Enhancing Board Motivation for Sustainable Competitive Performance of Thailand's Business Co-operatives

by

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Preface

For a long time, Co-operatives have been a major mechanism enabling producers to form a group for different purposes, particularly those relating to social development e.g. to enhance the bargaining power of small producers, to provide access to the markets for both products and production factors, to facilitate the knowledge transfer among the members, etc. Therefore, Co-operatives help to promote economic growth while reducing economic inequality at the same time. However, as the economic environment is changing, many Co-operatives are facing challenges in maintaining their competitiveness and their roles in economic development.

The Board of Directors of an organization plays an important role in driving the organization to achieve its goal. However, operating within the context of Co-operative ideology, rules and regulations, Co-operatives face several problems that cause the Board Members to lack motivation. This study aims to fill the information gap of the working mechanism of Co-operative Board Members' motivation and its impact on the Co-operative's performance in Thailand. The study leads to recommendations for enhancing Co-operative Board Members' motivation so that the Co-operative's performance will be improved, making Co-operatives a key driver for economic development.

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Abstract

This study aims to answer the main questions "Does the motivation of Co-operative Board of Directors affect the Co-operative's performance in Thailand, and to what extent?", and "Which factors affect the motivation of Co-operative's Board of Directors?" The methods used consist of both quantitative and qualitative approaches: Structural Equation Modeling (SEM) and in-depth interview, respectively.

The study result suggests that the motivation of Co-operative Board of Directors significantly affects the Co-operative's performance with a standardized factor loading of 0.144. Surprisingly, the types of motivation that affect the Co-operative's performance are not those of altruism, but they are those of personal interests, i.e. to gain reputation from the community or society, to obtain honors or awards, and to gain the feelings of accomplishment from working. However, this result is subject to the condition that cooperative performance is measured solely in financial terms and quality of management. This is due to the current limitation in standardizing the measurement of cooperative performance in social terms and should be left for future research.

Factors that are found to affect Board Member motivation include the knowledge, skills and experience possessed by the Board Members, Board authority and function, the composition of the Board (the presence of external persons) and lastly, the quality of the Board meetings. Specifically, Board authority and function is

the characteristic determining whether the Board is involved in the Co-operative operation. Factors whose relationship with Board motivation was not found included the one person one vote principle, Board size, chairman-manager duality, Board term, and Board structure (the presence of a compound Board).

Acknowledgements

First of all, I would like to thank Professor Jonathan Michie for his most valuable advice during my research. Without him, the completion of this study would not have been possible. I would like to thank the Co-operative Promotion Department and the Co-operative Auditing Department for providing the data about Co-operative registration and the Co-operative's performance.

I wish to acknowledge Police General Niphot Weerasunthorn, Assistant Professor Suchin Pleehajinda, and Assoc. Prof. Jutatip Patrawart, who kindly examined the validity of the instruments used in this research. I am grateful to all the experts who provided useful information about the Co-operative process in Thailand from their extensive experience through interviews. I am indebted to all the questionnaire respondents, who contributed their time by providing information which formed a large data set for the analysis.

I dedicate this thesis to all Co-operatists who have been working to strive for Co-operative development, which will bring wellbeing to all individuals in the society.

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Abbreviations

CAD	Co-operative Auditing Department
CDA	Co-operative Development Authority
CFA	Confirmatory Factor Analysis
CPD	Co-operative Promotion Department
GLS	Generalized Least Squares
IOFs	Investor-Owned Firms
NESDB	Office of the National Economic and Social Development Board
NSO	National Statistical Office
OPOV	One Person One Vote
SEM	Structural Equation Modeling

Chapter 1
Introduction

1.1 Rationale

The Co-operative has long been important to Thailand's economy and society, with February 26th annually set aside by the government as National Co-operatives Day. After almost 100 years since their establishment, Thailand's Co-operatives numbered 7,739 in 2010, counting more than 10 million members countrywide (CAD, 2011). The Co-operative is a business unit run on democratic principles and values, established to create economic and social benefits for members, who ideologically and in principle share together, assisting one another across all levels, areas and occupations.

Many sectors of the Thai economy have been covered by Co-operatives, including agriculture, fisheries, land settlement, consumer goods, thrift and credit, service provision and credit unions. Each type of Co-operative uniquely provides various different products and services. In the role of agricultural Co-operatives, for example, all functions can be seen as integrated, where members sell products, purchase farming input and equipment, or process goods to increase the value of the product. The Co-operative also plays a role in society as a learning center and provides welfare for members with scholarships or expenditure at times of emergency, for example to cover funeral expenses.

In terms of economic development, Co-operatives promote economic growth as a mechanism to fully utilize resources, maintain price stability and safeguard members'

benefits, and help to reduce income inequality by letting the public own and run their business and services. Moreover, Co-operatives can be a financial institution and participate in international trade as well. In terms of social development, Co-operatives provide their members with professional education, knowledge and technical training, as well as ideological input and moral values beneficial to society and communities. Importantly, the Co-operative can be a mechanism that helps in the learning and promotion of democratic values because, regardless of the number of shares each member has in the Co-operative, each member has an equal right to vote (one person one vote), to give opinions and to manage the Co-operative, which is truly democratic.

For these reasons, Co-operatives have been very important to the country as economic and social institutions that help to solve people's problems and increase the well-being of the community. However, although already running for a long while and with 10 million members in the Co-operative system, Thailand's Co-operatives still face many problems in their operation, with 33% of all Co-operatives not meeting the government's set criteria standards (Table 1.1). The most problematic Co-operative is the fisheries Co-operative. The proportion of fisheries Co-operatives considered as below standard amounted to 67.2%.

Of the 5,973 Co-operatives that were taken into consideration in 2010, the performance of more than 20% of these Co-operatives was very weak. There were 1,401 Co-operatives, or 23.5%, that had shown a loss in the last two accounting periods and 1,350 Co-operatives, or 22.6%, that could not pay a dividend to their members at least once in the previous two accounting periods (Table 1.2). Even though the detection and proven corruption or malpractice in Co-operatives is quite small (Table 1.3), all corruption could cause a great deal of damage.

Table 1.1: Summary of Co-operatives' Level Classification on 1 September 2010

	No. of existing Co-operatives	No. of Co-operatives taken into consideration	No. of below standard Co-operatives	% of below standard Co-operatives[1]
Agricultural Co-operatives	4,324	3,210	1,272	39.6
Fisheries Co-operatives	99	58	39	67.2
Land Settlement Co-operatives	98	94	41	43.6
Consumer Co-operatives	272	175	74	42.3
Thrift and Credit Co-operatives	1,384	1,246	68	5.5
Service Co-operatives	1,071	763	386	50.6
Credit Union Co-operatives	491	427	91	21.3
Total	**7,739**	**5,973**	**1,971**	**33.0**

Source: CPD (2011a)

Table 1.2: Summary of Co-operatives that were below standard in each criterion in 2010

Criterion used in Standard Measurement	Number of Co-operatives Below Standard	Percent of Number of Co-operatives taken into consideration
(1) From the Co-operative's performance in the last two accounting periods, there was no loss; Besides loss occurring through floods or natural disasters causing damage to the Co-operative and Co-operative members, such loss was not counted.	1,401	23.5
(2) From the Co-operative's performance in the last two accounting periods, there were no acts that could be considered as Co-operative corruption.	159	2.7
(3) From the Co-operative's performance in the last	336	5.6

[1] % of Co-operatives taken into consideration

Criterion used in Standard Measurement	Number of Co-operatives Below Standard	Percent of Number of Co-operatives taken into consideration
accounting period, a financial statement was prepared and already sent to an auditor to be approved at a Co-operative annual meeting within 150 days after the end of the accounting period.		
(4) From the Co-operative's performance in the last accounting period, the Co-operative must have members who do at least 60% of their business with the Co-operative.	1,059	17.7
(5) The Co-operative must employ a full time staff member in order to run the Co-operative. If there is no employment, a Board Member or a Co-operative member must be assigned to work fulltime in the Co-operative.	168	2.8
(6) From the Co-operative's performance in the last two accounting periods, the Co-operative must have a net profit and must pay a dividend back to its members at least once.	1,350	22.6
(7) From the Co-operative's performance in the last accounting period, a Co-operative must not act in a way that violates any laws, regulations or orders of the Registrar of Co-operatives.	144	2.4

Source: CPD (2011b)

Table 1.3: Number of fraudulent or malpracticing Co-operatives as of 31 December 2010

Types of fraud	Number of Co-operatives
Cash fraud by short account	286
Commodity fraud by short account	160
Cash and commodity fraud by short account	133
Other kinds of fraud	39

Types of fraud	Number of Co-operatives
Total	**618**

Source: CPD (2011c)

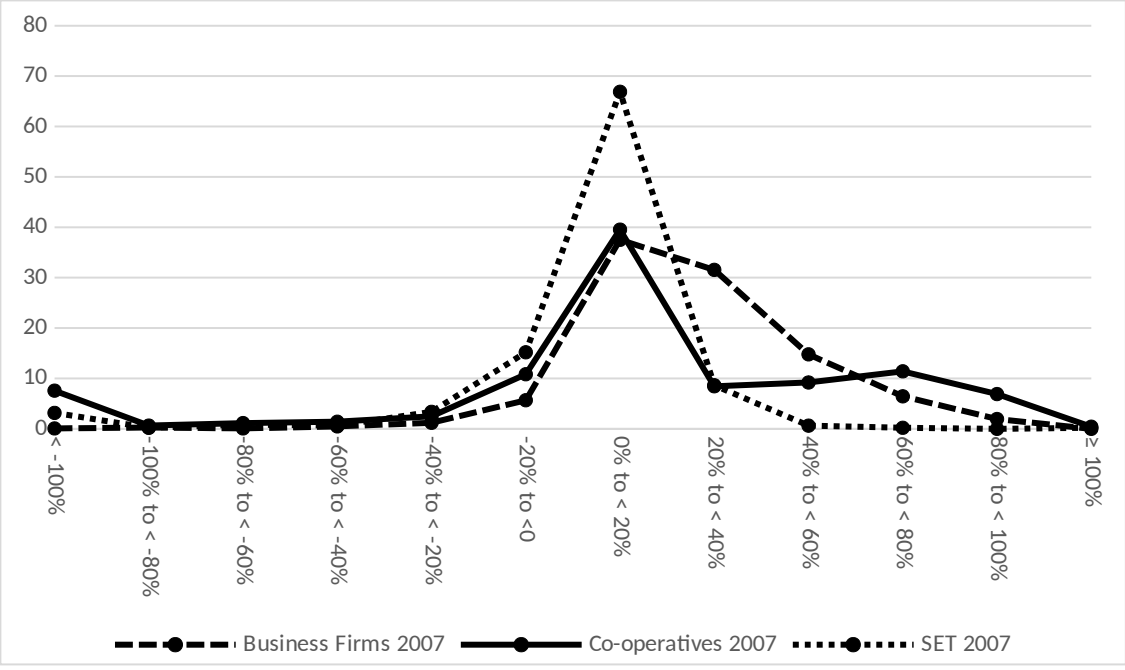
When we compared the performance of the Co-operatives with that of general business firms, it was found that most Co-operatives performed more poorly than the general business firms. Figure 1.1 and Figure 1.2 show the distribution of Co-operatives, general business firms, and companies within the Stock Exchange of Thailand (SET) (in proportion) across different values of net profit (in %). It was found that the distribution of the net profit of general business firms shifted towards the right of the Co-operatives in both 2007 and 2009, which means that most general business firms were able to generate more profit compared to Co-operatives. Table 1.4 shows that the proportion of Co-operatives with negative net profit was 24.08% and 21.27% in 2007 and 2009 respectively, while the proportion of the general business firms with negative net profit was 7.78% and 8.94% in 2007 and 2009 respectively. This indicates that the proportion of Co-operatives with a loss in their performance was much higher than that of the general business firms.

Another case was the comparison of the performance of the Co-operatives with companies in SET. Table 1.4 shows that the proportion of Co-operatives with a net profit less than -20% was 13.25% and 12.30% in 2007 and 2009 respectively, while the proportion of companies in the SET with a net profit less than -20% was 8.23% and 10.11% in 2007 and 2009 respectively. This indicates that the Co-operatives performed more poorly as compared to the companies in SET. Nevertheless, the proportions of Co-operatives with a negative net profit were closer to some companies in SET, as the proportion of Co-operatives with a negative net profit was 24.08% and 21.27% in 2007

and 2009 respectively, while the proportion of companies in SET with a negative net profit was 23.42% and 23.58% in 2007 and 2009 respectively.

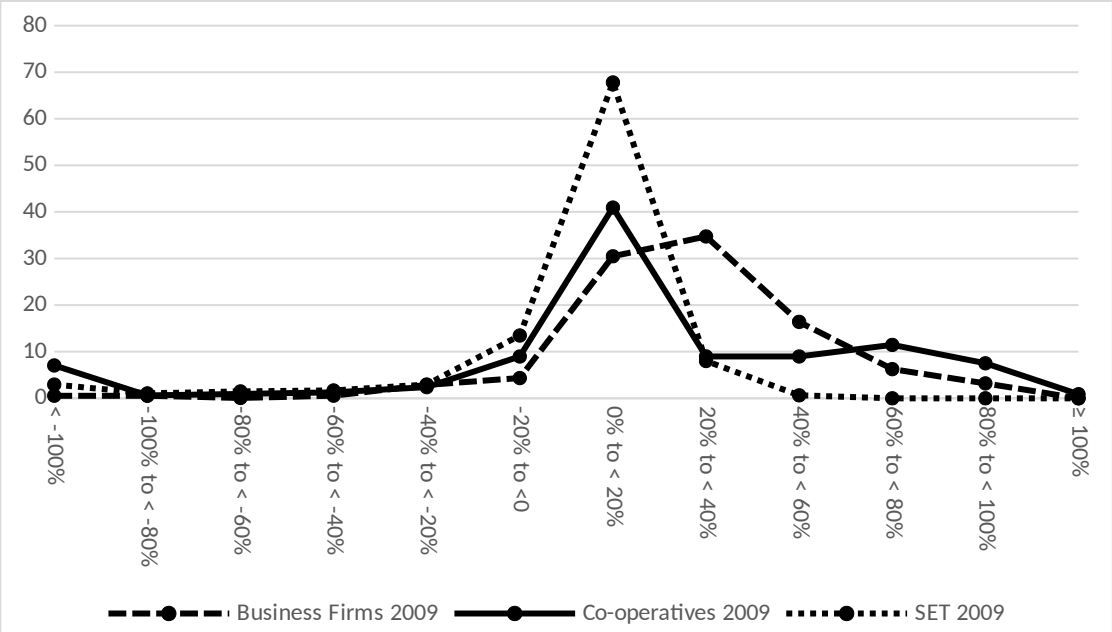
As regards Co-operatives and companies in SET with a positive net profit, Figure 1.1 and Figure 1.2 show that most Co-operatives seemed to perform better than companies in SET, as there was a greater proportion of Co-operatives that had higher % net profit, as compared to companies in SET in both 2007 and 2009. However, the above comparison was made on an uneven condition as the Co-operatives were exempted from corporate-income tax, which was at the rate of 30% during that time, while companies in the Stock Exchange of Thailand were not. If companies in the Stock Exchange of Thailand did not need to pay corporate-income tax, their % net profit might be higher, that is, their performance might be better than the Co-operatives.

Figure 1.1: Comparison of the performance (in term of net profit, %) of the Co-operatives, general business firms and companies in the Stock Exchange of Thailand in 2007



Source: Author's calculation from the data of National Statistical Office and CPD

Figure 1.2: Comparison of the performance (in term of net profit, %) of the Co-operatives, general business firms and companies in the Stock Exchange of Thailand in 2009



Source: Author's calculation from the data of National Statistical Office and CPD

Table 1.4: % Cumulative number of Co-operatives, general business firms and companies in the Stock Exchange of Thailand (% of total number) categorized by net profit margin in 2007 and 2009

Net Profit (%)	2007			2009		
	Business Firms	Co-operatives	SET	Business Firms	Co-operatives	SET
< -100%	0.08	7.58	3.16	0.55	7.05	2.95
-100% to < -80%	0.34	8.23	3.38	1.09	7.68	4.00
-80% to < -60%	0.42	9.37	4.22	1.16	8.62	5.47
-60% to < -40%	0.90	10.78	4.85	1.72	9.91	7.16
-40% to < -20%	2.10	13.25	8.23	4.59	12.30	10.11
-20% to <0	7.78	24.08	23.42	8.94	21.27	23.58
0% to < 20%	45.28	63.62	90.30	39.42	62.20	91.37
20% to < 40%	76.82	72.07	98.95	74.15	71.19	99.37
40% to < 60%	91.60	81.26	99.58	90.55	80.16	100.00
60% to < 80%	98.05	92.68	99.79	96.80	91.61	100.00
80% to < 100%	100.00	99.57	99.79	100.00	99.12	100.00
≥ 100%	100.00	100.00	100.00	100.00	100.00	100.00

Net Profit (%)	2007			2009		
	Business Firms	Co-operatives	SET	Business Firms	Co-operatives	SET
Number of units**	**593,512**	**5,871**	**473**	**422,199**	**6,032**	**474**

Source: Author's calculation from the data of National Statistical Office and CPD
*Data were collected from the Business Trade and Service Survey by the National Statistical Office of Thailand.
Note: In this research, organizational performance was not compared according to the size of the organization as it was found that the correlation between the size of the organization (revenue amount was used as a proxy) and organizational performance was low in all types of organizations.

When we consider the ideology and basic principles of the Co-operative, it is an organization whose objectives in its operation are for the members' benefit by sharing and helping each other. Being a committee member of the Co-operative is based on volunteerism, candidacy and being chosen from the whole membership. The ideology of the Co-operatives implies that the committee of the Co-operative should have the motive to work for the members' benefit rather than their own benefit. However, in view of the problems of the Co-operatives in Thailand, such as poor performance and corruption or malpractice, there is a question whether the committee of the Co-operative is motivated by concern for the public or not.

Analysis of substandard or fraudulent practices occurring in the operation of Co-operatives suggests that there are several causes, one source being the lack of motivation among Co-operative Board Members, managers, as well as staff, to drive their Co-operatives forward fully and efficiently. This is because the Co-operative organization is a collective enterprise of a group of persons and one core principle of the Co-operative system is "one person, one vote," regardless of the number of shares owned, so that no individual or group will have an investment motivation in the success of the Co-operative (The National Institute of Open Schooling, 2012, p.99) and no member nominates the managing committee and takes a personal interest in its activities. In the absence of personal motivation, no committees want to take

responsibility. Hence, the objective with which it is established remains unachieved (Singla, 2010, p.77).

Observed to be rampant elsewhere in Thai politics, vote-buying has also influenced the appointment of Board Members. But if candidates for Board Membership pay money to win their election, then when they are elected to a position, they may wish to ensure greater returns or benefits than their entrance expenses cost them (Competition for the Chairman of the Board of Directors, 2009), which motivates them to make a personal gain and encourages corruption. For this reason, most people seeking the responsibility of Board Membership misuse their authority by recruiting managers and staff whom they can control. Thus, corruption is easy, and without fraud and corruption, Board Members receive very small financial returns. It was found that Co-operative Board compensation ranged anywhere from $60 - $2500/year in 1986 (Zimbelman, 1986) (convert into 2014 value might be equal to $200 - $9,490). While total board compensation levels (in US public companies) regardless of company sized ranged from $134,000 - $250,000 per year in 2014 (Frederic W. Cook & Co., Inc., 2014).The committee fee per meeting attendance is usually low; hence their volunteer work is without much motivation. Where the performance of their Co-operative is not sourced in Board income resources, they will tend to spend minimal time, skill and effort in their Co-operative work compared to the time, skill and effort invested in work that will generate their personal income and benefits elsewhere. Therefore, Board Membership lacks work incentive where sizeable personal gain is considered insufficient.

However, the incentive structure of the Co-operative cannot explain the overall performance of all Co-operatives in Thailand. Even though Co-operatives are under

institutional arrangements, rules and the same regulations, their performances are not the same, as there are Co-operatives that have a good performance and those that have a poor performance. Also, there are Co-operatives that have corruption problems or malpractice.

Past studies of the relationship between the motivation of Co-operative Board Members and the Co-operative's performance are a kind of descriptive analysis e.g. Rapeepat (1980) and CPD (1985). It still does not explain the relationship based on clear evidence. So, empirical study that measures the motivation of the Co-operative Board Members and considers the relationship between the motivation and the performance of Co-operative will be beneficial to both the theoretical development and policy development to enhance the motivation of Board Members in the Co-operatives, which is expected to positively affect the Co-operative's performance.

1.2 Research Questions

This research aims to answer the following important questions:

1) In the case of Co-operatives in Thailand, does the motivation of Co-operative Board of Directors affect the Co-operative's performance, and to what extent? What kinds of motivation are effective, i.e. motivations that affect the Co-operative's performance?

2) Which factors affect the motivation of the Co-operative Board of Directors in Thailand?

3) Can a mechanism be designed that will in some way improve the motivation of Board Members to enhance the performance of Board operations in Thailand's Co-operatives?

1.3 Purpose of the research

As indicated above, concerning the problem and rationale of this study, the objectives of this study are:

1) To study the relationship between Board of Directors' motivation and the Co-operative's performance in Thailand in order to understand whether the motivation of a Co-operative's Board of Directors affects the Co-operative's performance and to what extent.

2) To investigate the factors affecting the Co-operative Board of Directors' motivations.

3) To develop policy recommendations to improve the motivations of Co-operative Board Members so that Co-operatives can be an effective tool to help improve the living standards of low-income people in Thailand.

1.4 Research Hypothesis

The research hypothesis can be outlined as follows. The motivation of Co-operative's Board Members significantly affects the Co-operative's performance, and there are factors that can explain the motivation level of Co-operative members, both Board characteristics and the Board's process of operation. Therefore, we can enhance Board motivation by building the right conditions for these factors.

1.5 The Scope of the Study

This research studies the motivation of Board Members in the case of Co-operatives in Thailand. It seeks to study the characteristics of the Co-operatives as a whole, not specific to some types of Co-operatives. Even though the sample groups in

the study cover all types of Co-operatives, they are not large enough to infer the characteristics of each type of Co-operative.

1.6 Thesis Contributions

Most research on motivation, which is based on the Expectancy Theory, has studied the effect of explanatory variables (Expectancy, Instrumentality and Valence) on motivation without identifying the determinants of motivation. In this research, the factors determining the level of Expectancy, Instrumentality and Valence are studied comprehensively by using Structural Equation Modeling (SEM).

In the area of Co-operatives, which are mutual businesses, since research on Board motivation is very scant (Silva, 2005, p.346-350), this research helps to fill in the gap concerning what kinds of motivation of the Co-operative Board of Directors affect the Co-operative's performance and what factors affect those kinds of motivation.

This research will be useful to government agencies and policy makers, who could use it as a guide to formulate policies that will effectively improve the performance of Co-operatives in Thailand. Other kinds of mutual business could also apply this research to improve their performance through enhancing the motivation of their Board of Directors.

1.7 Organization of the thesis

The remainder of this thesis is organized as follows.

Chapter 2 outlines the special characteristics of Co-operatives and differences between Co-operatives and other business organizations, the background of the Co-operative within a global context, and the history and the current situation of the Co-operative in Thailand.

In Chapter 3, literature is reviewed on how a Board's motivation affects the Co-operative's performance and how to measure Co-operative Board motivation in order to provide a conceptual framework for the research.

In Chapter 4, the analytical framework used in this research is explained. This research applies Vroom's expectancy theory to explain how motivation works in the case of Co-operative Board Members. The factors that affect Board motivation are hypothesized. How Co-operative's performance is measured (both financial and non-financial performance) is presented in detail.

Chapter 5 explains the research methodology that is used in this research, both quantitative and qualitative methods. The instrument development, the methods and procedures for conducting a pilot study are described. The data collection methods, mainly the questionnaire surveys on Board motivation, are described. Data analysis methods are also outlined in this chapter. The main quantitative research tool, SEM, is explained with reference to its general characteristics, advantages and limitations, as well as the steps in developing the models and using the models in analyzing the relationships among the factors. Finally, the qualitative method used in the study is explained.

Chapter 6 specifies the results from the quantitative analysis of both the measurement model and the structural model. Specifically, these are composed of the descriptive statistics of the surveyed data, the measurement model of Co-operative Board motivation and the Co-operative's performance, and the structural model that presents the relationships among Co-operative Board Motivation, Co-operative's performance, and their determinants.

Chapter 7 presents the analysis of expert opinions received from the interviews. These experts include personnel who are involved in the movement of Co-operatives in Thailand.

The last chapter presents a discussion of the results from both quantitative and qualitative methods, and also provides the conclusions. The limitation of the study and recommendations, both for policy and future research, are finally suggested.

Chapter 2
Co-operatives within a Global Context and in Thailand

2.1 Introduction

This chapter provides an overview of the Co-operative system beginning with general understanding about Co-operatives, such as what a Co-operative is and how it is different from other types of business organization. The Co-operative movement will then be explored in a Global Context and also in Thailand. How the first Co-operative was established in Thailand will be explained. The situation of the Co-operatives in Thailand and their impact on the Thai economy, such as employment by the Co-operative sector, will be analyzed in this chapter.

2.2 The characteristics of Co-operatives

2.2.1 Definitions of a Co-operative

There are many definitions of what a Co-operative is.

"A Co-operative society is an association for the purpose of joint trading, originating among the weak, and conducted always in an unselfish spirit, on such terms that all who are prepared to assume the duties of membership may share in its rewards in proportion to the degree in which they make use of their association" - C. R. Fay (Madan, 1994, p.5)

"A Co-operative society is a form of organization, wherein persons voluntarily associate together as human beings on the basis of equality for the promotion of economic interests of themselves" - H. Calvert (Madan, 1994, p.5, Amir, n.d.)

"A Co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise" - International Co-operative Alliance (International Co-operative Alliance, 2007)

"A Co-operative is a non-profit making voluntary organization where members associate on the basis of equal rights to obtain economic and social benefits for themselves" - H. M. Amir (Amir, n.d.).

"It is an association of the weak who gather together for common economic needs and try to lift themselves from weakness to strength through business organization." – Talmaki (Amir, n.d.)

"A Co-operative is a form of organization in which persons voluntarily associate together on a basis of equality for the promotion of their economic interests." - The Co-operative Planning Committee (Madan, 1994, p.5-6)

The Co-operative Planning Committee further added that all members have a common economic aim, which they cannot achieve by individual isolated action because of the weakness of the economic position of a large majority of them. This element of individual weakness is overcome by the pooling of their resources, by making self-help effective through mutual aid, and by strengthening the bonds of moral solidarity among them. (Madan, 1994, p.5-6)

Despite there being many definitions of a Co-operative, there is still no universally accepted definition of a Co-operative (Oleson, 1999). However, organizations that are called Co-operatives share together some characteristics. Bumrungwong (2009, p.1) explained that a Co-operative must include four basic features:

1) It is a group of people who share the same needs, whether economic, social or cultural.

2) They determine to help themselves by voluntarily working together.

3) They set up a business or an enterprise.

4) Their purpose is to promote the interests of their members.

Frederick (1997) argues that a Co-operative has three general attributes that distinguish it from other types of business structures, which are:

1) The user-benefits principle

The Co-operative operates for the benefit of its members. Earnings that the Co-operative generate during the year are distributed back to members according to the level of individual business that they have conducted with the Co-operative during that year. Also, the Co-operative provides social welfare for its members.

2) The user-owner principle

The people who use the Co-operative own it. Co-operatives are financed by members purchasing stock, paying membership fees, or members reinvesting their earnings (profits) to capitalize the business.

3) The user-control principle

Members control Co-operative's activities and exercise their authority through voting at annual and other membership meetings; and indirectly, through members elected to the Board of Directors. Generally, members have one vote regardless of the amount of equity they own or how much they patronize the Co-operative.

The Co-operative is different to other organizations in many respects due to the principles behind the establishment of a Co-operative. The first clear mention of the Co-operative principle was in the Rochdale Society of Equitable Pioneers, and the

original Rochdale Principles were officially adopted by the International Co-operative Alliance (ICA) in 1937 as the Rochdale Principles of Cooperation, which included the following principles (International Co-operative Alliance, 2004):

(1) Open Membership

(2) Democratic control (one person, one vote)

(3) Distribution of the surplus to the members in proportion to their transaction

(4) Limited interest payment on capital

(5) Political and religious neutrality

(6) Cash trading

(7) Promotion of education

Adjustments have been made to these principles by many Co-operative scholars. Nowadays, most Co-operatives in the world run their Co-operative based on the following seven principles from the International Co-operative Alliance.

1) Voluntary and Open Membership

Co-operatives are voluntary organizations, open to all persons regardless of gender, social status, race, political affiliation or religious background. Compared to the Co-operative, some other types of business organization may not be as freely open to other people to join or to do business. For instance, a Limited Partnership or certain business Partnership(s) in Thailand do not allow foreigners to hold more than 49% of shares (Department of Business Development, 1999).

2) Democratic Membership Control

Co-operatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. A Co-operative's

members have equal voting rights (one person, one vote). This differs from other types of business organization, in which the number of votes is tied to the number of shares.

3) Members' Economic Participation

Unlike other types of business organization, economic benefits are distributed proportionally according to each member's level of participation in the Co-operative, for instance by a dividend on sales or purchases, rather than divided according to capital invested.

4) Autonomy and Independence

Co-operatives are autonomous, self-help organizations controlled by their members, and cannot be controlled by only a few shareholders or only by the leader of the organization.

5) Education, Training and Information

Co-operatives provide education and training for their members so that they can contribute effectively to the development of their Co-operatives.

6) Cooperation among Co-operatives

Co-operatives serve their members by working together through local, national, regional and international structures. Compared to other types of businesses, Co-operatives have higher-levels of cooperation and networking.

7) Concern for Community

Co-operatives work for the sustainable development of their communities through policies approved by their members. Co-operatives are more interested in the care benefits of their members than in ensuring their business survival and profit, as is common.

2.2.2 The difference between the Co-operative and other business organizations

The exchange of goods and services among each other is a part of human life. To achieve this purpose, various forms of business organization have been set up, such as a Holding company, Limited company (Ltd.), Limited liability company (LLC), Limited liability limited partnership (LLLP), Limited liability partnership (LLP), Limited partnership (LP), Low-profit limited liability company (L3C), Not-for-profit corporation, Partnership, Sole proprietorship or Trust company and Co-operative. Each type of organization has its own purpose, ownership, control (voting), liability, distribution of profits, initiation of policies, exit strategy and tax implications, as explained in Table 2.1.

A Co-operative is different from other types of business organization in many respects. For example:

Purpose of the organization – a Co-operative is formed to provide services and welfare to members, not just to make profit as other types of business organizations do.

Ownership – a Co-operative is owned and run by their members while other types are owned by their founder or shareholders.

Control - a Co-operative is controlled by their members using one person, one vote, regardless of the number of shares and there is no proxy voting, which is different from other types of business organizations that are controlled by their owner or the number of voting shares held by each shareholder.

Distribution of profits – a Co-operative distributes its profits back to members in proportion to their use of the Co-operative's services, which is different from other types of business organization in which the owner receives all the profits or profits are shared according to their agreement, etc.

Table 2.5: Comparing the characteristics of the "Co-operative" and other business organizations

	Proprietorship	Partnership	Limited Liability Company (LLC)*	Corporation	Co-operative	N
Purpose	Profit	Profit for partners	Profit for members	Profit for shareholders	Service and savings for members	Pr va pr
Ownership	One owner	Two or more owners	Two or more owners	Shareholders	By members	By
Control (voting)	Owner	Partners share management and make policy decisions by mutual agreement or majority vote.	Decisions are made by mutual agreement or majority vote, or management is turned over to nonmembers.	The number of voting shares held by each shareholder.	One member, one vote, regardless of number of shares. No proxy voting.	On vo nu No me me is vo ma
Liability	Owner is fully liable for business and debts.	Owners are fully liable for business and debts.	Liability of LLC members is usually limited to their level of equity investment in the business.	Shareholders limited to share subscription. Directors can be liable.	Members limited to share subscription. Directors can be liable.	Me sha Di lia
Distribution of profits	Owner gets all profits.	Partners split profits as per partnership agreement.	Profits are shared by the members in accordance with the terms of the operating agreement.	Dividends paid on shares. Rate set by Board of Directors.	To members in proportion to their use of the Co-operative's Services	To pr us op to div
Initiation of policies	Owner	Owners	Owners	Board of Directors, shareholders and management.	Board of Directors, members and management	Bo me ma

	Proprietorship	Partnership	Limited Liability Company (LLC)*	Corporation	Co-operative	N
Exit strategy	Sell or close the business.	To sell the partner's portion of the business (as per exit strategy agreed to at commencement of partnership agreement) or to close the business.	LLC is dissolved when a member dies or undergoes bankruptcy	Public: Shares sold on the stock market. Private: Agreed to at commencement of business.	Agreed to at the commencement of business, usually sale of shares to another party or back to the Co-operative.	Ag co bu sal an ba op an sh dif co
Tax implications	Owner records profits on his or her personal tax return.	Owners record profits on their personal tax returns.	The earnings of an LLC are taxed once, at the member's (owner's) level. The LLC does have an option, however, to elect to be taxed as a general business corporation.	Corporate taxes paid on all profits. Dividends are then paid to shareholders, who pay personal taxes and apply for a personal tax credit. Corporations can also receive a tax credit on reinvested profits.	The Co-operative records profits, pays dividends and pays taxes on the remainder of the profits. Members pay tax on the dividends regardless of whether they do or do not receive them that year.	Th rec div tax rer pro pa div of or the

Source: Saskatchewan Agriculture, Food and Rural Revitalization (2001, p.10-11)
*From Frederick (1997) and Oleson (1999)

2.3 The Co-operative in a Global Context

Ever since prehistoric times, human beings have naturally collaborated together to begin family life, to search for food, to have a place to settle in safety from hazards, evolving from long ago to become today's global civilization. From the Hunting Era to the Agricultural Era, members in a family and community have known how to collaborate with one another in order to achieve their objectives effectively, for example allocating work and sharing resources together communally as a tribe, engaging with external communities in trade. However, life in tribal collaboration as described above is not a “Co-operative” according to the present-day definition, as its components are incomplete compared to the shared characteristics of the Co-operative.

Historians have argued about where and when the Co-operative first occurred. There are many opinions on this issue. The Shore Porters Society began as a group of porters but now they are in the removals business, established in Aberdeen in 1498. They claim to be one of the world's first Co-operatives (The Shore Porters Society, 2007). But Carrell (2007) explains that some historians argue that a Co-operative was set up for the first time in 1761 in Fenwick, Scotland, when the Fenwick Weavers' Society was formed. They started selling discounted oatmeal to local workers and then expanded to help members with savings and loans, emigration and education.

However, there are many stories about how the first Co-operative was established. Robert Owen, who is considered the father of the Co-operative movement, put his ideas about Co-operatives into practice in the cotton mills of New Lanark, Scotland in the 18th Century. In 1810, he opened discounted retail shops where profits were passed on to his employees, and it was successful (“Co-operative”, n.d.). Later, in the year 1825, he experimented with establishing a Co-operative community in two

places in Orbiston, Scotland, and in New Harmony, Indiana, the United States of America. But both Co-operative communities failed. Chiangkul (2007) accounts for their failure as being due to some members seeming to be selfish rather than considerate. They took advantage of their Co-operatives, causing the Co-operative communities to make only losses. However, his project could be reasonably considered a feasible pioneer project.

Dr. William King of Brighton, England, adopted Robert Owen's principles to set up Co-operative stores in 1827 for selling products to its members. Then, in the year 1828, he published "THE CO-OPERATIVEERATOR," a monthly magazine that described the philosophy of the Co-operative establishment and this becomes a guideline for setting up a Co-operative store (The Icons, n.d.; Chiangkul, 2007). Between 1826 and 1835, more than 250 towns and villages in Britain launched Co-operative societies. Some were initially successful, but most Co-operatives founded in the early 19th century had failed by 1840 (Peacock, 2007).

However, the Co-operative that is usually considered the first successful Co-operative enterprise was "The Rochdale Society of Equitable Pioneers," which was founded by a group of 28 weavers and other artisans in Rochdale, England, in 1844. The principles they designed and followed, called the "Rochdale Principles," have formed the basis for the principles on which Co-operatives around the world operate to this day, and this Society has become a model for modern Co-operatives, to the present ("Co-operative", n.d.).

The reasons for the greater success of The Rochdale Society of Equitable Pioneers, compared to the Co-operatives that had appeared in the previous period, were the important conditions created by the volatile economic and social climate at the time

of the emergence of the Rochdale Co-operative. It was at that time that the Industrial Revolution was taking place in the United Kingdom, in which the application of machinery replaced labor-intensive employment. The Rochdale Co-operative encouraged workers who were struggling to survive periodic unemployment, low pay, unhealthy cities, and dangerous workplaces. Without insurance or health care or pensions from their employers or from the state, they had to depend on merchants, who sometimes exploited them with high price goods and low paid jobs. Moreover, the Rochdale laborers had no negotiating power because they had no democratically elected government to represent them, no vote and no one who could help and protect them at that time (Fairbairn, 1994, p.2; Ward and McKillop, n.d., p.8).

They began to help one another, setting up a society in order to open their own store and sell food items they could not otherwise afford, and also to provide other assistance, especially education. As workers had little knowledge, education was therefore necessary for them, and various subjects were taught to members in their free time at night (Fairbairn, 1994, p.3). Ten years after The Rochdale Society of Equitable Pioneers had been established, there were over 1,000 Co-operative societies spread all over the United Kingdom ("Co-operative", n.d.).

In the first era, the type of Co-operative that was set up and became widespread was the consumer Co-operative (Co-operative Development Authority, 2009). Its purpose was to procure and distribute commodities to members and non-members. Later, many new types of Co-operatives were set up in order to meet the needs of members, but there was no exact classification of Co-operative type. It depended on the Co-operative's purposes, the target group of the members and the type of business a Co-operative intended to do. For example:

1) Business Co-operatives

This type of Co-operative was set up in order to help its members in production, business transactions or marketing. Agricultural Co-operatives, farming Co-operatives, supply Co-operatives, marketing Co-operatives, fisheries Co-operatives or dairy Co-operatives could be considered as business Co-operatives.

2) Financial Co-operatives

Financial Co-operatives are, for example, credit unions, credit Co-operatives, insurance Co-operatives, Co-operative banks or savings Co-operatives. These were established to provide financial services for members.

3) Consumer Service Co-operatives

This type of Co-operative took part in providing good quality services that were necessary for members at a cheap price, such as housing Co-operatives, health service Co-operatives, electric Co-operatives, transport Co-operatives, storage Co-operatives, utility Co-operatives or childcare Co-operatives.

4) Other types of Co-operative

Aside from those mentioned above, there were still many other types of Co-operative, such as workers Co-operatives, multi-purpose Co-operatives(combining two or more business activities) or federal or secondary Co-operatives (in which all members were themselves Co-operatives).

Besides the growth in the number of Co-operatives and the establishment of many types of Co-operative, there was an effort to develop the structure and the way in which Co-operatives were run and operated in order to cope with the fast changing environment and situations. The New Generation Co-operative (NGC) was set up in North Dakota and Minnesota in the 1970s (Schank and Fulton, 2002, p 3). This

represented the efforts of a younger generation of farmers to tackle the challenges of deregulated agricultural markets and specialized market niches (Fulton, 2000, p.1). At present, the concept of NGC has spread all over the world (the difference between NGC and the traditional Co-operative can be seen in Table 2.1).

Later, in the 1980s, waves of Co-operative demutualization occurred. Griffiths (2004, p.17) explains that "Demutualization refers to the decreased use of mutual organizations to provide services and to produce goods and the conversion from mutual to investor ownership. The beginning of the demutualization of a Co-operative is when the Co-operative has lost its Co-operative identity, and what distinguishes it from investor-owned companies."

This situation happens when the market goes through structural adjustment, the deregulation of markets, and technological innovations or agro-industrial innovations, which change the "rules of the game." These factors increase competition in the market, and this encourages the demutualization of Co-operatives (Chaddad, 2003). For example, Kerry Co-operative of Ireland, a milk and meat processor that demutualized in 1986, compensated its farmer members, and became the publicly traded Kerry Group (Kerry Group plc, 2011).

Nowadays, the Co-operative has continuously grown, developed and spread throughout the world (Christianson, 2007, p.5). It is estimated that currently there are over 700 million Co-operative members around the world (Zeuli and Cropp, 2004) (See Table 2.2). In terms of employment, Co-operatives now provide over 100 million jobs worldwide, 20% more than multinational enterprises (Chavez Hertig, 2008).Co-operatives secure the livelihoods of 3 billion people, covering 25% of the world market

in insurance and supplying 33% of the world's dairy products (International Co-operative Alliance, 2006).

Table 2.6: Co-operatives and Membership by International Region

Region	Number of Countries	Organizations	Societies	Individual Members
Africa	12	19	27,214	9,561,443
Americas	18	61	43,945	182,486,437
Asia	28	64	480,648	414,383,079
Europe	35	88	197,293	118,473,862
Total	93	232	749,100	724,904,821

Source: Zeuli and Cropp (2004, p.13)

2.4 The Beginning of the Co-operative in Thailand

Thailand's first Co-operative was registered as a Co-operative by the government (Department of Commerce and Statistic Forecasting, Ministry of Finance) on February 26, 1916 in the name of "Wat Chan Agricultural Co-operative Unlimited Liability." It was established 72 years after the world's first Co-operative began in England in 1844, 64 years after the first Co-operative commenced in Germany (1852), 16 years after Canada (1900), 12 years after India (1904), and 7 years after the United States (1909) (Bumrungwong, 2007).

Most scholars define a "bottom-up" process occurring in the case of the Rochdale Society of Equitable Pioneers, and with the first Co-operatives in other countries in Europe and the United States that were initiated by people and had to struggle for themselves. But the first Co-operative in Thailand originated from a "top-down" process. It happened with the assistance and full support of the government, whether in terms of assembling people, self-help by working together, establishment and operations or in understanding and awareness of the objectives of the Co-operative.

It was not from the initiation of the people or members of the Co-operative itself, as in the case of The Rochdale Society of Equitable Pioneers. Most Co-operatives in Asia, Africa, and South America have been set up by a "top-down" process or initiated by the state (Bumrungwong, 2007).

In Thailand, the Co-operative was set up at the end of the reign of King Chulalongkorn (Rama V) after many changes had taken place in Thailand in many respects due to the ability of the King to bring the country into being as part of a modern western civilization, particularly in the development of education, infrastructure, communication, trade with foreign countries, and emancipation. These changes had affected economic growth and Thai society significantly, especially the evolution of Thailand's economy from a "Subsistence Economy" to become an "Exchange Economy."

Thai people in those days were mostly farmers. The main occupation was to grow rice and sell rice to traders or rice mills, which were growing in number in rural areas and cities. The demand for rice increased continuously due to increased population in Thailand, wholesalers in Bangkok and importing countries. All these factors pushed farmers to increase their production.

When the demand for rice increased both for domestic consumption and export, farmers needed to invest more in growing rice. However, most farmers were small-time and worked on a family farm, while big-time farmers or those of medium-sized enterprises who employed outside labor were only few. Most small-time farmers had no capital to invest. Therefore, they had to borrow from rice traders or merchants, or from local rice mill owners. Only few of the medium or big-time farmers had enough savings or adequate assets to invest.

In order to survive, most farmers gradually adjusted their production from subsistence to commercial purposes, which required more capital funding from outside. When the weather was good, farmers harvested good yields with no rice price fluctuations. Then farmers had enough revenue to spend and save for investment in growing rice for the next year. But when the rice price fell due to high yields, according to the law of supply and demand, most farmers in general had to rely on loans from traders or entrepreneurs, whose interest rates were relatively high.

However, under loan agreements, farmers in a financial or social position inferior to lenders were often exploited by unfavorable agreement conditions. For example, at the conclusion of the rice harvest, farmers had to sell part or all of their rice to their creditors, who were traders or mill owners, at the price determined by their creditors in order to deduct their debt, both interest and principal. If farmers did not repay their debt in full or in part, their land or collateral would be confiscated. Moreover, as farming generally relies on weather or seasonal rain, farmers' yields could be damaged in some years due to poor weather conditions, for example with drought or unusual flooding. Thus, revenue from yields may be insufficient to repay debts as usual, forcing farmers to rely on loans for investment in the next rice growing season, and to spend on necessary items. This situation happened quite often and bankrupted farmers, whereupon some maybe fled their debts, migrating to work in other areas, or ceased being farmers, lending their land to others.

At that time, the lives of most debt-laden farmers were burdensome and many became poor. They were also uneducated. This picture could be seen generally in the country. Therefore, the government at that time tried to solve farmers' problems. The first government plan at the end of King Rama V's reign was to provide loans at low

interest rates and with fair conditions for farmers, and to establish the "Agricultural Bank" in a central area with branches in other provinces in order to provide financial support for farmers. However, due to regulations being insufficiently strict to prevent farmers fleeing their debts, this plan was terminated.

In 1913, during King Rama VI's reign, the government tried to help farmers to access loans in order to refinance their existing debts. The Ministry of Finance tried to change Siam Commercial Bank Ltd (now named the Siam Commercial Bank Public Company Limited) from its status as an exchange bank to be a loan bank. The bank was experiencing a crisis and could not compete with other international banks at that time. Thus, in 1914, the Government of Thailand via the Ministry of Finance invited Mr. Bernard Hunter to study how to modify the Siam Commercial Bank Ltd. to be a loan bank in order to provide loans to farmers. Mr. Hunter recommended the establishment of a "National Loan Bank," using land and other assets as collateral. This prompted people (farmers) to establish an association to borrow money from the bank. It was an association that would control the lending of money to its members according to the principle of shared help, and was a measure intended to prevent farmers who borrowed money from abandoning their land and fleeing their debts, which was a matter of government concern at that time. Mr. Hunter (who was later known as "Sir Bernard Hunter") called this association a "Co-operative." Krom Muen Pittayalongkorn then provided the Thai term, "Sa – Ha – Korn" (The Federation of Saving and Credit Co-operatives of Thailand Limited, 2007; Bumrungwong, 2007).

