$

Equation 2: $FPE = \alpha_{02} + \beta_4 MME + \beta_5 FSI + \beta_6 FAG + \varepsilon_2$

Equation 3: $FPE = \alpha_{03} + \beta_7 POM + \beta_8 FSI + \beta_9 FAG + \varepsilon_3$

Equation 4: $FPE = \alpha_{04} + \beta_{10} GSM + \beta_{11} FSI + \beta_{12} FAG + \varepsilon_4$

Equation 5: $FPE = \alpha_{05} + \beta_{13} BCE + \beta_{14} MME + \beta_{15} POM + \beta_{16} GSM + \beta_{17}(BCE*GSM) + \beta_{18}(MME*GSM) + \beta_{19}(POM*GSM) + \beta_{20} FSI + \beta_{21} FAG + \varepsilon_5$

Where,

BCE	=	Business collaboration effectiveness
MME	=	Modern management excellence
POM	=	Proactive operational management
GSM	=	Global strategic management competency
FPE	=	Firm performance
FSI	=	Firm size
FAG	=	Firm age
α	=	Constant
β	=	Regression coefficient
ε	=	Error

Summary

This chapter describes that research methodology is relevant to population and sample. The process to collect data comprises of selecting population and sample, method of data collection, test of non-response bias, throughout assessing all hypotheses of conceptual model to seek for the answers of research objectives and answers of research questions. Therefore, the 566 businesses exporting - textiles in Thailand are population and sample in this study. The information of textile exporters is available from the database of Thailand's exporter directory of Department of Export Promotion, Ministry of Commerce of Thai government in July, 2014 (http://www.depthai.go.th). Likewise, the research has collected data via questionnaires mailed and sent direct to the directors or the general managers who are the key informants of textile business ultimately. Furthermore, thirty received questionnaires are conducted for pre-test to check credibility of instrumental (e.g. validity and reliability). When data are completed, basic assumption and totally hypothesis testing are performed by hierarchical multiple regression analysis that emphasizes on mediating effect of this conceptual model. Accordingly, the next chapter will mention results and discussion.

Table 3: Definitions and Operational Variables of Constructs

Constructs	Definitions	Operational Variables	Scale Sources
Dependent Variable			
Firm Performance (FPE)	An achievement of the firm in term of profitability and non-profitability.	Firm performance is evaluated by ability to operation of firm successful in the viewpoint of both finance and non-finance such as earnings, the competitive advantages, and customer acceptance.	Kim, Song, and Koo (2008)
Independent Variables			
Business Collaboration Effectiveness (BCE)	Ability of the firm to generate the relationship to coordinate efficient, utilize existing resources together, and lead to competitive advantages.	The degree of capability to participate creatively to familiarity in cooperating and sharing reciprocal knowledge within the firms.	New scale
Modern Management Excellence (MME)	Firms are outstanding to integrate various knowledge, information, technology innovation, and communication appropriately to enhance the quality and the standards of an effective operation.	The level of potential to develop technological and acquire new knowledge has integrated with an operation system to enhance qualities and standards to innovation which is consistent to global context along with an intelligent technique operation.	New scale

Table 3: Definitions and Operational Variables of Constructs (Continued)

Constructs	Definitions	Operational Variables	Scale Sources
Independent Variables			
Proactive Operational Management (POM)	The firm's ability to develop skills, capability, and business expertise to have availability to respond to ever changing environment efficiently.	Capabilities of the firms to practice, learn things useful to their work continuously, and lead to preparedness and proficiency that are precise to meet environmental variations.	New scale
Global Strategic Management Competency (GSM)	The potential of the firms is to operate an approach focusing on adaptability and flexibility to practices that are consistent with environments and brings about operation systematically and effectively.	The level of flexibility and adaptability is to cope with various situations that orient accomplishment through standardized operations to be generally acceptable.	New scale
Control Variables			
Firm Size (FSI)	Number of employees currently registered full-time in firm.	Dummy variable 0 = 100 employees or less, 1 = more than 100 employees	New scale
Firm Age (FAG)	Number of years firm are in business.	Dummy variables 0 = 15 years or less, 1 = more than 15 years	New scale