The government agreed with farmers grouping together as an association to continue in business, to combine or merge, to control or take care of each other. But they disagreed with the recommendation to reform Siam Commercial Bank Ltd. to be a

National Loan Bank, because of the Board of Directors' comment that Siam Commercial Bank Ltd. was the only Thai commercial bank at that time and the company's business performance in foreign currency exchange was good. As there would be no Thai bank remaining if the bank was changed to be a National Loan Bank, the government decided not to establish a National Loan Bank. However, the idea still existed to encourage farmers to gather as an association to lend to their members and monitor each other by the use of land and other assets as collateral. It was thought that practicing the Co-operative system in Thailand would resolve chronic debt, career problems and farmers' poverty, which would lead to a better life.

2.5 The current situation of the Co-operative in Thailand

Considering various dimensional aspects of Thai Co-operatives, such as the number of Co-operatives in Thailand, the numbers of Co-operative members and the impact of Co-operatives in Thailand's economy, the relevant data is provided as follows:

2.5.1 Number of Co-operatives

Compared to other forms of legal organization in Thailand, the proportion of the number of Co-operatives is very small. In 2007, it was only 0.1% of total manufacturing establishments, while individual proprietors accounted for 89.6% (Table 2.3).

Thailand has a high proportion of individual proprietors because most business owners are SMEs, which are established easily and use low financial capital in investment. It is also because the informal economy in Thailand is very large. Thailand is ranked the world's 7th in countries having the highest informal sector. It accounted

for 57.2% of GDP from 1999 – 2007 (“Thailand Ranked 7th in Countries with Highest Informal Sector”, 2010).

Table 2.7: Percentage of manufacturing establishments in the form of legal organizations in Thailand: 2007

Form of Legal Organization	Percentage
Individual proprietor	89.6
Company Limited, Public Company Limited	5.1
Juristic partnership	1.8
Government, State-Enterprise	0.1
Co-operatives	0.1
Others	3.3
Total	**100**

Source: NSO (2007)

Although the proportion of Co-operatives is numerically small, it is increasing continuously. The number of Co-operatives in Thailand has grown from 5,610 Co-operatives in 2000 to 6,962 Co-operatives in 2010, representing an average growth rate of 2.1% per year over the past ten years (Table 2.4). However, from 6,962 Co-operatives, there are 761 Co-operatives, representing 9.85% of the total number of Co-operatives, which are under liquidation (Co-operative dissolution) (Table 2.5).

Co-operatives in Thailand are classified into seven categories under two groupings, Co-operatives in the agricultural sector and in the non-agricultural sector. Co-operatives in the agricultural sector consist of 1) Agricultural Co-operatives 2) Land settlement Co-operatives 3) Fisheries Co-operatives. Co-operatives in the non-agricultural sector consist of 4) Consumer Co-operatives 5) Thrift and credit Co-operatives 6) Service Co-operatives and 7) Credit union Co-operatives.

There are 4,027 Co-operatives or 57.8% of Co-operatives, in the agricultural sector, and 2,935 Co-operatives, or 42.2% of Co-operatives, in the non-agricultural sector (Table 2.4). The agricultural Co-operative is the largest type of Co-operative. In total, there are 3,850 agricultural Co-operatives. The second largest type is that of thrift and credit Co-operatives: 1,366 Co-operatives.

Table 2.8: Number of Co-operatives in Thailand Classified by Type from 2000 – 2010

Type of Co-operatives	2000	2002	2004	2006	2008	2010
Agricultural Sector	3,546	3,588	3,951	4,137	4,061	4,027
- Agricultural Co-operatives	3,370	3,419	3,787	3,958	3,885	3,850
- Fisheries Co-operatives	76	71	71	86	85	86
- Land Settlement Co-operatives	100	98	93	93	91	91
Non Agricultural Sector	2,064	2,041	2,296	2,575	2,807	2,935
- Thrift and Credit Co-operatives	1,295	1,346	1,529	1,597	1,370	1,366
- Consumer Co-operatives	369	246	250	249	227	206
- Service Co-operatives	400	449	517	700	866	943
- Credit Union Co-operatives	0	0	0	29	344	420
Total	5,610	5,629	6,247	6,712	6,868	6,962
Growth rate (%)	1.10	5.39	2.48	2.43	-0.06	0.49

Note: The numbers of Co-operatives in this table include only Co-operatives that are still active, and exclude Co-operatives that are inactive.
Source: CPD (2010a)

However, the number of Co-operatives in Thailand is still less than those in many developed countries, where the members of a Co-operative may account for 50 –

90% of the total population, such as in Canada, Japan, England, Sweden or Korea (Nawaratt, 2008).

Table 2.9: Numbers of Co-operatives in Thailand Classified by Status in 2010

Type of Co-operatives	Co-operative Status			Total
	Not doing business	Doing business	Under liquidation (Co-operative Dissolution)	
Agricultural Co-operatives	121	3,729	487	4,337
Fisheries Co-operatives	9	77	17	103
Land Settlement Co-operatives	0	91	5	96
Thrift and Credit Co-operatives	40	1,326	75	1,441
Consumer Co-operatives	3	203	87	293
Service Co-operatives	136	807	90	1,033
Credit Union Co-operatives	29	391	0	420
Total	338	6,624	761	7,723
	Active 6,962		Not Active 761	

Source: CPD (2010b)

2.5.2 Number of members of Co-operatives

Even though one of the Co-operative principles is voluntary and open membership, which means all persons are able to use their services and are willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination, Thai law states that only an individual who has become sui juris and has Thai nationality can be a member of a Co-operative. Foreigners are not allowed to be a member or associate member of the Co-operative in order to prevent the exploitation of the privileges received as a Co-operative member according to Thai co-operative law and other relevant laws.

In 2010, 10.3 million people became members of a Co-operative. If we compare the number of Co-operative members to the total population of Thailand, which was 65.9 million in 2010 (NSO, 2011), we will find that about 1 in 6 people in Thailand, or 16% of the total population, is a Co-operative member. On average, one Co-operative will have 1,506 people as members (Table 2.6). The agricultural Co-operative is the largest type of Co-operative, with 5.9 million members. The second largest type is that of thrift and credit Co-operatives, with 2.6 million members.

Table 2.10: Number of Co-operatives' members by Type as of January 1, 2010

Type of Co-operative	Number of Members	Members per Co-operative
Agricultural Sector	**6,172,845**	**1,558**
- Agricultural Co-operatives	5,968,358	1,587
- Fisheries Co-operatives	15,018	179
- Land Settlement Co-operatives	189,469	2,082
Non Agricultural Sector	**4,156,191**	**1,421**
- Thrift and Credit Co-operatives	2,618,501	1,923
- Consumer Co-operatives	756,092	3,725
- Service Co-operatives	350,273	373
- Credit Union Co-operatives	431,325	1,029
Total	**10,329,036**	**1,506**

Source: CPD (2010c)

The penetration of the Co-operative in Thailand is quite high compared to many countries in South East Asia, as illustrated in Table 2.7. Indonesia has 133,666 Co-operatives, which is the highest number of Co-operatives in the region, while Singapore has the lowest number of Co-operatives, with 86 Co-operatives. However, in terms of

the average number of members per Co-operative, Singapore takes the highest score with 16,430 members per Co-operative. This is compared, for example, to Thailand with 1,506 members per Co-operative, Malaysia with 1,223 members per Co-operative and Indonesia with 231 members per Co-operative.

In addition, if we consider the number of Co-operative members as a percentage of the total population, Singapore is ranked first with 50% of its total population as Co-operative members, while Malaysia is ranked second at 25.5% and Thailand 16.2%.

Table 2.11: The penetration of Co-operatives in some South East Asia countries

	Number of Total Co-ops (Active)	Number of Co-operative members	Average number of members per Co-operative	Number of Co-operative members (% of total population)	Other
Singapore (2012) [1]	86	1,413,000	16,430	26.4	
Thailand (2010)	6,962	10,329,036	1,506	16.2	
Malaysia (2007) [2]	5,170	6,320,000	1,223	25.5	
Indonesia (2011) [3]	133,666	30,849,913	231	12.6	Co-operatives provide jobs to 288,589 individuals (2004).
Vietnam (2008) [4]	14,500	7,478,019	516	8.7	Co-operatives create 295,680 permanent job for employees; 5.45% share of GDP (2009)
Philippines (2011) [5]	20,501	6,547,980	319	6.4	In 2010, Co-operatives generated a total of 201,225 direct jobs and contributed 3.12% to GDP.

1. Ministry of Community Development, Youth and Sports (2012, p.2)
2. Othman and Kari (2008)
3. Tentang Kementerian Koperasi dan UKM (in Indonesia) (2012)
4. Tu (2011)
5. Co-operative Development Authority, Philippine (2011)

Note: The size of population in each country comes from http://www.indexmundi.com
Source: Author's compilation

2.5.3 The impact of the Co-operative on the Thai economy

The Co-operative has been involved in many Thai economic activities. With data collected in the five main business categories of 1) Deposit business; 2) Loan business; 3) Trade business (Equipment supply, machinery, tools, seed, fertilizer or pesticides for farmers for the benefit of Co-operative members and the public); 4) Product-collecting/processing business (to prevent the exploitation of middlemen, some Co-operatives help their Co-operative members and the public gain fair prices by collecting their products for process and sale), and 5) Service and agricultural promotion business.), the Co-operative sector has increased its impact on the economy, as illustrated by the total Co-operative business volume, which has expanded continuously. In 2005, it was 1.05 trillion baht, or 14.5% of gross national product (GNP). In 2010, it had increased to 1.7 trillion baht or 16.5% of GNP (Table 2.8).

In 2010, the Co-operative business of highest volume was the loan business, accounting for 62.3% of total Co-operative business volume. However, though the total credit amount had increased steadily, the proportion of loan business volume to total Co-operative business volume had decreased from 65.3% in 2005 to62.3% in 2010. Co-operative members, on a continual basis, tend to borrow less credit from their Co-operatives. This might be due to increased competition between commercial banks and Co-operatives in the loan business, as well as government policies that attempt to extend low-interest loans to people, giving easier access through the state banks.

The second highest Co-operative business volume is the deposit business. In 2010, this accounted for 27.4% of total Co-operative business volume. It is likely to increase constantly both in total volume and as a proportion of the total Co-operative business volume. This is partly because Co-operative members and the public look for

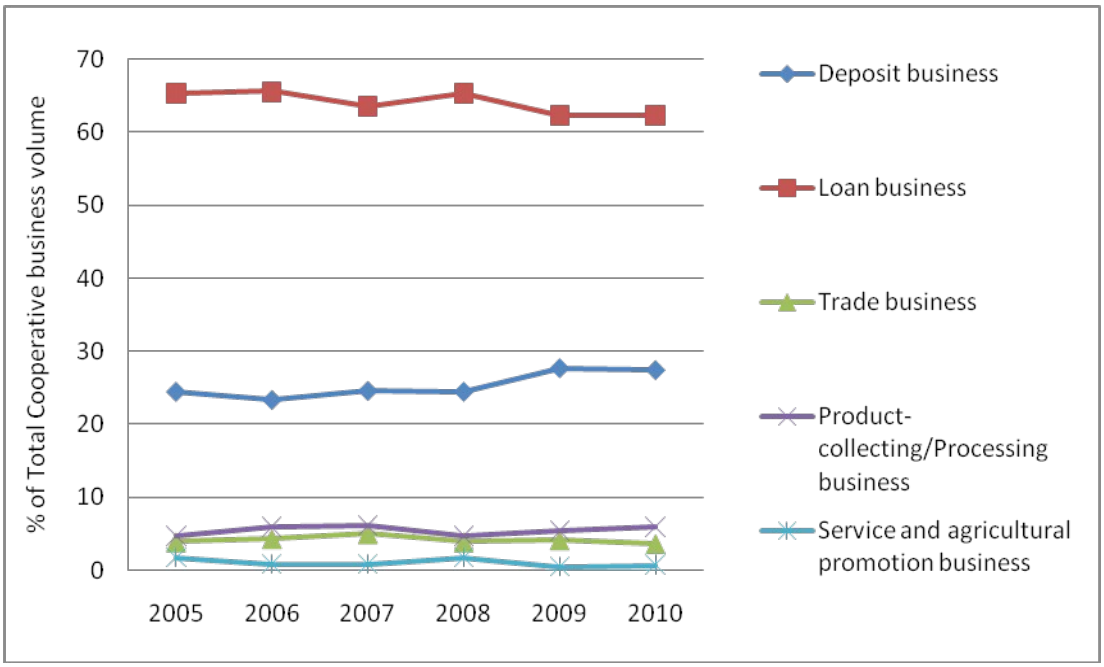
higher return on investment and commercial banks generally pay lower interest rates than Co-operatives do. Therefore, more deposits flow to the Co-operative sector.

Table 2.12: Total Co-operative business volume from 2005 to 2010 (million baht)

	2005	2006	2007	2008	2009	2010
Deposit business	257,270	266,810	274,352	292,855	398,518	469,560
Loan business	688,098	751,214	710,197	823,374	897,139	1,067,218
Trade business	40,501	49,007	55,507	68,423	58,839	61,530
Product-collecting/ Processing business	49,689	68,475	68,506	83,857	78,302	102,357
Service and agricultural promotion business	17,469	9,761	8,886	10,741	7,092	11,611
Total	**1,053,207**	**1,145,266**	**1,117,448**	**1,279,250**	**1,439,891**	**1,712,277**
GNP at current market prices	7,244,887	8,053,052	8,732,267	9,345,596	9,240,083	10,362,979
% of GNP	14.5	14.2	12.8	13.7	15.6	16.5

Source: Author's Compilation from CPD (2008, 2010d, 2011d) and NESDB website

Figure 2.3: Changes in % of Co-operative business volume in 2005 - 2010



Source: Author's Compilation from CPD's data

2.5.4 Employment by the Co-operative sector

The Co-operative not only benefits the economy by doing business with its Co-operative members, as noted above, but also has a positive impact on the economy by being a source of employment in the country as well. As far as direct employment is concerned, Co-operatives countrywide employed people to work both in primary and secondary Co-operatives. In 2008, it was estimated that the 6,868primary Co-operatives provided direct employment to over 26,573 full-time employees or about four persons per Co-operative. This increased to 32,867 full-time employees for 6,963 primary Co-operatives, or about five persons per Co-operative in 2011 (Table 2.9).

Table 2.13: Direct employment of the Co-operative sector in Thailand in 2008 and 2011 (persons)

	2008	**2011**
Agricultural Co-operatives	15,343	18,033
Fisheries Co-operatives	752	228
Land Settlement Co-operatives	222	1,108
Thrift and Credit Co-operatives	6,736	8,462
Consumer Co-operatives	1,168	1,317
Service Co-operatives	1,359	1,986
Credit Union Co-operatives	993	1,733
Total	**26,573**	**32,867**
Total employment in Thailand	37,016,612	38,464,667
Direct employment in Co-operative sector as % of total employment in Thailand	0.07	0.09

Source: Author's Compilation from CPD (2012a) and Committee on the study and promotion of Co-operatives as an item in the national agenda (2012, p.8)

Despite the fact that the percentage of Co-operative members in the total population is higher in Thailand than in many countries in South East Asia, direct

employment by the Co-operative sector in Thailand is much less than in other countries. Compared to 32,867 jobs provided by Co-operatives in Thailand, co-operatives in Indonesia provided jobs for 288,589 individuals in 2004,with 295,680 permanent jobs for employees in Vietnam in 2009and a total of 201,225 direct jobs in the Philippines in 2010 (Table 2.7).

However, besides direct employment, Thuvachote (2011) has estimated the Co-operative sector's indirect employment from the data of the CPD in December 2002. There were 139 agricultural Co-operatives with rice mills, 741 with an agricultural product central market, and 287 with smoked Para-rubber plants. Assuming that each had an average of six temporary workers, it could be estimated that over 7,000 people are recruited for seasonal labor services in Co-operatives every year. Moreover, if Co-operative-related public institutions are included, more employment will be generated. In 2008, the numbers of permanent staff in the CPD and the CAD were 6,886 and 1,218 persons respectively.

However, if we consider all employments that are generated by the Co-operatives, it should account for much more than the above statistics. This is because the Co-operative business volume does not only come from the value of goods and services produced by full-time workers of the Co-operatives, but it is also the sum of all business that members do with the Co-operatives, such as trading goods with the Co-operatives, depositing money and providing loans to the members. Unfortunately, due to the fact that the members of the Co-operatives do not only do business with the Co-operatives but also run business with other organizations too, the statistic that indicates the size of employment which is solely generated by Co-operatives is not available at the present.

As has been explained in this chapter, the Co-operative is a form of business organization operating by different principles and business practices from those of general business organizations. The Co-operative is set up for the benefit of its members. In Thailand, the numbers of Co-operatives have increased constantly over many years, having a positive impact on Thailand's economy by conducting business with its members and the public, and also by creating jobs directly and indirectly. Therefore, the development of Co-operative's performance will greatly benefit Co-operative members and the overall economy.

Chapter 3
Literature review

3.1 Introduction

The operation of a Co-operative is based on a self-help philosophy. Most Co-operatives are governed by Board Members who volunteer to work and are elected by the members. This philosophy implies that the membership influences the management of Board Members and the Co-operative manager while Board Members are motivated to protect the interests and needs of the membership. However, the results of empirical studies and experts' opinions on the performance of Co-operatives in the world have pointed to various governance problems, such as financial scandals, the failure of democracy (Lees, 1995), faulty management, monopoly of power, the restriction of members' participation (Lees and Volkers, 1996), rent seeking behaviour, corruption by Boards of Directors, lack of transparency in the decision-making process or weakness of monitoring and control mechanisms, etc. (*Corporate governance and Co-operatives*, 2007). These raise doubts about the quality of cooperative governance.

One governance issue questioned is the duty of Board Members in working or not working as representatives of the members, since a Co-operative's Board Members are not under internal or external pressure as a private company's Board Members are. Members rarely participate in their Board Members' work, due to having less involvement in the election of the Board Members and a lack of member participation in monitoring and controlling the Board operations (Spear, 2004). At the same time, Board Members are not under pressure from outside because their shares are not traded

on the market. Therefore, there is no external control by the market, and the rules to protect members' rights are weak (Monzon-Campos et al., 1996).

Issues about the governance and behaviour of Board Members, as noted above, bring the voluntary nature of the work of a Board into critical view. The Co-operative system may result in a free-riding problem due to the lack of motivation for a Board and inefficiency in monitoring and control due to a majority of the Board holding minor shares and being unable to sell their shares for a profit (*Corporate Governance and Co-operatives*, 2007). Another problem is that most Co-operatives have no mechanism to evaluate the performance of their Board. In addition, volunteer Boards are elected by members who may be restricted in terms of their expertise and time to contribute, while the operation of the Co-operative is complex, with multiple purposes that may cause conflicts, and with no agreeable performance measurement. It may therefore be difficult for the Board to gather information and monitor the operation efficiently (Spear, Cornforth, Chaves and Schediwy, 2004; Enjolras, 2004).

Based on the operation and governance problems of Co-operatives and restricted understanding of Board behaviours, particularly with Board conflicts between motivations to work on the basis of voluntary work for the public interest or personal gain, this research focuses on the study of Co-operative Board Members and the factors influencing Board motivations, and on understanding Board motivations in order to help understand Board behaviours and lead to improved governance quality and the Co-operative's performance.

3.2 Motivation Theories

The concept of motivation started at the time of the Greek philosophers. It shifted from the realm of philosophy to the newly emerging science of psychology in

the nineteenth century (Steers et al., 2004). From the existing literature I have observed, motivation theories have been classified in two ways. The first is a classification based on the psychology perspective and the second is a classification based on principles of motivation. One motivation theory can be in both classifications.

3.2.1 Motivation theories classified based on a psychology perspective

This type of classification is varied and different among scholars. However, it can be summarized as follows:

1) Biological Approach

James (1890) explained that what influences behaviours and affects motivation is instinct. It is a function of genetics and part of the brain's structure. Behaviour is determined by unconscious instincts, needs, or drives as well as locomotion, curiosity, sociability, fear, jealousy, and sympathy (Steers et al., 2004). However, this approach seems to be better in dealing with animal behaviour in general than explaining human behaviours (Bernard et al., 2005).

2) Psychological or psychoanalytic Approach

Freud (1957) stated that motivation emerges from the psyche, which was constructed from known and unknown past experiences. He also argued that if we completely understand the landscape of the ego, id and superego, we will be able to predict human motives. Cavalier (2000) rejected motivation theories in this approach by arguing that humans have free will and the ability to reason and make decisions.

Porter, Bigley, and Steers (1996) have grouped James and Freud's ideas as instinct theories of motivation. These were accepted widely during the early nineteenth century. However, they were attacked later for several reasons (Hilgard and Atkinson, 1967; Morgan and King, 1966 cited by Porter, Bigley, and Steers, 1996). First, the list

of instincts has grown continuously, reaching almost six thousand in number. Such a long list makes any attempt to explain motivation difficult. Second, psychologists have accepted increasingly that individuals varied greatly in the strengths or intensities of their motivational dispositions, causing more complexity in using instinct theories to fully explain behaviour. Third, some researchers found little relationship between the strength of certain motives and subsequent behaviours. Fourth, it cannot be explained or proved scientifically whether the unconscious motives were really instinctive or learned behaviour.

3) Behavioural Approach

This group of theories is based on the belief that behaviours, both of human or animals, are not strictly the result of instincts but are modified by environmental consequences (Bernard et al., 2005). The behavioural approach can be called drive and reinforcement theories. Many theorists have been classified in this category.

For example: **Thorndike (1911)** explained his theory, **"Law of Effect"**, whereby the environment has an impact on motivation, not just the results of instincts. He argued that behaviours followed by a satisfying state or reward have more of a chance to be repeated, whereas behaviours that are followed by an unsatisfying state or punishment have less of a chance to be repeated.

Skinner (1938) found that motives could be predicted through programs that were designed to push individuals in a specific direction.

Besides those theorists, Adams (1963), a workplace and behavioural psychologist, clarified his theory, **Equity Theory**, in which equity is an individual's beliefs or perceptions that he or she is being treated fairly relative to others or their referent person. The individual assesses the equity or fairness of the outcome compared

to others. They might feel equitably rewarded, under rewarded, or over rewarded. If they feel under rewarded or over rewarded, they will do something to reduce the inequity.

The behavioural approach is supported by Watson (1913). He argued that the behavioural approach is better than the biological and the psychological approach in explaining motivation because mental events and consciousness cannot be observed or measured directly while the behavioural approach has made behaviours observable (Bernard et al., 2005).

However, Bentley (2006) believed that this approach is inadequate to explain the wide panorama of human motivation despite the fact that it was shown to be accurate for animals in a lot of research. Moreover, Holt (1931) criticized this approach as descriptive rather than explanatory, and he believed that it did not satisfy the many psychologists who study conscious processes (Bernard et al., 2005). Porter, Bigley, and Steers (1996) also criticized this approach because it ignores the inner state of the individual and concentrates only on what happens to a person when they take actions.

4) Humanistic Approach

Humanistic theorists focus on the positive image of what it means to be human. Human nature is viewed as basically good, and humanistic theorists focus on methods that allow the fulfillment of potential. According to this approach, humans' motivation is to achieve their maximum potential and they will always try to do so.

A famous motivation theory based on this approach is **Maslow's hierarchy of needs (1943).** In order to achieve complete satisfaction for the individual, Maslow proposed a five level hierarchy of needs that have to be satisfied. These five needs are physiological needs, safety needs, belonging needs, esteem needs, and self-

actualization. He suggested the needs are hierarchical in nature and before a human can move from one to the other, the needs must be satisfied in order. Even though this theory is “one of the best-known and most widely cited works on motivation” (Denhardt et al., 2008, p.148), the humanistic approach is often seen as too subjective. It is difficult to objectively study and measure self-esteem or self-actualization. Another criticism is that observations are unverifiable: there is no accurate way to measure these qualities (McLeod, 2007).

Moreover, the humanistic theory makes some generalizations about human nature that are not widely accepted as complete. There are some people who still make negative choices even when positive solutions are clearly in front of them (Heffner, 2002).

5) Cognitive Approach (Bentley, 2006; Bernard et al., 2005; Huitt, 2011)

The cognitive view of motivation assumes that behaviours are caused by a rational and deliberative process, the way people think about themselves and their environment, more than the biological and behavioural perspectives allow (Bernard et al., 2005).

Leon Festinger (1957) developed **“Cognitive dissonance theory”,** which states that when there is a discrepancy between two beliefs, two actions, or between a belief and an action, we will act to resolve conflict and discrepancies.

Heider (1958) and Weiner (1974) later introduced the **“Attribution theory”**. Both explained that every individual tries to explain the success or failure of the self and others by offering certain attributions. These attributions are either internal or external and are either under control or not under control. They can be categorized into

4 categories. People will be motivated and put their effort into doing a task when they develop a self-attribution explanation of effort (internal, control).

	Internal	**External**
No Control	Ability	Luck
Control	Effort	Task Difficulty

Another famous motivation theory in the cognitive approach is **Vroom's Expectancy Theory.** Vroom (1964) explained motivation as a force which is a function of three variables, as expressed in the following equation:

Motivational Force = Expectancy x Instrumentality x Valence

Expectancy is the perception of how increased effort leads to increased performance. This includes the availability of resources and occupational support, for example, the necessary time, skills, information, and so on, in order to get the job done. *Instrumentality* is the perception of how much benefit will result from competent performance, depending on how the relationship between performance and outcomes is understood, along with transparency in the evaluation process. *Valence* is the degree of value placed on performance outcomes. For example, some workers may place a higher value on leisure time than on income, etc.

Porter and Lawler (1968) extended Vroom's expectancy model. The basic assumption of the Porter-Lawler model is the same as for Vroom's model but the Porter-Lawler model is more complex in many ways. The difference between Vroom's expectancy theory and the Porter-Lawler Model are:

1) In the Porter-Lawler Model, what affect the worker's effort (motivation) are only the value of the reward (valence) and the perceived effort reward probability (instrumentality), not the perceived effort performance probability (expectancy).

Expectancy, such as abilities to do the tasks and perception about their role, affects their performance more than their effort.

2) Vroom's expectancy model focused on effort, expectancy, instrumentality and valence but Porter and Lawler added the concept of rewards and satisfaction.

Performance leads to rewards, which can be intrinsic and extrinsic. Satisfaction is derived from the extent to which actual rewards fall short, meet or exceed the individual's perceived level of equitable rewards. If actual rewards meet or exceed perceived equitable rewards, the individual will feel satisfied; if these are less than equitable rewards, he will be dissatisfied. This part of the model is like Adams' Equity Theory. Satisfaction or dissatisfaction will therefore affect the value of the reward (valence) and the perceived effort reward probability (instrumentality) once again.

Another theory in this approach is **Bandura's Self-efficacy theory.** Bandura (1977) stated that people develop more confidence and are motivated to achieve at a higher level when they overcome a threatening situation. On the other hand, when people lose the perceived challenge, they will fail to enhance their coping skills and maintain their self-induced fears.

Even though cognitive theories have provided the framework for a more plausible theory of human motivation (Miskel, 1982; Kanfer, 1990; Hoy & Miskel, 1996 cited in Bentley, 2006), Bernard et al. (2005) critiqued cognitive theories that have not addressed other fundamental issues in motivation, such as the origin of conscious processes, the relationship of conscious processes to the biological or behavioural perspectives, and the role of non-conscious processes in motivation.

As well as Holt (1931)'s criticism of behavioural theories of motivation, cognitive theories can describe thoughtful processes and their outcomes but are less

able to provide explanations for the existence of these thoughtful processes. Moreover, this approach ignores important factors that affect motivation like culture which provide an environment of shared expectations and values which impose a certain consistency on social reinforcement and the development of cognition (Avital & Jablonka, 1994; Donald, 1997; Oyama, 1993 cited in Bernard et al., 2005).

3.2.2 Motivation theories classified based on principles of motivation

Based on the principles of motivation, theories can be classified into two groups (Boone and Kurtz, 1992).

3.2.2.1 Content (or Need) theories

This group of theories attempts to specify what sorts of events or outcomes motivate behaviour. The motivation theories which are classified in this group are:

1) Maslow's hierarchy of needs (as described above)

2) Alderfer's ERG Theory

Alderfer (1972) modified Maslow's hierarchy of needs. Instead of the five levels of needs, he proposed basic human needs that may be classified under three categories, namely, existence, relatedness, and growth, and these three needs do not have to be met in order as in Maslow's theory.

(1) Existence needs are similar to Maslow's physiological and safety needs.

(2) Relatedness needs involve interpersonal relationships. They are comparable to the belonging and esteem needs in Maslow's theory.

(3) Growth needs are individual needs to reach one's potential. They are associated with Maslow's esteem and self-actualization needs.

3) Herzberg's Motivation-Hygiene Theory (Herzberg, 1957)

Herzberg asked individuals what satisfies them and what dissatisfies them on the job. He found that the things making people happy in a workplace and those making them unhappy are different and there were two separate themes. Factors that dissatisfy workers are called “hygiene”. This includes company policies, supervision, working conditions, salary, safety, and security on the job. In contrast, the factors that satisfy workers are called “motivators”. They include achievement, recognition, interesting work, increased responsibilities, advancement, and growth opportunities. These factors are the conditions that encourage workers to work and try harder.

4) McClelland's Acquired Needs (McClelland, 1975)

McClelland argued that humans are motivated by 3 types of needs - the needs for achievement, affiliation, and power. This theory is concerned not about the ordering of needs but rather about the needs themselves.

(1) The need for affiliation is a desire to establish social relationships with others.

(2) The need for power reflects a desire to control one's environment and influence others.

(3) The need for achievement is a desire to take responsibility, set challenging goals, a desire to do something more effectively than in the past and obtain performance feedback.

In conclusion, needs or contents theories are useful in generating ideas about what motivates people. They used to dominate research on motivation in the sixties and seventies but have been abandoned today (Kelly, n.d.). This is because research on needs or contentment has the same problem as research on instincts. What a need is, or how it is linked to behaviour, cannot be determined scientifically. According to Pintrich

and Schunk (1996), the logic of using needs to describe behaviour eventually becomes tautological, as they explained:

> *"...almost any behaviour can be referenced to a need as the cause of the behaviour, and in turn, when someone has these needs, they cause the behaviour. The logic is circular and does not provide any real explanation of the behaviour"* (p.207).

Moreover, the validity of Content Theories is doubtful and they might not be able to provide a full explanation for human behaviours (Porter, Bigley, and Steers, 1996). This is because first, they seem to ignore interpersonal relations and the environment that can affect human behaviours. Second, one need may cause different types of behaviours in different persons. Also, one particular behaviour can be the cause of different needs. Third, there is no clear or scientifically acceptable research evidence to support the theories. As far as Maslow's hierarchy of needs is concerned, no research can explain how:

- Human need can be classified into five categories
- Satisfaction of needs at one level will activate need at the next higher level
- Unsatisfied need leads an individual to focus exclusively on those needs.

Turning to other theories, the ERG theory has been tested by only a few studies. Research which tested Herzberg's Motivator-Hygiene Theory failed to support the existence of motivators and hygiene factors and some studies showed that the effect of hygiene and motivational factors may be totally reversed in some other categories of people. McClelland's Learned Needs Theory has been questioned because the predictive validity of its research instrument (a psychological test called TAT) is problematic.

3.2.2.2 Process Theories

Process Theories attempt to specify how different kinds of events or outcomes motivate behaviour, how behaviour (action) develops, which components are involved or how these components interact. There are many well-known Process Theories, such as the Equity Theory (Adams, 1963), which was classified as a theory in the behavioural approach explained above or Vroom's expectancy theory, the Porter-Lawler Model of Motivation and Bandura's Self-efficacy theory as theories in the cognitive approach.

Another one that can be classified in the Process Theory is **Goal-Setting Theory (Locke and Latham, 1990).** Locke and Latham (1990) argued that the main source of job motivation is from the willingness to work towards the attainment of goals which should have a deadline and should be realistic, challenging, specific, clear and measurable. There are three moderators which have been indicated in setting goals successfully - Goal commitment, Feedback and Task complexity.

(1) Goal commitment - people will perform better when they are committed to achieving certain goals. Goal commitment is dependent on the importance of the expected outcomes, self-efficacy (which means the belief that they are able to achieve the goals), and commitment to others.

(2) Feedback - workers will be able to adapt or adjust to the required behaviour if they have proper and positive feedback.

(3) Task complexity - the more difficult the tasks ahead, the smaller the group of people will be involved and possess the necessary skills and strategies.

Despite the fact that Process Theories can provide a better theoretical explanation for work motivation than the Content Theories (BIS Center for

Management Research, 2012), they have still been criticized. An important reason for this is that Process Theories ignore habitual behaviour and subconscious motivation as they assume that humans are always able to calculate the pleasure or pain that they expect to attain or avoid when making a choice. However, it is generally accepted that this assumption is not true (Porter, Bigley, and Steers, 1996).

Even though there are a lot of motivation theories, there is no general, integrative theory that can completely explain human behaviours. Each theory explains only some aspects of motivation. However, as far as empirical studies in the field of motivation are concerned, Vroom's Expectancy Theory is the most widely used theoretical framework (Kanfer, 1990 cited in Igalens and Roussel, 1999, p.6). Chiang and Jang (2008, p.314) also stated that the Expectancy Theory generally is one of most commonly used theories of motivation in the workplace. The reason is Vroom's Expectancy theory not only simply explains what will motivate an employee, but also defines how motivation occurs and helps describe and explain how behaviour is directed, sustained, or stopped.

All motivation theories of importance being reviewed above have been summarized in Table 3.1 which has also been categorized according to the psychological perspective as well as the principles of motivation.

Table 3.14: Summary of motivation theories

		Principles of motivation	
		Content (or Need) theories	**Process Theories**
Psychology	**Biological Approach**	James (1890)	
	Psychological or psychoanalytic Approach	Freud (1957)	

	Behavioural Approach		Law of effect (Thorndike, 1911), Equity theory (Adams, 1963)
	Humanistic Approach	Hierarchy of needs (Maslow, 1943), ERG theory (Alderfer, 1972), Hygiene theory (Herzberg, 1957), Acquired needs (McClelland, 1975)	
perspective	**Cognitive Approach**		Cognitive dissonance theory (Festinger (1957), Attribution theory (Heider, 1958; Weiner, 1974), Expectancy theory (Vroom, 1964), Self-efficacy theory (Bandura, 1977), Goal-setting theory (Locke and Latham, 1990)

Source: Author's Compilation

3.3 Overview of the research on board of directors

This topic is an overview survey of research done on the Board of directors. The first part consists of 6 research streams on boards and corporate governance. The second part is the trend of the studies conducted on the board of directors. The third part is the concept of the board's motivation in the various streams of the research on the board of directors while the last part is the conclusion and discussion.

3.3.1 Research streams on boards and corporate governance

The research on the board of directors has a close link to that on corporate governance and consists of a number of research streams that are different in terms of topics, theories and research methodology. Hambrick and Van Ees (Hambrick et al. (2008) and Van Ees et al. (2009)) have provided comprehensive classifications of the literature on boards and corporate governance by categorizing it into six groups, as shown in table 3.2.

Table 3.15: Research Streams on Boards and Corporate Governance

	Micro (Internal relationship/inward)	**Micro (External relationship/outward)**
Formal structures	**I. Economic perspective** T**heory:** Agency theory **Objective:** Designing optimal incentive and monitoring structures **Topics:** Command and control *– Incentives and goal alignment* *– Monitoring and bonding*	**II. Legal perspective** **Theory:** Agency theory, transactions costs economics, and contracts-based theories **Objective:** Creating and enforcing governance rules and regulations for societal benefits **Topics**: Codification and compliance *– Law, codes, contracts and regulation*
Informal structure/ Interactions	**III. Power Perspective** **Theory:** Stewardship theory **Objective:** Showing how positions affect power/politics within organizations and how power differentials among board members influence processes and outcomes **Topics:** Collaboration and conflict *– Political bargaining* *– Power and trust* *– Conflicts and emotions*	**IV. Social networks perspective** **Theory:** Resource dependency theory **Objective:** Showing how power and information flow within inter-organizational networks and how power and opportunism among institutional actors influence board processes and outcomes **Topics:** Coordination and cooptation *– Social networks and director interlocks* *– Social elites and social movements*
Decision-making process	**V. Social psychological perspective** **Theory:** identity and social identity theory, cognition and small group decision making **Objective:** Revealing how decision making processes may be biased, how board members perceive themselves as directors, and how this influences processes and outcomes **Topics:** Cognition and competence *– Decision–making biases* *– Cohesiveness and commitment* *– Diversity and competence*	**VI. Symbolic management perspective** **Theory:** Institutional theory **Objective:** Understanding how the board is situated in a historical, social and organizational context, how symbols and language can address normative compliance with societal norms and values, and how this influences processes and outcomes. **Topics:** Conformity and ceremony *– Institutional embedded-ness and identity* *– Norms, symbolism, language and rhetoric*

Source: Adapted from Hambrick et al. (2008) and Van Ees et al (2009)

The first two groups of studies - economic and legal perspectives - focus on the formal structure of the firm. The main theory used in this group of studies is the Agency Theory, which describes contracts between principals (the owners) and agents (the top management) (Jensen and Meckling, 1976). The theory assumes that the actors make rational decisions and are motivated by self-serving reasons. The benefits of the agent do not coincide with the benefits of the principal, so the principal suffers from information asymmetries. According to this theory, the role of the board of directors is to create a formal incentive and monitor/control mechanism in order to protect the benefits of the principals (Fama and Jensen, 1983). The empirical research within these categories therefore focuses on examining the relationships between the various board structures (e.g. board independence, board composition, and chairman-CEO duality) and the performance of the firm (e.g., Rhoades, Rechner and Sundaramurthy, 2000; Randy and Nielsen, 2002) as well as the design of corporate governance regulations for monitoring the relationship between the firm and its external stakeholders (e.g., Kirkbride and Letza, 2004; Monks and Minow, 2008).

The third and fourth groups of studies, power and social network perspectives, deal with informal structures and interactions between board members and other internal/external actors. Theories used by this group challenge the concept of the agency theory, for example, the stewardship theory assumes that the motivation of the actors is altruistic (Donaldson and Davis, 1991; Davis, Schoorman and Donaldson, 1997). The empirical studies in these groups focus on examining conditions that are influential in cooperation and conflicts between boards of directors and CEOs; the internal power within the board and actors' characteristics (e.g. CEO tenure, social ties,

demographic similarity, and the timing of directors' appointment) that affect the power structure within the organization. (e.g., Westphal and Zajac, 1995; Westphal, 1999; Westphal and Bednar, 2005); the power relation and the linkages between the firm and other institutions; the effects of the relationship on the board processes and outcomes. (e.g., Richardson, 1987; McDonald, Khanna and Westphal, 2008).

The fifth and sixth groups of studies, the social psychological and symbolic management perspectives, deal with the decision-making behaviour and process in the boardroom (Huse, 1998; Pye and Pettigrew, 2005) and the influence of the external context and actors on the board of director's decision making process and the decision making itself. The theories used by this group are identity and social identity theory, cognition and small group decision making (Rindova, 1999; Van Ees, Van Der Laan and Postma, 2008) as well as institutional theory (DiMaggio and Powell, 1983). The empirical studies in these groups place emphasis on the factors and rationales influencing the decision making process and the decisions of the board of directors' to be biased (e.g., Westphal and Fredrickson, 2001; Zahra and Filatotchev, 2004) and the influence of social contexts that affect a board's decisions and behaviour (e.g., Carpenter and Westphal, 2001, Zajac and Westphal, 1994).

3.3.2 Direction of the research on boards of directors

Research relating to Boards of directors has been dominated by the economic framework, particularly the 'agency theory'. However, the results of the studies are both different and also ambiguous. This is due to the fact that some of the results are not in line with the theories, thus the traditional concepts, theories and research methods have been criticized and challenged by new theories. As a result, there have been calls for new directions in the research (in terms of research agendas, theoretical

framework, and research methodologies) (Daily et al., 2003; Gabrielsson and Huse, 2004; Davis, 2005; Roberts et al, 2005; Hambrick et al., 2008; Van Ees et al., 2009; Ryan et al., 2010; and Huse et al., 2011).

New research topics: from formal structure to behaviour structure and process

Most of the traditional research topics studied the relationship between various board structures and the firm's financial performance, called by Gabrielsson and Huse "input-output studies" (Gabrielsson and Huse, 2004). These research topics have been criticized as containing 'a black box' (Daily et al. 2003; Gabrielsson and Huse 2004; Hambrick et al. 2008) because these studies were based on unquestioned assumptions relating to board motivations and behaviours, while neglecting board processes, which serves as a link between input (board structures) and output (firm performance) (Pye and Pettigrew, 2005, Ryan et al, 2010). The trend of the research topics on boards of directors is to study board behaviour and processes more in order to understand the factors and conditions favorable to board effectiveness (e.g., Pettigrew, 1992; Huse, 1998; Zajac and Westphal, 1998; Forbes and Milliken, 1999; Huse, 2005; Leblanc and Schwartz, 2007).

New theoretical frameworks: From agency theory to multi-theoretical approaches

The agency theory, the dominant theoretical framework for board research, has been criticized relating to various disputable assumptions, i.e. actors may not always make rational decisions (Cyert and March, 1963; Argote and Greve, 2007; Ocasio, 1999; Osterloh et al., 2001; Hendry, 2005), the agent may not seek self-benefits only, (Aguilera et al, 2007), principals may not have homogenous interests (Aguilera et al, 2007; Aguilera, 2005; Hambrick et al, 2008), the influence of other actors on board of

directors' behaviour as well as on the firm's performance are neglected and the other roles of the board of directors apart from monitoring the manager are neglected. Criticism of the agency theory, therefore, has generated a number of board studies that offered alternative theoretical frameworks (Zingales, 2000), such as stewardship theory, resource dependency theory (Pfeffer, 1972; Pfeffer and Salancik, 1978), social capital theory (Kim and Cannella, 2008), identity and social identity theories (Ashforth and Mael, 1989; Aguilera et al, 2008; Hillman et al. 2008; Huse and Rindova 2001), team production theory (Blair and Stout, 1999; 2001; Kaufman and Englander, 2005), behavioural theory of the firm (Cyert and March 1963), behavioural theory of boards (Huse et al. 2011), etc. However, the trend is that research into boards will use multi-theoretical approaches because some alternative theories are complementary and not in competition with the agency theory.

New research methodologies: From empirical dogmatism to different research methodologies

The traditional board studies have been criticized for using dogmatic research methodology which relies on using standard methods, archival data about the board, and samples concentrating on large firms in the United States. So, scholars have proposed several different research methods, such as, qualitative studies and processual analysis. Primary data, obtained by interview, surveys, participatory observation, etc., have also been used widely. There is also a trend to make use of samples from other types of firms and also from firms outside the US (Grabrialson and Huse, 2004; Huse et al., 2011).

3.3.3 The concept of board's motivation in the various streams of board research

The behaviour and motivation of directors is not a focal point of the board research but it is attracting more attention, especially among the non-traditional research streams that use the behavioural theoretical frameworks as a reference in their studies.

According to the economic perspective, there is a strong assumption that the individual director has a rational optimizing behaviour. The roles of all non-executive directors in a firm are assumed to protect the interests of the shareholders from the self-serving behaviour of the manager (Fama 1980, Jensen and Meckling 1976). The directors' motivation is assumed to be a constant exogenous variable and extrinsic in nature, which implies that board behaviours can be encouraged by making use of extrinsic motivation, such as a financial reward (Deci and Ryan 1985, Fehr and Gächter 2002; Osterloh and Frey 2000).

The assumption regarding roles and motivations of non-executive directors causes the question to arise as to whether or not the independent directors are agents like the manager; why it is believed that the independent directors are motivated to protect the interests of the shareholders, (Hendry, 2005) and why the independent non-executive directors would try to protect the interests of the shareholders even though they did not receive much return from doing so, while their responsibilities were rather high (Wiesenfeld et al. 2008). The assumptions on the board behaviour and motivation in the agency theory were also criticized as being inconsistent with the actual board process, especially in relation to the point that the actors do not always make either rational or optimal decisions. Such an argument has led researchers to use behavioural

theoretical concepts in their studies on motivations and behaviours on the decision making of boards of directors by proposing a concept of human behaviours and motivations which is more sophisticated.

Bounded Rationality

Simon and his colleagues developed the concept of 'bounded rationality' explaining that human decision making is not always rational and optimal because in reality, the processes of decision-making on the boards of directors are rather complicated, since humans have limited knowledge, which is why they are unable to relate all relevant factors neatly and due to which they are unable to process all data well enough to make rational decisions (Simon, 1955, March and Simon, 1958; Cyert and March, 1963). The evolution of the concept of bounded rationality has caused a variety of concepts to originate. Radner (Radner (2000) has categorized bounded rationality into 2 views; i.e., 'Costly rationality', which argues that human decision making is to reach an optimization subject to the limited capability of processing all data and the limited choices they have; and 'Truly-bounded rationality', which explains that human decision making is made by using the decision premise.

The human decision making process is thorough, careful and objective thinking not only for the individual's own benefits but also influenced by cognitive and affective dimensions, including the context and the setting during the time at which the decision is being made. A human decision making process is subject to heuristics, which a lot of times leads to better results compared to decision making made by optimization. However, it could also lead to systematic bias (Kahneman and Tversky, 1979; Nisbett and Ross, 1980; Fischhoff, 2002; Gigerenzer and Selten, 2002), Hendry, 2002; Foss, 2001).

Concepts on board motivation in the bounded rationality model are more complicated than those in the traditional theory which assumes that human motivation is a single exogenous given, and that is self-interest. For directors who have high income and who have met their materialistic needs, their motivation is not only financial reward. However, this group of people also have higher intrinsic job satisfaction (Hendry, 2005). Concepts on motivation present in the bounded rationality model are varied and the interaction of different motivational forces still cannot be clearly understood (Selten, 1999). For example, Herbert Simon's bounded rationality model assumes that human motivation is exogenous and unselfish. Osterloh, Frey, and Frost (2001) argue that motivation is a variable endogenous to management and they propose a dynamic relationship between extrinsic and intrinsic motivation (crowding theory). Osterloh et al. state that extrinsic motivation mentioned in the agency theory (e.g. contingency of reward upon performance and commands and control) will cause a negative influence on intrinsic motivation (crowding-out effect) (Deci, 1971) while external factors will have a positive effect on intrinsic motivation (crowding-in effect), which is comprised of interest in the activity, personal communication and relationship, participation and message conveyed.

Satisficing

'Satisficing' is another behavioural concept used in the research on boards (van Ees et al, 2009). This concept explains that when facing a problem which needs to be solved within a limited amount of time, actors will not maximize but rather satisfice, meaning actors will choose the solution that is most satisfying or the choice is made intuitively (or it is called 'problemistic search') (Cyert and March, 1963), instead of looking for the optimal solution, which would take too much time and effort. The

concept of satisficing has been used in the study of the roles of the board of directors by Hendry (2002), which explained that the work situations of boards of directors and managers in companies might not all be the same as in the assumptions of the agency theory because the agent not only has self-interest but also has honest incompetency. As a result, when the manager makes any mistake, the board should solve this problem by giving the manager time and opportunity to learn. The roles of the board of directors, apart from monitoring, include them giving guidance and training as well (Hendry, 2005).

In the 'satisficing' concept, motivation is one of the factors influencing decision making behaviour. Krosnick, Narayan, and Smith (1996) indicated that there were three regulators of satisficing: firstly, task difficulty, which means the difficulty of solving the problem and the familiarization of the actors with the problem; second, performance ability, which means the ability to recall necessary data and information useful for solving the problem; and third, motivation, which is the determination of the actor to find the best solution. Under time constraints as well as the limitation on cognitive ability and competence, the decision making process of the actors is usually determined through simple reasoning. Decisions are influenced by past experiences of the organization as well as the personal goals and motives of the decision maker. However, the process of search and change will make the organization learn and thus will lead to some improvements in the organizational decision making (Gavetti, 2012).

However, the understanding of the board members' decision making process is rather limited, for example, the relationship between cognition, emotion, and motivation. At a certain point in time, a person may have varying types of motivation and the way they relate to one another will determine how they influence the decision

making of that person. Studies on corporate governance have a tendency to use behavioural economics to study the behaviour of the agent a great deal. Pepper and Gore (2015) have developed the model on agents' work motivation, which relies on expectancy theory. The structure of the model is comprised of the agent's work motivation, which has an influence on the job performance of the agent, and the performance ultimately has an impact on the reward achieved. An agent's work motivation is also influenced by extrinsic motivation, intrinsic motivation, loss, risk & uncertainty aversion, time discounting, inequity aversion, goal setting, and contracting & monitoring. Applying the concepts of behavioural economics to studying the manager should be beneficial in the study of the motivation of the board.

Routines

Van Ees et al. (2009) introduced another behavioural concept that is used in board research, ie., 'routines.'. Routines is the "performance programs" (March and Simon, 1958) or the "standard operating procedures" (Cyert and March, 1963)) which were developed throughout the entire life of the organization. Routines is the compilation of all organization memories, which are comprised of past experiences, knowledge, beliefs, values, competency of the organization and the decision makers (March and Simon, 1958; Cyert and March, 1963; Nelson and Winter, 2003). There are a number of research studies that have confirmed the above-mentioned proposal. For example, Ocasio (1999) studied the influence of formal and informal rules on the selection process for CEOs and found that the board of directors made use of the older modes of operation and formal internal labor markets to choose the CEO. Papadakis, Lioukas, and Chambers (1998) in their study found that decision rules had a greater influence than the characteristics of top management or contextual factors on strategic

decision making. Nonetheless, elements of motivation could not be found in this behavioural concept.

Political bargaining

Political bargaining is a concept relating to the group decision making process which has different preferences and objectives. The concept arose from the argument against agency theory, which considers only the relationship between two homogeneous interest groups, including the owners/shareholders and manager, in spite of the fact that firms have a number of stakeholders and each group of stakeholders (or even within one group) has different interests (Aguilera et al, 2007; Aguilera, 2005; Hambrick et al, 2008). Board members tend to have different goals because they are motivated by various groups of stakeholders (Berrone and Gomez-Mejia, 2009). As a result, the decision making behaviour of the board of directors as well as how they solve problems pertaining to goal conflicts are more of a political negotiation and bargaining rather than making use of economic incentives in order to obtain objective alignment (Huse and Rindova, 2001).

Collective identity

Collective identity is a concept and tool which is used to study the magnitude and direction of the motivation of the board of directors. Collective identity comes from humans' need for identification, meaning the need to maintain social identity that comes from being a member of a specific social group (Glynn, 1998, p.238). The above-mentioned need will motivate a person to be a part of the group, which in turn causes the individual to have concern for what benefits the group as well as to

contribute to the group in order to gain self-worth (Mignonac, Herrbach and Guerrero, 2006).

The study on board motivation that used the concept of collective identity arose from the argument against traditional corporate governance theories. For example, the agency theory makes the assumption that outside directors have an equal motivation to protect shareholders' interests (Fama 1980, Jensen and Meckling 1976) whereas the resource dependence theorists assume that outside directors will use their resources to benefit the firm. These assumptions and beliefs will not be true unless they are in line with the director's identity and identification with the firm or board. Hillman et al (2008) argued that a director who has a strong identification with the relevant board identities will be enthusiastic in monitoring the manager or provide resources for the board. On the other hand, the board members who have no or little identification may not be enthusiastic about taking up that responsibility.

Group norm

A norm is a common belief of a group that brings about the expectation of certain behaviours of the members of that group. Norms usually have an impact on the behaviours of members of the group or society, especially members of the group who have an interdependent relationship, such as boards (Wageman, 1995). Studies on boards of directors have started to use the concept of norms to study the board members' motivation. For example, Frobs (1999) has created a model explaining the relationship between the board characteristic variables and the firm-level outcome variables by using the board process variables and board-level outcome variables as linkage variables between the first two groups. Frobs (1999) has set variables relating to the board's motivation, i.e., effort norm (effort is "a product of motivation" (Kanfer,

1992; Wageman, 1995)) as one of the board process variables. Such a model is based on the argument that strong effort norms would cause an individual member to apply more effort to do his or her group tasks, which would then lead to better group performance (Steiner, 1972).

Social dynamics

Social dynamics is a state where the effects of the relationship and the interaction within the group has an influence on the decision making of the members of the group, thus making individual members unable to make autonomous decisions (Moore and Lowenstein, 2004; Moore et al., 2003). Board members may make decisions and engage in behaviours that are favourable to other members of the group or the CEO because of the social and psychological interdependence among themselves (Gwilliam and Marnet, 2010). The social dynamics within the group will motivate members to reach a consensus that may impede opinions that are different from the majority. On the other hand, it can also lead to more polarization (Janis, 1972; Myers, 1982; McHoskey, 1995). Both of the situations will have negative effects on the quality of the decision making of the board.

3.3.4 Conclusion and Discussion

The overall survey of the research on boards of directors can be concluded as follows:

(1) The mainstream research on boards of directors has a knowledge gap, leading to calls for more studies on board behaviour and processes to be conducted. Board motivation is another topic on which further studies have been called for (Grabrialson and Huse, 2004).

(2) Even though there are suggestions for new types of studies non-traditional studies on board and corporate governance are still in an embryonic stage. There are only few research studies and the research approaches, theories, methodologies are still varied, unrelated and inconsistent (Grabrialson and Huse, 2004; Huse, 2005). The theoretical frameworks are unrelated, therefore there is no consistent theory that can be a solid alternative to replace the agency theory. Research studies that did not make use of samples of large corporations in the U.S. are still limited and rather scattered (Huse, 2000).

(3) The concept of board motivation is not the focus of research on the boards of directors although the concept of board motivation has gained more interest in the research studies on board behaviour, yet the number of empirical studies on board motivation are still limited and most of them are only at the stage of debating concepts.

3.4 Empirical studies on the relationship between board motivation and the firm's performance

The scope of literature survey on this topic focuses on the empirical studies relating to the Board Members' motivation and its relationship to the performance of the firms they serve, including both non-profit and for-profit organizations. The literature surveyed can be classified into four main groups based on type of motivation. The first group involves investigating the multiple dimensions of motivations of Board Members. The second group focuses on the relationship between Board compensation and the firm's performance. The third group focuses on the impact of the Board's reputation on the number of directorships of each Board Member. The last group focuses on motivation to conduct board tasks.

3.4.1 Multiple dimensions of motivation

Most research on the motivation of directors in Non-Profit Organizations is based on theories and research methodologies that are used in studies of volunteers. The analytical frameworks for a Board's motivation used in those studies are multi-dimensional. The research was focused on questions as to why individuals would want to serve on a Board of Directors, what variables are predictors of each Board's motivation, and how do a Board's motivations affect Board performance since recruitment and the retention of volunteers, particularly to and on the Board of Directors, is a critical issue of Co-operatives and Non-Profit Organizations all over the world (Ward and McKillop, 2011).

By using an incentive barrier-model as the analytical framework, Widmer (1985) argued for the motivation of individuals to become Board Members in non-profit organizations. Incentives motivate individuals to participate by creating expectations about valued outcomes. Outcome values consist of material incentives (money, goods and services), and social (friendship, social status, honor), developmental (skills, training, experiences), and ideological (satisfaction, gratification) incentives. The researcher used questionnaires, interviews, and observations in order to collect data from 89 Board Members of the ten human service agencies located in New York. The simple descriptive statistics (percentage and mean) are used as analytical tools and the research result suggested that the incentives which motivate individuals to make a decision to become Board Members are complex and various; however, the ideological incentive seems to have the highest mean rating. Some Board Members receive enough incentives, but some do not. Only a few Board Members that join Board of Directors are motivated by specific policy outcomes and

Board Members who represent different agencies have different motivations. However, the test scores of different questionnaire items (which were categorized in the same group of incentives) may not be consistent and the simple descriptive statistics have limitations in measuring the internal consistency of the test scores.

Farris et al (2009) used survey questions to examine the motivations of volunteer county-level Board Members. Data was collected from 212 Board Members in 15 selected County Extension Boards in Indiana. The finding was that two-thirds of the respondents described their motivation to serve on the Board as an understanding that their service was benefiting the community. However, over 75% of the respondents perceived that they receive personal benefits from volunteer work, such as increased knowledge, increased awareness, increased satisfaction and better relationships. This research finding is lacking in generalization because of the homogeneity of survey participants in terms of age, ethnic background, and the type of Board they serve on. The simple descriptive statistics used in this research have limitations in identifying which motivation is the most influential for the Board Members.

Prouteau and Tabaries (2010) questioned why Board Members participated more than general members did, and what the difference in motivation between these two groups was. They used a set of secondary data set that was surveyed by the MATISSE team, including numerous aspects of nonprofit work and volunteers throughout France. Data about the participants' motives or their reasons for giving time were regrouped and analyzed. The research found that Board Members in nonprofit organizations are driven by activist motives and they are more likely to have self-efficacy than a general member. The advantage of this study is the sizable samples covering several groups of volunteers and non-volunteers that work for several sectors

of non-profit organizations throughout the country. However, the secondary data used may not include data about other important motivators. It may be appropriate to compare the characteristics, behaviours, and motives of different groups of people, but this may be unfit for the study of the motivation of Board Members alone. Moreover, regrouping of the data may be subjective, without checking the consistency of different items of data.

In order to avoid the problem of internal inconsistency of test score, Searle (1989) developed a sixteen-item scale: a tool used to assess the needs of Board Members in municipal recreation programs, based on the needs theory, social exchange theory, and expected roles of Board Members, and factor analysis was used to examine the correlation of the test score. The result supported four factors; growth (learning, development, and achievement at work), responsibility (satisfaction of ambitions, career opportunities, interaction with decision makers, and increase in responsibility), contribution (opportunity to participate and make a difference), and recognition (receiving appreciation and attention from others).

Searle's needs instrument was developed by Inglis (1994) in order to assess the needs of 263 executive directors and volunteer Board Members in 41 organizations located in a Provincial Sport Center in Toronto, Canada. The instrument was refined by including social relations aspects of the individuals' participation on Boards. Cronbach's alpha was used to estimate the reliability of the test score. The result supports five factors of growth: responsibility, contribution, recognition, and relations (the personal and professional social interactions of meeting and working with others).

Inglis and Cleave (2006) also developed a framework for identifying voluntary Board directors' motivation within non-profit organizations, building on Searle's

(1989) and Inglis' (1994) works on Board Member motivations and Clary et al.'s (1998) work on the motivations of direct service volunteers (which include six functions for volunteers: values, understanding, social function, career, protective function, and enhancement). Factor analysis of the data, sampling from 220 respondents of 50 nonprofit agencies in various sectors, support a framework consisting of the following components: "developing individual relationships", "enhancement of self-worth", "helping the community", "learning through community", "self-healing", and "unique contributions to the Board".

Searle's, Inglis', and Inglis and Cleave's studies focused on developing a framework or tool for identifying voluntary Board directors' motivation, so they focus on estimating the reliability of the test scores of different questionnaire items. However, the studies did not consider what factors could be predictors of motivation and how the motivations affect the effectiveness of the individual and group, and also organizational performance. The findings of these researchers are also lacking in generalization because the samples were limited to only some kinds of organizations located in a restricted area.

Trogdon (2005) utilizes Silverberg et al.'s (1999) modified Volunteer Functions Inventory (VFI) to identify Boards' volunteer motivations. The instrument was developed by expanding Clary et al.'s (1996) VFI (six motivations) to include: knowledge (knowledge of government operations), benefits (as known by the Board volunteers), and needs (organizations need help from the Board volunteers). Cronbach's alpha was used for confirmation of the instrument's reliability. Data was collected from 291 citizen Board Members of the 80 Parks and Recreation departments in North Carolina. The single sample t-test statistic was used for determining which of

the motivator values (mean) are statistically significant above the midpoint of four (midpoint of a 7-point Likert Scale: 1=not at all important/accurate for you; 7=extremely important/accurate for you), and the result supports four important motivators: values, knowledge, understanding, and needs. In addition, multiple regression analysis and a two-sample t-test were used to determine which demographic variables could predict each volunteer motivator. The result shows that age and race/ethnicity (minorities) have a positive relationship with the values motivator. Citizen Board Members, who are members of the association, have a higher average of motivators than non-members. The study focuses on identifying the Board's volunteer motivators and the predictors of these motivators. However, it still did not study how motivation affects Board effectiveness or organizational performance. A quantitative methodology with many statistical techniques was used in this study in order to avoid unreliable and subjective findings. Although it provides a broad view of motivations for Board Membership and their predictors it was not able to provide the in-depth reasons why individuals serve on Boards.

Education Boards are another type of Board of Directors that is similar to the Boards of Co-operatives in some respects, especially in that the Board Members of both organizations are recruited by election. A number of studies have addressed the relationship between school Board Member motivation and the performance of the Board. Gross (1958) attempted to characterize a well-motivated and a poorly-motivated school Board Member. He used a checklist of motives to ask 508 school Board Members and 105 superintendents in Massachusetts. However, he utilized only the data collected from the superintendents, because he felt that the Board Members' opinions were not objective. According to the superintendents, the result was that well-motivated

Board Members were those who were motivated by civic duty, and badly-motivated Board Members were motivated by the intention to represent some group or a desire to gain political experience. Gross's methodology could be questioned if the judgment of the superintendents was reliable. It seems that many Board Members may not have expressed their motives directly and superintendents could not understand each Board Member's motives thoroughly. Besides, superintendents' designation about good or bad motives may be too subjective because the linkage between the Board Members' motives and the interest of the schools and all the children in the community was in question.

Gross studied the effects of the motives on the operation of a school Board. Gross used the superintendents' rating to assess the conformity of school Boards to twelve professional standards which were considered as representative of good administration, such as "taking full responsibility for decisions" and "appointing only teachers nominated by the superintendent." He found a positive relationship between the proportion of members motivated by civic duty and the conformity of the Board to professional standards. This finding may be invalid because the two sets of data came from the same single source. The superintendent's rating was utilized to measure both motives and conformity to professional standards. It was impossible for a superintendent to rate a Board Member as well motivated and low in professional standards.

Gross also conducted a study of indexes that distinguished between well-motivated and badly-motivated Board Members including members with children, religious affiliation, sex (gender), income level, level of education, age, activity in politics, number of years on the Board, level of satisfaction, size of the school system,

community economic type, and prestige of the superintendent. The results indicated a positive correlation between Board Members who were well-motivated that had children, and had worked on a Board for a long time, and had come from closer communities (such as 'open town meeting' communities, residential communities, and smaller school districts). However, occupation, level of education, and income level were not good indicators for measuring the acquisition of well-motivated members.

Taylor et al. (1991) studied the relationship between Board effectiveness and motivation factors for trustees who join and work on private college Boards. Data was gathered from interviewing thirty-six trustees from ten campuses in the USA. Six Board competencies (including: understands institutional context, builds capacity for learning, nurtures the development of the Board as a group, recognizes complexities and nuances, respects and guards the integrity of the governance process, and envisions and shapes institutional direction) were developed by synthesizing the elements of effective trusteeship mentioned in the interview records. By using the set of competencies and a numerical rating system, each interview was assessed by the research team for evidence of Board effectiveness. Kendall's coefficient of concordance was then applied to the data in order to test for consistency. However, the Board competencies may not be good proxies for measuring Board effectiveness. High competencies of Board Members may not always contribute to high Board effectiveness because there may be other factors that hinder the Board's effectiveness.

The researchers also identified motivations for joining the Board by using the concepts of Widmer (1985), Foa (1971), and Wilson (1973). The motivational framework of Foa (1971) consists of love ("affectionate regard, warmth, or comfort"), status ("an expression of evaluative judgment which conveys high or low prestige,

regard, or esteem"), information ("advice, opinions, instruction, or enlightenment"), and services ("involve activities which often constitute labor for another"). The conceptual framework of Wilson (1973, pp. 33-35) assumes that individuals decide to join because they are motivated by hoping that they will receive intangible non-economic returns of three types: specific solidary ("rewards arising out of the act of associating that can be given to specific individuals"), collective solidary ("rewards created by the act of associating that must be enjoyed by a group if they are to be enjoyed by anyone"), and purposive ("satisfaction of having contributed to a worthwhile cause") returns. Data were also gathered from asking the trustees (divided into members of effective Boards and members of ineffective Boards) two questions about their motivation to serve and their sources of satisfaction. The percentages of responses were classified according to the above three frameworks, their connections, and the extent of trustee identification with the institution (as reflected in the reasons given for agreeing to join the Board).

The result of the study did not find any differences in motivation between the members of effective and ineffective Boards. However, effective Boards consisted of trustees that had a relationship with the college prior to becoming Board Members. So they proposed a new motivational model to distinguish which Board Members were more effective based on the extent of the Board's identification with the institution. According to the research methodology, the interviewers might have received biased answers because the respondents might have tried to make themselves look good, so most respondents answered that their motivation to serve on the Board are ideological.

Alby (1979) studied the motivation of citizens to participate in school Board service. Data was collected from interviewing 51 participants (Board Members and

superintendents) from eight schools located in Wisconsin and the data was utilized by content analysis. The results (as a percentage of respondents) suggested that dissatisfaction, recruitment, and civic interest were the primary motives for the citizens' involvement in school Board service. Board Members and superintendents suggested that the leading motives for Board Membership were civic interest and responsibility. The researcher found that the motivations for Board service were related to community-related factors (such as: size, social and cultural composition, and community consolidation), but no relationship was found between motivation and sex, age, level of income, educational level and occupation. Alby also found that the higher the degree of intensity of the Board Members' motives of each Board, the more it affected the Board's operations. The qualitative methodology used in Alby's work provides in-depth answers to the questions surrounding the reasons why citizens serve as school Board Members. The two sources of data gathering from Board Members and superintendents provided room for rechecking the bias of each. Because of the methodology using a small sample, however, the question may arise if the study provided reliable findings.

Bentley (2006) studied the motivation of individuals in becoming school Board Members. The researcher constructed a theoretical framework from Cavalier's (2000) Triarchic Theory of Motivation. The theory includes three system parts: the formative motivational system (consisting of all developmental experience bearing upon the present state of the organism), the operational motivation system (including all current awareness, evaluation, judgments and decisions), and the thematic motivational system (including the directional activity of the person in terms of life purpose, goals, and ultimate values in living). The result suggested that the important motivations were the

extrinsic motivations. A new Board Member would be recruited by existing Board Members, the superintendent, or influential members of the community. The contribution of this study is the distinguished qualitative methodology, especially the interview protocol. Superintendents were interviewed in order to reexamine Board Members' opinions. However, the methodology with a small sample (only five Board Members were interviewed) may lead to subjective findings.

Research on the motivation of Co-operative Board Members using a multi-dimensional framework is very much less common. Only two studies were found, that of Ward and McKillop (2011) and Guerrero and Seguin (2008). Ward and McKillop studied the motivation of volunteers in credit unions. The researchers used survey questions to determine the 17 key motivations, which were categorized into three types. The first is motivation from working as a volunteer (enjoyment, interest, social interaction), the second is motivation from the outcome of volunteering work (altruism, moral duty, need) and the last type of motivation is motivation from increasing human capital value, which is a result of volunteer activities (materialistic gain, egoism). Questionnaires were collected from 433 volunteers, both members (16.4%) and Board Members (83.6%) of credit unions in Northern Ireland. The result showed that altruistic reasons are the most important factor that motivated a person to be a volunteer and to do the volunteering. There was little evidence to support the suggestion that individual volunteers have the motivation to increase human capital value. These findings may be invalid because they were concluded roughly from an average score of 17 items of motivation without estimating the reliability of the test scores of different items.

Ward and McKillop also examined significant differences between the responses in each category according to volunteer characteristics (gender, age,

employment status, education level and volunteer role), by using Tamhane's T and ANOVA tests. The result shows that non-Board Members are motivated to work as volunteers more than Board Members because they are more satisfied than Board Members to work voluntarily. The reason why individuals become Board Members is that it is difficult to find someone else to work as a Board Member. Senior citizen volunteers, retired volunteers, and less educated volunteers were more motivated in carrying out their own role. Volunteers in a small Co-operative were motivated by reasons of necessity (with no-one to substitute or take their place). However, volunteers in middle-sized Co-operatives and in a large Co-operative were motivated more by enjoyment and interest in the work. The researchers thus found that in middle-sized Co-operatives and large Co-operatives that have a large number of employees the volunteer Board Members usually work on organizational strategy alongside managers who will provide additional support and decision making guidance. However, the researcher did not study the relationship between motivation and the characteristics of Board Members separately from non-Board volunteers, so the predictors of the motivation of the two groups were not comparable.

Guerrero and Seguin (2008) studied the relationship between board members' ideologies (altruist and self-interest) and their motivations (need for achievement and need for identification), their involvement in board tasks (involvement in strategic oriented tasks and involvement in stakeholder oriented tasks), and cooperation with other board directors. Questionnaires and group interviews were used to collect data from 691 boards of directors of the financial cooperatives in Canada and the data were analyzed using quantitative statistic tools, such as multiple regression, means, standard deviations and Pearson correlations. The results showed that the self-interest ideology

positively related to the need for achievement but did not relate to involvement in board tasks and cooperation with other board members. The altruist ideology positively related to the need for identification, the involvement in board tasks, and cooperation with other board members but did not relate to the need for achievement. The implication from this finding is that the non-profit board members who are mostly motivated by altruist ideology (according to others studies) would actively perform their board tasks. This study, however, did not explore the relationship between board motivation and the performance of the firm.

From the survey of the studies that used a multi-dimension motivational framework, I remark that:

(i) The amount of research on the motivation of Board Members in Co-operatives is still very small.

(ii) Most research topics focus on the study of motivation in becoming Board Members and the motivation to continue working as Board Members. However, the motivation to participate as a Board Member may not be equivalent to motivation to perform. What is more, the motivation to become Board Members and the motivation to continue working as Board Members are different.

(iii) The study framework that is used is that of difference and variance, though most are based on the Content Theory of motivation.

(iv) There are a number of studies that investigate the predictors of Board Members' motivation. There are some studies that investigate the relationship between Board Members' motivation and Board performance or Board effectiveness. However, I have not found any research that has studied the relationship between Board Members' motivation and organizational performance. In addition, there is no literature that

studies the linkage between the factors influencing Board motivation, Board motivation and the organization's performance.

(v) The research methods used are mostly that of survey questions, questioning a sample of Board Members. The samples used in each study were limited to specific types of Boards in specific types of organizations which were located in a restricted area. This makes the research findings lack a capacity for generalization.

(vi) As for the research study results, some show correspondence, while some show conflicting study results, which may reflect the fact that the motivations of Board Members in nonprofit organizations are more complex. However, most research, according to Board Members' opinions, has found that ideological motives (such as value and civil duty) were important motivators. The question is whether the Board Members' opinions about their motives are biased or not.

3.4.2 Financial incentive

The mainstream Economics concepts of corporate governance research specify that incentives promote effort and performance (e.g. Gibbons, 1997; Lazear, 2000).Agency theorists focus on the role of incentives, such as equity compensation, in motivating directors to engage in Board functions, which makes the firm able to increase the quality of corporate governance and to improve the firm's performance (e.g. Brick, Palmon and Wald, 2006; Boumosleh, 2009; Chen and Li, 2010). Kakabadse and Kakabadse (2001) proposed that to motivate Board Members to improve their firm's operational results, the firm must offer compensation that is suitable. Referring to the Agency Theory, if the Board Members have enough ownership of the firm, they will have benefits that are more similar to the benefits of shareholders, thus motivating the Board Member to increase the monitoring of managers or to become more

independent (Mace, 1986; Patton and Baker, 1987; Hermalin and Weisbach, 1998) because the decisions made by the Board's members will also affect the wealth of the Board itself (Minow and Bingham, 1995).

However, some researchers have argued that compensation alone may not be enough to affect behaviour (Daily et al., 1999; Daily and Dalton, 2002). If considered from a complex psychological viewpoint, the impact of incentives toward performance is still disputed by some researchers, who raise the question whether rewards may cause performance to worsen, or may affect performance negatively in the long-run (e.g. Kruglanski, 1978; Deci, Koestner and Ryan, 1999). Core, Holthausen, and Larcker (1999) suggested that too many incentives given to a Board may cause more self-interest and agency conflict, which will in turn cause corporate governance to worsen. A study of the relationship between extrinsic and intrinsic motivations found that extrinsic motivation (such as monetary rewards) may crowd out intrinsic motivation (Frey and Oberholzer-Gee, 1997; Kreps, 1997; Bénabou and Tirole, 2003). In addition, as considered by institutional theory, the reason why companies use performance-related pay is due to the fact that other companies are using it too and are also building the legitimacy of their own companies in the eyes of important stakeholders, especially institutional investors (Bender, 2004).

There are many empirical studies on the relationship between directors' incentives and firm performance. The related literature can be divided into two groups, which are studying the impact of directors' compensation on firm performance and the impact of firm performance on directors' pay.

1) The first group of empirical studies focuses on the impact of financial incentives on firm performance. Most studies in this group were based on the Agency

Theory, which implies that the higher conformity between CEO or Board Members personal interests and shareholders' interests, the better the performance of the firm. So, the literature focuses on examining the effect of Board ownership on the firm's performance.

McLaughlin (1994) examined the correlation between the level of the outside director ownership (measured the director holdings in each company as median dollar value and a percentage of a director's annual retainer) and company performance (measured as average return on shareholders' equity). A sample of 70 randomly selected large companies in the US was collected from surveys and secondary data. By dividing the companies into quartiles based on the median director ownership, the results showed that a company that provides incentives for directors in the form of shares, pays a higher return to shareholders, and where Board ownership, especially, is at a higher proportion, will have a higher return for the shareholders. The weakness of this study is its methodology. The median dollar value of director holdings may not be a good representative of director ownership in each company because the level of stock holdings of directors in a company is not distributed normally and the ownership structure in a company may differ from the others. The research findings also lack clarity about the causal relationship between Board ownership and performance and the problem of spurious correlation.

McConnell and Servaes (1990) regressed Tobin's q (the ratio of the firm's market value to the replacement cost of its assets) against the portion of shares owned by corporate insiders (officers and directors) for the firms listed on either the New York Stock Exchange (NYSE) or the American Stock Exchange (AMEX). Information on a sample of 1,173 firms for 1976 and 1,093 firms for 1986 was obtained from the Value

Line Investment Survey. The regression result showed an inverted U-shape curvilinear relationship between the above variables. Q increased with increasing insider ownership until it reached 40% to 50% and then Q decreased. The curvilinear relationship was still presented in the modified data, in which each observation of the variable was subtracted with the industry average value for each variable. The researchers also estimated the model by substituting Q with return on assets and found an uneven relationship. The results suggested that there were no spurious correlations from the effect of industrial type and firm performance.

Similarly, Hermalin and Weisbach (1991) estimated the effects of ownership level of directors on firm profitability. Time-series data for calculating shareholdings of Board Members (all shares over which the director had voting power) and Tobin's q of 142 NYSE firms for 1971, 1974, 1977, 1980, and 1983 were gathered from corporate proxy statements and COMPUSTAT respectively. Piecewise linear regressions were conducted to predict both Tobin's q and earnings level by using the ownership levels (which were divided into four regions including less than 1%, 1 to 5%, 5% to 20%, and more than 20%) as independent variables. The q value of each firm was subtracted with mean q for all firms in the same industry in order to reduce the effect of industrial performance on firm performance. The result was that q and earning levels increase with ownership at low levels of ownership, but q decreases with ownership at high levels of ownership. These effects were larger when using lagged values of shareholdings as instrumental variables. When using earnings before interest and taxes as a measure of profitability, the result was similar to the above regressions. The researchers attempted to control potentially spurious relationships between ownership and performance by using time-series data and the instrumental variables approach.

Barnhart et al. (1994) also examined the effect of managerial ownership and Board composition on corporate performance. A sample of 369 firms of the 1990 Standard and Poor's 500 (excluding regulated utilities and financial institutions) were used. The market-to-book ratio of common equity was regressed against managerial ownership (measured as the percentage of shares owned by officers and directors), Board composition, institutional ownership, Board size, R&D expenditure, advertising expenditure, and total assets. They found an inverted U-shape relationship between ownership and firm performance. The researchers also reran the regression model by using the instrumental variables approach but they found no significant correlation.

The studies of McConnell and Servaes, Hermalin and Weisbach, and Barnhart et al. are similar in terms of research topic, sample, methodology, and research findings. The advantage of these works is using various analytical tools and techniques in order to get rid of the effects of other factors in the firm's performance. Nevertheless, the q value (or market value of firm's equity) and directors' shareholdings may not be suitable for studying in other types of organizations whose shares are untradeable and whose ownership structure is different from the corporation.

Payne et al (2009) hypothesized that Board attributes contribute to the effectiveness of corporate Boards and the Board effectiveness contributes to the performance of the firm. They also hypothesized that the relationship between Board ownership and firm performance is non-linear. In order to test the hypothesis, data for 217 Fortune 1000 companies was collected from various types of survey and archival data. A hierarchical multiple regression was used to estimate the effects of the Board attributes (measures of knowledge, information, power, incentives and opportunity/time) on Board effectiveness (self-rating by directors of each Board) and

the effects of Board attributes and Board effectiveness on corporate financial performance (measured as sum of standardized return on assets, standardized earnings per share and standardized return on sales). The evidence supported the hypothesis that most team effectiveness attributes are associated with higher levels of Board effectiveness, and that Board effectiveness is significantly positive related to corporate financial performance. There were no significant relationships between incentive measures (measured as percentage of common stock owned by Board Members and its squared and cubed terms) and Board effectiveness and performance. Measuring Board effectiveness by a Board's self-rating may make the researchers receive unreliable information and result in unreliable findings. However, the contrast between this research finding and the previous studies may reflect the fact that there is no consensus about the relationship between Board ownership and firm performance.

A number of studies examine the impact of Board ownership on the likelihood of critical situations for firms, such as financial fraud or hostile takeovers. These studies hypothesized that directors who possess the company's equity would be motivated to control and monitor management, so the probability of fraud or a hostile takeover will be lower. The studies are also similar in terms of samples used, analytical tools and research findings.

Shivdasani (1993) examined the contribution of Board structure and Board ownership to the incidence of hostile takeovers. A sample of 1158 firms consisted of 505 firms that received takeover bids during 1980 to 1988 (247 received hostile bids and 258 were targets of friendly takeovers) and 653 firms who received no takeover bids. The logistic regressions were used to examine relations between the dummy variables of hostile target firm and measures of Board composition, Board ownership,

firm performance, Board characteristics, and Board CEO duality. The findings were that increased equity ownership by outside directors and by those unaffiliated with management significantly reduced the likelihood of hostile bids. These results supported the claim that the outside directors who owned some company shares would be motivated to have the management inspected more closely, which reduces the possibility of a hostile takeover.

Beasley (1996) investigated the predictors of companies' financial fraud. The sample used was 150 publicly traded firms consisting of 75 fraud firms (which were publicly reported during the period 1980-1991) and 75 no-fraud firms. The logistic cross-sectional regression model was used to test the relation between the dummy variable of fraud firm and independent variables (such as cumulative percentage outstanding common stock shares held by outside directors, proportion of outside directors, outside director's tenure, mean number of additional directorships held by outside directors, Board size, control variables). The result showed that a higher level of outside director ownership in the firm decreased the likelihood of financial statement fraud.

Similarly, Gerety and Lehn (1997) also examined the effect of the structure of Boards on the likelihood of committing accounting fraud. They collected data on the 52 pairs of Boards in offenders and control firms in the year prior to the SEC charges. A logic regression model was used to examine the likelihood of committing accounting fraud against percentage of outside, inside and professional directors, accounting based compensation for CEO, and ownership of the director who possesses the most shares. The result indicated that the probability of account fraud is negatively related to the Board Members' ownership of shares.

Shivdasani, Beasley, and Gerety and Lehn found a contribution of Board ownership to the probability of incidents of bad operating performance. However, this research approach cannot examine how and at what level that Board ownership contributes to better firm performance. The researchers also used director shareholdings as measures of Board incentive, which does not conform to the context of unlisted firms, as noted above.

Some related studies have used measures of Board ownership and firm performance different from the above literature. The research findings, however, support the idea of weak relationships between ownership and performance.

Leech and Leahy (1991) investigated the effect of ownership structure on various company goals. A cross-section data of 470 UK-listed companies or 32% of the Stock Exchange companies was utilized. Six dependent variables, including valuation ratio (VAL) (historical market value divided by ordinary share capital), trading profit margin (TPM), rate of return on shareholders' capital (RSHC), rate of growth of total sales (TSG), rate of growth of net assets (NAG), and salary of the highest-paid director (HDS), were regressed against ownership concentration and other independent variables (i.e. control type, risk, market concentration, the cost of capital, the labor market, life-cycle effects etc.). The researchers found a statistically significant and negative relationship between ownership concentration and VAL, TPM and NAG. They also found positive relationships with TSG and NAG but the relationship was very weak. These relationships between organization goals and ownership concentration may be spurious because firm performance and ownership concentration in the present may be consequences of the firm’s performance in the past. The

ownership concentration is not a good measure of Board incentive in the context of Co-operative firms where their shares are distributed widely.

Vafeas (2000) studied the contribution of the adoption of outside director incentive plans for outside directors on the firm's performance. A sample of 112 US public firms (members of the Forbes 800 list, excluding financial and utilities firms) adopting director incentive plans between 1989 and 1995 and 112 matched control firms (both Forbes and non- Forbes firms) were used. The paired t-test and the Wilcoxon signed ranks test (two-tailed) were used to test differences in performance (measured as annual change in abnormal return on assets (AROA = the firm's ROA – control firm's ROA), annual changes in asset turnover and the return on sales) between adopting and control firms and in tests of changes in performance around the adoption of such a plan. The result was that there is no significant link between the adoption of the director incentive plans and improvements in operating performance. The adoption of an outside director incentive plan reflects attempts to align Board Members' interests with the interests of shareholders. But the adoption is vague in terms of the amplitude of its effects on the directors' motivation because of diversification in the incentive packages of each firm. There are also other factors that affect the impact of adoption of such plans on firm performance. For example, the adopting of the incentive plan will contribute less to the performance of a firm with a small proportion of outside directors.

The samples used in the studies above are concentrated in US and UK large corporations. There are few studies that used samples of small and medium firms outside the US and UK, and other types of organizations.

Koufopoulos et al. (2008) examined the effect of the ownership of the director on the performance of firms in Greece. Data was collected by extensive questionnaire

mailing to 27 chairmen chosen from 161 corporations listed in the Athens Stock Exchange (ASE) during 2003. Spearman correlation was utilized to examine the correlation between share ownership of the chairman and organizational performance (measured as ROA, after-tax-return on sales, total sales growth, overall performance and success, and the firm's competitive position). The result showed that the ownership of shares of the chairman related positively to the return on total assets. Given the small sample, the research finding is potentially lacking in generalization. The ownership measure as shareholdings of the chairperson may not represent Board ownership because the chair people of each firm have different statuses (the biggest shareholder, minor shareholder, or outside director). Collecting the data from only one source may reduce the credibility of the data and research findings. The methodology used for analyzing the relationship between ownership and performance might not explain the casual relationship and spurious correlation. The ownership measure, the shareholdings of the chairperson, does not appear appropriate for measuring financial incentives in the case of Co-operatives, where the ownership structures differ from corporations.

Uadiale (2010) studied the impact of Board ownership on corporate financial performance. Information on 30 Nigerian listed companies (excluding financial services and regulated utility companies) for the period 2007 year end was collected from the company's annual reports. The measures of the firm's financial performance, consisting of return on equity (ROE) and return on capital employed (ROCE), were regressed against the measures of Board ownership (measured as a proportion of total equity owned by directors). The researcher found a negative relationship between the directors' ownership of shares and the firm's financial performance indicators (ROE). Uadiale's work also has a problem similar to that of Koufopoulos, such as a small

sample, the problem of spurious correlation, and the problem of using shareholdings as a financial incentive measure.

2) The second group of studies focuses on the impact of firm performance on directors' compensation. The literature in this group assumes that if the impact of firm performance on the Board's compensation is positive, the Board Members would be motivated to perform better. There is empirical evidence supporting the suggestion that directors get higher benefits from high firm performance.

Conyon and Leech (1994) investigated the effect of the company performance on the top director compensation using a sample of 294 UK listed companies between 1983 and 1986. The growth in salary plus bonus of the highest paid director in a company was regressed against the lagged variables, including shareholder wealth, growth of shareholder wealth, change in sales, and change in industrial performance. The finding was that there was a positive relationship between change in pay and change in past firm performance but the link was very weak (the elasticity of pay with respect to performance is only 0.00059). The effect of lagged company sales on change in top pay is stronger (elasticity is about 7 percent). However, using salary plus bonus of the highest paid director of the Board did not represent the compensation of the whole Board, since the highest paid director is usually the CEO, who works as a full-time employee with different roles compared to other Board Members. The salary plus bonus also does not cover all benefits that the Board received from the firm. Nor do the compensation measures reflect the alignment of the Board's interest and shareholders' interest. Furthermore, using these measures of firm performance and Board compensation in the research on other types of organizations does not seem appropriate.

Conyon (1998) examined the determination of the growth in directors' pay of a sample of large companies in the UK during 1986 to 1994. Data were obtained from the Datastream international including 184 companies from the top 1000 largest companies. The change of directors' remuneration (salary, bonus and benefits) was regressed against pre-dated company shareholder returns, pre-dated average industry returns, and company size (total employment). The econometric evidence showed that directors' pay is positively and significantly related to company performance and size. But the relation between size and pay appears stronger than the performance-pay relation. The limitations were that the only data available was direct emoluments including salary, bonus and benefits of the highest paid director but excluding share options and equity holdings and remuneration of the entire Board.

In order to investigate the determinants of all items of Board remuneration, Main et al (1996) examined the relationship between total Board remuneration and company performance. A sample of 60 British companies was obtained from 3 sources of datasets including the Register of Directors' Interests, the London Stock Price data base, and Datastream. The rate of change in Board emoluments (salary and bonus) and total Board remuneration (measured as the sum of the emoluments and the change in value of option holdings) were regressed against the company stock market performance, overall sector stock market performance, and the change in company turnover (sales) in the past. Three sets of data on director remuneration were tested including CEO's, the highest paid director's and the entire Board remuneration. The result showed there was a statistically significant relationship between total Board remuneration and company performance. The options component produced a more performance-sensitive remuneration package. This literature used variables covering

both short-term and long-term remuneration received by Board Members. However, the regression models excluded some variables that may affect director pay such as the past firm performance.

Buck, Bruce, Main, and Udueni (2003) studied the determinants of total executive rewards including Long Term Incentive Plans (LTIP) valuations. A cross sectional of dataset for 1,602 directors (CEO = 287 and non-CEO = 1,315) in 287 nonfinancial companies in the FTSE-350 was collected from the companies' annual reports and interviews. The log of total rewards (comprising flows of salary, bonus, benefits, pensions, dividend income and changes in value of stock holding) was regressed against total shareholder return and other control variables. The result showed that increasing 10 percentage points of TSR produces increases of 15.5 per cent for executive rewards. The absence of LTIP reduces this sensitivity to 19.9 percent. This research result is different from Main's finding in terms of the effect of firm performance on the director's long-term remuneration. These different findings may be due to the different measures of Board remuneration used or the effect of other factors that were not included in the models, especially firm performance in the past. There are questions that should be further explored, including which type of Board remuneration is affected by firm performance the most, which type of Board remuneration contributes to the firm performance the most, and what is the cause and what is the effect.

Yermack (2004) studied 3 types of incentives including compensation, replacement, and additional directorships that are received by outside directors. Data was collected from company proxy statements including a sample of 734 outside directors of Fortune 500 companies between 1994 and 1996. Pay-Performance

Sensitivity was measured as a proportion of the remuneration (cash, restricted stock awards, and stock options) received by each director during the first five years of service per $1,000 change in shareholder wealth. The result showed that directors' wealth increases 11 cents per $1,000 increase in firm value. Although Pay-Performance Sensitivity confirms the relationship between directors' wealth and firm performance it does not indicate the causality.

However, some of the empirical research on the relationship between Board compensation and firm performance does not give a clear confirmation that there are positive relationships.

Gregg, Machin and Szymanski (1993) examined the relationship between Board compensation (salary plus bonus) of the highest paid director and the performance of 288 large UK companies during the 1980s and early 1990s. The log of directors' remuneration was regressed against previous-period performance, which was measured as either returns to shareholders (dividends paid and the change in share price) or earnings per share. The finding was that the appreciation of directors' remuneration was very weakly linked to firm performance. However, the data used in this study was collected in a recessionary period so the relationship between pay and performance may be different from the studies conducted in a normal period. Also, using salary plus bonus as a measure of Board compensation did not cover all types of Board financial compensation.

Cordeiro et al. (2000) investigated the determinants of outside director compensations by using data on 200 large U.S. corporations in 1996. Outside director compensation measures (including total compensation, cash compensation, and stock compensation) were regressed against measures of firm performance (including stock

return, projected 5-year earnings per share growth, firm reputation), director effort (including sales per director, diversification per director, number of Board meetings, and firm growth rate), monitoring (including number of security analysts, institutional stockholdings, and 5% block-holdings), CEO compensation, and control variables (inside ownership and firm size). They found that the total compensation of outside directors was not statistically linked to stock return and earnings per share. However, there is a positive significant relationship between the compensation and the other measures equivalent to the firms' performance, such as sales per director, firm growth rate, and the firm's reputation score. This research result reflected how the determination of Board compensation does not only depend on the increase in stock price or dividends, but it may result from consideration of other indications of firm performance.

There are some related studies which used different measures of firm performance, such as accounting measures and receiving a takeover bid. The contributions of the measures of firm performance on Board remuneration were also ambiguous.

Dogan and Smyth (2002) examined the determinants of Board compensation in Malaysian listed companies during the period 1989 – 2000. They regressed measures of Board pay (salaries and fees) on measures of firm performance, sector performance, and firm size. Two alternatives for measuring firm performance were shareholder wealth and return on assets. They found that the relationship between Board remuneration and firm performance was ambiguous because the relationship was positive for stock market performance measures, but negative for accounting measures.

Jaikrajang (2005) studied the relationship between Board pay (annual cash compensation) and company financial performance (return on assets (ROA), EBIDA margin, return on net assets (RONA), and growth rate of sales). Data was gathered from financial statements of 257 non-financial listed companies on the Stock Exchange of Thailand during 1998 to 2004. She found that the directors' cash compensation and the proportion of the Board shareholdings were statistically and positively related to RONA. However, there was no statistical relationship between such measures of Board remuneration and the other measures of firm performance.

Graffin et al. (2008) used panel data for 1992–1996, including a sample of 264 companies which were part of the S&P 500 in order to investigate the determinants of Board compensation. The change of total direct compensation (including salary, bonus, other annual compensation, the total value of restricted stock grants, the total value of stock options granted, long-term incentive payouts, and all other miscellaneous forms of compensation) was regressed against measures of firm performance (1 year lag of the total yearly stock return of the company and annual return on equity (ROE)) and other independent and control variables. They also found the compensation had no relationship with ROE and a very weak positive relationship with market return.

Harford (2003) studied the effect of receiving a takeover bid on a director’s wealth. Data was gathered from 1,091 directors from 91 NYSE/AMEX listed firms that received a takeover bid from 1988 – 1991. Harford argued that the financial impact of a merger on the target directors was a function of shares held by the director and his or her relatives, golden parachutes, and cash compensation. The results show that a completed merger affected negatively at least 35% of the directors, most of whom were outside directors. This study found a negative impact from the bad situation of the firm

performance on the directors' wealth, but this did not mean that there is a positive relationship between firm performance and directors' financial compensation. The research finding only identifies those who were affected financially from the event and at what level (in absolute dollar terms). But this did not mean that the level of financial impact was equivalent to the level of motivational impact, because each Board Member values money differently.

The related literature on nonprofit and mutual organizations found weak relationships between organizational performance and Board incentives.

Ingham and Thompson (1995) examined the pay-performance relationship in mutual organizations. They used unbalanced panel data for 117 UK building societies ranging from 1986 to 1990. The change in the highest paid director's salary was regressed hierarchically against the change in profitability (profit divided by total assets), change in relative profitability to the sector average, growth (percentage change in total assets), relative growth, and control variables (i.e. director's personal characteristics and total assets). The findings are that the compensation change has a weak positive relationship with change in profitability and no relationship with relative profitability to the sector average. However, they found a strong negative relationship between growth and compensation change and a strong positive relationship between age and compensation change. This study viewed Board remuneration too narrowly since there are several types of remuneration received by the Board of mutual organizations. Most of the organizations may not pay their Board a salary. The highest paid director also does not represent the entire Board Members because the director may be the CEO or chairman, whose roles differ from the other directors.

Hallock (2002) examined the relationship between executive pay and the performance of non-profit organizations. The data on 32,146 nonprofit organizations in the U.S. between the years 1992 and 1996 was obtained from IRS tax returns. The total compensation for the director (measured as log of sum of base pay, benefits, and expense account) was regressed against performance (measured as program service expense as a fraction of total expense and a log of the sum of government grants, public direct and indirect support), organization size, Board composition, and control variables. The finding was that there was no significant relationship between Board compensation and program service expense. However, government grant and public support had a significant positive relationship with director's pay. This study used measures of compensation and performance pertaining to the characteristics and missions of non-profit organizations. However, the measurements may vary with the type and context of the organization. In a different political context, the allocation of government grants and public support may not depend on the organization performance but political interest.

Amess and Drake (2003) examined the determinants of Board remunerations in mutual organizations. The data on 46 mutual Building Societies in the UK between the years 1991 and 1996 was obtained from the Thesys database. Change in the highest paid director (HPD), chairperson, and average Board remuneration (including salary, profit-related-pay, bonuses, pensions, and any other benefits) were regressed separately against change in executive remuneration of the last period, change in profitability (measured as profit on ordinary activities / total assets (%)), and/or relative profitability of the last period, and/or the Malmquist TFP change index, change in size of firm, and GDP deflator. The evidence showed a weak relationship between pay for directors and

TFP change and no relationship between profitability and pay for directors and chairperson. But they found significant positive relationships between HPD pay and profitability. The research findings reflected the fact that the Board compensation of such organizations may not be determined by profitability and TFP. This result may support the argument of Deci and Ryan (1985) which suggested that motivation to join the organizational processes of volunteer directors does not result from compensation, but from intrinsic motivation.

As for Co-operatives, a disputed issue in Canada and the US at present revolves around the question of whether Board Members should receive remuneration or not (Ward and McKillop, 2011). The reason for Co-operatives having to consider remuneration payments to Board Members is due to an increasingly competitive environment in which there is high competition to recruit effective Board Members (Bond and Bhuyan, 2011). Limitations to recruiting Co-operative Board Members has resulted from some Co-operatives being unable to pay any incentives to directors, with benefits received from participation in decision-making also being limited (Hueth and Reynolds, 2011). It should not be forgotten that the election of a Co-operative's Board Members is not within a truly competitive context (Reynolds, 2004).

In view of our literature review about the relationships between Board financial incentives and firm performance, I would like to make the following remarks:

(i) Most related studies have used samples of large listed firms in the US and UK, but there is still little research that has used samples of small and medium sized enterprises, non-listed firms, other types of organizations, and organizations outside the US and UK.

(ii) The empirical evidence on the relationship between firm performance and director compensation is not conclusive, and the causal relationship between director pay and company performance is not clear.

(iii) The measures of corporate performance and the Board's financial incentives are not suitable for such studies in mutual organizations, which are different in terms of objectives, missions, ownership structure, tradability of the company's shares, and the characteristics of directors.

(iv) Questions related to motivation continue to close a gap in the existing research, for example:

- How does Board compensation affect Board motivation, especially the motivation of Board Members of non-profit organizations and Co-operatives that operate on a voluntary basis?
- How do different types of compensation affect Board motivation?
- How are Board Members' expectations related to the impact of their effort on firm performance?
- And what does the Board acknowledge or expect regarding the impact of the firm's performance on their pay?

3.4.3 Reputational benefits

From the economic perspective, "directors seek to develop and maintain a favorable reputation as active representatives of shareholder welfare," intentionally achieved by examining management behaviour independently, as well as efficiently utilizing all necessary knowledge in making a strategic decision (Zajac and Westphal, 1996, p.508). A Board's motive in protecting the interests of shareholders derives from

the need to maintain its own position, or in being invited to be on the Board of other organizations, together with prestige and compensation (Fama and Jensen, 1983).

The related empirical studies mostly address the impact of directors' reputation on the Board turnover or the opportunity for a Board Member to be elected to the same organization or to be a Board Member of another organization as well.

A number of studies have used return to stock or accounting ratios as the firm's performance measures, and also Board reputation. The number of outside directorships and proxy variables of top management turnover were used as dependent variables. Most studies showed consistent findings, including positive relationships between directors' reputation and the number of directorships, but negative relationships between the directors' reputation and director turnover.

Warner, et al. (1988) used logistic models for estimating the likelihood of top management (CEO, president, or chairman of the Board) changes as a consequence of the firm's performance (measured as returns on the firm's stock, returns on the Center for Research in Security Prices equally-weighted market index, and three lags of both variables). Data on 351 top management changes during 1963-1978 were gathered from the Wall Street Journal. They found a negative relationship between the probability of a top management turnover and a firm's stock return, but there was no statistical relationship between the management changes and most of the lagged variables.

Gilson (1989) investigated top management turnover when a firm faces financial distress using a sample of 381 firms on the New York Stock Exchange and American Stock Exchange that experienced large negative stock returns during the period 1979 to 1984. Logistic regressions were used to estimate the probability of top

management (CEO, president, and chairman of the Board) changes with respect to proxy variables for corporate financial distress and relative annual stock price performance (return on common stock, market return, and lag of both variables). The result showed that the management turnover has statistical significance and is positively related to the incidence of financial distress, but negatively related to return on common stock.

Blackwell, Brickley, and Weisbach (1994) examined the probability of top management turnover in subsidiaries of multi-bank holding companies in Texas during the period 1984 to 1987. A logistic regression model was used to predict management turnover with regard to accounting-based performance (including return on assets and change in return on assets). They found a statistically significant and negative relationship between the probability of turnover and firm performance.

Brickley et al. (1999) examined the probability of retired CEOs being on Boards using samples of 277 CEOs (representing the 257 largest U.S. companies), who retired during 1989-1993. Logistic models were used to examine the impact of the firms' performance in the final two years of a CEO's tenure (measured as ROA, abnormal stock return, and industrial adjusted of both variables) on measures of probability of a CEO being on his own Board and a member of another Board after retirement. They found a strong positive relationship between the probability of a CEO being on his own Board and the firm performance.

Yermack (2004) examined the impact of the firms' performance on the number of directorships and the probability of director turnover using a sample of 734 outside directors who served in Fortune 500 firms between 1994 and 1996. The OLS regression model was used to estimate the relationship between the number of Board seats held by

outside directors during their first 4 years of service on the Boards and the firms' performance measure (stock return, net of market, lagged one year). The logistic regression model was also used to estimate the relationship between the probability of the outside director's turnover and the firm performance measure (stock return, net of market). The researcher found that firm performance had a positive relationship with the number of directorships, but a negative relationship with director turnover.

Ferris, Jagannathan, and Pritchard (2003) investigated the determinants of the number of directorships. Information on 3,190 firms during 1993-1995 was obtained from the secondary datasets. The number of appointments held by individual directors was regressed against the performance of firms they serve (measured as a log of average total assets and average operating margin) and firm size (log of average total assets). They found that firm performance and firm size had a positive effect on the number of directorships. This research finding indicated that the director reputation is not only measured by the firm performance but also by the size of the firm.

Although the above research findings conform to the theory, top management who hold the title of president, chairman of the Board, or CEO are not good representatives of the Board Members because they differ in both their roles and responsibilities. The samples used in these studies were limited to the largest and listed corporations located in the U.S. Furthermore, using the return on stock as the company's performance may not be suited for studying other types of firms whose shares are untradeable.

Many related studies have used different directors' reputation measures reflecting the incidence of extremely bad situations in the companies, such as hostile takeovers, bankruptcy, dividend reduction, financial fraud, etc. These studies also

estimated the impact of the reputation on Board turnover and found negative relationships between both variables.

Klein and Rosenfeld (1988) studied the relationships between targeted share repurchase (as a proxy for poor management performance) and top management (president, chairman of the Board, or CEO) changes. They collected data for the period 1978 to 1983, consisting of 73 firms paying greenmail, 25 firms in which an outside investor purchased at least 5% of the shares, and 100 randomly selected firms. The Pearson chi-square test was used to test the statistical difference in the top management turnover rate between the greenmail sample and the other samples. They found that the turnover rate in the firms paying greenmail was higher than the average, but no relationship between the turnover rate and the firm stock price performance was found. Although the targeted share repurchase may partly reflect poor management performance, it does not always reflect poor company performance since the company receiving the hostile takeover may be profitable. The top managements' turnover is not only a consequence of the poor performance of the companies they served but also the change in ownership structure.

Kaplan and Reishus (1990) studied the effect of a company's performance on its top managers' opportunity to obtain outside Board seats. Dividend cuts were used to measure companies' performance and also reflected their managers' reputation. Samples of 101 dividend-reduction companies and 80 industry-matched comparison companies were gathered from several datasets. Multivariate logistic regressions were conducted to estimate the probability of obtaining additional outside directorships. The finding was that managers (chairman, chief executive officer, or president) of dividend-reduction companies are less likely to receive additional outside directorships than

those of comparison companies. Although the dividend reduction reflects the negative side of top management reputation, this does not mean that the non-dividend cut firms always have good performance. The research technique of selecting industrial-matched comparison companies may lead to biased results since the observations were not a good representative of the whole population and the important factors may be excluded from the analysis.

Gilson (1990) examined the consequences of financial distress using a sample of 111 U.S. listed companies that experienced bankruptcy, debt default, or debt restructuring between 1979 and 1985. The result showed that only 46% of the incumbent directors remained on the Board the fourth year after the incident of financial distress. In addition, directors who leave the firm hold fewer average seats on other Boards after their resignation (from 2.2 seats per person before the incident of financial distress to 1.4 seats per person in the third year after resignation). The above result does not identify whether this is an abnormal turnover rate since it was not compared with non-financially distressed companies and neither did it include the impact of other factors, especially the impact from the U.S. economic recession and average industrial performance.

Coles and Hoi (2003) examined the impact of director reputation on the probability of director retention and gaining external Board seats using a sample of 109 listed firms incorporated in Pennsylvania. The director reputation was measured as directors rejecting anti-takeover provisions of Pennsylvania Senate Bill 1310. Logistic regression models were used to estimate the probability of gaining at least one external directorship and the probability of director retention against proxy variables of Board reputation. The finding was that directors who decide to reject anti-takeover provisions

are more likely to retain their seat on the same Board and gain additional directorships than those retaining all provisions. This research finding may be lacking in generalization because of the use of too narrow a sample and using varied specific actions of Board Members as reputation measures.

However, some related studies did not find negative relationships between fraud and Board Member turnover.

Agrawal, Jaffe, and Karpoff (1999) estimated the impact of fraud on the probability of top management turnover using a sample of 103 fraud firms and 103 matched control firms. The information about the fraud was collected from the "Corporate News" section of the Wall Street Journal Index. Logistic regressions were used to estimate the probability of top management turnover and found that turnover of CEOs and outside directors is unchanged after fraud.

Fich and Shivdasani (2007) investigated the impact of financial fraud on outside directors' turnover using a sample of 216 firms confronting shareholder class action lawsuits during the period 1998 to 2002. Similarly, they did not find evidence of abnormal turnover on the Boards of the sued firms, since 83% of incumbent directors remained on the Board of the sued firm in the third year after the fraud allegation. But the result showed that the average number of other directorships held by outside directors of sued firms significantly declined from 0.95 to 0.47 in the third year.

Helland (2006) examined how fraud allegations affect the number of outside directorships, which is assumed to represent director reputation. He used a sample of 4,330 directors who served on the Board of a company accused of fraud in a private securities class action and 691 directors who served on such Boards accused by the U.S. Securities and Exchange Commission. The change in each of several definitions of

the net number of directorships (measured as director's new directorships minus exits from existing Boards over an 8-year period between 1994 and 2002) was regressed against proxy variables of private and public allegations of fraud. The finding was that the private allegation of fraud has a statistically significant and positive relationship on all definitions of net number of directorships, but the relationship between the net number of directorships and public allegations of fraud was negative.

In view of the different results of the above three studies which used data from different sources, the accuracy of the fraud allegations is in question.

However, there is a different view on the labor market of directors. Zajac and Westphal (1996) examined the predictors of change in Board appointments by using CEO-Board data obtained from 491 of the largest U.S. corporations during the period 1985 - 1992. Poisson regression models were used to analyze the impact of Board Members' prior participation in five governance-related changes (as a measure of active or passive Board) on subsequent additions or subtractions in appointments to Boards with high- or low-control orientations. The changes in Board appointments were also regressed against control variables including average return on assets, total compensation, age, number of prior appointments and participation in succession. The result was that individual directors with experience on active Boards tended to receive additional Board seats on high control Boards. On the other hand, directors with experience on passive Boards tended to receive additional Board seats in low control Boards. The profitability (return on assets) was not related to subsequent changes in appointments to low-control Boards but it was positively related to appointments to high-control Boards (statistical significance at the 10% level).

In view of our literature review about the impact of Board reputation on the number of directorships, I want to make the following remarks:

(i) Most of the literature suggests that directors are motivated to secure their reputations and thus increase their opportunities to receive Board positions in other organizations.

(ii) Most studies focus on the sample of top management, who hold the titles of president, chairman of the Board, or CEO, who differ in their roles and responsibilities from other Board Members.

(iii) Most research findings may lack a capacity for generalization since the samples used in these studies were limited to the largest and listed corporations located in the U.S.

(iv) Using the return on stock as the company's performance may not be suitable for other types of firms whose shares are untradeable.

(v) The composition of a Co-operative Board differs from that of a Board of Directors for a for-profit organization, or even for a non-profit organization. On a Co-operative Board (especially in Thailand), all Board Members are elected from the common pool of Co-operative members. Therefore, no Board Members come from outside the Co-operative. The question is whether or not Co-operative Board Members will have the motivation to secure their reputations. If Co-operative Board Members are motivated to secure their reputations, then what are the benefits of having a good reputation that they received?

(vi) From the economic perspective, Board Member motivation is in securing their own position in the firm that they serve. Shareholders can pressure Board

Members to improve firm operations and to protect shareholder benefits by voting to dismiss or to re-elect Board Members.

The Co-operative, by its nature, is a democratically based organization. The Co-operative's members can influence Board motivations as well. However, Thai law states that the Co-operative Board Membership term duration is only two years, with a Board Member allowed no more than two consecutive terms on the Board. Thus, the question is whether these legal limits impact on the motivation of an organization's Board, and if so, how.

3.4.4 Motivation to do board tasks

This group of empirical board studies focuses on the relationship between board members' motivation and the board performance. All literature within this group of research studies used for-profit firms as their sample but the differences between these previously-mentioned two groups are the use of a multi-theoretical framework and the study of board members' intrinsic motivations.

Silva (1995) studied how boards' motivations and their equity ownership relate to a board's CEO performance evaluation. Dependent variables in this study were 'the use of quantitative factors in the CEO evaluation' and 'the use of qualitative factors in the CEO evaluation' (the qualitative criteria are more difficult to verify with respect to CEO performance in comparison to quantitative criteria). Independent variables were board members' financial incentives (composed of stock ownership, value of stock ownership, and salary) and director's motivation to perform tasks (involvement in the firm and perception of the role of board member). Questionnaires were used to collect data from 257 board members from the Fortune 2000. The results showed that a director's motivation, stock ownership and the value of stock ownership positively

related to the use of quantitative factors in the CEO evaluation but negatively related to the use of qualitative factors. This research, however, only studied a narrow role of the board of directors ie., the role of evaluating the CEO only. Actually the roles of the board are much broader. In the same light, the evaluation of the CEO has a variety of dimensions, more than what the quantitative or qualitative approaches can consider, for example the process and the method of evaluation, the transparency of the evaluation, the consistency of the criteria used in evaluation and the goal of the organization concerned, etc.

Huse et al. (2008) studied the relationship between board member intrinsic motivation and board tasks involvement by making use of data from 347 Norwegian SMEs. Dependent variables consisted of board activity and task involvement (involvement in control, service, strategy and total task, and number of board meetings) and the independent variables consisted of measuring external factors, leadership, board characteristics, board structure, and board member motivation (how personal and professional standards motivate board members to do a good job on the board). The results were that board members' motivation and board structure (composed of the length of board meetings and regular board evaluations) positively related to all types of board task involvement. This research studied broader roles of the board as well as other variables that might influence the performance of the board. The limitation of this study and that of Silva's study was that they studied only one type of motivation while omitting other types, especially self-interest.

Guerrero (2012) studied the relationship between directors' pro-organizational motivation and their engagement in boards' roles and also their cooperation with other board members. Guerrero defined 'pro-organizational motivation' as the desire to put

greater effort into contributing to the success of the organization. Guerrero also studied the impact of three variables which are the drivers moderating the relationship mentioned above, i.e., the need for achievement, the need for identification, and self-oriented motivation. Questionnaires and focus groups were used to collect data from 691 non-executives directors of financial institutions in Canada. The result was that pro-organizational motivation positively related to board roles and cooperation. The need for achievement and the need for identification positively moderated the relationship between pro-organizational motivation and the control role as well as cooperation respectively. The self-oriented motivation negatively moderated the relationship between pro-organizational motivation and cooperation. Guerrero's research placed importance on various types of board motivation and also studied the interaction between different types of motivation. The limitation of the study, however, is that it did not study other factors which have an impact on motivation and the performance of the board. As a result, the relationship between the factors which were commonly studied in other research (especially the board characteristics) and board motivation and board performance could not be clearly observed.

Jing (2009) studied the relationship between directors' external-internal identity consistency and their motivation to monitor and provide resources. Data was collected from 1,100 Chinese listed companies in the Shanghai and Shenzhen Stock Exchange in 2006. The results showed that directors with an external identity of being directors of other boards, managers of other companies, government officers or members of the national people's congress will provide effective monitoring resources, which will have the consequence of better firm performance. The results imply that directors whose external identities are consistent with the internal identities of being a director will

positively influence the firm’s performance. This research study used the framework relating to social identity in order to study the motivation of the board; as a result, it was possible to study a variety of board motivations and the relationship between these motivations on the board performance was able to be observed. However, this framework of thought still ignores other types of motivation, such as self-serving, extrinsic rewards, altruist motivation, etc.

Veltrop et al. (2015) studied the relationship between an individual's outside director tenure and his/her board task involvement. Data regarding individual directors' task involvement were provided by fellow outside directors’ peer ratings. The empirical results showed an inverted U-shaped relationship between the outside director tenure and the directors' task involvement. The findings suggest that a director's social identification with the organization has an influence on the director’s task involvement. The distinctiveness of this research study is that the unit of analysis is the individual board member, with the outcome of the study suggesting that the relationship between the two previously mentioned factors is non-linear. Nevertheless, to conclude that a director's social identification is the factor influencing the relationship pattern is arguable because the director’s tenure could be interpreted differently apart from being a reflection of the director's social identification. The length of a director’s tenure could also decrease the enthusiasm and the determination of the board.

From reviewing the research studies in this group, it can be observed as follows:

(i) Studies that investigated the relationship between board motivation and board performance are limited in number.

(ii) Research in this group studied motivation within a limited framework; consequently, the understanding of the relationship between different types of motivation as well as their effects on board performance are not sufficient.

(iii) The scope of the studies in this group is limited, therefore the relationship between factors relating to the board (e.g., board characteristics, board demography, board structure) and board motivation and board performance, and their impact on the firm performance could not be clearly identified.

3.5 Concluding remarks

The related literature on Board motivation and its relationship to the firm performance have been divided into four groups based on the type of motivation. The first group of studies focuses on the motivation in becoming Board Members and the motivation to continue working as Board Members in nonprofit organizations. These studies are based on several theories of motivation, but most of them may be classified as the Content Theory of motivation, whose objective is to identify the factors associated with the Board Members' motivation. The main research methodologies used are survey questions, questioning a sample of Board Members. However, the samples were specific types of Boards in specific types of organizations which were located in restricted areas. The research study results reflect the fact that the motivations of Board Members in nonprofit organizations are more complex.

The second type of research examines the relationship between the financial compensation that Board Members receive and the performance of the firms for which the Board Members serve. The literature is based on the Agency Theory, which focuses on the role of financial incentives in motivating directors to engage in Board functions and aligning the director's interest to the shareholder's interest. Data used in the

literature was obtained mostly from secondary sources. However, the samples used in the studies were dominated by the largest firms listed on the stock markets in the US and UK. There is no consensus on the research findings, and the causal relationship between pay and performance is not clear.

The third group of studies focuses on the impact of top management and director reputation on the Board's turnover and the number of other directorships they hold. The studies are based on the Agency Theory and the concept of the labor market for directorships, which indicates that directors seek to develop their reputations in order to increase their opportunities to receive other directorships. Samples used in the studies were dominated by top management working in the largest listed corporations in the US. Data used in the studies was gathered mostly from secondary data sources. Most of the studies found that the Board's reputation has a positive impact on the number of directorships, but a negative impact on Board turnover.

The fourth group of studies focuses on motivation to do board tasks. The studies are based on the Agency Theory, Stewardship theory, resource-dependency theory, identity and social identity. Most of the studies found that the board's altruist motivation has a positive impact on involvement in board tasks.

The following Table 3.3 summarizes literature on Board motivation and its relationship with the performance of firms.

Table 3.16: Summary of literature on Board motivation and its relationship with the performance of firms based on the type of motivation

Type of motivation	Focus	Theoretical ground	Result
Multiple dimensions of motivation (e.g. Trogdon, 2005; Inglis and Cleave, 2006; Farris et al., 2009; Prouteau and Tabaries, 2010, etc.)	The motivation for becoming board members and working as board members in nonprofit	Several theories of motivation, but a majority of them may be classified as the Content Theory of	Ideological motives (such as value and civil duty) are important motivators.

Type of motivation	Focus	Theoretical ground	Result
	organizations.	motivation	
Financial compensation (e.g. McConnell and Servaes, 1990; Leech and Leahy, 1991; McLaughlin, 1994; Gerety and Lehn, 1997; Vafeas, 2000; Koufopoulos et al., 2008; Payne et al., 2009)	The relationship between board's financial compensation and firm performance	Agency Theory	The causal relationship between pay and performance is not clear.
Reputational benefits (e.g. Zajac and Westphal, 1996, Coles and Hoi, 2003, Ferris, Jagannathan, and Pritchard (2003, Yermack, 2004, Helland, 2006, Fich and Shivdasani, 2007)	The impact of the reputation of a director on the number of directorships and the turnover of the board	Agency Theory and the concept of the labor market for directorships	The board's reputation has a positive impact on the number of directorships, but a negative impact on board turnover.
Motivation to do board tasks (e.g. Silva, 1995, Huse et al, 2008, Guerrero, 2012, Jing, 2009, Veltrop et al, 2015)	The relationship between boards' motivations and involvement in board tasks	Agency Theory, Stewardship theory, resource-dependency theory, identity and social identity	The board's altruist motivation has a positive impact on involvement in board tasks

Source: Author's Compilation

Knowledge gaps which exist between the motivation of the board and performance of firms gathered from the literature review of empirical studies has been summarized in Table 3.4. It is shown that in the case of Thailand and other countries; studies which considered and tried to find the linkage between Board motivation and the Co-operative's performance were unable to find any. Only two studies by Ward and McKillop (2011) and Guerrero and Seguin (2008) were found which related to the type of Board motivation, the relationship between boards' motivation and their involvement in board tasks and Board motivation determinants in the Co-operative.

Table 3.17: Summary of literature (empirical studies)

Case of	Topic	Case of			
		Thailand		Other countries	
Cooperative	Type of board motivation	None	None	Ward and McKillop (2011), Guerrero and Seguin (2008)	None

Case of	Topic	Case of			
		Thailand		Other countries	
	Board motivation & involvement in board tasks	None		Guerrero and Seguin (2008)	
	Board motivation & organizational performance	None		None	
	Board Motivation determinants	None		Ward and McKillop (2011)	
Non-profit firm	Type of board motivation	None		e.g. Gross (1958), Widmer (1985), Inglis and Cleave (2006), Farris et al. (2009), Prouteau and Tabaries (2010), etc.	None
	Board motivation & organizational performance			None*	
	Board Motivation determinants			e.g. Gross (1958), Alby (1979), Trogdon (2005)	
Firm	Type of board motivation			e.g. Gibbons, 1997; Lazear, 2000	None
	Board motivation & involvement in board tasks			e.g. Silva (1995), Huse et al. (2008), Guerrero (2012)	
	Board motivation & organizational performance			e.g. Kakabadse and Kakabadse (2001), Brick, Palmon and Wald (2006); Boumosleh (2009); Chen and Li (2010), etc.	
	Board Motivation determinants			None**	

* There are some studies which investigate the relationship between the motivation of Board Members' and the performance or effectiveness of the Board however not with organizational performance.
** There are some studies which relate to the determinant of Board compensation or reputation.
Source: Author's Compilation

In view of the above literature review, four gaps in knowledge can be identified and the implications for studying Boards' motivation and its relationship to the performance of the Co-operatives in Thailand are provided. The first gap is that there are very few studies exploring the motivation of directors who work for Co-operative firms.

Moreover, most studies on Board motivation (in for-profit and non-profit organizations) lack a capacity for generalization because the sample they used was limited to listed companies in the US and the UK or specific types of nonprofit firms

located in a restricted area. The variables used in these studies may not be suited to studying Co-operative firms, which are different in many ways from for-profit and the other types of nonprofit firms. So, in order to study the Boards' motivation in the case of Co-operatives in Thailand, we need to design research methodologies with a concern for the general characteristics of the Co-operative and also the specific contextual factors of Co-operatives in Thailand.

The second gap is that the studies that are related to Board motivation are not comprehensive and integrative. The literature in the first group (multiple dimensions of motivation) addresses various types of motivation, but it does not examine the relationship between the motivations and the firms' performance. On the other hand, the literature in the other groups (financial incentive and reputational benefits) focuses on only one type of incentive and its relationship to the firms' performance. Furthermore, there are very few studies that consider the linkage between factors influencing Board motivation and the organization's performance (Table 3.4).

A Co-operative is a type of firm that combines both the characteristics of for-profit and nonprofit firms. Board Members of Co-operatives operate on both a volunteer basis and an employment basis. In view of such complexity, study of the motivations of Co-operatives' Board Members and their relationships to performance should be used as a comprehensive and integrative framework.

The third gap is the gap between the truth and the directors' perception about the relationship between the firm's performance and their incentives or benefits. The studies in the first group focus on the reasons why individuals become Board Members or continue working as Board Members. However, there is little evidence supporting the relationship between these Board motivations and the firm's performance. On the

other hand, the literature in the second and third groups focuses on providing empirical evidence supporting the relationship between the firms' performance and the Boards' incentives or benefits. However, this does not mean that the Board perception and the truth about such a relationship were consistent. This knowledge gap implies that there may be some motivational factors affecting the relationship between Board incentives and the firms' performance. A change of the Board's perception and other motivational factors (such as Board expectations and Board value) may change the relationship between incentives and performance.

The fourth gap is the gap between theory and empirical evidence. The empirical evidence is not consistent on the relationship between firms' performance and director incentives. This gap reflects the fact that the theories used in these studies cannot explain this relationship. The Content Theories of motivation seem to ignore inter-personal relationships and the environment that can affect human behaviours. The Agency Theory assumes that the individual's motivation is static and extrinsic, but there is evidence that human motivation is both intrinsic and extrinsic and is dynamic (Frey and Oberholzer-Gee, 1997; Kreps, 1997; Bénabou and Tirole, 2003). So, the Agency Theory and the Content Theories of motivation may be too simple to address the motivations of Board Members in Co-operative firms, which are more complex than those of investor-owned firms.

In view of the weaknesses of these theories, the Process Theories of motivation could be considered as alternative theories since they treat individual motivation as a dynamic term and provide comprehensive and systematic views on motivation. Thus, the Process Theories can provide a better theoretical explanation for work motivation than the Content Theories (BIS Center for Management Research, 2012).

In conclusion, the methodology design for studying directors' motivation and its relationship to the performance of Co-operatives in Thailand should be more contextualized, comprehensive, integrative, inclusive, and systematic.

Chapter 4
Analytical Framework

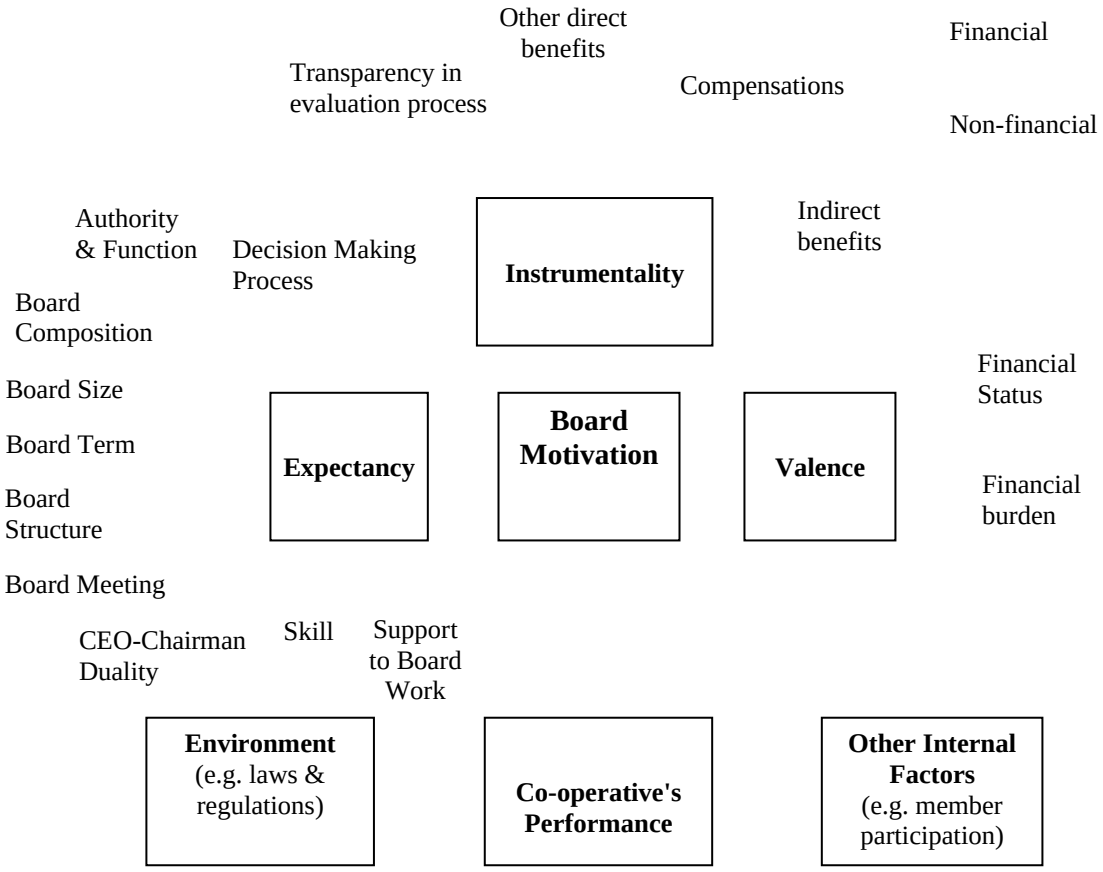
4.1 Introduction

The first two chapters introduced a statement of the problem of the research and background information about the Co-operatives in Thailand. Chapter 3 reviewed the related literature, including studies on motivation theories, the relationship between the motivation of Co-operative Board Members and Co-operative's performance, the variables that affect the motivation of Co-operative Board Members, and also the measurement method of Co-operative's performance. This chapter outlines the analytical framework of the research, the research design. This framework shows how Vroom's Expectancy Theory is used to link many variables related to Co-operative Board motivations into one framework, and also formulates hypotheses about the relationships between these variables and Co-operative Board motivations – whether each of them is positive or negative.

The chapter is divided into two parts. The first part presents the hypotheses about the factors affecting Expectancy, Instrumentality, and Valence. The second part presents what factors are used to measure the Co-operative's performance, both financial and non-financial performance.

Figure 4.1 presents the overall analytical framework in this research. It outlines the hypotheses about what factors have an effect on Board motivation through each component of motivation variable in the context of Co-operatives. Moreover, it outlines the factors that have an effect on the Co-operative's performance, which are classified into environmental factors and internal factors, which also include Board motivation.

Figure 4.4: Analytical framework of the research



Note: Arrows represent causal relationships in which a change in factor at the arrow's tail causes a change in factor at the arrow's head.

The above analytical framework can be represented by a system of equations. There are five equations in the system as the followings.

Co-operative's Performance = f1(Board Motivation, Other Internal Factors, Environmental Factors)

Board Motivation = f2(Expectancy, Instrumentality, Valence)

Expectancy = f3(Decision Making Process, Authority and Function, Board Composition, Board Size, Board Term, Board Structure, Board Meeting, CEO-Chairman Duality, Skill, Support to Board Work)

Instrumentality = f4(Transparency in evaluation process, Other direct benefits, Compensations)

Valence = f5(Financial Status, Financial burden)

4.2 Co-operative Board Members' Motivation

The main task of this research is to test the statistical relationship between the Co-operative's performance and the motivation of Board Members, which is itself analyzed in different components as indicated in the following analytical framework. Moreover, each motivation component will be tested with its determinants. These test results will enable us to identify which motivation variables play an important role in levering the Co-operative's performance, leading to motivation design for the Co-operative's Board of Directors.

Vroom's Expectancy Theory (Vroom, 1964) is utilized in this research because it is used extensively in much of the literature, thus we can find many examples of its application in practice and evidence of its effectiveness. Furthermore, the variables used to measure motivation in Vroom's theory are more comprehensive than those of other theories, which mostly focus on merely intrinsic factors or the personal factors of agents. As the scope of this research is to improve the motivations of Co-operative Boards by not only improving the personal factors of Co-operative Board Members, but also improving factors related to the Co-operative system or context, extrinsic factors due to the characteristics of Co-operatives are also included to explain Co-operative Board motivations. The inclusion of extrinsic factors to explain Co-operative Board motivations can help in understanding the Board's working process that affect Board motivations, which will lead to a wider scope of channels for improving Board motivations.

According to Vroom's Expectancy Theory, motivational force is a function of three variables:

1) **Expectancy** is the perception of how increased effort leads to increased performance. Factors that affect Expectancy include the availability of resources and occupational support, for example, the necessary time, skills, information, and so on, in order to get the job done.
2) **Instrumentality** is the perception of how much benefit will result from competent performance, depending on how the relationship between performance and outcomes is understood, along with transparency in the evaluation process.
3) **Valence** is the degree of value placed on performance outcomes. For example, some workers may place a higher value on leisure than on income, etc.

Motivation is a product of expectancy, instrumentality, and valence. This relationship could be expressed in the following equation:

Motivational Force = Expectancy (E) x Instrumentality (I) x Valence (V)

The equation explains that all three factors play an important role in supporting one another in increasing motivation, i.e. an increase in one factor helps to increase the influence of the other factors on motivation. However, in practice there are other forms of relationship which can be used in model estimation, as shown in Table 4.1.

Table 4.18: Choices of model specification

Model	Label	Hypothesized Relationship
1	Expectancy only	M = E
2	Instrumentality only	M = I
3	Valence only	M = V
4	Multiplicative (1)	$M = E * \Sigma(I_i V_i)$

Model	Label	Hypothesized Relationship
5	Multiplicative (2)	$M = E * (IV)$
6	Additive (1)	$M = E + \Sigma(I_i V_i)$
7	Additive (2)	$M = E + I + V$
8	Additive (3)	$M = I + V$
9	Instrumentality x Valence	$M = \Sigma(I_i V_i)$
10	Expectancy x Valence	$M = EV$

Source: Adjusted from Pritchard and Sanders (1973) and Behling, Dillard and Gifford (1979)
For I_i = Observed variable i of a latent variable I and V_i = Observed variable i of a latent variable V

It has been shown that some forms of relationship include only one variable of E, I or V (model 1 to model 3). Pritchard and Sanders (1973) stated that it is possible to consider both I and E as conceptually equivalent. Nevertheless, most current researchers use the original formulation of the expectancy – valence model (model 4 and 5), one in which E and I are measured separately. Furthermore, Pritchard and Sanders (1973) found that the data tended to offer some support for the basic expectancy–valence model. However, the multiplicative relationship (model 4 and 5) was found to be no better than an additive model (model 5, 6, 7).

In this research, model number 6 is used for two reasons. First, as stated by the expectancy theory by Vroom, the researcher believes that all three variables have some relationship to motivation. Hence, all three variables should be included in the model. Considering models 1 – 10, only models 4 – 7 include all three variables. Therefore, only models 4 – 7 have been left for consideration.

Secondly, the model should be able to be estimated by using SEM. Model 4 is a case of the interaction of two latent variables (E and Σ(IiVi)) and Model 5 is a case of the interaction of three latent variables (E, I and V). The multiplicative term of latent variables is difficult to be estimated as Marsh, Wen and Hau (2004) stated that

interactions between (multiple indicators) latent variables are rarely used because of implementation complexity. Even though Pritchard and Sanders (1973) and Behling, Dillard and Gifford (1979) specified the model in multiplicative term between two latent variables, the method used in the data analysis was only correlation analysis, not SEM. Therefore, models 4 and 5 were excluded.

The additive form between E, I, V (model 6 and 7) is the case of a linear model, which is easier to be estimated. However, for model 6, the multiplicative form between I_i and V_i (in terms of observed variables, not constructs), is chosen because it is only logical to assume that if people perceive that they will benefit from their performance and the benefit they receive are things which they value (instrumentality and valence correspond), this will motivate them more than paying them for what they do not value (instrumentality and valence do not correspond). In other words, the effect of instrumentality on motivation depends on valence, which is in terms of the multiplicative relationship. This multiplicative relationship is more consistent with the theory and consistent with one of the models in the study of Campbell and Pritchard (1976). Therefore, in this study the questions used to measure instrumentality and the questions used to measure valence correspond with each other, item by item.

4.2.1 Hypothesized factors that affect Expectancy

In this research, the hypothesized Board characteristics which are considered to affect the Expectancy variable are categorized into the Co-operative's decision making system, Board authority and function, Board size, Board term, Board meeting, Board composition, Board structure, skills of Board Members, CEO-Chairman duality and Support to Board work. These characteristics could be specific for each Co-operative,

or could be common to all Co-operatives due to the policy of Co-operative regulations, promotions, etc.

There is some research which has studied the relationship between these variables and organizational performance. However, no research has been found which has studied the relationship between these variables and Expectancy or Board motivation. In this research, the relationship between these variables and Expectancy or Board motivation has been studied. As this research also studies the relationship between Board motivation and Co-operative's performance, Expectancy and Board motivation can be considered as the mediators which explain how these variables may come to affect the performance of the Co-operative.

1) Co-operatives decision-making system ("One person-one vote" system)

There are many research papers which have studied whether control mechanisms or decision-making system within an organization affects the performance of the organization.

For example, Mikkelson and Partch (1994) and Oijen (1998) found that for firms which violate the one-share-one-vote principle, performance is likely to fall. Therefore, it is highly possible for the decision making system of the Co-operatives to have an effect on the performance of the Co-operatives in the same manner. Nevertheless, in this study, Expectancy and Board motivation are expected to be the mediators which explain the relationship between the decision making system and the performance of the Co-operative.

The Co-operative uses the "One person one vote" system in decision-making, while investor-owned firms (IOF) use the "One share one vote" system. The use of "One person one vote" in the Co-operative might cause lower Expectancy and lower

incentive to work for the Co-operative because despite representing Co-operative members who hold the majority of shares in the Co-operative, those Board Members would have only one vote. Therefore, they could not control the decision making and could not push their agenda forward into practice as would be possible under IOF if major shares were held by some investors.

2) Board authority and function

Andrews (1986) found that with board involvement in strategic planning, CEOs and managers are likely to become more effective in making strategic decisions because the board would then be checking the assumptions being made by managers. Lynch (1979), Judge and Zeithaml (1992) and Summanen and Lazareva (2008) found a positive relationship between board involvement in the strategic decision process and the performance of firms. Through this literature, it is expected that Board authority and function could have an effect on the performance of the Co-operatives in a similar manner with Expectancy and Board motivation acting as mediators.

The scope of Board authority and function directly affects Board Members' Expectancy because it identifies what the Board can do and what the Board cannot do. Board authority and function in this case are not those that are officially described, but are those that are really exercised in practice.

3) Board Composition

In this study, Board composition refers to the number of independent non-executive directors on the board relative to the total number of directors. At time, the term Board independence is used but has the same meaning.

There are a number of research papers studying the relationship between the composition of the Board and the performance of the firm however research findings have been inconclusive.

For example, Baysinger and Butler (1985), Ezzamel and Watson (1993) found that having outside directors positively affects the firm's performance whereas Wen, Rwegasira, and Bilderbeek (2002) and Brick and Chidambaran (2008) found that having outside directors affect a firm's performance negatively. On the other hand, Kajola (2008) found no significant relationship between Board composition and the performance of firms in the Nigerian listed firms. In this study, the relationship between Board composition and Co-operatives performance will be tested by making use of Expectancy and Board motivation as mediators.

According to Co-operative regulations by law, being a Co-operative Board Member is limited only to Co-operative members. Thus, the views of Board Members on making decisions may not diverge greatly due to the homogenous characteristics of the members. However, having some experts on the Board from outside the Co-operative may help to lessen this problem, though they would have no direct authority over the Board decision making or the operation of the Co-operative.

On the contrary, having only Co-operative members as part of the Co-operative Board might have some benefits. This allows all Co-operative Board Members to have a greater understanding about the system, practices, people as well as the context of the Co-operative, which would allow them to work more effectively and, therefore, have high Expectancy.

4) Board Size

There are a number of research papers studying the effect of Board size on a firm's performance but the research findings on this topic have been inconclusive.

Some studies found a positive relationship between Board size and firm's performance (Zahra and Pearce, 1989; Mak and Li, 2001; Adams and Mehran, 2005). Specifically, Zahra and Pearce (1989) found that a large Board leads to better performance due to the variety of skills and experiences which results in better decision making and monitoring of the performance of the CEO. Some studies suggested that a smaller Board is better for improving firm's performance (Lipton and Lorsch, 1992; Barnhart and Rosenstein, 1998). However, Ghabayen (2012) found no relationship between Board size and the firm's performance.

From the above literature, it is expected that Board size could have an effect on the performance of Co-operative's. However, this relationship is indirect when Expectancy and Board motivation are used as mediators.

If the Board size is small, then Board Members' Expectancy is expected to be high because of the greater chance that each Board Member's agenda will be brought into consideration and implemented. Board size is measured by the number of Board Members. However, a smaller Board size may cause lower Expectancy because there is less variety of opinions at the meeting. As a result, there may be an optimal Board size and Expectancy is expected to be an inverted-U shape function of the Board size.

5) Board Term

There are a number of research papers studying the effect of Board term on the performance of a firm.

For example, Dou, Sahgal, and Zhang (2015) explained that efforts to impose term limits may be misguided because it was found that firms with a higher proportion of directors with extended tenures have lower CEO pay, higher CEO turnover-performance sensitivity, and a smaller likelihood of intentionally misreporting earnings, which is good for firms. Therefore, it is expected that Board term could have an effect on the performance of Co-operative's, by making use of Expectancy and Board motivation as mediators.

The Board term of Thai Co-operatives is limited by law to two years per term, and members cannot exceed two consecutive terms at a time. This regulation, though aiming to decrease the chance of a Co-operative Board's monopolization by some Board Members or groups, might negatively affect Board Members' Expectancy. This is because Board Members cannot be sure that their long-term work plan will be implemented.

6) Board Structure

A number of research papers have studied the relationship between Board structure and firm's performance.

For example, Rechner and Dalton (1991) and Pi and Timme (1993) found that companies with a Board having separated roles out performs those companies in which the Board has combined roles. This is consistent with Laing and Weir (1999) who found a positive impact of board sub-committees on the performance of firm's (measured as return on assets). This suggests that companies with remuneration committees and audit committees outperformed others. From this literature it is suggested that Board structure could have an effect on the performance of Co-

operatives in the same manner. However, Expectancy and Board motivation are used as mediators of this relationship in this study.

Board Members on a Co-operative Board that sets up many sub-committees or Co-operative working groups are likely to have high Expectancy, compared to those on a Co-operative Board that has no such groups, or has only a few sub-committees or working groups. This is because a sub-committee is set up to delegate work according to each member's specialization.

7) Board Meeting

There are many research papers studying whether or not a Board meeting affects firm's performance but research findings are inconclusive.

For example, Ntim (2009) found that a higher frequency of Board meetings can result in a higher quality of managerial monitoring, and thereby impacts positively on corporate financial performance. However, Vafeas (1999) explained that Board meetings are costly in the form of managerial time, travel expenses, refreshments and directors' meeting fees which can negatively influence corporate performance, while Ponnu and Karthigeyan (2010) found no significant relationship between the frequency of Board meetings and the performance of a firm. It is not only the frequency of board meetings but the quality of Board meetings should also be considered. As Rebeiz and Salameh (2006) stated that the quality of meetings is important and increasing the number of meetings doesn't necessarily enhance a firm's performance.

With respect to the literature above Board meetings could have an effect on the Co-operatives performance in the same manner. However, Expectancy and Board motivation are used as mediators which help in explaining this relationship.

The meeting is an important role of the Board Members as the Board works as a committee. The Board Meeting includes the frequency of the meeting, how the meeting agenda is set, the features of the meeting agenda, the quantity and quality of information that the Board Members obtain for the meeting, etc. These factors could affect Board Members' Expectancy in terms of the work process.

8) CEO-Chairman Duality

The empirical evidence reveals that the relationship between CEO-chairman duality and company performance is inconclusive.

Duality may affect the performance of a firm positively. For example, Cannella and Lubatkin (1993) found a positive link between a dual leadership structure and a firm's financial performance. Also, Simpson and Gleason (1999) found that companies which combine the roles of the CEO and chairman are less likely to be financially distressed, while Rechner and Dalton (1986) found a positive relationship between CEO duality and firm's performance because it speeds up the decision making process and removes any unnecessary bureaucracy and hence promotes stronger financial performance.

Nevertheless, the relationship between CEO duality and firm's performance can also be negative, as Erah, Samuel, and Izedonmi (2012) found that the Chief Executive Officer duality is harmful to the financial performance of a firm because the Board cannot remove an underperforming CEO and at times, the CEO pursues his own interest at the cost of the shareholders. However, Daily and Dalton (1992) found no link between CEO duality and corporate performance. Therefore, for the purpose of this study, the relationship between CEO duality and the performance of Co-operatives

will be tested by making use of Expectancy and Board motivation as mediators of the relationship.

If the Co-operative Board chairman also happens to be the CEO or Co-operative manager, this Board Member is likely to perform at high Expectancy, both as a manager and also as the Co-operative chairman, with authority to influence the setting of the agenda for the meeting. However, this may be in the opposite direction in the view of other Board Members who are not the CEO-chairman, because CEO-chairman duality may reduce their opportunity to participate in the Board's operation.

9) Board Skill

Research findings from existing research on the relationship between Board skill and firm's performance are inconclusive.

Akpan and Amran (2014) found a significant relationship between directors' educational qualification and company performance. This implies that educational qualification equips directors with the knowledge, experience and better managerial and administrative skills to be able to conduct the affairs of the company. Likewise, Tornyeva and Wereko (2012) found that Board and management skills have a positive correlation with the performance of the insurance companies because Board members with appropriate skills will have the competence of providing the company with strategic direction and be able to monitor management and ensure that internal controls are instituted and working.

In contrast, Ujunwa (2012) used the robustness test to study this relationship and found that competence variables, which are represented by PhD holders, were

negatively linked to the performance of firms. However, this study was conducted by the dominance of young firms in the dataset. The result implies that Board members having PhD qualifications do not contribute positively towards the performance of smaller firms.

From the above literature, it is hypothesized in this study that Board skill has an effect on the Co-operative's performance with Expectancy and Board motivation being used as mediator variables. Board Members with high skill, knowledge, or experience are likely to have high Expectancy because their capability can contribute more to the Co-operative's performance. Measuring skill is a difficult task. However, many factors could be used as proxies of Board skill, for example, degree(s) earned, years of work experience - particularly management experience, number of training sessions or seminars attended, etc.

10) Support to Board Work

Serrano (2015) explained that conditions which enhance Expectancy include having the correct resources available and having the necessary support to get the job done correctly. Therefore, it is hypothesized in this study that support to Board work has an effect on Expectancy and Board motivation. If a Co-operative provides enough resources, such as budget, personal, equipment etc. to the Board Member, they are likely to have higher Expectancy since those in their support will help them to work in a fully effective manner.

4.2.2 Hypothesized factors that affect Instrumentality

1) Transparency in the evaluation process

Serrano (2015) explained that having a clear understanding of the link between performance and its outcomes, and noticing the transparency in the process of who gets

what reward helps in increasing Instrumentality. For this purpose, it is hypothesized in this study that transparency in the performance evaluation process has an effect on Board motivation via Instrumentality.

Transparency in the evaluation process is having a clear and fair process in evaluating the Co-operative's performance, or a compensation system that links Board Members' performance to their compensation. Thus, all Board Members can be sure that their performance will be rewarded fairly, which leads to an increase in Instrumentality.

2) Financial compensations

As it was shown through the review of literature in Chapter 3, the impact of financial incentives towards performance is still inconclusive.

Some researchers found that incentives promote effort and performance (e.g. Gibbons, 1997; Lazear, 2000), while other researchers found that rewards may cause performance to worsen (e.g. Kruglanski, 1978; Core, Holthausen, and Larcker, 1999; Deci, Koestner and Ryan, 1999).Alternatively, Graffin et al. (2008) found that the compensation (including salary, bonus and other annual compensation, the total value of restricted stock grants, the total value of stock options granted, long-term incentive payouts, and all other miscellaneous forms of compensation) had no relationship with return on equity (ROE) and had a very weak positive relationship with market return.

In this study, it is hypothesized that financial compensation has an effect on the Co-operatives performance via Instrumentality and Board motivation. As Instrumentality refers to how the relationship between performance and outcomes is understood, generally, higher financial compensation contributes to higher motivation via higher instrumentality. However, this is possibly not true in the presence of a

principal-agent problem, where the principal (who is a Co-operative member in this case) cannot completely recognize the performance of the agent (who is a Co-operative Board Member in this case); therefore, the principal is unable to compensate the agent according to the agent's performance. Hence, having financial compensation tied to performance is a necessary condition to making higher compensation effective in motivation.

3) Other direct benefits

Other direct benefits are benefits the Board Members obtain directly from the Co-operative other than compensation, e.g. rewards. This also includes benefits that do not come from being a Board Member, for example, dividends - which vary according to the Co-operative's performance.

With respect to the for-profit organizations, Payne et al (2009) found no significant relationships between incentive measures (measured as percentage of common stock owned by Board members, one of other direct benefits, and its squared and cubed terms) and Board effectiveness and performance. Similarly, Vafeas (2000) found that there is no significant relationship between the adoption of the director incentive plans (salary plus other direct benefits) and the improvements in operating performance.

In this study, it is hypothesized that other direct benefits have an effect on the performance of the Co-operatives via Instrumentality and Board motivation.

4) Indirect benefits

Being a Co-operative Board Member may bring about opportunities to obtain indirect benefits from other sources other than direct benefits from the Co-operative. For example, returns from reputation obtained from being a Co-operative Board

Member may lead to other job opportunities, or grant an opportunity to do business with the Co-operative due to the ability to obtain more information than other competing business partners can.

It is hypothesized in this study that indirect benefits have an effect on the Co-operative's performance via Instrumentality and Board motivation. This is supported indirectly by the fact that the amount of indirect benefits which Board members receive might affect the performance of the firm.

Searle (1989) explained that one factor which motivates Board members to work is responsibility which includes satisfaction of ambitions or career opportunities. Masulis and Mobbs (2014), after controlling for busy boards, found that independent directors having a strong or weak need for reputation have significant relationships with the performance of the firm. Rubin and Segal (2011) found that the level of Board reputation has a positive causal effect on monitoring and thus results in higher quality financial reporting which indicates good performance.

4.2.3 Hypothesized factors that affect Valence

Serrano (2015) explained that Valence in Expectancy Theory can be affected by individual needs, value and preference. In this study, it is hypothesized that financial status and financial burden of the Co-operative Board members have an effect on Valence and hence Board motivation.

1) Financial status

According to the law of diminishing returns, Board Members with higher incomes are likely to put less value on financial rewards, compared to Board Members with lower incomes, because the same amount of financial reward is lower in value for higher-income Board Members, relative to lower-income Board Members.

2) Financial burden

Board Members with a higher financial burden tend to need more money and put higher value on financial return compared to those with a lower financial burden. Financial burden could be estimated indirectly through the number of children, the age range of children, the number of dependent members in the family, health status, etc.

4.3 The Co-operative's performance

As described in Chapter 3, using only financial indicators may not enable us totally to explain or measure the Co-operative's performance. Unlike the case of investor-owned firms (IOFs), non-financial performance also plays an important role in determining the Co-operative's performance because the objective of the Co-operative is not only to maximize profit but also to maximize the members' welfare, while the objective of IOFs is usually limited to financial performance, for example, to maximize profit, to maximize market share, etc. Therefore, in this research, financial indicators and non-financial indicators are used in measuring the Co-operative's performance.

1) Financial performance

In this research, Co-operative financial performance is measured by a number of financial ratios, which are classified into four dimensions: Liquidity, Profitability, Efficiency and Leverage (Hardesty and Salgia, 2007). Each dimension has its own indicators, which are summarized in Table 4.2.

Table 4.19: Financial ratios used to measure the Co-operative's performance

Liquidity Ratios	Profitability Ratios	Efficiency Ratios	Leverage Ratios
- Current Ratio	- Net Profit Margin	-Account Receivable Turnover	- Debt/Equity Ratio
	- Return on Assets	- Average Collection Period	
	- Return on Equity	- Total Asset Turnover	
		- Fixed Asset Turnover	

Note: The calculation method for these financial ratios can be seen in Appendix V

Liquidity ratios indicate the firm's ability to pay the short-term debt. Profitability ratios measure the firm's ability to generate profit. Efficiency ratios evaluate the firm's ability to utilize its assets. Leverage ratios measure the firm's ability to pay debt in the long term.

2) Non-financial performance

A Co-operative is a kind of organization, the purpose of which is focused on the members' welfare, which sometimes cannot be reflected through the financial performance. Therefore, other aspects of the Co-operative's performance should be included in measuring the Co-operative's performance. Co-operative non-financial performance could be measured in many ways, for example, member welfare, member participation, the quality of the Co-operative's operation such as corruption incidence, law violation, etc.

4.3.1 Hypothesized factors that affect the Co-operative's performance

To reduce the problem of bias estimation stemming from variable omission, factors other than Board Members' motivation that affect the Co-operative's performance should also be included in the model. These factors are used as control variables in the estimated model. However, since this research does not aim to study factors that affect the Co-operative's performance other than Board motivation, only major factors that help to improve the quality of the estimation are included in the model. These factors are used to design the questionnaire in the data collection process and are tried in the model in the step of model estimation. These factors are classified into the following categories.

(1) Co-operative age

Research findings from existing literature on whether the age of the firm affects firm's performance are inconclusive. Research that found a negative effect of firm age on firm's growth includes, for example, Fariñas and Moreno (2000), Correa, Acosta, González, and Medina (2003) and Geroski and Gugler (2004), while other studies that found a positive effect of firm age on firm's growth include, for example, Das (1995), Shanmugam and Bhaduri(2002).

(2) Co-operative location

Carr, Amelia, Kariyawasam, Amanie, Casil and Maureen (2008) found that choosing a good location has become an important factor for a Co-operative to be successful. Bad location can thus hinder the success of a Co-operative.

(3) Members' incomes

One factor that is quite important to the success of the Co-operative is the capital base of its members. The larger the member capital base is, the more likely a Co-operative is to be successful (Carlberg, Ward and Holcomb, 2006). In this study, members' incomes are used as a proxy for member capital base.

(4) Members' education

Lower levels of education can be a major constraint for the development of a Co-operative because it is easier for the Co-operative leaders to misuse the co-operative and divert activities in accordance to their own priorities if the education level of its members is low (Chirwa et al. 2005).

(5) Members' participation

Members' participation is an important factor for the success of Co-operatives. Persson (2010) found that surviving Co-operatives are those which have initiated a high

level of involvement from the members themselves. Holmén (1994) and Flygare (2006) also mentioned member participation as an important factor for cooperative development.

(6) Communication within a Co-operative

Communication within the Co-operative, communication with the Board and communication with members are important factors which contribute to the Co-operatives performance (Carlberg et al., 2006). The first one is most important in comparison to the others. Therefore, this factor is included in the model as a control variable.

(7) Unique selling point of a Co-operatives products

Carlberg et al. (2006) interviewed the managers of Co-operatives and found that product quality and product uniqueness is factors which may affect the performance of Co-operatives. This is consistent with Carr et al. (2008) which found that one of the factors which contributes to the success of the Co-operative is that the Co-operative can provide essential products and services to meet member's needs most efficiently and effectively. Failing to meet member's needs will cause problems for the Co-operative.

(8) Market share of a Co-operative

The market condition is important for the success of the Co-operative (Carr, 2008) along with the market size. (Carlberg et al., 2006). Therefore, having a low or high market share might affect the performance of the Co-operative.

(9) Competition in the market

This variable is tested in the model because Carlberg et al. (2006) explained that the number of competitors and the product price of competitors' could affect the performance of the Co-operative. Carr (2008) explained that the necessity to compete with big companies for services in the same area and to compete with conglomerates that can spread their costs can hinder the success of the Co-operative. Moreover, failure to change practices along with changes in market conditions is one of the many factors which could lead towards the dissolution of the Co-operative. Also, Karagu and Okibo (2014) found that, for savings and credit Co-operative, in order to have a good performance, competition was needed with micro finance institutions.

(10) Using technology in management

According to Carr et al. (2008), inability to maintain adequate technology with advances in technology is one reason which causes Co-operatives to dissolve. Therefore, using technology in management may have a relationship with the performance of Co-operative's.

(11) Support from the Co-operative League and Federation of Co-operatives

In case of the Co-operatives in Malawi, Nkhoma (2011) recommended that, in order to improve the performance of Co-operatives, an apex organization and secondary level Co-operative at district level should be established as they would help in addressing governance, management and market access problems.

In the case of Thailand, an apex organization is the Co-operative League of Thailand, while the secondary level Co-operative refers to the Federation of Co-operative. Therefore, support from these organizations may have an effect on the Co-operatives performance likewise.

(12) Support from the government

Based on Carlberg et al., (2006), most of the Co-operatives managers believed that support from the government such as direct government agency funding and government planning support/technical assistance affects the Co-operative success but only slightly.

(13) Law and government regulations

The Co-operatives performance might be affected by Co-operative existence laws (Carlberg et al., 2006). This is also supported by Carr et al. (2008) which indicated that, for a Co-operative to be successful, Co-operatives in industries that are regulated by the government should operate under these government regulations at all times. Inability to abide by government regulation can lead to the dissolution of the Co-operative.

4.4 Summary of hypotheses in the study

Each motivation component will be tested with its determinants. These test results will enable us to identify which motivation variables play an important role in improving the Co-operative's performance, leading to motivation design for the Co-operative's Board of Directors. Based on the literature review, the model of work motivation was developed using the expectancy theory, and hypotheses were proposed as follows:

H1: There is a significant positive relationship between Co-operative Board Members' Work motivation and the Co-operative's performance

H2: There is a significant positive relationship between Expectancy and Co-operative Board Members' Work motivation

H3: There is a significant positive relationship between Instrumentality and Co-operative Board Members' Work motivation

H4: There is a significant positive relationship between Valence and Co-operative Board Members' Work motivation

H5: There is a significant negative relationship between the decision-making process of one person one vote and Expectancy

H6: There is a significant positive relationship between the level of Board authority and function and Expectancy

H7: There is a significant relationship between a Board composition that has no experts outside the Co-op and Expectancy

H8: There is a significant relationship between Board size and Expectancy

H9: There is a significant negative relationship between a Board term that is limited to two years per term, and cannot exceed two consecutive terms, and Expectancy

H10: There is a significant positive relationship between a Board structure that has sub-committees or working groups and Expectancy

H11: There is a significant positive relationship between Board meeting quality and Expectancy

H12: There is a significant relationship between CEO-chairman duality and Expectancy

H13: There is a significant positive relationship between Board Members' skill and Expectancy

H14: There is a significant positive relationship between Support to Board work and Expectancy

H15: There is a significant positive relationship between transparency in the evaluation and compensation setting process and Instrumentality

H16: There is a significant positive relationship between financial compensation and Instrumentality

H17: There is a significant positive relationship between other direct benefits and Instrumentality

H18: There is a significant positive relationship between indirect benefits and Instrumentality

H19: There is a significant positive relationship between Board Members' financial status and Valence

H20: There is a significant positive relationship between Board Members' financial burden and Valence

Chapter 5
Research Methodology

5.1 Introduction

The methods used in this study are both quantitative and qualitative. For the quantitative method, Structural Equation Modeling (SEM) is used as a major tool in analyzing the relationships among variables in the model of the study. SEM is a statistical technique used for analyzing a model that has many variables, particularly when the relationships among them are complicated and some variables are latent variables, i.e. variables that cannot be directly observed but are assessed indirectly through a number of measured (observed) variables. In this research, Board Members' motivation, including its components, and the Co-operative's performance are all latent variables.

As far as the qualitative method is concerned, the analysis is based on data from in-depth interview with experts who are involved in the Co-operative process in Thailand. They are Board Members and managers from different kinds of Co-operatives, which cover the major industries of the Co-operatives in Thailand and also cover primary, secondary, and tertiary Co-operatives. Information and opinions obtained from the interviews were synthesized and compared to the results from the quantitative analysis. They were also used to explain the reasons behind the relationships among variables, which is the result of the model from the quantitative analysis.

There are a number of approaches which can be used which combine the quantitative and qualitative method to answer the research questions (Creswell and Clark, 2011). For example:

1) Convergent parallel design occurs when the researcher implements the quantitative and qualitative strands during the same phase of the research process and prioritizes the two methods equally.

2) Explanatory sequential design occurs in two distinct interactive phases. The researcher starts with the analysis of quantitative data, which is followed by the analysis of qualitative data and then interprets how the qualitative results help in explaining the quantitative results.

3) Exploratory sequential design is in contrast to the explanatory design. The researcher begins with the analysis of qualitative data, conducts a quantitative test and then interprets how the quantitative results build on the initial qualitative results.

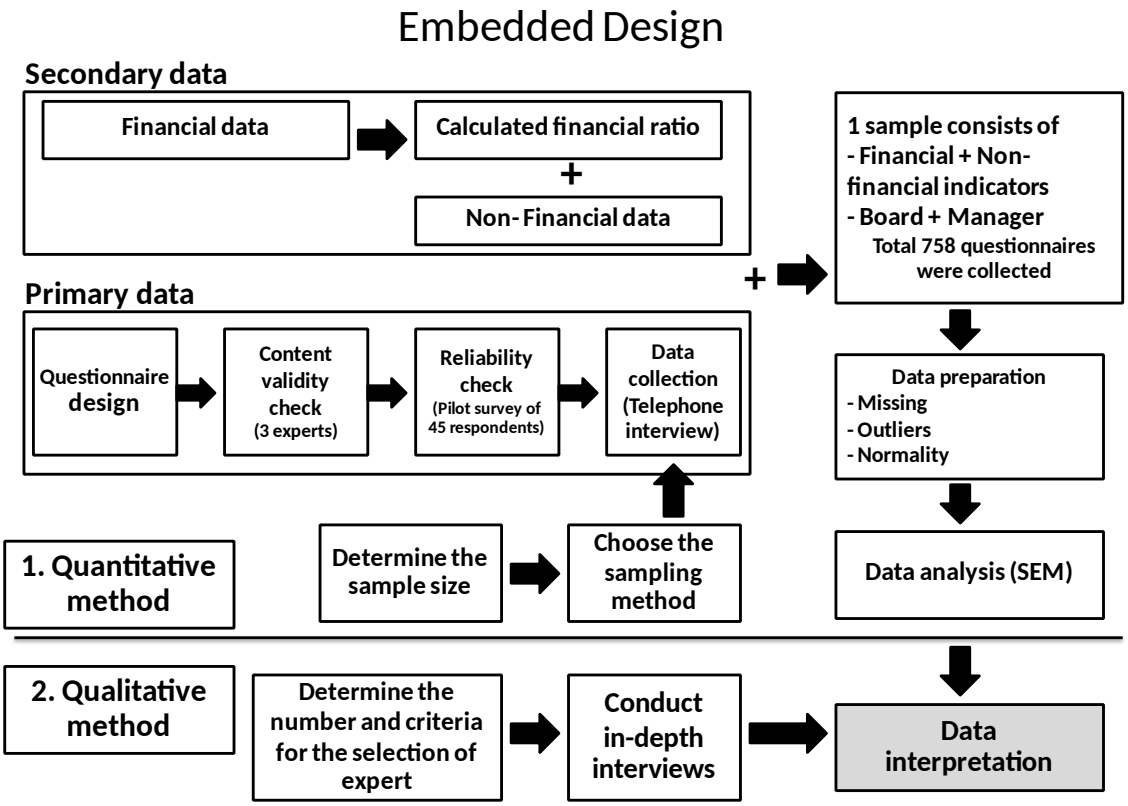
4) Embedded design occurs when the researcher collects and analyzes both quantitative and qualitative data within a traditional quantitative or qualitative design. Then the researcher may add a qualitative strand within a quantitative design or add a quantitative strand within a qualitative design. In the embedded design, the supplemental strand is added to enhance the overall design in some way.

In this study, convergent parallel design, exploratory sequential design and explanatory sequential design are not used because this topic is not entirely new and thus there is no need to begin from scratch. Also, there are some qualitative researches which can support and explain the arguments presented in this study. Furthermore, this research wants to focus more on the quantitative test due to which the embedded design

method is used. Most of the attention is placed on the quantitative design while the qualitative strand is only added to clarify some issues in the research.

Figure 5.1 outlines overall the research methods used in this study.

Figure 5.5: Overview of research methods used in this study



Even though this research involved a lot of processes and cost a lot time and money, it has no financial support from or relationship with other people or organizations. This is to state that there are no competing interests at stake and no conflicts of interest with other people or organizations that could inappropriately influence or bias the content of this research.

5.2 Quantitative Method

Data used in quantitative analysis comes from two sources: primary and secondary data.

Primary data

The primary data are collected by questionnaire surveys from both Board Members and the managers who work in the same Co-operatives. The unit of analysis in this research is at individual level. Therefore, information is gathered from individual Co-operative Board Members. However, information at the Board level is also collected to be combined with the information at the individual Board Member level. This information is gathered from the Co-operative manager who comes from the same Co-operative of the Co-operative Board Member.

The information gathered from the Co-operative's Board of Directors includes, for example, individual characteristics of each Co-operative's Board of Director, opinions on the performance of the Co-operative's Board of Directors, motivation on working as a Board Member, and factors that are hypothesized to affect Board Members' motivation. Information gathered from managers is information about the Co-operative, for example, characteristics of the Co-operative's Board, characteristics of the Co-operative's products and services, Co-operative members, management in the Co-op, and factors that affect the Co-op's operations.

In general, there are 12 to 15 Board Members in one Co-operative. However, it is not feasible to collect data from all members of the Board in any single Co-operative since they are not available at the same time and some are not willing to give up time to respond to a survey. Therefore, this study would only be able to have access to some Board Members from each Co-operative. However, using this method might raise a question about whether or not the motivation of individual Board members can be used to explain Co-operative performance.

As a Co-operative board has several members (typically more than ten members), it is difficult to collect data from every Board member of the same Co-

operative. However, we can analyze the relationship between Board motivation and Co-operative performance by collecting data from only some board members in each Co-operative. Even though the motivation of the selected board member(s) cannot be representative of the motivation of other board members in the same Co-operative, the analysis is still valid. This section aims to support the above argument.

Using average motivation

The relationship between Board motivation and Co-operative performance can be written as equation (1). This shows that the performance of each Co-operative is a function of the motivation of each member in the Board together with other factors.

$$Y_j = \beta_0 + \beta_1 M_{1j,} + \beta_2 M_{2j} + \beta_3 M_{3j} + \ldots + \beta_{N_j} M_{N_j j} + \beta_{N_j+1} X_{1j} + \beta_{N_j+2} X_{2j} + \beta_{N_j+3} X_{3j} + \ldots \quad (1)$$

Where Y_j= performance of Co-operative j

M_{ij} = motivation of Board member i in Co-operative j

N_j = number of Board members in Co-operative j

X_{ij} = other factors affecting Co-operative performance

β_i = estimation coefficient

However, to simplify the analysis we can assume that the effect of each Board member's motivation on Co-operative performance is equal, that is $\beta_1 = \beta_2 = \beta_3 = \ldots = \beta_{N_j}$. Hence, we can use the average value of Board motivation in each Co-operative Board to explain the Co-operative's performance; the model specification in this case can be written as equation (2).

$$Y_j = \alpha_0 + \alpha_1 \left[\frac{\sum_{i=1}^{N_j} M_{ij}}{N_j} \right] + \alpha_2 X_{1j} + \alpha_3 X_{2j} + \alpha_4 X_{3j} + \ldots \quad (2)$$

Using the motivation of an individual Board member

To obtain the average value of Board motivation of each Co-operative Board is difficult, as it is difficult to collect data from every Board member of the same Co-operative; therefore, the model specification in the form of equation (2) is not attractive. However, if we use the motivation of an individual Board member to explain the Co-operative's performance, the model specification can be written as equation (3).

$$Y_j = \gamma_0 + \gamma_1 M_{ij} + \gamma_2 X_{2j} + \gamma_3 X_{3j} + \gamma_4 X_{4j} + \ldots \quad (3)$$

By summing equation (3) over each Board member (subscript i) from the same Co-operative (with the same j), we obtain

$$N_j Y_j = N_j \gamma_0 + \gamma_1 \sum_{i=1}^{N_j} M_{ij} + N_j \gamma_2 X_{2j} + N_j \gamma_3 X_{3j} + N_j \gamma_4 X_{4j} + \ldots \quad (4)$$

By dividing equation (3) *by* N_j, we obtain equation (5), which has the same specification as equation (2).

$$Y_j = \gamma_0 + \gamma_1 \left[\frac{\sum_{i=1}^{N_j} M_{ij}}{N_j} \right] + \gamma_2 X_{2j} + \gamma_3 X_{3j} + \gamma_4 X_{4j} + \ldots \quad (5)$$

Therefore, we can use the model specification of equation (3) as an equivalent of model specification of equation (2). However, the model specification of equation (3) is more attractive as we can use the motivation of individual Board members to explain the Co-operative's performance. This implies that we can use a sampling method to choose some Board members in order to represent the characteristics of the

whole population of Co-operatives, instead of selecting Board members to represent the characteristics of each selected Co-operative.

Secondary data

Secondary data used in the study is the financial and non-financial indicators of the Co-operatives, which were collected by CAD and CPD. These data are used to measure each individual Co-operative's performance. They are composed of, for example, the number of Co-operative members, participation level of members, financial balance sheets and income statements, and level of standard classification. The data is based on the year 2009, which was the most up to date information at the time of study. Data from the two sources was then screened and combined to form a data base for the quantitative analysis.

5.2.1 Population and sample size

In this research, the unit of the sample is the Co-operative Board of Directors in Thailand. Therefore, the scope of population is 76,236 members of Board of Directors from 6,962 Co-operatives all over Thailand, which can be classified by Co-operative types as shown in Table 5.1. Of these 76,236 members of Board of Directors, 55,561 members are male and 20,675 members are female (CPD, 2010e).

Table 5.20: Number of Board of Directors by Co-operative type in 2010

Type	Number of Board of Directors	%Total
Agricultural Co-operatives	39,728	52.1
Fisheries Co-operatives	849	1.1
Land Settlement Co-operatives	1,111	1.5
Consumer Co-operatives	2,169	2.8
Thrift and Credit Co-operatives	17,246	22.6
Service Co-operatives	9,761	12.8
Credit Union Co-operatives	5,372	7.0

Type	Number of Board of Directors	%Total
Total	76,236	100

Source: CPD (2010e)

The determination of sample size is based on the following factors.

1) Statistical tools used in data analysis

To answer research questions, several statistical tools are used to analyze data such as confirmatory factor analysis (CFA) and structural equation modeling (SEM). Therefore, it is necessary to determine the sample size that supports each type of statistical tool used in data analysis. For CFA and SEM, there is no consensus on the recommended sample size (Sivo et al, 2006).

For CFA, many researchers have suggested that sample size should be between 100 and 300 as we can see from Gorsuch (1983) and Kline (1979, p. 40), who recommended at least 100 cases for a sample. Hutcheson and Sofroniou (1999) recommended at least 150 - 300 cases. Guilford (1954, p. 533) suggested that a sample size should be at least 200 cases. Cattell (1978) claimed the minimum desirable sample size was 250 cases. Norusis (2005) suggested that sample size should be at least 300 cases.

SEM is a large sample statistical technique, with a critical sample size of 200. In other words, any number above 200 is understood to provide sufficient statistical power for data analysis (Garver and Mentzer, 1999, Hoelter, 1983 and Iacobucci, 2009). However, a larger model requires a larger sample as it has more parameters to be estimated. A rule of thumb, which is applicable when the model estimation method is Maximum Likelihood, is that the samples should be more than 5-20 times of the

number of estimated parameters, since a lower sample size provides more unreliable results (Kline, 2011).

In conclusion, due to all the recommendations from existing research papers above, a sample that can meet the requirement of both CFA and SEM is 300 at the minimum.

2) Cost of data collection

Iacobucci (2009) stated that "bigger is always better" when it comes to sample size. However, due to the fact that large samples are scattered throughout the country together with the fact that the information needed from our samples is extensive and detailed, collection of data from our samples may take a long time and involve a high budget. Therefore, collecting data from samples is limited because of the constraints of the budget and time.

Of the factors mentioned above, the determination of sample size in this study was set according to the cost of data collection. Therefore, a sample size of 300 Board of Directors was chosen.

5.2.2 Research instrument development (Questionnaire development)

In order to answer the research question and to find the relationship, both the direction and the extent, between the motivation of Co-operative Board Members and the Co-operative's performance, 3 categories of data are required.

1) The Co-operative's performance data, both financial and non-financial

2) Motivation of Co-operative Board Members

3) Operation of Co-operative and Co-operative Board Members

Data on the Co-operative's performance, both financial and non-financial, can be found on the website of CPD (more detail in section 5.4,Data collection process) but

data on the motivation of Co-operative Board Members and the operation of Co-operative and Co-operative Board Members need to be collected by surveying. Therefore, a questionnaire was developed to collect these data.

Due to the need to collect a lot of data and because some information may not be appropriate to ask of our respondents, who are on Board of Directors because they may give information which is not true in order to protect themselves such as questions about conflict of interest in the co-op, the researcher also collected some data about the Co-operative from Co-operative managers.

Types of questionnaires

As has been explained, two types of questionnaire have been developed, one for a Co-operative Board of Directors, and the other one for the Co-operative manager. The questionnaire for a Co-operative Board of Directors aims to collect data related to Board Directors' motivation and its determining factors, while the questionnaire for Co-operative managers aims to collect data related to Co-operative characteristics attributable to the Co-operative's performance (see Table 5.2, Appendix I, and Appendix II).The data collected from the Co-operative manager will then be combined with the data from the Co-operative Board of Directors from the same Co-operative in order to use it in the analysis.

The first type of questionnaire was developed to collect data related to the motivation of Co-operative Board Members form Co-operative Board Members, categorized into 4 parts.

Part 1: Board Members' personal information

Part 2: Perceived relationship between work effort, performance and reward

Part 3: Information and opinions on the operation of a Co-operative's Board of Directors

Part4: Suggestions on the operation of the members of a Co-operative's Board of Directors

The second type of questionnaire was developed to collect data related to the operation of the Co-operative and Co-operative Board Members from Co-operative managers, who we believe will provide more accurate and valid information than Co-operative Board Members in some respects. This questionnaire has 8 parts.

Part 1: General information about the Co-operative

Part 2: General information about the Co-operative's Board of Directors

Part 3: Information about the operation of the Co-operative's Board of Directors

Part 4: Characteristics of the Co-operative's products and services

Part 5: Characteristics of the Co-operative's members

Part 6: Characteristics of management in the Co-operative

Part 7: Factors supporting the Co-operative's operations

Part 8: Suggestions and recommendations

Most questions have been newly developed to collect the data needed to answer the research questions. However, questions in the questionnaire for Co-operative Board Members, Part 2: Perceived relationship between work effort, performance and reward, which measure the motivation of Co-operative Board Members, are based on previous studies on motivation: Silva (2005), Chiang and Jang (2008), Gavin (1973), Mitchell and Nebeker (1973), Pritchard and Sanders (1973), Matsui and Terai (1975), Parker

and Dyer (1975), Pritchard, Deleo and Von Bergen (1976), Kominis and Emmanuel (2007), and Klein (1991) (See more detail in Appendix IV).

Table 5.21: Structure of the questionnaires

Items	Number of questions	
	Questionnaire for Board Member	**Questionnaire for manager**
Personal characteristic of Board Member		
Gender	1.1	
Age	1.2	
Education	1.3	
Occupation	1.4	
Sector	1.5	
Income	1.6	
Income source	1.7	
Motivation	**2.4**	
Expectancy	**2.1**	
Decision-making system	3.1	
Board size	3.2	2.1
Board term	3.3	
Board structure	3.4	2.2
Board composition	3.5	
Board skill	3.6	
Authority and function	3.7	3.1 - 3.3
Support in working as a Co-op Board Member	3.8	
Board meeting	3.9	3.4 – 3.10, 3.12, 3.14
CEO-Chairman duality		2.3
Conflict of interest in Board Members		3.13
Instrumentality	**2.2**	
Compensation	1.8	
Other direct benefits	1.8	

Items	Number of questions	
	Questionnaire for Board Member	**Questionnaire for manager**
Indirect benefits	1.8	
Transparency in the evaluation process	3.10	
Valence	**2.3**	
Financial status (Income)	1.6, 1.7	
Financial burden (Expense)	1.9	
6. Other Factors that affect the Co-operative's performance		
Co-operative location		1.3
Co-operative age		1.4
Co-operative activities		1.5
Customer groups		1.6
Number of employees		1.7
The use of technology in management		1.8
Communication within the Co-operative		3.11
Unique selling point of the Co-operative's products		4.2
Competition in the market		4.3
Market share of the Co-operative's products		4.4
Members' incomes		5.1
Members' education		5.2
Member's occupation		5.3
Relationships with members		5.4
Members' participation		5.5
Membership restriction		5.6
Marketing agreement with members		6.1
Co-operative's management and financial problems		6.2
Management quality		6.3
Goal setting and planning		6.4

Items	Number of questions	
	Questionnaire for Board Member	Questionnaire for manager
Support from Co-operative League and Federation of Co-operatives		7.1
Law and government regulations		7.2
Support from the government		7.3

Answering Scale used in the questionnaires

Both questionnaires use Likert-type scales, invented by Rensis Likert (1931), which are widely used in gathering information in the social sciences, marketing, medicine, and business, relative to attitudes, emotions, opinions, personalities, and descriptions of people's environment.

However, there is an ongoing debate on the Likert scale as to whether an odd or even scale should be used. Some advocate an odd scale where respondents can have a neutral middle point whereas others prefer to force people to select a position with an even scale (O'Neil, 2007).

Fowler (1995) argued that the use of an odd number in scales makes survey instruments ambiguous. The middle point can cause a dilemma for respondents as it can either be interpreted as a neutral point or not applicable. So, he suggests using an even number, preferably six. Worcester and Burns (1975) suggested that survey results from having a neutral or mid-point on a Likert scale (odd scale) might not be accurate because respondents are likely to answer the mid-point because they have social desirability bias, arising from a desire to please the interviewer or appear helpful or not be seen as giving what they perceive to be a socially unacceptable answer.

On the other hand, Hu (2010) found that using an even scale also has disadvantages. The 4-point scale (even scale) tends to over-scale the answers, going to extreme values more than the 5-point (odd scale) Likert scale. To some extent and in some cases, it exaggerated the answers because there is no middle point for a respondent to either choose or think about what they should choose. It is a forced side scale, which may have some survey bias involved.

Malhotra (2006, p.188) explained that the decision to use an odd or even number of categories depends on whether some of the respondents may be neutral on the response being measured. If a neutral or indifferent response is possible from at least some of the respondents, an odd number of categories should be used.

In this study, most questions are those asking about opinions to measure the motivation of Co-operative Board Members and related factors. The researcher considers that using an even scale may cause the problem of response bias because respondents are forced to choose an answer that does not truly exhibit their opinion. While using an odd scale, even though response bias may occur from the desire to please the interviewer, as interview method is used as a data collection method in this study, the effect from using an even scale outweighs that from using an odd scale. As a consequence, an odd scale is used.

How many points should be used? For this question, Diefenbach, Weinstein, and O'Reilly (1993) undertook an investigation of a range of Likert items, including 2-point, 5-point, 7-point, 9-point, 11-point, 12-point, and percentage (100-point) varieties. It was found that the 7-point item scale emerged as the best overall. Seven-point items produced among the best direct ranking matches, and were reported by participants as being the most accurate and the easiest to use.

Therefore, unless otherwise indicated, most questions in the questionnaires will use a seven-point Likert scale, ranging from 1 = Strongly Disagree to 7 = Strongly Agree.

5.2.3 Pilot study

Pilot studies are feasibility studies which are a small-scale version, a trial run for the major study (Polit et al., 2001) or the pre-testing of a particular research instrument (Baker, 1994, p.182-183). A pilot study is recommended with any type of research but is imperative with a survey (Dunn, 1999). Conducting pilot studies is necessary. It is a crucial element of a good study design. Even though it does not guarantee the success of the main study, it does increase the likelihood of success because it helps in developing and testing the adequacy of research instruments, assessing the feasibility of a survey, designing a research protocol and also assessing whether the research protocol is realistic and workable (Van Teijlingen and Hundley, 2001). In this study, the process of the pilot study is explained below.

1) Ask the experts to check for the content validity of the questionnaires

Straub (1989, p.150) explains that content validity refers to the question: "Are the instrument measures drawn from all possible measures of the properties under investigation?" An instrument uses representative validated questions from a wide pool of appropriate questions that could be considered as having content validity. The research instrument proposed in this research uses questions from a variety of validated sources as suggested in the Research Instrument Development section above.

Moreover, by using a panel of experts to review the questionnaires, the content validity of a test can be improved. The experts will be able to review the items and comment on whether the items cover a representative sample of the behaviour domain.

The number of experts used in validating the questionnaire of many research papers is three (Tepareenun and Pichayapaiboon, 2012, Sungkarat et al., 2011, Wichadee, 2011). Therefore, the expert panel in this research consisted of three professionals within the Co-operative field. They read and checked the questionnaires. Item-Objective Congruence Index (IOC) was then used as a validation method for the relevance of the content and the objective of the questionnaire (Rovinelli and Hambleton, 1977).

According to Brown (1996), if the value of IOC is higher than 0.5, the question is acceptable due to its congruence between the question and objectives or content, but if it is lower than 0.5, the question is unacceptable because of the lack of congruence. The result of IOC index for each question was checked and after that the questions in the questionnaire were adjusted according to the experts' advice.

After the experts finished checking the questionnaires and the IOC index was calculated, the result of the item analysis from the IOC revealed that there were 4 unacceptable items in the 85 items for the questionnaire for Co-operative Board Members and 4 unacceptable items in the 84 items for the questionnaire for Co-operative managers because they were irrelevant to the research question and/or purposes of this study (A name list of the experts, the method used in the calculations and the result of the IOC index can be seen in Appendix III).

2) Correct the questionnaires according to the experts' opinion and bring the new questionnaire to collect data

After removing irrelevant questions and correcting terms and words used in the questionnaires to make it more understandable, the researcher used the new questionnaire to do a pilot study with the Co-operative Board Members.

Pilot study

The administration of the survey in a pilot study took place after the two types of questionnaires were revised according to the suggestion of the review expert panel. For the sample in the pilot study, it is important that it has to be representative of the target study population. A pilot study of the questionnaire was undertaken in January 2012. The researcher used the telephone interview method, which is the same method used in the actual data collection, and is described in detail in section 5.2.4 (Data collection process).

Testing the reliability of the questionnaires

Sample size calculations may not be required for some pilot studies (Thabane et al., 2010). However, according to Dunn (1999) a minimum of 30 respondents are needed to complete the survey to be considered an adequate reliability study. In this pilot study, 45 Co-operative Board Members participated.

The collected data were used in testing the reliability of the questionnaires. Dunn (1999, p.176) explains that “any instrument is deemed reliable if it consistently provides the same answer, result, or conclusion when measuring the same person, object, or construct on several occasions”. The reliability of an instrument is generally measured by Cronbach's alpha. Large Cronbach's alpha are usually signs that these survey items are reliable (Straub, 1989, p.150).

The higher value of the Cronbach’s alpha Coefficient (α) is, the more reliability the questionnaire has. However, Nunnally (1987) suggests that a Cronbach’s alpha coefficient of 0.60 is acceptable and satisfactory to indicate that the sets of items in the questionnaire are reliable.

Table 5.22: Cronbach's alpha of the questionnaire for a Co-operative's Board Member

Construct Variables	Number of items	Cronbach's alpha coefficient
1. Expectancy	2	0.781
2. Instrumentality	9	0.993
3. Valence	9	0.977
4. Motivation	7	0.986

5.2.4 Data collection process

There are two main sources of data. The first is from questionnaire surveys, which gather the data on motivation of Co-operative Board Members and its determinants. The questionnaire surveys also collect the data on additional aspects of the Co-operative's performance. The second is from the CPD, which provides the Co-operative's performance data both financial performance and non-financial performance.

1) Data on the Motivation of Co-operative Board Members and Operation of Co-operative and Co-operative Board Members

Data on the motivation of Co-operative Board Members and operation of Co-operative and Co-operative Board Members was collected by the questionnaires, the contents of which are described in Section 5.2.2 (Research instrument development). After correcting the questionnaires following the pilot study, the final questionnaire survey was conducted from April 2012 to July 2012.

The data collection method by using a questionnaire can be done in several ways such as face to face interviews, telephone interviews, self-enumeration methods (postal/mail survey) or an electronic form. The appropriate method used in data

collection depends on many factors, such as the complexity of the topic and the nature of the questions, response rates, respondent preference, sample frame and target population, etc.

In this research, the researcher used the telephone interview method to collect data from target respondents because the data needed from Co-operative Board Members and Co-operative managers is detailed and questions about motivation or the operation of the Co-operative might be complicated and may need to be explained. The telephone interview method enables the interviewer to build trust and to provide an opportunity for further explanations, if required, while the cost of using a telephone interview is low and the time spent is less than with other methods.

The researcher chose not to use face to face interviews because, although it is easier to gain the trust of respondents, which may increase response rate and data quality, Co-operatives in Thailand have spread throughout the country, so to reach out to every Co-operative by the use of face to face interviews would be very costly and time consuming. Self-enumeration methods (postal/mail survey) or electronic forms might not be appropriate because the questions in the questionnaires are complicated. The response rate and quality of data would be low even though it can reach out to a lot of people and the cost is low.

In the actual data collection process, the researcher sought to contact Co-operative Board Members and managers who are in the Co-operative profile database of the CPD. However, contacting the Board of Directors and managers of some Co-operatives may be difficult because many Co-operatives do not have contact details and they are not in the database of the CPD. From the contact list of the Board of directors, each contact within each type of Co-operative was assigned a number starting from 1 to

the number of Board of directors of that type; then the Microsoft Excel function, which is the RANDBETWEEN function, was used to generate random numbers. Board members who were assigned the same number as that of the random number were chosen as the sample. The researcher chose the sample until the predetermined quota in each type of Co-operative was met.

The researcher had a team helping with the telephone interview. The team members, consisting of supervisors and enumerators, were required to attend an intensive training session during which the researcher explained the questionnaires in great detail along with explaining the ethical issues related to the questionnaire and the process of conducting telephonic interview. Each team member was informed about the data collection process, the objectives of the research , the meaning of each question in the questionnaires as well as the meaning of the technical terms used in order to better explain it to the respondents in case a problem were to arise.

All team members were expected to keep the information they received from respondents strictly confidential. They were not allowed to discuss the information received from respondents amongst themselves nor with other people. Team members could not write down any information on any paper except on the questionnaire itself. They were also not allowed to have their computers or any kind of equipment which could record audio or written data while the telephone interview was being conducted.

The telephone interviews were conducted in a room exclusively arranged for this task. At least one of the supervisors had to be present in the room during the time the telephone interviews were being conducted by the enumerators. The supervisors had the responsibility to make the phone call and once the respondents agreed to participate in the survey, the phone line would be switched to the enumerators to

conduct interview. The supervisors would read through the script to obtain oral consent[2] from the respondents with both the Co-operative Board Members and the Co-operative managers. The telephone interviews were conducted during office hours i.e. 09.00 – 17.00 hrs. When conducting interviews, enumerators did not know who the respondent was. The questionnaires were collected daily at the end of the day and placed in a safe place.

The processing of data entry was conducted using the Epi Info software which did not require any information which could reveal the identity of the respondent. It simply required a code matching the data entry and the questionnaire. The code was merely for double-checking the accuracy of the entered data. The questionnaires were kept for a period of 6 months after the data had been processed while the questionnaires were destroyed.

Sampling method

The scope of population in this study is Co-operatives from all areas in Thailand, therefore the sample was scattered across the country. In addition, some Co-operatives and Board of Directors have no contact in the database of the CPD. To keep the cost of data collection reasonable, stratified quota sampling was used as the sampling method in this study. In this method, all Co-operatives were stratified according to their Co-operative type, then Co-operatives from each stratum were selected to meet their quota number. The stratification of samples is used to ensure that every type of Co-operative will be included in the sample.

From the number of required respondents of 300, 10% more than the sample size were surveyed in order to prevent the problem of inadequate samples that may

[2] This could be found at the beginning of the questionnaires for both Coop board members and Coop managers, which are shown in Appendix I and Appendix II.

occur due to errors in some collected samples. Hence, a sample of 330 Board of Directors was collected in this study. The planned number of respondents classified by Co-operative type is shown in Table 5.4. These numbers are calculated based on the proportion of the number of Board of Directors in each Co-operative type shown in Table 5.1. However, the researcher considered that the number of respondents in some stratums is too small. Therefore a condition that each stratum should contain at least 20 respondents was set so that the numbers would better represent the population of each Co-operative type. At the same time, the number of respondents in the largest stratum is reduced to keep the total number of respondents remained the same as initial planned which will allow the cost of survey stay within the budget. The adjusted sample size in each stratum is shown in Table 5.4.

Due to the change of sample sizes by Co-operative type as explained above, sampling weights are needed to readjust the proportion of samples from each stratum to be the same as those before the reconfiguration of sample sizes. Sampling weights is the probabilities of selection for each observation. By giving weights to the samples, the change of the sample sizes of each Co-operative type can be made possible, making them as if they were drawn from the entire population by a simple random sampling method, which provides an accurate population estimate for the parameters of interest (Friedman, 2013). The sampling weights will be calculated after the data cleaning process, and will be used in both descriptive statistics and model estimation.

Table 5.23: Planned number of respondents in each stratum

Type	Number of respondents	Adjusted number of respondents
Agricultural Co-operatives	172	130
Fisheries Co-operatives	4	20

Type	Number of respondents	Adjusted number of respondents
Land Settlement Co-operatives	5	20
Consumer Co-operatives	9	20
Thrift and Credit Co-operatives	75	75
Service Co-operatives	42	42
Credit Union Co-operatives	23	23
Total	330	330

Source: Author's calculation

During the data collection process, the researcher tried to collect data to satisfy the planned number of respondents by Co-operative type. However, due to some unforeseen conditions during the questionnaire survey process, the researcher was unable to satisfy the minimum of planned number of respondents in some Co-operative types. To fulfill a criteria for a complete unit of data, information is needed from both Co-operative Board Member and Co-operative manager. But in many cases, both manager and Co-operative Board Member from the same Co-operative are not unavailable as time the research visited the Co-operative. Lack of complete contact information of managers and Co-operative Board Members was also another reason prohibiting researcher from accessing to samples. The actual number of respondents from each Co-operative type is shown in Table 5.5.

Table 5.24: Collected number of respondents in each stratum

Type	Collected Number of respondents
Agricultural Co-operatives	136
Fisheries Co-operatives	13
Land Settlement Co-operatives	24
Consumer Co-operatives	19
Thrift and Credit Co-operatives	56
Service Co-operatives	39
Credit Union Co-operatives	43
Total	330

2) The Co-operative's performance data

Financial indicators

CPD provides partial data about balance sheets and the income statements of all Co-operatives in Thailand. The financial performance of each individual Co-operative could be computed from these data. In this study, the Co-operative's performance is measured by financial ratios, which can be classified into four dimensions. However, due to data limitations, only some financial ratios can be computed.

a. Liquidity Ratios

From CPD data, only Current Ratio can be calculated while Quick Ratio (Acid Test) and Cash Conversion Cycle cannot. This is because the data on Inventory, which is necessary in calculating the Quick Ratio (Acid Test) and the Cash Conversion Cycle, is not available.

b. Profitability Ratios

Net Profit Margin, Return on Assets and Return on Equity are calculated while Gross Profit Margin Percentage and Operating Profit Margin Percentage are not. This is due to the fact that only data on Net Profit is available while data on Gross Profit and Operating profit is not.

c. Efficiency Ratios (Activity Ratios)

Account Receivable Turnover, Average Collection Period, Total Asset Turnover and Fixed Asset Turnover are calculated, but Inventory Turnover is not calculated because data on Inventory is not available.

d. Leverage Ratios (Debt Ratios)

Only Debt-to-Equity is calculated while Interest Coverage is not. This is because data on Operating Profit and Annual Interest Charges, which is necessary to calculate Interest Coverage, are not available.

The financial indicators that were possible to compute are summarized in Table 5.6. However, it can be observed from the table that the financial ratios of Account Receivable Turnover, Return on Fixed Assets, and Fixed Asset Turnover are excluded because these three ratios, which are calculated from the data of CPD, have an unreliably large magnitude in value for some Co-operatives in the samples. This casts doubt on the reliability of the data on Fixed Assets and Net Receivables, which are used in calculating these three ratios.

Table 5.25: Financial indicators used to measure Co-op performance

Liquidity Ratio	Profitability Ratio	Efficiency Ratio	Leverage Ratio
- Current Ratio	- Net Profit Margin	-Account Receivable Turnover	- Debt/Equity Ratio
	- Return on Equity	- Average Collection	

Liquidity Ratio	Profitability Ratio	Efficiency Ratio	Leverage Ratio
		Period	
	- Return on Assets	- Total Asset Turnover	
	- Return on Fixed Assets	- Fixed Asset Turnover	

Non-financial indicators

Non-financial indicators can be obtained from the CPD. These data are from the Co-operative self-evaluation surveys. CPD uses these data to classify Co-operatives subject to their quality. The items in the survey are as follows (CPD, 2009, p.18-19). The answer to each item is “yes” or “no”.

(1) From the Co-operative’s performance in the last two accounting periods, there was no loss; besides loss occurring through floods or natural disasters causing damage to the Co-operative and Co-operative members, such loss is not counted. (“NOLOSS” is replaced for this variable)

(2) From the Co-operative’s performance in the last two accounting periods, there were no acts that could be considered as Co-operative corruption (“NOCORRUP” is replaced for this variable)

(3) From the Co-operative’s Performance in the last accounting period, a financial statement was prepared and already sent to an auditor to be approved at the Co-operative annual meeting within 150 days after the end of the accounting period (“ACAUDIT” is replaced for this variable)

(4) From the Co-operative’s performance in the last accounting period, the Co-operative must have at least 60 percent of members who do their business with the Co-operative ("PARTIC60” is replaced for this variable)

(5) The Co-operative must employ a full time staff member in order to run the Co-operative. If there is no employment, a Board Member or a Co-operative member must be assigned to work fulltime in the Co-operative. ("FTSTAFF" is replaced for this variable)

(6) From the Co-operative's performance in the last two accounting periods, the Co-operative must have a net profit and must pay a dividend back to its members at least once. ("PAYDIVI" is replaced for this variable)

(7) From the Co-operative's performance in the last accounting period, a Co-operative must not act in a way that violates any laws, regulations or orders of the Registrar of Co-operatives. ("NOVIOLAT" is replaced for this variable)

Another non-financial indicator which is used in this study is an indicator which indicates the quality of management in the Co-operative ("COOPLEVE" is replaced for this variable). It is collected from a manager's questionnaire.

However, these data have some limitations in that they may be unable to fully reflect the performance of each Co-operative since there is no performance measurement that can reflect a structural management style that is unique to Co-operatives as inclusive, universal and measurable, as well as consistent (Soboh, 2009)

Co-operative's performance data used in this research, both financial and non-financial data, is from year 2009. The researcher considered that one-year performance data might not fully reflect the actual performance of some Co-operatives because some external shocks might happen during that year and affect their performance. This problem could be lessened by using the average of the Co-operative's performance data from several years. For the financial data, three years of the data, 2006–2009, is

available. For the non-financial data, the data of the year 2006-2009 is also available. Nevertheless, the definitions of some non-financial variables were changed during that time period making it is inappropriate to find the average over time. Therefore, only one year of data is used.

Even though the Co-operative performance data (of the year 2009) predates the survey of board members (from the year 2012) by a few years, this does not affect the results from the analysis because the Co-operatives' performance seems to have a constant pattern, that is, Co-operatives with good performance had good performance over time while Co-operatives with poor performance had poor performance over time. This can be illustrated in Table 5.7, which shows the bivariate correlation among the net profit of Co-operatives between the year 2006 and 2009.The net profits in the year 2006 – 2009 are significantly moderately to highly correlated (the Pearson correlations range from 0.39 – 0.78) with each other at the 99% confidence level. Following the same pattern, the Co-operatives' performance in the year 2009 is likely to be able to reflect the Co-operatives' performance in 2012.

Table 5.26: The Pearson Correlation of the Co-operative net profit in 2006 - 2009

		NETPRO09	NETPRO08	NETPRO07	NETPRO06
NETPRO09	Pearson Correlation	1	.467**	.408**	.386**
	Sig. (2-tailed)		.000	.000	.000
	N	319	319	319	319
NETPRO08	Pearson Correlation	.467**	1	.766**	.768**
	Sig. (2-tailed)	.000		.000	.000
	N	319	319	319	319
NETPRO07	Pearson Correlation	.408**	.766**	1	.784**
	Sig. (2-tailed)	.000	.000		.000
	N	319	319	319	319
NETPRO06	Pearson Correlation	.386**	.768**	.784**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	319	319	319	319

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Author's calculation from CPD's data

5.2.5 Data analysis method

In this research, to analyze the data in order to answer the research questions the following techniques and methods have been used.

5.2.5.1 Confirmatory factor analysis (CFA)

Confirmatory factor analysis (CFA) is used to develop a scale for measuring a latent variable. It seeks to determine whether the number of factors and the loadings of measured variables (indicators) on the latent variable conform to what is expected on the basis of pre-established theory. The researcher used CFA to establish a measurement model of the Co-op Board of Directors' motivation i.e. to determine its components which have clear theoretical support (the Expectancy Theory of motivation). CFA was also used to establish the measurement model of the Co-operative's performance. The details of the process are conducting CFA and statistical values that need to be considered are explained below.

Shook et al. (2004, p.400) stated that "confidence in an SEM study's findings depends on a solid foundation of measures with known and rigorous properties. Yet, little attention has been paid to reliability and validity". Therefore, the researcher tested the validity and reliability of constructs by the method explained below.

1) Testing the validity of constructs

Validity refers to the degree to which the items of a construct can measure the true value of that construct. Construct validity is used to show the results from the empirical analysis using the construct fit the theory. The test of construct validity could be done by examining whether the construct used as the instrument can cover the concept as proposed by the theory (Yusoff et al., 2012). To evaluate the construct

validity, the convergent and discriminant validity of the constructs was examined (Chiang and Jang, 2008).

A. Convergent Validity

The convergent validity of a construct refers to the degree to which a set of items measures the same construct. Therefore, items measuring the same construct are expected to be highly correlated with one another. It is important to test the convergent validity of constructs to ensure that all items measuring the same construct do not contradict each other (Yusoff et al., 2012).

The standardized factor loading, composite reliability (CR) and average variance extracted (AVE) could be used to examine convergent validity (Hair et al., 2011). The threshold value is 0.4 for standardized factor loading (Homburg and Giering, 1998), 0.6 for CR (Bagozzi and Yi, 1988) and 0.5 for AVE. All these indices should exceed their threshold values.

B. Discriminant Validity

Discriminant Validity refers to the degree to which a set of items measures distinct concepts or differentiates among constructs. Items measuring different constructs are expected not to be highly correlated with one another. Netemeyer et al. (2003) explained that a construct should not correlate too highly with constructs from which it is supposed to differ. To assess Discriminant Validity, a common method is to determine whether the correlation between two constructs is significantly less than 1. Another method was recommended by Fornell and Larcker (1981, p.45-46), which

states that for any two constructs in the model, the AVE estimates of both constructs need to be larger than the shared variance (i.e., square of the correlation) between them.

2) Testing the reliability of constructs

Reliability refers to the degree of internal consistency of the measuring items. Reliability depends on the size of measurement error.

Besides the Cronbach's alpha coefficient, which was used to assess the reliability of the measurement items, CR and AVE are also used. Shook et al (2004) argued that CR is a better option because it draws on the standardized loadings and measurement error for each item. According to Bagozzi and Yi (1988), CR should exceed 0.6 as was noted earlier.

AVE is similar to CR as it indicates the amount of variance that is captured by the construct in relation to the amount of variance due to measurement error (Fornell and Larcker, 1981). AVE should exceed the threshold values proposed by Hair et al. (2011) at 0.5.

The result from CFA in testing the validity and reliability of constructs showed that all the measurement models fit with the data. All the constructs are valid and reliable, which is appropriate for the analysis in the next step. The method used in calculating CR and AVE and the result of testing the validity and reliability of the constructs are shown in Chapter 6.

5.2.5.2 Structural Equation Modeling (SEM)

In this research, SEM is used to analyze the relationship between the motivation of Co-operative Board Members and the Co-operative's performance, and also the determinants of both the motivation of Co-operative Board Members and the Co-operative's performance. Many researchers have started paying more attention to SEM

since research questions in the social and behavioural sciences have increased in complexity and flexible user-friendly computer software has appeared continuously (Sweeney, 2009).Werner and Engel (2009) state that SEM allows analysis that would not be possible using other methods. Even in cases where alternative methods of analyses are available, SEM may provide more meaningful and more valid results. Therefore, SEM has become one of the important tools for researchers across disciplines and increasingly is a 'must' for researchers in the social sciences (Hooper et al., 2008). From the beginning, SEM was used as a tool for analytic social scientists and spread to other fields such as psychology, education, the social and behavioural science, biology, economics, medicine, marketing, psychology, demography and even genetics (Sweeney, 2009).

1) SEM definition

SEM is a general approach to multivariate data analysis which is used to study complex relationships among variables, where some variables can be latent or unobserved. SEM is a collection of statistical techniques that allow a set of relationships between one or more independent variables, either continuous or discrete, and one or more dependent variables, either continuous or discrete, to be examined. Both independent variables and dependent variables can be either measured variables (directly observed) or latent variables (a variable that is not directly measured but is assessed indirectly through two or more measured (observed) variables) (Wothke, 2010; Ullman and Bentler, 2004).

Kaplan (2000) defines SEM as "a class of methodologies" that seeks to represent hypotheses about the means, variances, and covariances of observed data in terms of a smaller number of 'structural' parameters defined by a hypothesized

underlying conceptual or theoretical model. It represents an extension of general linear modeling procedures, such as the ANOVA and multiple regression analysis and it is also referred to as causal modeling, causal analysis, simultaneous equation modeling, analysis of covariance structures, path analysis, or confirmatory factor analysis (Ullman and Bentler, 2004).

SEM is generally used as a tool to evaluate the validity of a theory. Lei and Wu (2007) highlight this point in defining SEM as a general term that has been used to describe a large number of statistical models used to evaluate the validity of substantive theories with empirical data. Rigdon (n.d.) also defines SEM as a largely confirmatory, rather than exploratory method. It is used to determine whether a certain model is valid rather than to find a suitable model, although SEM analyses often involve a certain exploratory element.

2) The use of SEM

SEM can be used to address a broad range of questions. There are three general types of research questions that are particularly well addressed through the use of the SEM technique (Ullman 2006).

1) Do the parameters of the model combine to estimate a population covariance matrix (estimated structured covariance matrix) that is highly similar to the sample covariance matrix (estimated unstructured covariance matrix)?

2) What are the significant relationships among variables within the model?

3) Which nested model provides the best fit to the data?

In this research, measurement and structural models were developed based on the theory from the literature survey. Then these models have to be tested to determine whether they are consistent with existing data or not. To answer such questions, we

need to make sure whether the parameters included in the model to estimate a population covariance matrix are similar to the sample covariance matrix, which corresponds to the first type of question.

The research questions are whether the motivation of a Co-op Board affects the performance of the Co-op and whether there are any factors that affect the performance of the Co-op. The relationship between variables (motivation of co-op Board Members, co-op performance and other factors) are investigated. This is consistent with the second type of research question that SEM can address, which was mentioned earlier.

If we consider the literature on motivation, we can see that SEM is a very popular technique that has been widely used in analyzing motivation. This is because SEM is a very general statistical modeling technique, which is widely used in the behavioural sciences. It is a powerful technique that can combine a complex path model with latent variables. As Rigdon (n.d.) points out, in SEM, instead of focusing on the manifest variables used to measure these constructs, interest usually focuses on latent constructs, which are abstract psychological variables like "intelligence" or "attitude toward the brand", as well as “motivation”, which is also a latent variable (Barker, 2003).

3) Software used to conduct SEM

Several statistical packages for conducting SEM are available e.g. LISREL, AMOS, EQS, and MPLUS. Each software package has its own distinctive features which can be summarized in Table 5.8.

Table 5.27: A comparison of software packages for Structural Equation Modeling

Feature	EQS 6.1	AMOS 18.0	LISREL 8.8	MPLUS
Imports Data Types	- Raw ASCII, covariance, SPSS, BMDP,	- Raw ASCII, Dbase, Excel, FoxPro, Lotus,	- Raw ASCII, covariance matrix, SPSS,	- Raw ASCII, covariance matrix

Feature	EQS 6.1	AMOS 18.0	LISREL 8.8	MPLUS
	Dbase. - Imported data must be converted to EQS format.	Access, SPSS (through SPSS: Stata, SAS and others)	SAS, BMDP, Dbase, Statistica, Systat, Excel among others. - Imported data must be converted to covariance matrix by Prelis, but raw ASCII format can be read directly	
Graphic interface	Yes	Yes	Yes	Yes
Estimations methods	ULS, GLS, ML, ML Robust, ADF	ML, ML robust GLS, ADF, ULS or SLS (scale-free least squares)	ULS, GLS, ML, ML Robust, WLS, DWLS	ULS, GLS, ML, multiple ML Robust options, several WLS options
Missing data (FIML)	Yes	Yes	Yes	Yes
Fit indices	Many	Many	Many	Limited
Categorical data	Yes	Yes	Yes	Yes, special features
Robust ML	Yes	No	Yes	Yes
Multilevel Analysis	Yes	No	Yes	Yes, special features
Sample Weights	Yes	No	Yes	Yes
Complex Sampling Design adjustments (variance adjustments)	No	No	Yes	Yes

Source: Adjusted from Newsom (2010)

The comparison of the software packages above was compiled in 2010 which might be outdated as the software is developed continuously. However, the main features of the software that are relevant to this research do not change. With the availability of a number of software, an important question to be asked is which software ought to be used for conducting SEM in this particular research.

The researcher made use of two criteria in selecting the appropriate software. Firstly, the software should be able to incorporate sample weights in the model

estimation process. This is because this research uses the sampling method that assigns unequal weights for observations from different stratum. Keeping this criterion under consideration, AMOS is to be excluded as it does not allow sample weights to be incorporated as part of the analysis.

Secondly, the software must be able to analyze the model which contains dichotomous and ordered categorical variables since the data collected in this research is mostly that kind of ordered categorical and contains dichotomous variables. EQS, LISREL and MPLUS are all able to handle dichotomous and categorical data. However, Newsom (2012) stated that there seems to be growing consensus that the best approach to analyze categorical variables containing fewer categories is the Robust Weight Least Squares (WLS) approach implemented in MPLUS. Therefore, the researcher chose to make use of the MPLUS to conduct SEM in this research.

4) Limitations of SEM

Even though SEM is a useful and powerful tool, it has some limitations which should be kept in mind when making use of it.

(1) Variables which are of theoretical relevance may be omitted. Structural models are approximations of reality hence some variables may be omitted in the process of translating a causal theory into a causal model.

Some researchers may believe that omitted variables are not a problem because they believe that residual terms can be used to account for omitted variables and that if a model fits well, it must have included all the necessary and important variables in the hypothesized model.

However, Tomarken and Waller (2005) argued that omitted variables can cause problems. Such variable omissions present a misleading picture of the measurement

model as well as the structural model which might lead to biased parameter estimates and inaccurate estimates of standard errors (Kaplan, 1989; Mauro, 1990; Reichardt, 2002 cited in Tomarken and Waller, 2005).

Researchers need to acknowledge the high likelihood of omitted variables and the effects they have on parameter estimates, standard errors, and broader inferences with respect to the model used in their research.

(2) Researchers normally use those rules of thumb to guide decision-making and or to justify the decisions made. However, some commonly used rules of thumb in SEM, such as the Tucker-Lewis Index or the Comparative Fit Index greater than 0.90 indicate the acceptable fit, might be inaccurate. Such rules of thumb are oversimplified and lack a detailed mathematical or empirical justification.

The optimal cutoff criteria for most fit indices cannot be determined only by simply making use of rules of thumb because the criteria is conditional upon a variety of factors including the estimation method used, sample size, model complexity, and the degree to which the assumption of multivariate normality is violated. For example, several simulation studies have indicated that using the Comparative Fit Index at a value greater than 0.90 to indicate an acceptable fit is often inaccurate (Tomarken and Waller, 2005).

(3) There might be other models that also fit well with the data. In the model testing process, alternative models may be available that could fit the data equally well or better. However, researchers tend to overstate the certainty and strength of the conclusions yielded by a SEM analysis (Tomarken and Waller, 2005).

It is impossible to search for all models that would fit well with the data due to the large amount of the combination of variables and their relationships. However,

researchers might conduct tests to comparatively evaluate some of the alternatives available to them.

(4) SEM requires a large sample size. SEM is a large sample statistical technique. A sample size which is greater than 200 is understood to provide sufficient statistical power for data analysis (Garver and Mentzer, 1999, Hoelter, 1983 and Iacobucci, 2009). Therefore, if the sample size of the research topic is small, SEM will not be able to estimate accurately what the research aims to measure and the research results will lack reliability.

5) Literature on Board motivation and the Co-operative's performance using SEM

After considering the possible benefits and limitations of SEM, research papers on motivation and Board of Directors making use of SEM in their analysis were reviewed. The researcher found some interesting papers such as Wright (2004),which tested a conceptual model predicting how the organization's work context might influence work motivation based on goal and social cognitive theories using SEM. Ahmed and Bruinsma (2006) checked whether a motivational model of academic performance based on self-concept and self-determination theories fit with the data they collected by making use of SEM. Eveleth and Stone (2008) studied the relationship between the antecedents of an organizationally new software implementation and behavioural intentions to use this software based on self-efficacy theory using SEM. Chatzoglou et al. (2011) employed SEM to examine the impact of organizational and professional commitment, work motivation, job characteristics in job satisfaction and intention to leave (turnover). There are also many research papers utilizing SEM to study motivation based on expectancy theory, such as Liu et al. (2007), Chiang and

Jang (2008), Manolova et al. (2008), Abadi et al. (2011), Bosse (2011), Gegenfurtner (2011) or Tatum (2012).

For research papers related to Board of Directors, SEM is generally used as a data analysis method as well. For example, by building up SEM, Stephens et al. (2004) examined the relationships between an individual's experience and role as a member of the Board of Directors for a non-profit organization, the director's level of commitment to the Board, and the director's self-reported performance. Filatotchev et al. (2007) studied the relations among corporate governance, managers' independence from owners in terms of strategic decision making, exporting, and performance. Li et al. (2009) investigated the relationships between corporate governance risk and corporate governance culture, ownership structure, and inside governance. Eling and Marek (2011) employ SEM to analyze the impact of factors related to corporate governance (i.e., compensation, monitoring, and ownership structure) on risk taking in the insurance industry. Essen et al. (2012) investigated corporate Boards and the performance of Asian firms.

However, research papers using SEM to explore the relationship between a Co-op Board Member’s motivation based on expectancy theory and the Co-operative’s performance have not been found yet.

5.2.6 Data preparation before the analysis

SEM is based on the analysis of correlation among variables; therefore missing data, outliers, nonlinearity and non-normality of data affect the variance-covariance among variables and thus affect SEM analysis (Sweeney, 2009). For this reason, the collected data have to be examined for missing data, outliers, nonlinearity and non-

normality of data first. The methods used to detect these problems and their solutions are as follows.

1) Missing data

Missing data causes a problem for researchers using SEM techniques for data analyses because SEM and multivariate methods require complete data (Carter, 2006). The statistical analysis of data might be affected by missing data. Therefore, researchers have to deal with missing data first.

There are many methods that can be used to handle missing values such as deletion methods, single imputation methods or model-based methods. Each method has its own advantages and limitations which can be summarized in Table 5.9.

Table 5.28: Summary of methods used to handle missing values

Methods		Explanation	Advantages	Limitations
1. Deletion Methods	1.1 List-wise deletion	- Cases with missing data are deleted. - Cases containing completed data are the only ones analyzed.	- Simple to use - Can be used with any kind of statistical analysis. - No special computational methods are required. - Comparability across analyses	- Reduce the numbers of samples - Reduces statistical power. - Estimates may be biased if the data are not missing completely at random.
	1.2 Pair-wise deletion	- Cases are not deleted; only those cases containing the variables of interest will be analyzed.	- Makes use of every possible information for every analysis.	- Cannot compare analyses because samples are different for each analysis conducted.
2. Single Imputation Methods	2.1 Mean/mode substitution	- Replaces missing values with sample mean or mode. - Runs analyses considering all cases as complete.	- Can use complete case analysis method.	- Reduces the level of variability - Leads to biased estimates of variances and co-variances.
	2.2 Single	- Replaces missing	- Uses all	- Overestimates

Methods		Explanation	Advantages	Limitations
	regression	values with predicted scores from a regression equation.	information from observed data.	model fit and correlation estimates. - Weakens variance.
3. Model-Based Methods	3.1 Maximum Likelihood	- Does not impute any data, but rather uses the full, incomplete data to compute Maximum Likelihood estimates. - The Maximum Likelihood estimate of a parameter is the value of the parameter that is most likely to have resulted in the observed data.	- Uses full information (both complete cases and incomplete cases) to calculate Log Likelihood. - Unbiased parameter estimates with data that is missing completely at random and missing at random (MAR)	- Standard errors tend to bias downward.
	3.2 Multiple imputation	- Imputes missing values, and generates several data sets, each with slightly different imputed values. -Performs an analysis on each of the data sets. - Combines the results into a single set of parameter estimates, standard errors, and test statistics.	- Variability is more accurate with multiple imputations for each missing value. - Considers variability due to sampling process and imputation. - Can be used with any kind of data and model with conventional software. - When the data is MAR, multiple imputation can lead to consistent, asymptotically efficient, and asymptotically normal estimates.	- Cumbersome coding - Rooms for error when specifying models - It produces different estimates every time it is used which can lead to situations where different researchers get different numbers from the same data using the same method.

Source: Allison (2012), Soley-Bori (2013), Humphries (n.d.)

In this research, the researcher didn't make use of the deletion methods, list-wise deletion or pair-wise deletion. This is because these methods lower the number of

samples used in the analysis and reduce the statistical power while the researcher wished to make use of the greatest number of sample possible.

For single imputation methods, the mean/mode substitution or single regression may be inappropriate. Even though these methods make use of all information gathered from observed data in the estimation, it might reduce variability and lead to biased estimates of variances and co-variances.

The last approach is a model-based method such as Maximum Likelihood or multiple imputations. The researcher believes that this approach is better in comparison to the deletion methods and single imputation methods because it does not reduce the statistical power and leads to more consistent, asymptotically efficient, and asymptotically normal estimates.

The researcher had two alternatives to choose between Maximum Likelihood and multiple imputations. Question is which method should be used to handle the missing values in this research. Collins, Schafer and Kam (2001) explained that even though they operate differently, they are conceptually and theoretically very similar and will always yield highly similar results when the input data and models are the same as well as the number of imputations is large enough. This suggests that neither approach is clearly better than the other.

Practically, the possibility of omitting a variable important to the missing data model of multiple imputations is much less in comparison to the Maximum Likelihood. It is because, for multiple imputations, the imputation is done separately from data analysis and additional variables can be included easily in a data set during the imputation process. But with Maximum Likelihood, a set of variables is limited to those included in the data analysis at hand, suggesting that one or more variables that

contain information necessary to the missing data model might be omitted. Maximum Likelihood can include additional variables to solve this problem. However, this is more difficult, which is why many researchers do not know that adding such variables is possible as part of the maximum likelihood software (The Methodology Center, 2014).

Keeping all the reasons explained above in mind, the researcher for the purpose of this research has managed the missing values by using multiple imputation method.

2) Outliers

Hawkins (1980) defined an outlier as an observation that deviates so much from other observations as to arouse suspicion that it was generated by a different mechanism. Outliers must be explained, deleted or accommodated before researchers start analyzing the data because they can affect statistical analysis.

There are two types of outliers, i.e. univariate outliers and multivariate outliers. The univariate outliers can be detected by the standardized score (z-score). Generally, data with an absolute value of z-score more than a critical value are deemed to be outliers. The statistics for identifying multivariate outliers is called Mahalanobis Distances. This calculates the distance of particular scores from the central cluster of remaining cases. The Mahalanobis Distances score for each subject is considered an outlier if it exceeds a "critical value" (*Detecting outliers – multivariate*, 2009).

Researchers have several options for reducing the influence of the outliers, for example, excluding them from the sample, transforming the data using mathematical functions, and using the robust estimation method. For SEM, the robust estimation method is limited. All standard estimation methods are vulnerable to the outlier problem.

3) Non-normality

A normal distribution is a symmetric bell-shaped curve defined by two things i.e. the mean and variance. Most statistical methods rely upon the assumption that data is normal and most of the estimation techniques used in SEM assume the data that has been drawn from a population is normal (Ullman, 1996).

In this research, Normality is checked by considering the skewness and kurtosis of each variable, which can be calculated by SPSS. skewness is an index that reflects the symmetry of a univariate distribution while kurtosis reflects the shape of the distribution in terms of its peakedness. Data with normal distribution is data with zero skewness and zero kurtosis. Therefore, hypothesis testing of the above characteristics is used in a normality check (Sweeney, 2009).

There are several methods to deal with the non-normal data. The first is to transform the data from non-normal data into normal data by using some mathematical functions e.g. logarithm, exponential function, power functions. The second is to choose an estimation method that is compatible with non-normal data. This will be discussed later in the section on model estimation.

5.2.7 Steps in conducting SEM

Byrne (2001) proposed the two-step approach to SEM. The first step is to construct a measurement model to test a series of confirmatory factor analysis (CFA) models for each of the latent variables. These latent variables are used in step two, structural model testing. The processes for carrying out CFA are the same as those for testing structural models, which include model specification, model identification, model estimation, model testing and model modification (Schumacker and Lomax, 2004).

1) Model specification

Model specification is the description of parameters that are of interest, and proposed to be true in the data, which the researcher wishes to confirm or investigate (Kline, 2006). This process is based on a combination of theory and empirical results from previous research. However, Kelloway (1998) suggested that informed judgment, hunches and dogmatic statements of belief might be useful in this process as well.

Raykov and Marcoulides (2000) suggested that after constructing a model based on theory and evidence, a path diagram which represents a pictorial portrayal of all relationships in the model should be prepared because path diagrams will enhance the understanding of structural models and also contribute substantially to the creation of the correct input files. To draw a path diagram, according to Hox and Bechger (1998), observed variables are represented by a rectangle or square box, and latent (or unmeasured) variables by a circle or ellipse. Each observed variable is associated with a residual error term, which is also unmeasured and depicted by a circle. Single headed arrows or "paths" are used to define causal relationships in the model, with the variables at the tail of the arrow causing the variable at the point. Double headed arrows indicate covariances or correlations, without a causal interpretation.

2) Model identification

The question in model identification is whether one has sufficient information to obtain a unique solution for the parameters to be estimated by the model (Kelloway, 1998). Models can be under-identified, just-identified or over-identified. A model is just-identified when there is only one possible solution for each parameter estimate. A model is under-identified when there are an infinite number of possible parameter estimate values, and, finally, a model is over-identified when there is more than one

possible solution, but one best or optimal solution for each parameter estimate. According to Loehlin (1992), all successfully fitted models are just-identified or over-identified. Typically researchers might want to use over-identified models because these models allow researchers to test statistical hypotheses, including global model fit.

3) Model estimation

After the model specification step is completed, the population parameters are estimated and evaluated. Several estimation methods are available such as Maximum Likelihood (ML), Unweighted Least Squares (UWLS), Weighted Least Squares (WLS), and Generalized Least Squares (GLS). All estimation methods require that no outliers exist in the sample.

Maximum likelihood (ML) is usually the default method in most statistical packages because it yields the most precise (smallest variance) estimates when the data are normal (Ullman, 1996). When the sample size is reasonably large and the data are multivariate normal, Cheung (2009) suggested that Maximum Likelihood estimation is a good method.

In case the data is non-normal or the sample size is not large, other estimation methods can be used, for example GLS and Asymptotically Distribution-Free Estimation (ADF). In GLS, each observation is given a weight proportional to the reciprocal of the error variance. However, GLS requires a large sample size. ADF requires a very large sample size (in the thousands) and the manifest variables must have an eight-moment matrix (Blunch, 2008).

Due to the fact that the majority of the variables in this study aim to measure the respondents' opinion, many variables in this study are those of the ordinal scale rather than interval scale. In SEM analysis, the usual covariance matrix cannot be used in the

case of ordinal-scale variables which is why the, ML, GLS or ADF might be inappropriate.

Blunch (2008) suggests a way to deal with this problem is to make use of the estimation methods that employ special measures of co-variation. MPLUS software used in this research has a feature that supports the estimation for ordinal-scale variables as manifest variables. The estimation method is the Robust Weighted Least Squares (WLS) and Weighted Least Squares Means and Variance Adjusted (WLSMV).

For these two methods, Brown (2006) suggests the WLSMV is a robust estimator that does not assume normally distributed variables and it provides the best option for modeling categorical or ordinal data. This is consistent with Muthen (2006) who confirmed from simulation results that WLSMV is better than WLS in all such cases. Therefore, the researcher used the WLSMV method to estimate data in this study.

4) Model testing

How to assess the fit between observed data and the hypothesized model has become a central issue that has to be addressed in SEM. Mueller and Hancock (2008) explained that to assess the model fit is an evaluation of the degree of discrepancy between the true population covariance matrix and that implied by the model's structural and nonstructural parameters. To consider the model fit, an examination of the model fit indices, the coefficients of hypothesized relationships and the residuals should be discussed (Schreiber et al., 2006).

The model testing also covers the examination of the significance level of each causal relationship in the model. This can be done by examining the t statistic, which

indicates whether the coefficient of the causal relationship deviates from zero. In addition, these coefficients should be consistent with the related theories or facts.

An examination of model fit indices

Jackson et al. (2009) surveyed 194 studies that employ CFA and found that there are some goodness-of-fit indices that have been used in reports more often than others. This is illustrated in Table 5.10.

Table 5.29: Summary of goodness-of-fit indices used in 194 CFA studies

Index	Description	% of total studies (N = 194)	Acceptable Threshold Levels
1. Chi-square ($\chi 2$)	- Evaluating overall model fit - Assesses the magnitude of discrepancy between the sample and fitted covariance matrices (Hu and Bentler, 1999) - It is sensitive to sample size (Jöreskog and Sörbom, 1993)	89.2%	- A non-significant $\chi 2$ ($p>0.05$) is considered to be a good fit. - This does not necessarily mean a model with significant $\chi 2$ to be a poor fit (Sridharan et al., 2010)
2. Degrees of freedom (df)		89.2%	
3. $\chi 2$ / df ratio	A statistic that minimizes the impact of sample size on the Model's Chi-Square statistics (Wheaton et al., 1977)	21.6%	≤ 2 or 3 (Schreiber et al., 2006)

Index	Description	% of total studies (N = 194)	Acceptable Threshold Levels
4. Comparative fit index (CFI)	A revised form of the NFI which takes into account sample size (Byrne, 1998)	78.4%	≥ 0.90 (Hu and Bentler, 1999)
5. Root-mean-square error of approximation (RMSEA)	- How well the model, with unknown but optimally chosen parameter estimates, would fit the population covariance matrix (Byrne, 1998)	64.9%	≤ 0.06 (Hu and Bentler, 1999)
6. Tucker–Lewis index (TLI) (or Non-normed fit index - NNFI)	- The difference between $\chi 2$ / df ratio of the null model and $\chi 2$ / df ratio of proposed model, divided by $\chi 2$ / df ratio of the null model minus one	46.4%	≥ 0.90 (Hu and Bentler, 1999)
7. Standardized Root-mean-square residual (SRMR)	- The standardized difference between observed correlation and predicted correlation (Kenny, 2011)	23.2%	≤ 0.08 (Hu and Bentler, 1999)

Source: Adjusted from Jackson et al. (2009)

In addition to goodness-of-fit summarized in the table, there are still many more indices but they have been used in reporting in very few studies.

About reporting the model fit, it is not necessary or realistic to include every index (Hooper et al., 2008).Jackson et al. (2009) recommended that indices which the researcher should report are the chi-square value, the associated degrees of freedom and probability value, an index to describe incremental fit, such as the TLI, CFI, or Bollen's delta, and a residuals-based measures (e.g., RMSEA and SRMR).

For the chi-square statistics and its probability value, Kenny (2014, February 6) explained that it tends to be affected by the sample size and is likely to have type1 error (reject $H_0$when $H_0$is true).Therefore, instead of using chi-square statistics and its probability value, another index that better explain the model fit is $\chi 2$ / df ratio.

Moreover, by using MPLUS to estimate the model, there are only few indices provided by the software. These indices include the Chi-Square statistics, degrees of

freedom, RMSEA, CFI, TLI and WRMR (Weighted Root Mean Square Residual). This does not include the SRMR (Muthen, 2013). On the other hand, WRMR is viewed as being an experimental fit statistics to which the researcher does not have to give much weight. Therefore, the goodness-of-fit indices used in this research are $\chi 2$ / df ratio, CFI, TLI and RMSEA.

5) Model modification

When the hypothesized model is rejected based on the examination of parameter estimates, goodness-of fit indices or the residuals, SEM researchers might have to find an alternative model that fits the data (Lei and Wu, 2007). The researcher might modify the model by deleting parameters that are not significant and adding parameters that improve fit.

Most SEM software assists this process by calculating the "modification index" for each fixed parameter. The value of a given modification index is the minimum amount that the Chi-Square statistic is expected to decrease if the corresponding parameter is freed (Hox and Bechger, 1998).

However, Saris et al. (1987) commented on modifying a model based on a modification index claiming that the use of a modification index might lead to incorrect conclusions in many instances. This is because the modification index is more sensitive to misspecification in some restricted parameters than in others. They may suggest corrections for parameters that deviate only slightly from the hypothesized values but not for parameters that are far from the hypothesized values. Therefore, large specification errors may remain undetected while small specification errors may be detected and corrected. For this reason, the model should not be modified based on

only the modification index suggested by the software, the correction of models should also be based on theoretical arguments, which are always better.

The researcher modified the measurement models and structural model by deleting parameters that are not significant and adding parameters that improve fit.

5.3 Qualitative Method

In this study, a qualitative method is used as a complementary tool with the quantitative method, to discover behaviours or phenomena which cannot be captured by the quantitative method. The qualitative method used is the in-depth interview. The target number of experts to be interviewed is 8-10. Participants include experts who have been involved in the Co-operative movement in Thailand. The letter requesting the interview[3] is sent and is accompanied by a consent form which the participant is expected to fill and return thereby granting approval to be interviewed. The letter contains the following information 1) the research objectives, consent form granting guidance from the university and other relevant information, 2) a signed reply form by the expert, should he/she wish to participate in the study, and 3) ensuring the expert that the identity of the interviewees would remain completely anonymous. All interviewees would be identified only as Experts 1, Experts 2, Experts 3, … in the research.

The criteria for choosing the experts consist of:

(1) Having expertise or having worked in the Co-operative in Thailand for a long time, as well as being accepted by other people in the Co-operative community, or being rewarded in connection with a Co-operative at a national or international level.

[3] See Appendix IV

(2) Holding a position as a Board Member or the manager of the organization.

(3) Serving as a representative or working at any level of a Co-operative, covering primary, secondary, and tertiary Co-operatives.

(4) Serving as a representative, or working in any kind of the Co-operative in Thailand covering the main Co-operative sectors, namely the agricultural Co-operatives, the savings Co-operatives, store Co-operatives, and the credit union Co-operatives.

The process of conducting qualitative research is described as follows.

(1) Seeking consent by experts to give interviews

Letters were sent out to experts to ask them to give interviews. The letters were signed by the researcher and had information regarding:

- The title of the research study
- The list of the interview topics.
- The experts were free to ask questions about the study or any additional detail.
- The experts were free to refuse to answer any question.
- The experts were free to withdraw from the interview or leave at any time without needing to give any reason or explanation.
- The data provided by the expert would be stored in the researcher's personal database and could be accessed only by the researcher.
- At the end of the project the data would be destroyed permanently.
- Excerpts from the interview might be used in the final research report and other academic publications.

- The expert’s opinion would be made anonymous.

(2) Interview meeting

The researcher asked the experts verbally if they would agree to give interviews and if the interview could be recorded. The confidentiality as well as the rights of the experts was explained by the researcher before starting the interview. Then, the interviews were conducted and recorded. Most of the qualitative interviews were conducted by the researcher, but there were a few cases in which the experts were not available at all for the researcher to interview so a research assistant, who was trained to interview in this research, helped to conduct the interview.

(3) Confidentiality of the data

The recorded voice data would be transcribed by the interviewers within 48 hours after each of the interview meetings. The interviews were recorded and transcribed in order to make sure that information from the interview did not get lost and all necessary and important data was kept and could be fully used in the data analysis process. Only excerpts from the interview were used anonymously. After finishing the analysis of the data, the recorded voice data was deleted and the transcripts of the interviews were destroyed. Excerpts from the opinion of experts were used anonymously in the research paper and other subsequent related writings. In cases where the interview was conducted by a research assistant, the interviewer had to return the recording equipment with the recorded data from the expert interviews to the researcher within 24 hours after each interview meeting to ensure the confidentiality of the data.

After the interview, results from the interviews were used to analyze the results from the quantitative method. The questions to be discussed with the experts are as follows.

- What is the most important factor affecting the performance of your Co-operative? This can be micro factors, e.g. the operation of Co-operatives, quality of employees, etc., or macro factors e.g. rules, regulations, or support from the government.
- What is the motivation behind a person who wants to be a Co-operative Board Member?
- Does the motivation of the Co-operative Board Members affect the Co-operative's performance, and if so how?
- What factors cause the Board Members to gain motivation or lose motivation in their work?

Chapter 6
Results from Structural Equation Modeling

6.1 Introduction

In this chapter, the result from the data preparation process is first presented, then the output data are analyzed. The analysis is divided into four sections. The first section presents the background information about both the respondents and their co-operatives, followed by a descriptive statistics analysis of the motivation of the Co-operative Board Members in the second section. The third section presents the result from Confirmatory Factor Analysis to construct the indicators used to measure the motivation of the Co-operative Board Members and the Co-operative's performance. The result from the Structural Equation Modeling Analysis of the motivation of the Co-operative Board Members, the Co-operative's performance, and their determinants is presented in the last section.

6.2 Results from data collection and data preparation process

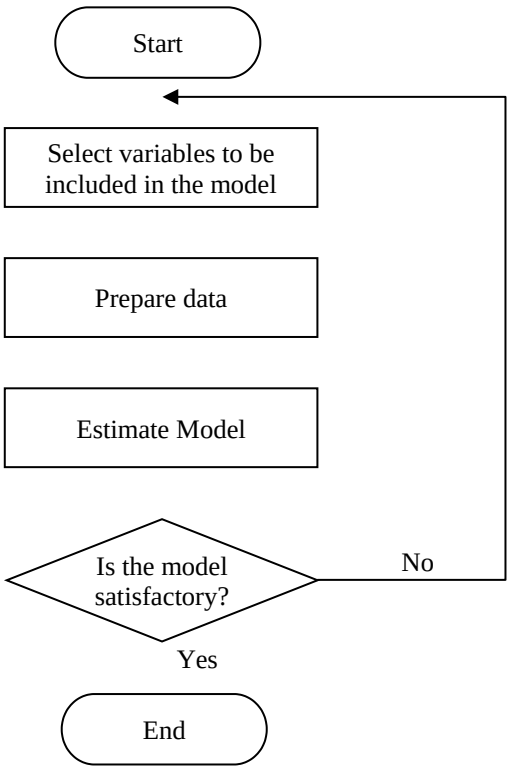
The data preparation process was composed of outlier detection, data imputation, and normality assessment. Outlier detection was divided into univariate outlier detection and multivariate outlier detection. For the process of normality assessment, there are also 2 types of normality assessment: univariate normality assessment and multivariate normality assessment. The order of performing each process was as follows. The univariate outlier detection was first carried out, followed by data imputation to form a completely filled data set. Multivariate outlier detection

was then carried out before univariate normality checks and multivariate normality checks were performed at the same time in the last stage.

During the process of model estimation, the data preparation process was repeated every time there was a change in variables included in the model (see Figure 6.1). Hence, many rounds of data preparation process were performed until a satisfactory model was found. However, the statistics values shown here are those of the samples which are fitted to the final satisfactory model.

Before preparing the data, the number of respondents from the questionnaire survey was 330. After the data preparation process, the number of respondents was reduced to 319. The details of the data preparation process are as follows.

Figure 6.6: Data preparation process in the model adjustment process



6.2.1 Handling missing data

There are 2 samples which contain large amounts of missing data and should not be used in the analysis, thus they were deleted. From the initial 330 samples, there are now 328 samples left in the analysis.

After analyzing the missing data of 328 samples, the numbers of missing data points of each selected variable are summarized in Table 6.1. It is apparent that most variables have a number of missing values less than 5%, except IV7, COOPLEVE, BCOMPO4, LNSEMINAR and LNMEETAL1Y which have the number of missing values of 5.2%, 5.2%, 8.2%, 18.0% and 10.4%, respectively. The researcher dealt with missing values by making use of the multiple imputation method which was explained previously in section 5.2.6.

Table 6.30: Number of missing values

Variable	Number of missing values	Number of missing values (%)
EXPECT1	13	4.0
EXPECT2	13	4.0
IV2	14	4.3
IV7	17	5.2
IV8	14	4.3
MOTIV3	10	3.0
MOTIV4	13	4.0
MOTIV5	14	4.3
ROE52	0	0
NOLOSS	0	0
COOPLEVE	17	5.2
BFUNC6	0	0
BCOMPO4	27	8.2

Variable	Number of missing values	Number of missing values (%)
BAUTHO1	12	3.7
BMEET2	10	3.0
LNSEMINAR	59	18.0
COMRULE4	11	3.4
LNMEETAL1Y	34	10.4
DUALITY	0	0
FINTYPE	0	0

Note: LNSEMINAR and LNMEETAL1Y are the natural logarithm of SEMINAR and MEETAL1Y respectively.

6.2.2 Univariate outlier detection

First of all, the researcher detected the univariate outliers by using the following criteria. Outliers are data which have a standardized score (z-score) more than 4 or less than -4 (Parke, 2013, p.84). Therefore, the z-scores of the variables were first calculated. The number of univariate outliers of each variable is shown in Table 6.1

In this study, the strategy of dealing with outliers was listwise deletion, which involved an entire response being removed from the sample if it had at least one variable with an outlier value. The number of responses which were removed from the list in this process was 6. Therefore, the number of samples left after the process was 322.

Table 6.31: Number of univariate outliers

Variable*	Number of univariate outliers
EXPECT1	-
EXPECT2	2 (24, 103)
IV2	-
IV7	-
IV8	-

Variable*	Number of univariate outliers
MOTIV3	-
MOTIV4	-
MOTIV5	-
ROE52	2 (256, 257)
NOLOSS	-
COOPLEVE	-
BFUNC64	-
BCOMPO4	-
BAUTHO1	-
BMEET2	-
LNSEMINAR	-
COMRULE4	-
LNMEETAL1Y	2 (50, 58)
DUALITY	-
FINTYPE	-
GOVSUP3	-

*The meaning of these variables can be found in Table 6.7 and Table 6.17.
Number in the parentheses is the case number.

6.2.3 Multivariate outlier detection

Multivariate outliers were detected using Mahalanobis distance statistics. The p value of Mahalanobis distance is used to determine multivariate outliers. In this study, the researcher uses criteria specifying that samples with p value of less than 0.001 are identified as outliers. In this research, the strategy of dealing with multivariate outliers was the same as that of univariate ones, listwise deletion. Outlier samples were then removed from the list. There are 3 responses which were identified as multivariate outliers (case number 181, 221 and 273). Therefore, after listwise deletion of these responses, there were 319 responses left in the data.

6.2.4 Normality Assessment

After the process of outlier detection and data imputation, the normality of the data was then investigated. The skewness and kurtosis statistics were used to assess the normality of each variable. Variables with normal distribution are variables that have zero value of skewness and kurtosis. Table 6.3shows the value and the critical ratio (the value divided by its standard error) of skewness and kurtosis of each variable. It is shown that all variables except MOTIV4 are assessed to have non-normal distribution because their skewness or kurtosis statistics are significantly different from zero (having a critical ratio higher than 1.96, with 95% confidence level).

For the multivariate normality assessment, Weston and Gore (2006, p.75) explained that it is very difficult to assess as it involves examining an infinite number of linear combinations. A solution to this problem is to examine the distribution of each observed variables. By screening for univariate normality, it would allow the researcher to know whether multivariate normality may be an issue or not. Therefore, in this research, the researcher assessed multivariate normality by screening for univariate normality.

Table 6.32: Results from the normality check

Variable	Skew	Critical Ratio	Kurtosis	Critical Ratio	Is it normal?
EXPECT1	-1.304	-9.491	1.455	5.313	No
EXPECT2	-1.459	-10.620	3.686	13.460	No
IV2	0.399	2.903	0.018	0.065	No
IV7	0.142	1.026	-0.720	-2.611	No
IV8	0.175	1.271	-0.844	-3.079	No
MOTIV3	-0.529	-3.869	-0.242	-0.886	No
MOTIV4	-0.063	-0.459	-0.418	-1.525	Yes

Variable	Skew	Critical Ratio	Kurtosis	Critical Ratio	Is it normal?
MOTIV5	-0.181	-1.319	-0.698	-2.545	No
ROE52	11.636	86.426	143.479	534.424	No
NOLOSS	-1.474	-10.946	0.173	0.645	No
COOPLEVE	-0.752	-5.440	0.976	3.541	No
BFUNC6	-0.479	-3.555	-1.782	-6.637	No
BCOMPO4	-0.541	-3.851	0.789	2.817	No
BAUTHO1	0.081	0.588	-0.909	-3.325	No
BMEET2	-0.272	-1.991	-0.662	-2.429	No
LNSEMINAR	1.164	7.837	1.380	4.664	No
COMRULE4	-1.059	-7.734	1.922	7.039	No
LNMEETAL1Y	-3.743	-26.337	28.649	101.115	No
DUALITY	2.612	19.404	4.855	18.082	No
FINTYPE	0.899	6.679	-1.199	-4.464	No
GOVSUP3	1.259	9.292	-0.418	-1.549	No

For data that are not normally distributed, the researcher had tried to transform each variable into normal distribution using several mathematical functions e.g. logarithmic function, square function, reciprocal function, etc. Nevertheless, even though some variables could be transformed into normal distribution, it is not so for all variables. Therefore, the model's estimation method should follow those for the non-normal data, which is, in this case, the weighted least squares means and variance adjusted (WLSMV).

After finishing the data preparation process, the researcher calculated the sampling weights, which were used to adjust the proportion of sample size from each

stratum to be the same of that of the planned sample size. The calculated sampling weights are shown in Table 6.4.

Table 6.33: Number of respondents after preparation process and calculated sampling weights of each stratum

Type	Planned Number of respondents	Number of respondents after preparation process	Weight
Agricultural Co-operatives	172	134	1.28
Fisheries Co-operatives	4	12	0.33
Land Settlement Co-operatives	5	23	0.22
Consumer Co-operatives	9	18	0.50
Thrift and Credit Co-operatives	75	53	1.42
Service Co-operatives	42	38	1.11
Credit Union Co-operatives	23	41	0.56
Total	330	319	

Source: Author's calculation

6.3 Background information on Board Members and their co-operatives

The personal profile of Board Members who responded to the questionnaire survey is shown in Table 6.4, while the type and location of the Co-operatives where they work is shown in Table 6.5 and Table 6.6. The numbers of respondents shown in these tables are the weighted numbers of respondents. These numbers are the sum of weights which is given to each sample so that the sum of weights by each Co-operative type would represent the proportion of the number of Board of Directors from each Co-operative type in the population. Therefore, the total number of respondents in these tables is 330, which is consistent with the planned total number of respondents in Table 5.4.

6.3.1 Gender and age

The majority of respondents are male. There are 259 male respondents or 78.5% of the total respondents and 71 female respondents or 21.5% of the total respondents. The largest and the oldest group of respondents is 41-60 years old, which comprises 211respondents or 63.9% of the total respondents. The smallest and the youngest group is the 18-24 years old and it accounts only for 1 respondent or 0.3% of total respondents.

6.3.2 Education

Out of all the respondents, 15.3% (n=51) have completed primary school. 11.2% (n=37) have completed junior high school. 24.8% (n=82) have completed high school or vocational school. 25.6% (n=84) have completed a bachelor's degree, and 13.2% (n=44) have completed a degree higher than a bachelor's degree. Overall, the respondents have relatively high education, with 38.8% having graduated with a bachelor's degree or higher.

6.3.3 Occupation and economic sector

The sample group in this study covered several occupations and economic sectors. There are 148 respondents or 45.0% of the total respondents who are farmers on their own land. The subsequent groups contained 45 respondents (13.8%) who are business owners, 35 respondents (10.7%) who are professionals (lawyer, accountant, teacher, etc.), 21 respondents (6.4%) who are office workers and 10 respondents (3.0%) who are employers or executives in an organization. The remaining samples included other occupations, each of which has a small proportion.

Considering the economic sectors the respondents work in, most of the respondents are in the sector of agriculture, fisheries and forestry (50.0%, n = 165). The second rank contained other services (n = 40, 12.0%), followed by education (n = 22, 6.6%), social services and other personal services (n = 18, 5.6%), wholesale and retail trading (n = 18, 5.3%) and manufacturing (n = 11, 3.4%). The remaining samples spread over other sectors, each of which has a small proportion.

From the above information, most Board Members are in the agricultural sector and are farmers. This information corresponds to the information that most Co-operatives in Thailand are Co-operatives in the agricultural sector.

6.3.4 Work Experience

Overall, the average time-length of work experience related to the Co-op field of the respondents were 8.0 years (Table 6.5). Most of the respondents (57.5%) had experience as a member of a Board of Directors in either for-profit or non-profit organizations (46.6%). Average length of work experience as a member of a Board of Directors in for-profit organizations is about 7.6years and in non-profit organizations is about 6.1 years.

From the above information, it is clear that most Board Members in the sample group have relatively longer years of experience in the co-op field than other fields. The information gained from this sample group should therefore be sufficiently reliable for the research.

Table 6.34: Co-op Board Member profiles

	Frequency (N = 330)	
	N	**%**
Gender		
Male	259	78.5
Female	71	21.5
Age		
Under 18 years old	0	0
18 – 24 years old	1	0.3
25 – 40 years old	42	12.8
41 – 60 years old	211	63.9
Over 60 years old	62	18.9
No response	13	4.0
Education		
Informal Study	2	0.5
Have not completed Primary School	6	1.8
Completed Primary School	51	15.3
Have not completed Junior High School	7	2.1
Completed Junior High School	37	11.2
Have not completed High School/Vocational School	12	3.7
Completed High School/Vocational School	82	24.8
Completed Bachelor's Degree	84	25.6
Completed higher than a Bachelor's Degree	44	13.2
No response	6	1.8
Occupation		
Farming one's own land	148	45.0
Worker in the agricultural sector	5	1.5
Employer/Executive in an organization	14	4.2
Business Owner	45	13.8
Professional (Lawyer, Accountant, Teacher, …)	35	10.7
Supervisor, Head of operations	10	3.0
Office Worker	21	6.4
Skilled Worker	5	1.5
Non-Skilled / Work in a Factory	0	0
Unemployed	0	0
Others	40	12.2

	Frequency (N = 330)	
	N	**%**
No response	6	1.8
Sector		
Agriculture, Fisheries, Forestry	165	50.0
Mining and Quarrying	1	0.4
Manufacturing	11	3.4
Electricity, Gas and Water Supply Units	1	0.3
Construction	8	2.4
Restaurant and Hotel	0	0
Education	22	6.6
Employee in a personal household	4	1.2
Health Service	8	2.3
Logistics and Warehouse	7	2.2
Financial Institution	4	1.4
Wholesale and Retail Trading	18	5.3
Real Estate	2	0.6
Government or Public Service	7	2.2
Social Service and other personal services	18	5.6
International Organization	0	0
Other services	40	12.0
No response	14	4.1
Work experience		
Have experience as a Board Member in for-profit organizations		
Yes	189	57.5
No	17	5.0
No response	124	37.5
Have experience as a Board Member in non-profit organizations		
Yes	163	49.6
No	32	9.6
No response	135	40.8
	Mean	**S.D.**
Work experience related to Co-op field (Number of years)	8.0	7.0
Work experience as member of Board of Director in For-profit organization (Number of years)	7.6	6.9
Work experience as member of Board of Director in Non-profit	6.1	6.6

	Frequency (N = 330)	
	N	%
organization (Number of years)		

Note: The N numbers shown in the table are the weighted number of respondents.

6.3.5 Type and location of co-operative

Number of samples classified by Type of co-operative is explained and shown in Table 5.5.

When considering how the samples are distributed across regions, it was found that most of the respondents are from the north-east, which is 30.6% of total sample, 28.8% from the central region, 15.2% from the south, 16.7% from the north, and 8.8% from Bangkok (Table 6.6) respectively.

Table 6.35: Profiles of respondents by region

Region	Number of Respondents	Respondents as % of Total Sample	Number of Board Members in 2010*	
			Number	% of Total
Bangkok	29	8.8	3,561	7.1
Central	95	28.8	14,170	28.2
North	55	16.7	8,962	17.9
North-East	101	30.6	15,487	30.9
South	50	15.2	7,993	15.9
Total	**330**	100.0	**50,173**	**100**

*Data from CPD (2010f), which includes only 66% of Board Members whose data is available.

6.4 Descriptive statistics of Co-op Board motivation and its determinants

From the data collected from the questionnaire survey, the motivation level of Co-operative Board Member can be analyzed to answer the following questions.

- How high is the motivation level of Co-operative Board Members?

- What are the characteristics of the motivation level of Co-operative Board Members?
- Does the motivation level of Co-operative Board Members vary across different groups of Board Members, for example, Board Members with different gender, age, education levels?

The factors that are expected to be the explanatory variables of the motivation, which are expectancy, instrumentality, and valence, are also analyzed using descriptive statistics in this section.

6.4.1 Motivation level and its determinants of overall Co-operative Board Members' motivation

It was found that the motivation level of the Co-operatives Board Members was rather high. The Mean average of the answers from different items ranged from 4.84 to 5.85, and the standard deviation was in the range of 0.91 and 1.44 (the range of scores in the questionnaires was from 1 to 7).

When considering each questionnaire item about motivation, it was found that MOTIV2 ("You wish to develop yourself to increase your quality of work for the Co-op") had the highest mean (Mean = 5.85) and the dispersion of the scores was the lowest (SD = 0.91), while the item which had the lowest mean was MOTIV7 ("You feel that you have sacrificed more effort than other Board Members") (Mean = 4.84) with the highest dispersion of the scores (SD = 1.44 maximum).

Expectancy

Expectancy of the Co-operative Board Members was rather high. The Mean average was in the range from 4.05 to 4.48with the standard deviation ranging from 0.63 to 0.97 (questionnaires had the score range from 1 to 5). When considering each

questionnaire item of Expectancy, it was found that EXPECT2 (“It is a general rule that 'If one makes an effort, one will meet with success'. In your experience how applicable is this general principle in working in your Co-op?"), was the item which had the highest mean (Mean = 4.48) and the lower score of dispersion (SD = 0.63) while the item which had the lower Mean was EXPECT1 ("In your current context, how possible is it for your Co-op to improve or to reach its goal due to your hard work?") with Mean average of4.05. This item had the higher dispersion of scores (SD = 0.97).

Instrumentality

Instrumentality of the Co-operatives' Board Members was high. The Mean average was in the range from 4.86 to 5.85 and the standard deviation was in the range from 0.96 to 1.40 (questionnaires had the score range from 1 to 7). When considering each questionnaire item of Instrumentality, INSTRU6 (Feeling good and satisfied through doing good for society and utilizing all one's potential) was at the highest level (Mean = 5.85) with a standard deviation of 0.96. The item which had the lowest Mean was INSTRU1 (Having increased financial benefit (Meeting Allowance, Bonus, Welfare)) with the Mean of4.86. This item had also the highest standard deviation (SD = 1.40).

Valence

Valence of the Co-operative Board Member was high. Mean average was in the range from 4.07 to 5.74 and the standard deviation was in the range of 1.10 to 1.47. This variable had more dispersion of scores than the other variables. (Questionnaire had a score range from 1 to 7). When considering each questionnaire item of Valence, VALENCE6 (Feeling good and satisfied by doing good for society and utilizing all one's potential) had the highest mean (Mean = 5.74) with the lowest standard deviation

(SD = 1.10). The item which had the lowest Mean (Mean = 4.07) was VALENCE1 (Having increased financial benefit (Meeting Allowance, Bonus, Welfare)) with the standard deviation equaled to 1.38.

It appears that Co-operative Board Members value neither the financial benefits nor being honored for being a committee member as a major incentive. When the researcher compared these two items with other items, these two items had the lowest means. The return they value the most is the good feeling or satisfaction from doing good for society and utilizing their potential, as is shown in Table 6.7.

Table 6.36: Descriptive Statistics of the motivation variable and its components

Measurement items	Question	N	Mean	S.D.
Motivation (1-5 scale)	**Your current work as a Co-op Board Member**			
MOTIV1	1) You wish to sacrifice more time and ability in working for the Co-op	320	5.76	0.98
MOTIV2	2) You wish to develop yourself to increase your quality of work for the Co-op	320	5.85	0.91
MOTIV3	3) You wish to take more responsibility in the Co-op's work	319	5.75	1.02
MOTIV4	4) You feel that other Board Members respect and value having you work as a Board Member	317	5.56	0.93
MOTIV5	5) You feel that being a member of the Co-op Board is important to you	316	5.71	0.94
MOTIV6	6) You feel that your decision-making has a significant impact on improving the standard of living for Co-op members	317	5.30	1.34
MOTIV7	7) You feel that you have sacrificed more effort than other Board Members	316	4.84	1.44
Expectancy (1-7 scale)				
EXPECT1	1) In your current context, how possible is it for your Co-op to improve or to reach its goal due to your hard work?	317	4.05	0.97

Measurement items	Question	N	Mean	S.D.
EXPECT2	2) "It is a general rule that 'If one makes an effort, one will meet with success'. In your experience how applicable is this general principle in working in your Co-op?"	316	4.48	0.63
Instrumentality (1-7 scale)	**Do you agree that if you work hard for the Co-op, you will have a chance to get these incentives?**			
INSTRU1	1) Having increased financial benefit (Meeting Allowance, Bonus, Welfare)	322	4.86	1.40
INSTRU2	2) Being honored and awarded by the Co-op or the Public Sector	322	5.13	1.34
INSTRU3	3) Having more work personally assigned	320	5.42	1.17
INSTRU4	4) Taking on more challenging work tasks	316	5.45	1.04
INSTRU5	5) Gaining admiration and respect and being loved by colleagues and people in the community	321	5.52	1.06
INSTRU6	6) Feeling good and satisfied through doing good for society and utilizing all one’s potential	321	5.85	0.96
INSTRU7	7) Feelings of accomplishment	320	5.61	0.97
INSTRU8	8) Being well known in the community and society	322	5.62	0.97
INSTRU9	9) Being healthy	319	5.24	1.17
Valence (1-7 scale)	**How important are these rewards to you?**			
VALENCE1	1) Having increased financial benefit (Meeting Allowance, Bonus, Welfare)	317	4.07	1.38
VALENCE2	2) Being honored and awarded by the Co-op or the Public Sector	317	4.52	1.47
VALENCE3	3) Having more work assigned to you	319	5.25	1.30
VALENCE4	4) Taking on more challenging work tasks	316	5.34	1.13
VALENCE5	5) Gaining admiration and respect and being loved by colleagues and people in the community	318	5.22	1.23
VALENCE6	6) Feeling good and satisfied by doing good for society and utilizing all one’s potential	319	5.74	1.07
VALENCE7	7) Feelings of accomplishment	317	5.42	1.20
VALENCE8	8) Being well-known in the community and society	317	5.46	1.17
VALENCE9	9) Being healthy	315	5.40	1.24

6.4.2 Motivation level of the Co-operative Board Members of different genders

The result from comparison of the motivation level of the Co-operatives' Board Members of different genders could be summarized as follows. A T-test was used to determine whether the motivation of different Co-operative Board Members, male and female Board Members, are significantly different. The result showed that the motivation levels of the male and female Board Members, which were measured by variables MOTIV3, MOTIV4, MOTIV5 and MOTIV6, were not significantly different statistically. However, when comparing motivation level by using variables MOTIV1, MOTIV2 and MOTIV7, it was found that the male Co-operative Board Members had more motivation than female Co-operatives Board Members, with a confidence level of 95% for MOTIV1, MOTIV2 and MOTIV7.

Table 6.37: Result of comparison of motivation of Co-operative Board Members, classified by gender

Variable	Description	Male			Female			
		N	Mean	S.D.	N	Mean	S.D.	
MOTIV1	You wish to sacrifice more time and ability in working for the Co-op	249	5.83	0.991	71	5.53	0.920	2
MOTIV2	You wish to develop yourself to increase your quality of work for the Co-op	249	5.92	0.896	71	5.60	0.903	2
MOTIV3	You wish to take more responsibility in the Co-op's work	248	5.80	1.020	71	5.60	1.005	1
MOTIV4	You feel that other Board Members respect and value having you work as a Board Member	247	5.58	0.954	70	5.47	0.843	.
MOTIV5	You feel that being a member of the Co-op Board is important to you	247	5.72	0.937	69	5.67	0.942	.
MOTIV6	You feel that your decision-making has a significant impact on improving the standard of living for Co-op members	247	5.34	1.344	71	5.15	1.300	1
MOTIV7	You feel that you have sacrificed more effort than other Board Members	246	4.95	1.439	71	4.44	1.402	2

6.4.3 Motivation level of the Co-operative Board Members of different ages

The result from comparison of the motivation level of the Co-operatives' Board Members of different ages could be summarized as follows. Because there are more than two groups to compare, an F-test in One-Way ANOVA was used to determine whether the motivation level of the Co-operatives' Board Members of different ages were significantly different.

The result of analysis suggested that the motivation of the Co-operatives' Board Members of different ages, when measured by MOTIV1 and MOTIV4, was not significantly different as the significant value is higher than 0.05. However, when measured by MOTIV2, MOTIV3, MOTIV5, MOTIV6 and MOTIV7, the motivation level of Co-operatives' Board Members of different ages was significantly different, with a confidence level of 90% for variable MOTIV6, 95% for variable MOTIV5 and a confidence level of 99% for MOTIV2, MOTIV3 and MOTIV7 as shown in Table 6.9.

Therefore, the researcher tested the difference of mean in pairs by using the method of Scheffe, to find out which pairs of age groups have a different mean of motivation. The result of analysis is in Table 6.10. It was found that the Co-operative Board Members with the age of 25-40 years had a motivation level (measured by variables of MOTIV2, MOTIV3, MOTIV5, MOTIV6 and MOTIV7) lower than that of the Board Members with the age of 41-60 years, with a confidence level of 99% for MOTIV2 and MOTIV3, 95% for MOTIV5 and MOTIV7, and 90% for MOTIV6, and lower than that of the Board Members whose age are over 60 years, with a confidence level of 99% for MOTIV2, MOTIV3 and MOTIV7, 95% for MOTIV5 and 90% for MOTIV6.

However, even though the mean of motivation level of Board Members with the age of 41-60 years was less than that of the Board Members with the age of over 60 years, the result from the statistical test shows that there is no statistical difference between these two means. Hence, the motivation level of Board Members with the age of 41-60 years was not statistically different from that of the Board Members with the age of over 60 years.

Table 6.38: Result of comparison of motivation of Co-operative committees, classified by age

Variable	Description	Mean				Source of variance	Sum of Squares	d.f.	Mean Squar
		18-24 years old	25-40 years old	41-60 years old	Over 60 years old				
MOTIV1	You wish to sacrifice more time and ability in working for the Co-op	5.00	5.44	5.79	5.82	Between Groups	5.242	3	1.747
						Within Groups	291.289	302	.965
						Total	296.531	305	
MOTIV2	You wish to develop yourself to increase your quality of work for the Co-op	5.00	5.37	5.87	5.99	Between Groups	11.424	3	3.808
						Within Groups	239.442	302	.793
						Total	250.867	305	
MOTIV3	You wish to take more responsibility in the Co-op's work	5.00	5.09	5.85	5.86	Between Groups	21.467	3	7.156
						Within Groups	293.563	301	.975
						Total	315.030	304	
MOTIV4	You feel that other Board Members respect and value having you work as a Board Member	5.00	5.33	5.55	5.70	Between Groups	3.709	3	1.236
						Within Groups	256.197	299	.857
						Total	259.906	302	
MOTIV5	You feel that being a member of the Co-op Board is important to you	5.00	5.28	5.72	5.84	Between Groups	8.787	3	2.929
						Within Groups	254.172	299	.850
						Total	262.959	302	
MOTIV6	You feel that your decision-making has a significant impact on improving the standard of living for Co-op members	5.00	4.85	5.35	5.49	Between Groups	11.155	3	3.718
						Within Groups	516.255	300	1.721
						Total	527.409	303	
MOTIV7	You feel that you have sacrificed more effort than other Board Members	4.00	4.18	4.89	5.11	Between Groups	23.247	3	7.749

Table 6.39: Result of comparison of motivation of Co-operatives' committee, classified by age

Age (years old)	Age (years old)	**MOTIV2** (You wish to develop yourself to increase your quality of work for the Co-op)	**MOTIV3** (You wish to take more responsibility in the Co-op's work)	**MOTIV5** (You feel that being a member of the Co-op Board is important to you)	**MOTIV6** (You feel that your decision-making has a significant impact on improving the standard of living for Co-op members)	**MOTIV7** (You feel that you have sacrificed more effort than other Board Members)
		Sig.	**Sig.**	**Sig.**	**Sig.**	**Sig.**
25 – 40	41 – 60	0.005***	0.000***	0.022**	0.081*	0.014**
25 – 40	Over 60	0.003***	0.001***	0.013**	0.057*	0.006***
41 – 60	Over 60	0.659	1.000	0.701	0.776	0.588

Note: As the sample group of Board Members with the age of 18-24 years contained only one response, a test of mean difference between this group and other groups cannot be done.
Note: *p-value < 0.10, **p-value < 0.05, ***p-value < 0.01.

6.4.4 Motivation level of the Co-operative Board Members of different types of Co-op

The result from comparison of the motivation level of the Co-operatives' Board Members of different types of Co-op could be summarized as follows. Because there are more than two groups to compare, an F-test in One-Way ANOVA was used to determine whether the motivation level of the Co-operatives' Board Members of different types of Co-op was significantly different.

The result of analysis suggested that the motivation of the Co-operatives' Board Members of different types of Co-op, when measured by MOTIV1 – MOTIV7, was not significantly different as shown in Table 6.11where significant value of all variables is higher than 0.05.

Table 6.40: Result of comparison of motivation of Co-operative committees, classified by types of Co-op

Variable	Description	Mean*							Source of variance	Sum of Squares	d.f.
		1	2	3	4	5	6	7			
MOTIV1	You wish to sacrifice more time and ability in working for the Co-op	5.80	5.68	5.68	5.86	5.67	5.06	5.77	Between Groups	5.337	6
									Within Groups	302.143	312
									Total	307.480	318
MOTIV2	You wish to develop yourself to increase your quality of work for the Co-op	5.94	5.80	5.73	5.89	6.00	5.11	5.75	Between Groups	7.206	6
									Within Groups	253.947	312
									Total	261.153	318
MOTIV3	You wish to take more responsibility in the Co-op's work	5.84	5.70	5.36	5.75	5.50	5.00	5.71	Between Groups	7.625	6
									Within Groups	321.530	310
									Total	329.154	316
MOTIV4	You feel that other Board Members respect and value having you work as a Board Member	5.57	5.56	5.64	5.61	5.75	5.00	5.54	Between Groups	3.166	6
									Within Groups	270.106	309
									Total	273.272	315
MOTIV5	You feel that being a member of the Co-op Board is important to you	5.83	5.65	5.59	5.64	5.75	5.06	5.61	Between Groups	7.182	6
									Within Groups	269.018	308
									Total	276.201	314
MOTIV6	You feel that your decision-making has a significant impact on improving the standard of living for Co-op members	5.23	4.98	5.62	5.56	5.42	5.00	5.44	Between Groups	8.623	6
									Within Groups	555.045	309
									Total	563.668	315
MOTIV7	You feel that you have sacrificed more effort than other Board Members	4.84	4.88	4.55	4.81	4.67	4.33	4.94	Between Groups	3.690	6
									Within Groups	653.435	308
									Total	657.125	314

* 1) Service Co-operatives, 2) Consumer Co-operatives, 3) Land Settlement Co-operatives, 4) Agricultural Co-operatives, 5) Thrift and Credit Co-operatives, 6) Credit Union Co-operatives and 7) Fisheries Co-operatives

6.5 Measurement model of Board motivation and Co-op performance

This section presents the results from doing Confirmatory Factor Analysis to construct the measurement models of variable Board Member motivation, Expectancy, Instrumentality, Valence, and the Co-op performance. The model started from an initial model, in which all the variables which were expected to be the observed variables of each latent variable were included, then the model fit indices and other criteria were assessed. Subsequently, the model was adjusted until it met the requirement of both model fit and other criteria. The results are measurement models which will be used later in the SEM analysis.

6.5.1 Variable names in the data analysis

The names of variables related to motivation, expectancy, instrumentality and valence are shown in Table 6.7 with the supplement of the following variables.

MOTIVE	=	Motivation
EXPECT	=	Expectancy
IV	=	Product of Instrumentality and Valence
IVi	=	Instrumentality of item i x Valence of item i

The names of variables related to the Co-operative's performance are as follows.

PERFORM	=	Co-operative's performance
CRRTIO52	=	Current ratio in the year 2009
AVCOPE52	=	Average Collection Period in the year 2009
NETPRO52	=	Net Profit Margin Percentage in the year 2009
ROE52	=	Return on Equity in the year 2009
ROA52	=	Return on Assets in the year 2009
TTASTO52	=	Total Asset Turnover in the year 2009

DEBTEQ52	=	Debt/Equity Ratio in the year 2009
NOLOSS	=	From the Co-operative's performance in the last two accounting periods, there was no loss; besides loss occurring through floods or natural disasters causing damage to the Co-operative and Co-operative members, such loss is not counted.
NOCORRUP	=	From the Co-operative's performance in the last two accounting periods, there were no acts that could be considered as Co-operative corruption
ACAUDIT	=	From the Co-operative's Performance in the last accounting period, a financial statement was prepared and already sent to an auditor to be approved at the Co-operative annual meeting within 150 days after the end of the accounting period
PARTIC60	=	From the Co-operative's performance in the last accounting period, the Co-operative must have members who do at least 60 percent of their business with the Co-operative
PAYDIVI	=	From the Co-operative's performance in the last two accounting periods, the Co-operative must have a net profit and must pay a dividend back to its members at least once.
FTSTAFF	=	The Co-operative must employ a full time staff member in order to run the Co-operative. If there is no employment, a Board Member or a Co-operative member must be assigned to work fulltime in the Co-operative.
NOVIOLAT	=	From the Co-operative's performance in the last accounting period, a Co-operative must not act in a way that violates any laws, regulations or orders of the Registrar of Co-operatives.
COOPLEVE	=	CPD's classification of Co-operative's level of internal management quality.

6.5.2 Initial Measurement Model

According to the model specification, as explained in Chapter 4, the variables of Instrumentality and Valence are included in the model in the form of their product terms (Instrumentality x Valence). Therefore, there are four latent variables to be measured in the model: the motivation of Co-operative Board Members (MOTIVE), Expectancy (EXPECT), Instrumentality x Valence (IV), and the Co-operative's performance (PERFORM). The observed variables of MOTIVE are MOTIV1 to MOTIV7. The observed variables of EXPECT are EXPECT1 to EXPECT2. The observed variables of IV are IV1 to IV8.The observed variables of PERFORM are those related variables listed in the previous section e.g. CRRTIO52, AVCOPE52, NETPRO52, etc.

As presented above, the sample data is non-normal. Therefore WLSMV, which does not assume normally distributed variables, was used as the estimation method in CFA. The estimation result showed that one Goodness-of-fit indices of the initial measurement model did not meet the defined criteria. Even though $\chi 2/df$ ratio (1.96), the Comparative Fit Index (CFI) (0.903) and Root-mean-square error of approximation (RMSEA)(0.057) met the criterion but Tucker–Lewis index (TLI) (0.895) was lower than standard criteria (see Table 6.12). Furthermore, the standardized factor loadings of several variables were found to be lower than 0.4, such as MOTIV7, IV1, CRRTIO52, AVCOPE52, TTASTO52 or DEBTEQ52 (see Table 6.13). Moreover, standardized factor loading of some variables are low such as MOTIV7 or IV1. Therefore, the model needs to be adjusted.

Table 6.41: Goodness-of-fit indices of the initial measurement model

Index	Acceptable Threshold Levels	Initial model	Result
1. $\chi 2$/df ratio	≤ 2 or 3	838.2 / 428 = 1.96	Passed
2. Comparative fit index (CFI)	≥ 0.90	0.903	Passed
3. Tucker–Lewis index (TLI) or Non-normed fit index (NNFI)	≥ 0.90	0.895	Not Passed
4. Root-mean-square error of approximation (RMSEA)	≤ 0.06	0.057	Passed

Table 6.42: Factor loadings of variables in the initial measurement model

Constructs	Manifest variables	Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	Composite Reliabilities (CR)	Average variance Extracted (AVE)
MOTIVE					**0.885**	**0.539**
	MOTIV1	0.849	0.025	34.372	-	-
	MOTIV2	0.892	0.017	52.873	-	-
	MOTIV3	0.838	0.022	38.651	-	-
	MOTIV4	0.730	0.029	25.182	-	-
	MOTIV5	0.767	0.027	28.933	-	-
	MOTIV6	0.537	0.041	12.984	-	-
	MOTIV7	0.380	0.049	7.697	-	-
EXPECT					**0.686**	**0.523**
	EXPECT1	0.664	0.102	6.531	-	-
	EXPECT2	0.778	0.124	6.255	-	-
IV					**0.888**	**0.483**
	IV1	0.309	0.052	5.964	-	-
	IV2	0.532	0.044	12.224	-	-
	IV3	0.751	0.033	23.049	-	-

Constructs	Manifest variables	Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	Composite Reliabilities (CR)	Average variance Extracted (AVE)
	IV4	0.771	0.029	26.534	-	-
	IV5	0.783	0.031	24.937	-	-
	IV6	0.768	0.033	23.434	-	-
	IV7	0.765	0.030	25.463	-	-
	IV8	0.820	0.028	29.548	-	-
	IV9	0.588	0.044	13.372	-	-
PERFORM					**0.653**	**0.279**
	CRRTIO52	0.313	0.042	7.368	-	-
	AVCOPE52	-0.377	0.072	-5.239	-	-
	NETPRO52	0.224	0.016	13.793	-	-
	ROE52	0.502	0.026	19.046	-	-
	TTASTO52	0.190	0.048	3.952	-	-
	DEBTEQ52	-0.349	0.041	-8.589	-	-
	NOLOSS	0.987	0.021	46.529	-	-
	NOCORRUP	0.935	0.047	20.058	-	-
	ACAUDIT	0.088	0.107	0.816	-	-
	PARTIC60	0.169	0.122	1.386	-	-
	PAYDIVI	0.908	0.029	31.646	-	-
	FTSTAFF	0.199	0.097	2.056	-	-
	COOPLEVE	0.416	0.051	8.116	-	-

Note:
1) Variable “NOVIOLAT” is excluded from the initial model because this variable has no variance
2) Variable “ROA52” is also excluded from the initial model because it causes variance to be negative

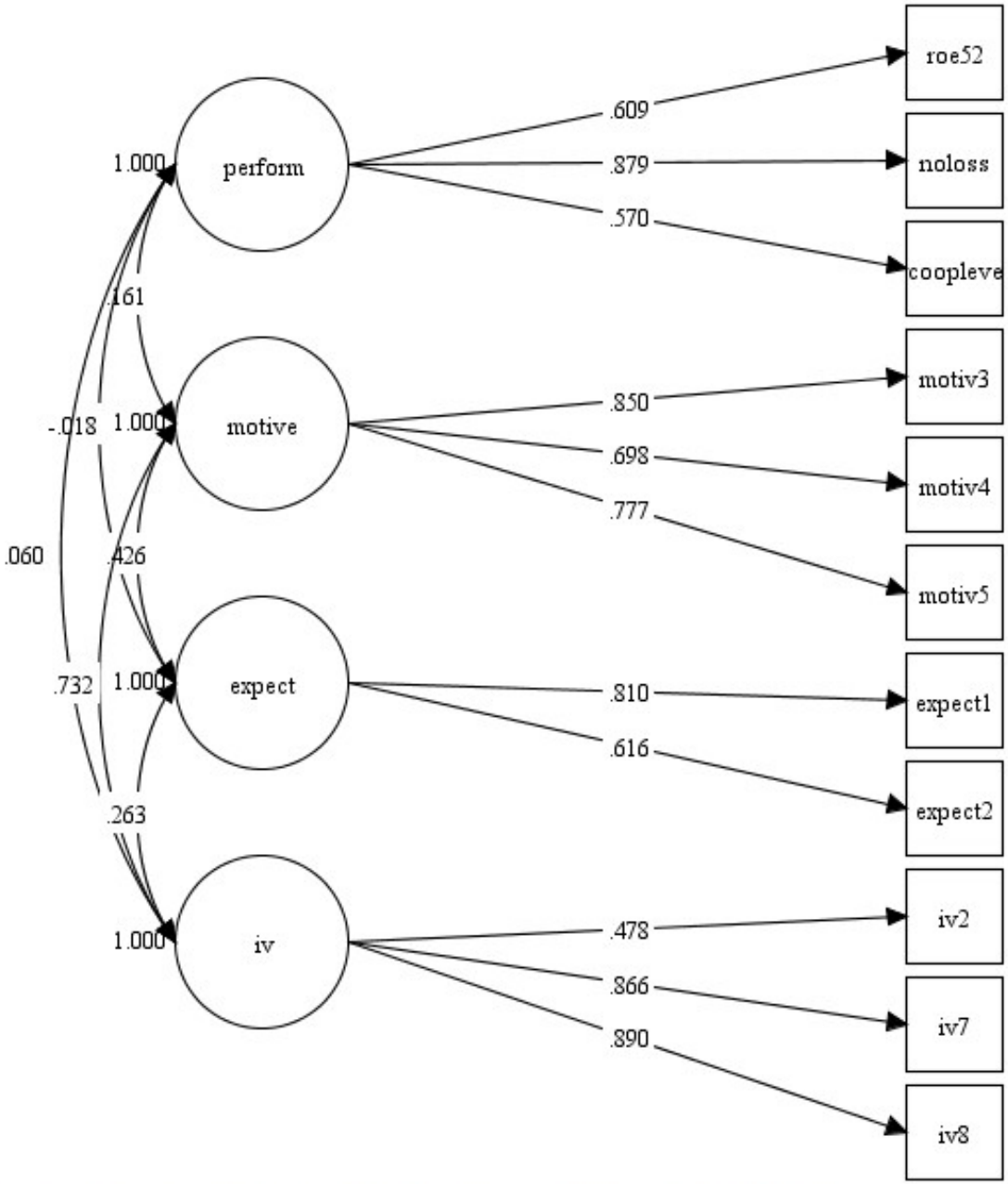
6.5.3 Adjusted Measurement Model

When the goodness-of-fit indices of the initial measurement models do not meet the criteria, or the factor loading of some variables is relatively low, the model should

be adjusted, by deleting some variables or covariating some variables based on the theoretical background.

The model was adjusted by choosing the proper indicators of each latent variable that caused all Goodness-of-fit indices to pass the acceptable threshold levels, and the validity and reliability of each latent variable to be acceptable. Finally, it was found that MOTIV3, MOTIV4 and MOTIV5 are appropriate indicators for measuring motivation (MOTIVE), EXPECT1; EXPECT2 for measuring EXPECT, IV2, IV7; IV8 for measuring Instrumentality and Valence (IV); and ROE52, NOLOSS and COOPLEVE for measuring the Co-operative's performance (PERFORM). The final measurement model is shown in Figure 6.2.

Figure 6.7: The final measurement model



1) Model's Goodness of Fit

The final adjusted model had Goodness-of-fit indices that all passed the criteria (see Table 6.14). The model's degree of freedom was 38. $\chi 2$/df ratio was equal to 1.43. RMSEA was 0.036. CFI was equal to 0.986 and TLI was equal to 0.980. It appears that the Goodness-of-fit indices of the adjusted model are much better than those of the initial model (see Table 6.15).

Table 6.43: Goodness-of-fit indices of the adjusted measurement model

Index	Acceptable Threshold Levels	Adjusted model	Result
1. $\chi 2$/df ratio	≤ 2 or 3	54.229 / 38 = 1.43	Passed
2. Comparative fit index (CFI)	≥ 0.90	0.986	Passed
3. Tucker–Lewis index (TLI) or Non-normed fit index (NNFI)	≥ 0.90	0.980	Passed
4. Root-mean-square error of approximation (RMSEA)	≤ 0.06	0.036	Passed

Table 6.44: Goodness-of-fit indices of initial model and adjusted model

Index	Initial model	Adjusted model
1. $\chi 2$/df ratio	1.96	1.43
2. Comparative fit index (CFI)	0.903	0.986
3. Tucker–Lewis index (TLI) or Non-normed fit index (NNFI)	0.895	0.980
4. Root-mean-square error of approximation (RMSEA)	0.057	0.036

2) Validity and reliability of the latent variables

All latent variables in the model were tested for their reliability, Convergent Validity, and Discriminant Validity. The estimate result from CFA is shown in Table 6.15. It is shown that the standardized factor loading of all variables in the model is high, ranging from 0.478 - 0.890. Standardized factor loading plays an important role in determining reliability, Convergent Validity, and Discriminant Validity.

To investigate the reliability of latent variables, the indices of Composite Reliability (CR) and Average Variance Extracted (AVE) are used, which can be calculated as the following equations.

Composite Reliabilities (CR)

$$= \frac{(\text{Sum of standardized loadings})^2}{(\text{Sum of standardized loadings})^2 + (\text{Sum of indicator measurement error})}$$

Average Variance Extracted (AVE)

$$= \frac{(\text{Sum of squared standardized loadings})}{(\text{Sum of squared standardized loadings}) + (\text{Sum of indicator measurement error})}$$

Where Indicator measurement error = $1 - (\text{standardized loading})^2$

The calculated CR and AVE of each latent variable are shown in Table 6.16.

Table 6.45: Results from CFA of the adjusted measurement model

Model construct	Measurement item	Description	Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	Squared multiple correlations (r-square)	Con Relia * (
MOTIVE		Motivation					0.
	MOTIV3	You wish to take more responsibility in the Co-op's work	0.850	0.023	37.587	0.723	
	MOTIV4	You feel that other Board Members respect and value having you work as a Board Member	0.698	0.034	20.732	0.488	
	MOTIV5	You feel that being a member of the Co-op Board is important to you	0.777	0.029	27.025	0.604	
EXPECT		Expectancy					0.
	EXPECT1	How possible is it for your Co-op to improve or to reach its goal due to your hard work?	0.810	0.142	5.717	0.661	
	EXPECT2	"It is a general rule that 'If one makes an effort, one will meet with success'. In your experience how applicable is this general principle in working in your Co-op?"	0.616	0.109	5.660	0.381	

Model construct	Measurement item	Description	Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	Squared multiple correlations (r-square)	Con Relia * (
IV		Instrumentality x Valence					0.
	IV2	Being honored and awarded by the Co-op or the Public Sector	0.478	0.052	9.193	0.228	
	IV7	Feelings of accomplishment	0.866	0.031	28.177	0.750	
	IV8	Being well known in the community & society	0.890	0.030	30.084	0.791	
PERFORM		Performance					0.
	ROE52	Return on Equity	0.609	0.055	11.022	0.371	
	NOLOSS	No loss	0.879	0.077	11.405	0.773	
	COOPLEVE	CPD's Ranking of Co-operatives	0.570	0.073	7.825	0.325	

*Note: According to Huong (2011)

For the test of convergent validity, standardized factor loadings, CRs, and AVEs are considered. All standardized factor loadings have to exceed the threshold value of 0.4. The threshold value of CRs is 0.6, and AVEs is 0.5.

From Table 6.15, the standardized factor loading of all variables in the model is high, ranging from 0.478 - 0.890, which passes the required threshold value of 0.4. The CR of all latent variables ranges from 0.678 to 0.820, all of which exceed the acceptable threshold level of 0.6. However, the AVE of all latent variables ranges from 0.489 to 0.604. There is one construct, the AVE of which is a little lower than the threshold level of 0.5, which is “PERFORM”.

Ping (2009) argued that a few points lower than an "acceptable" value of AVE (0.50) may not always be "fatal". AVE slightly below 0.50 might be acceptable in an "interesting", "first-time" study and is considered acceptable if it does not produce major discriminant validity problems, and the diminished AVE is noted and discussed in the limitations section of the paper.

As this is the "first-time" study of Board Motivation and Performance of Thailand’s Business Co-operatives, discriminant validity is not a problem here (to be explained later) and the diminished AVE will be discussed in the limitations section of the research, therefore AVE of 0.489 for “PERFORM” can be considered “acceptable” and can be summarized as all latent variables passing the test of convergent validity.

For the discriminant validity of a latent variable, as mentioned earlier in Chapter 5, it is assessed by comparing AVE values of any two constructs with its squared correlation. Both AVE estimates have to be greater than its squared correlation.

The AVE of each latent variable and the squared correlation among them are shown in Table 6.17. It can be seen that no matter which pairs of constructs are

considered, both AVE values are greater than its squared correlation. In conclusion, all the latent variables pass the discriminant validity test.

Table 6.46: AVE compared to squared correlation between the constructs

	EXPECT	IV	MOTIVE	PERFORM
EXPECT	**0.518**			
IV	0.069	**0.590**		
MOTIVE	0.180	0.536	**0.604**	
PERFORM	0.000	0.003	0.026	**0.489**

Note: Values along the diagonal indicate AVE.

6.6 The Structural model of Board motivation and Co-op performance

After the appropriate measurement model of latent variables was obtained from conducting CFA, a structural model which presents the causal relationships among those latent variables, supplemented with other observed variables, was then constructed by using SEM. Starting from the final CFA model, the assumed covariances (represented by double-headed arrows in the model diagram) among the latent variables were then removed, and the hypothesized causal relationships among them were added. Hypothesized causal relationships between latent variables and other observed variables were also included. The hypothesized model was then estimated and adjusted until the model satisfied the criteria of the model's goodness-of-fit and the best model was found. Nonetheless, all causal relationships need to be statistically significant and the sign of their coefficients have to be consistent with the theory or hypothesis. As the data is non-normal, the WLSMV estimation method was chosen.

During the process of adjusting the model, a number of variables that were expected to determine each element of motivation (i.e. Expectancy, Instrumentality, and Valence) were tried in the model according to the predetermined hypotheses.

Furthermore, control variables of the Co-operative's performance (variables other than motivation variable that were expected to determine the Co-operative's performance) were also included to reduce the estimation bias that would emerge from the omission of variables. A list of variables that were tried in the model is shown in Table 6.18.

Table 6.47: List of variables that were tried in the model estimation

Issues for testing	Hypothesis	Variables	Description
1. Performance			
1.1 Board Motivation	H1: Positive to Performance	- MOTIV3 - MOTIV4 - MOTIV5	**Your current work as a Co-op Board Member** 3) You wish to take more responsibility in the Co-op's work 4) You feel that other Board Members respect and value having you work as a Board Member 5) You feel that being a member of the Co-op Board is important to you
1.2 Go	Co	-	**- Does your Co-op**

Issues for testing	Hypothesis	Variables	Description
1.5 Market Condition	Control variables	- PRODUCT - MKSHARE-MKAGREE-COMPETE - USP1 - U	- Number of products and services - Market Share of Co-operative (%) - Does your Co-op have a marketing agreement with members? - If your Co-op's products and services compete with other producers, how is the competitive condition in the market? **- What are the selling points of products and services provided or procured by your Co-op? (Can answer more than 1 option)** 1) Price

Issues for testing	Hypothesis	Variables	Description
		- PROB6 - PROB7 - PROB8 - PROB9 - PROB10 - PROB11	6) Lack of working capital 7) Difficulty of access to finance 8) High financial costs 9) Lack adequate accounting standards 10) Doesn't have financial and investment planning 11) Low return on investments
1.8 Business Pl	Control	- BIZ	**- Does your Co-op engage in goal setting and**

Issues for testing	Hypothesis	Variables	Description
1.11 Communication in Co-operative	Control variables	- COMMUN1 - COMMUN2 - COMMUN3	**- Is there disclosure or communication of Board meeting resolutions to these groups of people?** 1) Co-op employees 2) Co-op members 3) People who are interested
1.12 Co-operative Type	Control variables	- FINTYPE	Financial-type Co-operative
2. Motivation			
2.1 Expectancy	H2: Positive to Motivation	- EXPECT1 - EXPECT2	1) In your current context, how possible is it for your Co-op to improve or to reach its goal due to your hard work? 2) "It is a general rule that 'If one makes an effort, one will meet with success'. In your experience how applicable is this general principle in working in your Co-op?"
2.2 Instrumentality x Valence	H3 and H4: Positive to Motivation	- IV2 - IV7 - IV8	2) Being honored and awarded by the Co-op or the Public Sector 7) Feelings of accomplishment 8) Being well known in the community and society
3. Expectancy			
3.1 Decision making system :One Person One Vote System	H5: Negative to Expectancy	- ONEMAN1 - ONEMAN2 - ONEMAN3 - ONEMAN4	**- How different is using a "one person-one vote system" in the Co-op to the "one share-one vote system" used in investor-owned firms?** 1) Reflects the Co-op members' voice more equally 2) A Co-op member's voice is less likely to be dominant 3) Takes more time to reach a final conclusion 4) Decision-making is more correct

Issues for testing	Hypothesis	Variables	Description
3.2 Authority and function	H6: Positive to Expectancy	- BAUTHO - BAUTHO1 - BAUTHO2 - BAUTHO3 - BFUNC1 - BFUNC2 - BFUNC3 - BFUNC4 - BFUNC5 - BFUNC6	- Can the Co-op Board exert enough authority to function in driving the Co-op forward to success according to the Co-op Board's plan? **- Opinions on the authority and function of your current Co-op Board – Do you agree that…** 1) Co-op Board rarely participates in Co-op activities 2) Co-op Board only approves plans & policies proposed by manager 3) Your Co-op Board actively sets policies and goals for the Co-op **- What are the roles of a Co-op's Board Members?** 1) No clear authority and function 2) Considering only specific issues proposed by Co-op staff 3) As auditor, general administrator 4) Slightly associated with the operation of a Co-op 5) Authorizing employees to operate 6) A decision maker for strategy, policy, goals
3.3 Board Composition (Proportion of outside directors)	H7: Positive to Expectancy	- BCOMPO - BCOMPO1 - BCOMPO2 - BCOMPO3 - BCOMPO4 - BCOMPO5	- Do you agree with the law that limits outside experts from becoming Co-op Board Members? **- Do you agree that having no outside Co-op expertise as Co-op Board Members causes….** 1) Skills and expertise do not vary enough 2) Lack of specific expertise that is necessary 3) Each Co-op Board Member lacks freedom in making decisions 4) Co-op Board Members understand the context of the Co-op 5) Co-op Board Members are responsible to their members

Issues for testing	Hypothesis	Variables	Description
3.4 Board Size	H8: Negative to Expectancy	- BSIZE - BSIZE1 - BSIZE2 - BSIZE3 - BSIZE4 - BSIZE5	- Total number of Co-op Board Members in your Co-op **- Do you agree that (according to your answers in previous questions), your number of Co-op Board Members has caused…?** 1) A variety of expertise 2) Wide network formation 3) Good representation from each group of Co-op Board Members 4) Flexible Board meetings where conclusions are easy to reach 5) Each Board Member can fully express their opinions
3.5 Board Term	H9: Positive to Expectancy	- YEARTERM - TERM2Y1 - TERM2Y2 - TERM2Y3 - TERM2Y4 - TERM2Y5 - NUMTERM - B2TERM1	- How many years per term do you think is appropriate for a Co-op Board Member to work for the Co-op? **- Do you agree that limiting the Board term to 2 years per term has caused…?** 1) Sufficient time to work continuously 2) Focuses on short-term projects, rather than long-term projects 3) Be responsible to members in order to receive enough votes to return 4) A position on the Co-op's Board of Directors might be monopolized by some Co-op members 5) Co-op members are not willing to be Board Members - How many terms do you think is appropriate for a Co-op Board Member to work for the Co-op? **- Do you agree that limiting the Co-op Board term not to exceed 2 consecutive terms has caused…?** 1) A long enough time to work continuously

Issues for testing	Hypothesis	Variables	Description
		- B2TERM2 - B2TERM3 - B2TERM4 - B2TERM5 - DIFBTERM	2) Focuses on short term projects, rather than long term projects 3) A position on the Co-op's Board of Directors might be monopolized by some Co-op members 4) Lack of qualified members to apply to be Co-op Board Members 5) Committee lack responsibility to members - Difference between the number of YEARTERM and the number of years that the committee members can be in the positions at present.
3.6 Board Structure : Type of Board (Unitary or Compound Boards)	H10: Unitary Board is positive to Expectancy	- BSTRUCT - BSTRUCT1 - BSTRUCT2 - BSTRUCT3 - BSTRUCT4	- Is your current Co-op Board structure appropriate? **- Do you agree that your current Board structure would make.....?** 1) Co-op Board Members have a lot of work and have no time to consider the strategic issues 2) There is delegation and specialization in your Co-op Board 3) Co-op operations are transparent. There are checks and balances 4) Co-op operations are slow because there are many steps in the decision-making process
3.7 Board meeting quality	H11: Positive to Expectancy	- BMEET1 - BMEET2 - BMEET3 - BMEET4 - BMEET5	**- Opinion of Board Meetings** (1) Agenda is set by the Secretary of the Board (2) Agenda concerns small issues and is just to inform (3) All Co-op Board Members attend every meeting (4) Co-op's Board of Directors can express opinions freely (5) Some members of a Co-op's Board of Directors can have influence on other Board Members' decisions

Issues for testing	Hypothesis	Variables	Description
		- BMEET6	(6) Board resolutions are from a majority vote of the Board
		- BMEET7	(7) Board resolutions are concluded after reasonable discussion
		- BMEET8	(8) Board resolutions are made by the Chairman of the Board
		- BMEET9	(9) Board Members receive information in advance and have enough time to prepare to attend the meeting
		- BMEET10	(10) Documents for the meeting have enough information to be considered for decision-making
		- BMEET11	(11) Board Members follow up the resolutions of the Board
		- RESOLU	continuously
		- DAYSB4	- Do Board resolutions provide clear guidelines for operational-level staff?
		- AGDSET	- How many days in advance do a Co-op's Board Members
		- FREMEET	receive information before the meeting?
		- MEETTIME	- Mostly, who sets the meeting agenda?
		- ONTIME	- How often is a Board meeting organized?
		- FOLLOW1	- How long on average is one Co-op Board meeting?
		- FOLLOW2	- Does the meeting start on time?
			- How often is there follow-up after a Co-op Board meeting?
			- How does your Co-op Board mostly follow-up the resolutions from a Board meeting?
		- CONRESOL1	**- If a conflict occurs in the Co-op meeting, how often does**
		- CONRESOL2	**the Board use these methods to solve the problem?**
		- CONRESOL3	1) Doing nothing
			2) Board majority vote
			3) Decision of the Co-op Board Chairman

Issues for testing	Hypothesis	Variables	Description
3.8 CEO – chairman duality	H12: Positive to Expectancy	- DUALITY	- How does your Co-op appoint managers?
3.9 Skill	H13: Positive to Expectancy	- SEMINAR - BEXPIR1 - BEXPIR2 - EXINCO-OPERATIVE	- Average number of seminars on Co-op development attended in a year - Experience as a Board Member in For-Profit organizations (years) - Experience as a Board Member in Non-Profit organizations (years) - Work experience related to Co-op field (Number of years)
3.10 Support to Board work	H14: Positive to Expectancy	- SUPPORT1 - SUPPORT2 - SUPPORT3	**- Opinions on support in working as a Co-op Board Member** 1) You have been supported and received enough resources 2) You have enough time to work as a Co-op Board Member 3) Co-op Board Members should work full time in the Co-op
4. Instrumentality			
4.1 Transparency in the evaluation / compensation setting process	H15: Positive to Instrumentality	- COMRULE1 - COMRULE2 - COMRULE3 - COMRULE4 - COMRULE5 - COMRULE6	- Is there any compensation you received as a Board Memberwhich is not written in the Co-op's regulations? - Is there a Key Performance Index (KPI) in evaluating Board Member performance in your Co-op? - Does your Co-op use KPI for Board Members in setting their compensation (of all allowances and bonuses)? - The compensation-setting process is fair and reliable - Benefits received from the Co-op are appropriate to one's workload - Compensation setting process should be redesigned in order to increase motivation in working for the Co-op

Issues for testing	Hypothesis	Variables	Description
			- How often do these following situations happen?
		- CONOFIN1	1) Some Board Members have conflicts of interest in running the Co-op
		- CONOFIN2	2) A manager tries to do something to solve the problem
		- CONOFIN3	3) Some Board Members become partners of a company doing business with the Co-op
4.2 Financial compensation	H16: Positive to Instrumentality	- INSOURCE	- Source of income
		- MEETAL1T	- Meeting allowance (Baht/per 1 meeting)
		- MEETAL1Y	- Total meeting allowance in a year (MEETAL1T x number of meetings per month x 12)
		- BONUS	- Bonus (Baht/year)
		- TTINCO-OPERATIVE	- Total income receive from co-op in a year
		- INCOTTIN	- Proportion of income received from co-op to total income from every source
4.3 Other direct benefits	H17: Positive to Instrumentality	- BWELFARE	- Other non– financial welfare received as a Co-op Board Member
		- MBWF1	- **Benefit received as a member of the Co-op**
		- MBWF2	1) Medical expenses
		- MBWF3	2) Marriage
		- MBWF4	3) Disaster aid
		- MBWF5	4) Ordination aid
		- MBWF6	5) Children's Scholarship
		- MBWF7	6) Retirement
			7) Funeral expenses

Issues for testing	Hypothesis	Variables	Description
		- MBWF8 - MBWF9	8) Child birth 9) Other
4.4 Indirect benefits	H18: Positive to Instrumentality	 - INSTRU 5 - INSTRU 6 - INSTRU 7 - INSTRU 8 - INSTRU9	Do you agree that if you work hard for the Co-op, you will have a chance to get these incentives? 5) Gaining admiration and respect and being loved by colleagues and people within the community 6) Feeling good and satisfied by having done some good for the society and utilizing all of your potential 7) Feelings of accomplishment 8) Being well known in the community and society 9) Being healthy
5. Valence			
5.1 Financial Status	H19: Negative to Valence	- AVINCOME - AVINCO1Y	- Overall monthly income from every source - Overall yearly income from every source
5.2 Financial Burden	H20: Positive to Valence	- EXPENSE	- In a month, the average cost of living as a percent of your total income from all sources you receive

The final structural model that satisfied all the criteria of model estimation is presented in Figure 6.3. There are five explanatory variables of Expectancy, which are BFUNC6 (A decision maker for strategy, policy, goals), BCOMPO4 (Co-operative Board Members understand the context of the Co-operative), BAUTHO1 (Co-operative Board rarely participates in Co-operative activities), BMEET2 (Agenda concerns small issues and is just to inform), LNSEMINAR (average number of seminars on Co-op development attended in a year in terms of log transformations), and two explanatory variables of Instrumentality and Valence are included, which are LNMEETAL1Y (meeting allowance in a year in terms of log transformations), and COMRULE4 (the compensation-setting process is fair and reliable). Three control variables (other explanatory variables besides motivation) of the Co-operative's performance are included which are DUALITY (How does your Co-op appoint managers?) FINTYPE (financial-type Co-operative), and GOVSUP3 (Price intervention from the government).

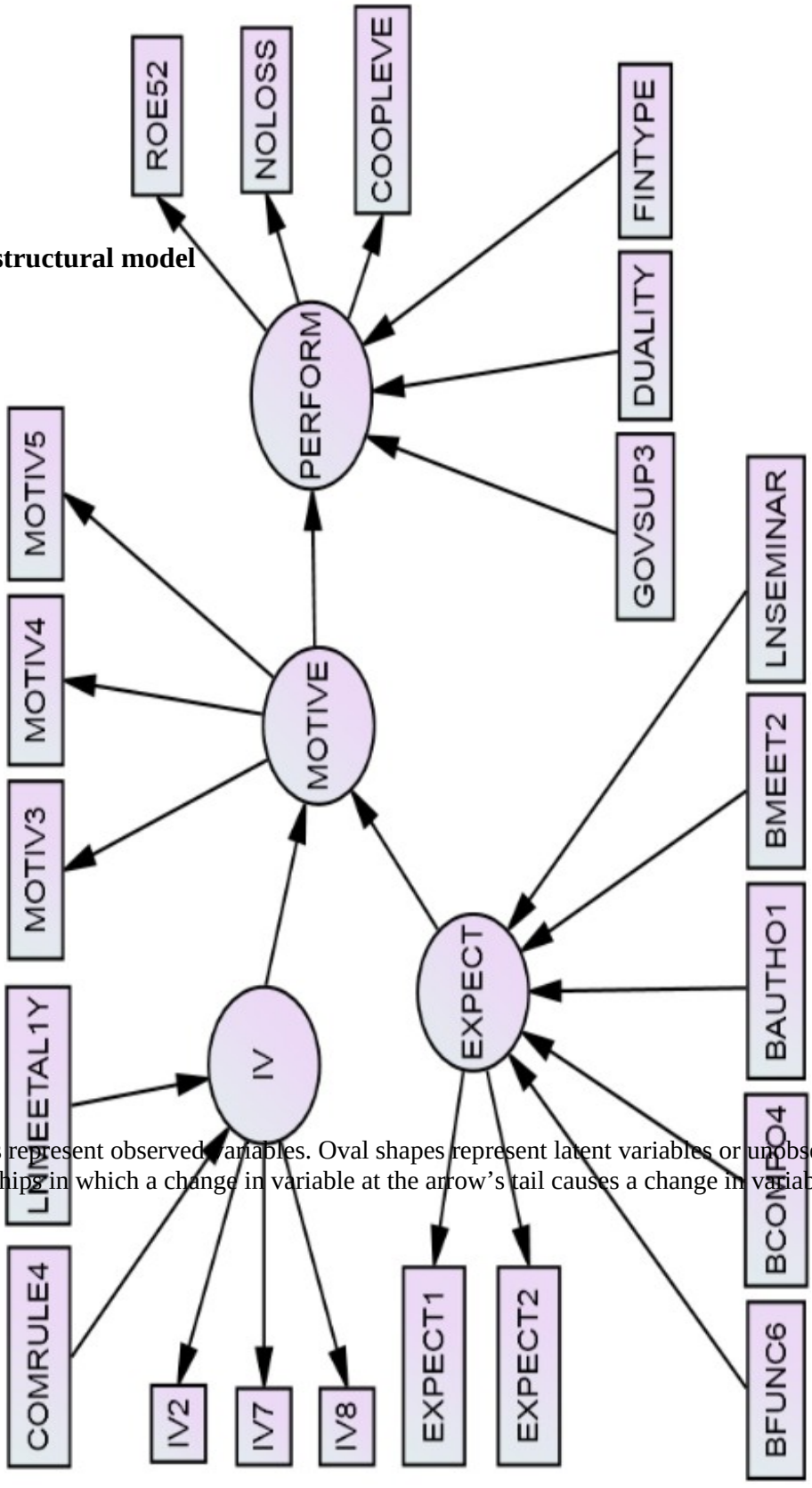


Figure 6.8: The final structural model

Note: Rectangular shapes represent observed variables. Oval shapes represent latent variables or unobserved variables. Arrows represent causal relationships in which a change in variable at the arrow's tail causes a change in variable at the arrow's head.

Table 6.19 shows the final model's goodness-of-fit. The model's degree of freedom is 141. The ratio of Chi-square to degree of freedom is 1.69. RMSEA is equal to 0.046. CFI is equal to 0.914 and TLI is equal to 0.900. All these indices indicate the model fits satisfactorily with the data.

Table 6.48: Goodness-of-fit indices of the structural model

Index	Acceptable Threshold Levels	Statistics value	Result
1. χ2/df ratio	≤ 2 or 3	238.301 / 141= 1.69	Passed
2. Comparative fit index (CFI)	≥ 0.90	0.914	Passed
3. Tucker–Lewis index (TLI) or Non-normed fit index (NNFI)	≥ 0.90	0.900	Passed
4. Root-mean-square error of approximation (RMSEA)	≤ 0.06	0.046	Passed

Table 6.20 presents the estimated standardized factor loadings of all causal relationships in the final model. Most of the factor loadings are statistically significant at a confidence level of more than 95%. This means that no hypotheses about the existence of these relationships can be rejected.

Table 6.49: Results of the structural model of Co-operative's Board Motivation

Variables			Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	P value
PERFORM (Performance)	<---	MOTIVE (Motivation)	0.144	0.064	2.246	0.025
MOTIVE (Motivation)	<---	EXPECT (Expectancy)	0.394	0.090	4.373	0.000
MOTIVE (Motivation)	<---	IV (Instrumentality x Valence)	0.748	0.111	6.751	0.000
MOTIV3 (You wish to take more	<---	MOTIVE (Motivation)	0.854	-	-	-

Variables			Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	P value
responsibility in the Co-op's work)						
MOTIV4 (You feel that other Board Members respect and value having you work as a Board Member)	<---	MOTIVE (Motivation)	0.669	0.046	14.554	0.000
MOTIV5 (You feel that being a member of the Co-op Board is important to you)	<---	MOTIVE (Motivation)	0.752	0.041	18.458	0.000
EXPECT1 (How possible is it for your Co-op to improve or to reach its goal due to your hard work?)	<---	EXPECT (Expectancy)	0.802	-	-	-
EXPECT2 ("It is a general rule that 'If one makes an effort, one will meet with success'. In your experience how applicable is this general principle in working in your Co-op?")	<---	EXPECT (Expectancy)	0.616	0.118	5.217	0.000
IV2 (Being honored and awarded by the Co-op or the Public Sector)	<---	IV (Instrumentality x Valence)	0.434	-	-	-
IV7 (Feelings of accomplishment)	<---	IV (Instrumentality x Valence)	0.774	0.128	6.051	0.000

Variables			Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	P value
IV8 (Being well known in the community and society)	<---	IV (Instrumentality x Valence)	0.841	0.134	6.280	0.000
EXPECT (Expectancy)	<---	BFUNC6 (A decision maker for strategy, policy, goals)	0.231	0.081	2.836	0.005
EXPECT (Expectancy)	<---	BCOMPO4 (Co-op Board Members understand the context of the Co-op)	0.214	0.092	2.335	0.020
EXPECT (Expectancy)	<---	BAUTHO1 (Co-op Board rarely participates in Co-op activities)	-0.258	0.085	-3.038	0.002
EXPECT (Expectancy)	<---	BMEET2 (Agenda concerns small issues and is just to inform)	-0.228	0.084	-2.725	0.006
EXPECT (Expectancy)	<---	LNSEMINAR (average number of seminars on Co-op development attended in a year in term of log-transformations)	0.260	0.103	2.530	0.011
IV (Instrumentality x Valence)	<---	COMRULE4 (The compensation-setting process is fair and reliable)	0.276	0.082	3.367	0.001
IV (Instrumentality x Valence)	<---	LNMEETAL1Y (Meeting allowance in a year in form of log-transformation)	0.183	0.073	2.505	0.012
ROE52 (Return on equity)	<---	PERFORM (Performance)	0.629	-	-	-

Variables			Standardized factor loadings	Standard error	Critical Ratio (t-statistic)	P value
NOLOSS (No loss)	<---	PERFORM (Performance)	0.862	0.135	6.373	0.000
COOPLEVE (CPD's Ranking of Co-operatives)	<---	PERFORM (Performance)	0.552	0.102	5.413	0.000
PERFORM (Performance)	<---	DUALITY (How does your Co-op appoint managers?)	-0.447	0.063	-7.078	0.000
PERFORM (Performance)	<---	FINTYPE (Financial-type Co-operative)	0.347	0.114	3.047	0.002
PERFORM (Performance)	<---	GOVSUP3 (Price intervention)	-0.284	0.081	-3.528	0.000

Table 6.21 shows the estimated squared multiple correlations of each variable in the model. Each number indicates the portion of variance of the corresponding variable that can be explained by the explanatory variable(s) of that variable in the model. It is shown that the model can explain 74.5% of the variance of motivation, 45.4% of the variance of the Co-operative's performance, 11.8% of the variance of Instrumentality and Valence, and 28.4% of the variance of Expectancy.

Table 6.50: Estimated squared multiple correlations of selected variables

Variable	Estimate
MOTIVE (Motivation)	0.745
PERFORM (Performance)	0.454
IV (Instrumentality x Valence)	0.118
EXPECT (Expectancy)	0.284

As explained earlier in Chapter 4, the Analytical Framework i.e. the model was better estimated in the multiplicative form between observed variables of Instrumentality and Valence variables. The result from the analysis could be changed if the Instrumentality and Valence construct were estimated in other forms, such as the additive form. Change in the estimation form could also cause a change in other relationships among variables in the model too.

The researcher also tried estimating the model in other choices of model specification such as the additive form of Instrumentality and Valence constructs (E + I + V, rather than E + ∑(IiVi). It was found that other model specifications did not provide a good fit as compared to the above model, as the researcher expected in the first place. For example, by making use of the specification of the additive form of Instrumentality and Valence constructs, some goodness-of-fit indices of the model did not pass the criteria (CFI< 0.9, TLI < 0.9, RMSEA > 0.06) as shown in Table 6.22.

Table 6.51: Goodness-of-fit indices of the structural model (I and V model)

Index	Acceptable Threshold Levels	Statistics value	Result
1. χ2/df ratio	≤ 2 or 3	484.0 / 201 = 2.408	Passed
2. Comparative fit index (CFI)	≥ 0.90	0.794	Not Passed
3. Tucker–Lewis index (TLI) or Non-normed fit index (NNFI)	≥ 0.90	0.764	Not Passed
4. Root-mean-square error of approximation (RMSEA)	≤ 0.06	0.066	Not Passed

After considering the effects on the results of including Instrumentality and Valence separately, the researcher conducted a sensitivity analysis and considered the

direct and indirect effect of all variables on Co-operative board motivation and Co-operative performance. The details are explained as follow.

1) Sensitivity analysis

After selecting the final model, the researcher carried out a basic sensitivity analysis, which is used to check the effects of including sectoral dummies on the robustness of the results. It was found that the result is robust as including the sectoral dummies in the model one by one did not affect the result of the analysis.

Dummy variables representing Agricultural Co-operatives, Credit Union Co-operatives, Service Co-operatives, Consumer Co-operatives and Thrift and Credit Co-operatives were not found to have a significant relationship with the Co-operative performance, while dummy variables representing Land Settlement Co-operatives and Fisheries Co-operatives were found to have a significant relationship with the Co-operative performance and fit indices of both two models passed all the criteria. However, squared multiple correlations (r-squared) of Co-operative performance of these two models were lower than the selected final model (0.365 and 0.370 < 0.454) (Table 6.21 and 6.23). It means that the variables included in the selected final model can explain the variation of the Co-operative performance better than the models including dummy variable representing Land Settlement Co-operatives and Fisheries Co-operatives.

Table 6.52: Results of including sectoral dummies in the model (one by one)

Dummy variable*	P-Value	Meaning
AGRI	0.186	Not significant
CREDIT	0.524	Not significant
LAND	0.000	Significant, CFA = 0.915, TLI = 0.901, RMSEA = 0.046, Squared multiple correlations of Co-operative Performance = 0.365
SERVICE	0.241	Not significant

FISH	0.000	Significant, CFA = 0.921, TLI = 0.907, RMSEA = 0.044, Squared multiple correlations of Co-operative Performance = 370
CONSUMER	0.833	Not significant
SAVING	0.217	Not significant

*AGRI = A dummy variable representing Agricultural Co-operatives (yes = 1, no = 0)
CREDIT = A dummy variable representing Credit Union Co-operatives (yes = 1, no = 0)
LAND = A dummy variable representing Land Settlement Co-operatives (yes = 1, no = 0)
SERVICE = A dummy variable representing Service Co-operatives (yes = 1, no = 0)
FISH = A dummy variable representing Fisheries Co-operatives (yes = 1, no = 0)
CONSUMER = A dummy variable representing Consumer Co-operatives (yes = 1, no = 0)
SAVING = A dummy variable representing Thrift and Credit Co-operatives (yes = 1, no = 0)

2) Direct and indirect effect

To consider the effect of an explanatory variable on dependent variables, direct effect (DE) and indirect effect (IE) need to be considered. The sum of these two effects constitutes the total effect (TE).

To consider the statistical significance of direct effect, t-statistics, which are shown in Table 6.20, are used. However, to consider the statistical significance of indirect effect and total effect, the p value, which indicates the confidence level of the estimate of each indirect effect, can be found in Table 6.24. The estimate of all effects in standardized value (this value shows how much the dependent variable increases, in proportion of standard deviation, when the variable increases by 1 standard deviation) is shown in Table 6.25.

Table 6.53: Two tailed significance of indirect Effects

Variable	Indirect Effect on			
	EXPECT	**IV**	**MOTIVE**	**PERFORM**
DUALITY	-	-	-	-
FINTYPE	-	-	-	-
GOVSUP3	-	-	-	-
BFUNC6	-	-	0.011	0.110

Variable	Indirect Effect on			
	EXPECT	IV	MOTIVE	PERFORM
BCOMPO4	-	-	0.037	0.114
BAUTHO1	-	-	0.006	0.082
BMEET2	-	-	0.010	0.084
LNSEMINAR	-	-	0.022	0.105
COMRULE4	-	-	0.000	0.057
LNMEETAL1Y	-	-	0.009	0.095
EXPECT	-	-	-	0.042
IV	-	-	-	0.037
MOTIVE	-	-	-	-
PERFORM	-	-	-	-

Note: – indicates no indirect effect between variables

Table 6.54: Variables' standardized effect on dependent variables in structural model

Variable	Effect	Dependent Variable			
		EXPECT	IV	MOTIVE	PERFORM
DUALITY	DE	-	-	-	-0.447***
	IE	-	-	-	-
	TE	-	-	-	-0.447***
FINTYPE	DE	-	-	-	0.347***
	IE	-	-	-	-
	TE	-	-	-	0.347***
GOVSUP3	DE	-	-	-	-0.284***
	IE	-	-	-	-
	TE	-	-	-	-0.284***
BFUNC6	DE	0.231***	-	-	-
	IE	-	-	0.091**	0.013
	TE	0.231***	-	0.091**	0.013
BCOMPO4	DE	0.214**	-	-	-

Variable	Effect	Dependent Variable			
		EXPECT	IV	MOTIVE	PERFORM
	IE	-	-	0.085**	0.012
	TE	0.214**	-	0.085**	0.012
BAUTHO1	DE	-0.258***	-	-	-
	IE	-	-	-0.102***	-0.015*
	TE	-0.258***	-	-0.102***	-0.015*
BMEET2	DE	-0.228***	-	-	-
	IE	-	-	-0.089**	-0.013*
	TE	-0.228***	-	-0.089**	-0.013*
LNSEMINAR	DE	0.260**	-	-	-
	IE	-	-	0.102**	0.015
	TE	0.260**	-	0.102**	0.015
COMRULE4	DE	-	0.276***	-	-
	IE	-	-	0.206***	0.030*
	TE	-	0.276***	0.206***	0.030*
LNMEETAL1Y	DE	-	0.183**	-	-
	IE	-	-	0.137***	0.020*
	TE	-	0.183**	0.137***	0.020*
EXPECT	DE	-	-	0.394***	-
	IE	-	-	-	0.056**
	TE	-	-	0.394***	0.056**
IV	DE	-	-	0.748***	-
	IE	-	-	-	0.107**
	TE	-	-	0.748***	0.107**
MOTIVE	DE	-	-	-	0.143**
	IE	-	-	-	-
	TE	-	-	-	0.143**
PERFORM	DE	-	-	-	-
	IE	-	-	-	-
	TE	-	-	-	-

Note: *p-value < 0.10, **p-value < 0.05, ***p-value < 0.01

From the results of the model estimation above, it is shown that:

1. Expectancy (EXPECT) receives direct effects from BFUNC6, BCOMPO4, BAUTHO1, BMEET2 and LNSEMINAR, while receives no indirect effect from any variables. All effects have statistical significance at a 95% confidence level ($p < 0.05$). The standardized coefficient of the effects was equal to 0.231, 0.214, -0.258, -0.228 and 0.260, respectively. These five variables can explain 28.4% of the variance of EXPECT (Squared Multiple Correlations = 0.284).

2. Instrumentality and Valence (IV) receives direct effects from COMRULE4 and LNMEETAL1Y, while receives no indirect effect from any variables. All the effects have statistical significance at a 95% confidence level ($p < 0.05$). The standardized coefficient of the effects was equal to 0.276 and 0.183 respectively. These two variables can explain 11.8% of the variance of IV (Squared Multiple Correlations = 0.118).

3. Motivation (MOTIVE) receives direct effects from EXPECT and IV, while it receives an indirect effect from BFUNC6, BCOMPO4, BAUTHO1, BMEET2, LNSEMINAR, COMRULE4 and LNMEETAL1Y. All variables can explain 74.5% of the variance of Motivation (Squared Multiple Correlations = 0.745). If both direct and indirect effects are considered, it was found that:

- Motivation receives direct effects from EXPECT and IV, with statistical significance at a confidence level of 99% ($p < 0.01$).The standardized coefficient of the effects was equal to 0.394 and 0.748, respectively.
- Motivation receives indirect effects, with statistical significance at a confidence level of 95% ($p < 0.05$), from BFUNC6, BCOMPO4,

BAUTHO1, BMEET2 and LNSEMINAR, via variable EXPECT. The standardized coefficient of the effects was equal to 0.091, 0.085, -0.102, -0.089 and 0.102, respectively. Motivation also receives indirect effects from COMRULE4 and LNMEETA1Y, via variable IV, with the standardized coefficient of the effects being equal to 0.206 and 0.137.

4. Performance (PERFORM) receives all effects from the variables MOTIVE, EXPECT, IV, DUALITY, FINTYPE, GOVSUP3, BFUNC6, BCOMPO4, BAUTHO1, BMEET2, LNSEMINAR, COMRULE4 and LNMEETAL1Y. All variables can explain 45.4% of the variance of performance (Squared Multiple Correlations = 0.454). If both direct and indirect effects are considered, it was found that:

- Performance receives direct effects from the variables of MOTIVE, DUALITY, FINTYPE and GOVSUP3. The standardized coefficient of the effects was equal to 0.143 ($p < 0.05$), -0.447 ($p < 0.01$), 0.347 ($p < 0.01$) and -0.284 ($p < 0.01$), respectively.
- Other than direct effects, performance receives indirect effects from BFUNC6, BCOMPO4, BAUTHO1, BMEET2 and LNSEMINAR, via variables EXPECT and MOTIVE. All these effects have statistical significance at a 88% confidence level ($p < 0.12$) except BAUTHO1 and BMEET2, statistical significance of which is at a 90% confidence level ($p <0.10$). The standardized coefficient of the effects was equal to 0.013, 0.012, -0.015, -0.013 and 0.015, respectively.
- Performance also receives indirect effects from COMRULE4 and LNMEETAL1Y, via variable IV and MOTIVE. All these effects have statistical significance at a confidence level of 90% ($p < 0.10$). The

standardized coefficient of the effects was equal to 0.030 and 0.020, respectively.

6.7 Hypothesis Testing Results

From the above results showing all effects between explanatory variables and each dependent variable in the model, the research hypotheses could be assessed as shown in Table 6.26, the details of which are shown as follows.

H1: There is a significant positive relationship between Co-operative Board Members' work motivation and the Co-operative's performance

It was found that Co-operative Board Members' motivation had a total effect on the Co-operative's performance with a standardized coefficient of 0.144and statistical significance at 95% confidence level. Therefore, support was found for this hypothesis.

H2: There is a significant positive relationship between Expectancy and Co-operative Board Members' work motivation

Support was found for this hypothesis, as it was found that Expectancy had a total effect on Co-operative Board Members' motivation with a standardized coefficient of 0.394 and statistical significance at a confidence level of 99%.

H3 and H4: There is a significant positive relationship between Instrumentality and Co-operative Board Members' Work motivation, and between Valence and Co-operative Board Members' Work motivation

This research applied Expectancy theory of motivation, by using the model of $M = E + \Sigma(IV)$ as explained in Chapter 4. For this reason, the answers to H3 and H4 are put together. It was found that variable IV (Instrumentality x Valence) had a total effect on Co-operative Board Members' motivation with a standardized coefficient of 0.748and statistical significance at the 99% confidence level.

The fact that variable IV has an effect on motivation could imply that there is a relationship between Instrumentality and motivation, and also a relationship between Valence and motivation. Therefore, support was found for hypotheses H3 and H4.

H5: There is a significant negative relationship between the decision-making process of one person one vote and Expectancy

Support was not found for this hypothesis. From the data analysis, it was not found that the decision-making process, which was measured by variables ONEMAN1, ONEMAN2, ONEMAN3, ONEMAN4, had any effects on Expectancy, either directly or indirectly.

H6: There is a significant positive relationship between the level of Board authority and function and Expectancy

Support was found for this hypothesis. From the data analysis, it was found that one variable among several variables that reflect Board authority and function, BFUNC6 (A decision maker for strategy, policy, goals), had a positive relationship with Expectancy, with statistical significance at a confidence level of 99% and a standardized coefficient of 0.231. It was shown that the more the Co-operative Board Members were associated with decision making in strategy, policy, and goals of the Co-operative, the more Expectancy the Co-operative Board Members have.

From the analysis, it was also found that factor loading of variable BAUTHO1 (Co-op Board rarely participates in Co-op activities) was negative with a standardized coefficient of -0.258 and statistical significance was at a confidence level of 99%. It means that if the Co-operative Board Members rarely participate in their Co-operative, expectancy will be low. If Co-operative Board actively participate in their Co-operative, expectancy will be high.

However, for variable BAUTHO1, this item in a questionnaire was phrased negatively. Therefore, if considering the interpretation of the result related with this variable and the way a question was phrased, it can be noted that Board authority has a positive relationship with Expectancy.

H7: There is a significant relationship between a Board composition that has no experts outside the Co-op and Expectancy

Support was found for this hypothesis, as it was found that the Board composition, which was measured by the variables of BCOMPO4 (Co-op Board Members understand the context of the Co-op) had a positive effect on Expectancy with a standardized coefficient of 0.214 and statistical significance was at a confidence level of 95%. This means that the more the Co-operative Board Members understand the context of the Co-op, the more Expectancy the Co-operative Board Members have.

H8: There is a significant relationship between Board size and Expectancy

Support was not found for this hypothesis, as from the analysis of the data it was found that the Board size variable, which was measured by the variables BSIZE, BSIZE1, BSIZE2, BSIZE3, BSIZE4 andBSIZE5, had no effects on Expectancy, either directly or indirectly.

H9: There is a significant relationship between a Board term that is limited to two years per term, and cannot exceed two consecutive terms, and Expectancy

Support was not found for this hypothesis, as from the analysis of the data it was found that the Board term variable, which was measured by the variables YEARTER, TERM2Y1 to TERM2Y5, NUMTERM, B2TERM1 to B2TERM5 and DIFBTERM, had no effects on Expectancy, either directly or indirectly.

H10: There is a significant relationship between a Board structure that has sub-committees or working groups and Expectancy

Support was not found for this hypothesis because none of the relationships between variables that measure Board structure and the Expectancy variable were found to be statistically significant. These variables include BSTRUCT and BSTRUCT1 to BSTRUCT4.

H11: There is a significant positive relationship between Board meeting quality and Expectancy

Support was found for this hypothesis. It was found that variables that indicate Board meeting quality, BMEET2 (Agenda concerns small issues and is just to inform), had a negative standardized coefficient of -0.228 and the statistical significance was at a confidence level of 99%.

This means that if Board meetings lack quality, as can be seen from meeting agenda which concerns small issues and is just to inform, Expectancy of the Co-operative Board Members is likely to be low.

On the other hand, if the Board meeting has high quality, as can be seen from meeting agenda which concerns big issues, strategies and information sent before the meeting for other Board Members to prepare, Expectancy of the Co-operative Board Members is likely to be high. Therefore, it can be concluded that there is a significant positive relationship between Board meeting quality and Expectancy.

H12: There is a significant relationship between CEO-chairman duality and Expectancy

Support was not found for this hypothesis, as it was not found from the data analysis that the CEO-chairman duality, which was measured by variable DUALITY, had a significant effect on Expectancy, either directly or indirectly.

H13: There is a significant positive relationship between Board Members' skill and Expectancy

It was found that Board Members' skill, which was measured by the variable LNSEMINAR (average number of seminars on Co-op development attended in a year in terms of log transformations), had a significant effect on Expectancy with a 95% confidence level and a standardized coefficient of 0.260. Therefore, support was found for this hypothesis. This means that the average number of seminars on Co-op development that Co-operative Board Members attend in a year has a positive effect on Expectancy.

H14: There is a significant positive relationship between Support to Board work and Expectancy

Support was not found for this hypothesis, as the data analysis did not find that Support to Board work, which was measured by the variable SUPPORT1, SUPPORT2 and SUPPORT3, had any significant effect on Expectancy, either directly or indirectly.

H15: There is a significant positive relationship between transparency in the evaluation and compensation setting process and Instrumentality

Support was found for this hypothesis, as it was found that the variable COMRULE4 (the compensation-setting process is fair and reliable), which measured the transparency in the evaluation and compensation setting process, had a significant effect on Instrumentality with a 99% confidence level and a standardized coefficient of 0.276.

H16: There is a significant positive relationship between financial compensation and Instrumentality

It was found that financial compensation, which was represented by the variable LNMEETAL1Y(meeting allowance in a year in term of log-transformations), had an effect on Instrumentality of Co-operative Board Members with a 95% level of confidence and a standardized coefficient of 0.183.Therefore, support was found for this hypothesis.

H17: There is a significant positive relationship between other direct benefits and Instrumentality

Support was not found for this hypothesis, as it was not found from the data analysis that other direct benefits, which were measured by the variable BWELFARE, MBWF1 to MBWF9, had significant effect on Expectancy, either directly or indirectly.

H18: There is a significant positive relationship between indirect benefits and Instrumentality

It was found that indirect benefits, which were represented by the variable IV7 and IV8, had a positive relationship with Instrumentality of Co-operative Board Members had a 95% level of confidence and a standardized coefficient of 0.774 and 0.841 respectively. Therefore, support was found for this hypothesis.

H19: There is a significant positive relationship between Board Members' financial status and Valence

Support was not found for this hypothesis as it was not found that financial status of the Board Members, measured by AVINCOME and AVINCO1Y, had a significant effect on Valence, either directly or indirectly.

H20: There is a significant positive relationship between Board Members' financial burden and Valence

From the analysis of the data, it was not found that the financial burden of the Board Members had an effect on Valence, either directly or indirectly. Therefore, support was not found for this hypothesis.

Table 6.55: Hypothesis testing conclusion

Hypothesis	Predicted Sign of Coefficient	Actual Sign	Hypothesis Supported Yes/No
H1: There is a significant positive relationship between Co-operative Board Members' Work motivation and the Co-operative's performance	+	+	Yes
H2: There is a significant positive relationship between Expectancy and Co-operative Board Members' Work motivation	+	+	Yes
H3: There is a significant positive relationship between Instrumentality and Co-operative Board Members' Work motivation	+	+	Yes
H4: There is a significant positive relationship between Valence and Co-operative Board Members' Work motivation	+	+	Yes
H5: There is a significant negative relationship between the decision-making process of one person one vote and Expectancy	-	NA	No
H6: There is a significant positive relationship between the level of Board authority and function and Expectancy	+	+	Yes
H7: There is a significant negative relationship between a Board composition that has no experts outside the Co-op and Expectancy	+ or -	+	Yes
H8: There is a significant relationship between Board size and Expectancy	+ or -	NA	No
H9: There is a significant negative relationship between	-	NA	No

Hypothesis	Predicted Sign of Coefficient	Actual Sign	Hypothesis Supported Yes/No
a Board term that is limited to two years per term, and cannot exceed two consecutive terms, and Expectancy			
H10: There is a significant positive relationship between a Board structure that has sub-committees or working groups and Expectancy	+	NA	No
H11: There is a significant positive relationship between Board meeting quality and Expectancy	+	+	Yes
H12: There is a significant relationship between CEO-chairman duality and Expectancy	+ or -	NA	No
H13: There is a significant positive relationship between Board Members' skill and Expectancy	+	+	Yes
H14: There is a significant positive relationship between Support to Board work and Expectancy	+	NA	No
H15: There is a significant positive relationship between transparency in the evaluation and compensation setting process and Instrumentality	+	+	Yes
H16: There is a significant positive relationship between financial compensation and Instrumentality	+	+	Yes
H17: There is a significant positive relationship between other direct benefits and Instrumentality	+	NA	No
H18: There is a significant positive relationship between indirect benefits and Instrumentality	+	+	Yes
H19: There is a significant positive relationship between Board Members' financial status and Valence	+	NA	No
H20: There is a significant positive relationship between Board Members' financial burden and Valence	+	NA	No

Chapter 7
Results from Interviews with Experts

7.1 Introduction

According to the literature review in Chapter 3, there are both advantages and disadvantages to different quantitative and qualitative methodologies. In qualitative research, a small sample is used, along with what seems to be an almost subjective analytical method, perhaps raising questions as to possibly unreliable and too specific study results. However, a qualitative study can provide in-depth answers to questions surrounding the reasons why people serve as Board Members. On the other hand, quantitative research usually uses a large sample obtained from survey data, along with what seems to be an objective analytical tool. So, the research findings are more reliable and generalizable, though an in-depth explanation of Board motivation and its relationship to the firm's performance cannot be provided.

This chapter provides qualitative study results. The objectives for interviewing Co-operative experts are to gather in-depth information and expert opinions that cannot be obtained from a quantitative study. The information and opinions will be rechecked and compared to the quantitative results. Also, the information and opinions will be used to explain the relationship between factors in the models studied in the past chapter.

As far as the structure of this chapter is concerned, the second part concerns the interview procedures, interviewees, and questions. The third part is an analysis of the data and opinions from the interviews. The final part is the chapter summary.

7.2 The interview procedure

The interviews took place as individual interviews, and were held in January and February, 2012. All the interviews were held at the interviewees' offices. All the content of the interviews was recorded using a recordable Mp3 player. Each interview began by explaining the research objectives. The length of the interviews varied from 45 minutes to 90 minutes depending on the time availability of the interviewee. To ensure that the identity of the interviewees would remain completely anonymous, all interviewees were identified only as Experts 1 through 10 in this research.

From the criteria for choosing the interviewees explained in Chapter 5, a total of ten experts from Co-operatives, whose characteristics are presented in Table 7.1, were interviewed. In some Co-operatives there was more than one interviewee, but only one interviewee was counted. Many experts had been working at the Co-operatives for more than ten years. Some of them were Board Members or executives of large Co-operatives and had been rewarded with national prizes for excellence. Besides this, some were rewarded as excellent national Co-operatists and some served as Board Members and had received awards from international Co-operatives. The interviewees included three experts/Co-operatives from agricultural Co-operatives, two experts/Co-operatives from store Co-operatives, and five experts/Co-operatives from savings Co-operatives or credit union Co-operatives. When classified based on the level of each Co-operative, there were six experts/Co-operatives from primary Co-operatives, seven experts/Co-operatives from secondary Co-operatives, and five experts/Co-operatives from tertiary Co-operatives. Some of them had been working for many Co-operatives. Most of the experts were ranked in the position of Co-operative chairman or vice chairman. However, some experts were also Co-operative managers.

Table 7.56: Summary of interviewees' characteristics

Code	Role		Sector			Level			Reward
	BOD	Mgt.	Agri.	Bank	Store	Pri.	Sec.	Ter.	
Expert 1	✓		✓				✓	✓	
Expert 2	✓		✓			✓			
Expert 3	✓	✓	✓			✓			NECO
Expert 4	✓			✓		✓	✓	✓	NEC, ACCU's Award
Expert 5	✓			✓			✓	✓	NEC, ACCU's Award
Expert 6	✓			✓		✓	✓		
Expert 7	✓			✓			✓		
Expert 8	✓	✓		✓		✓	✓	✓	NEC
Expert 9	✓	✓			✓		✓	✓	
Expert 10	✓	✓			✓	✓			

Remarks: BOD = Board of Directors, Mgt. = Management, Agri. = Agricultural Co-operative, Bank = Savings Co-operative and credit union Co-operative, Store = Store Co-operative, Pri. = Primary Co-operative, Sec. = Secondary Co-operative, Ter. = Tertiary Co-operative, NECO = National Excellence Co-operative**,** NEC = National Excellent Co-operatist, ACCU's Award = Association of Asian Confederation of Credit Union Recognition Award

The main questions included in the interview were:

(1) What is the most important factor affecting the performance of your Co-operative?

(2) What is the motivation behind a person wanting to be a Co-operative Board Member?

(3) Does the motivation of the Co-operative Board Members affect the Co-operative's performance, and if so how?

(4) What causes the Board Members to have motivation and lose motivation in their work?

After the interview, data was transcribed and compiled. Data was analysed by combining all the experts' responses under each question.

7.3 Analysis of data and opinions from the Expert interviews

In this part, the data and opinions collected from the expert interviews are classified into four groups, according to the four interview questions listed above.

7.3.1 What is the most important factor affecting the performance of your Co-operative?

Most experts gave their opinions on the various factors affecting the performance of their Co-operatives. These factors could be classified into two groups: the micro factors, or those factors that affect the performance of each organization, and the macro factors, or those factors that affect the performance of all domestic Co-operatives, or of only some sectors.

(1) Micro factors

As indicated by the experts, the micro factors affecting the performance of Co-operatives consist of personnel ones (many experts specify clearly that they are directors, the Chairman of the Board of Directors, members, administrators or executive officers, including Co-operative auditors), operation capital, the management system, operation tools and instruments. Most experts agreed that the most important factor is personnel, especially that of members, the Board of Directors, and the Executive, but the allocation of importance by each expert is probably different.

Expert 8 believed that the prime factor is that the Board of Directors is full of knowledge, competency, leadership, ideology, and good vision. The duty of the Board of Directors is to set up strategy and goals, including impetus for the Co-operative's performance to achieve its goals. In addition, they must build up the confidence amongst members. If the Co-operative's Board of Directors has no knowledge, confidence, strong decisions, good competency or they only work temporarily, the Co-

operative will grow with difficulty. A strong professional management team is the second priority.

However, many experts have stated that very many Co-operative Board of Directors had undesirable characteristics. Expert 1 said that many agricultural Co-operatives have encountered a lack of qualified Board of Director members. This was because almost all members are farmers, who have little academic, management, or accounting knowledge. Expert 4 said that the (savings) Co-operative's Board of Directors has never had a Co-operative background. Expert 5 commented that the Board of Directors who are enthusiastic to set up policy would get better performance. However, most of the Co-operative's performance is a consequence of the quality of the services they provided, rather than from policy determination due to lack of Co-operative knowledge.

Experts indicated that management is another important factor that affects the Co-operative's performance. A desirable manager should have honesty (Expert 4), excellent capability, and long-term vision (Expert 3) including a strong and professional management team (Expert 8). Even though directors elected from a pool of members have some experience, they lack knowledge (Expert 3). However, Co-operatives always face financial limitations and cannot pay a high salary to attract qualified people to work with the Co-operative (Expert 10). Some Co-operatives need a Chairman of their Board of Directors to be a manager as well, because they cannot hire an additional manager (Expert 3). Furthermore, some experts considered that most corruption in a Co-operative derives from the management team and they act as a team (Expert 9 and Expert 10).

Expert 6 considered that members who have ideology is the most important factor, because directors are elected from amongst members. If members have good ideology, the directors will be efficient as well. If members who have good ideology jointly develop themselves, the Co-operative and community with coordination, and active participation, this will enable the Co-operative to be successful and ensure its survival.

Participating in the activities of the Co-operative, especially in doing business with the Co-operative, is an important factor for the performance of the Co-operative. Expert 3, who is an agricultural Co-operative director, indicated that 80-90% of members participated in and gained from the Co-operative's activities because they believed in the Co-operative. On the other hand, Expert 1 provided information that overall, members of the agricultural Co-operative rarely participated in the Co-operative's activities, while as many as 50% never participated in activities or attended meetings. This was because they were lacking real knowledge and understanding. The persons who were Co-operative members did not have real ideology and in-depth Co-operative knowledge.

The interviewees also argued that specific factors affect the performance of some Co-operatives. Expert 4 said that the Co-operative league is short of operational capital because the Co-operatives that are members of the Co-operative league did not submit their net profits for dues. Expert 10 mentioned that factors of location and work time caused some store Co-operatives to be incapable of competing with convenience stores that have more suitable locations and which are open 24 hours a day. Expert 3 said that some income of the Co-operative depended on service provision for people, not for their members.

(2) Macro factors

The interviewees also talked about macro factors that affect Co-operatives' performance, such as the macroeconomic factors, industrial competition, government policy, related regulations, and performance of the government sector in supporting Co-operatives.

Expert 6, who is the chairman of a Board of Directors, indicated that the national economy, particularly the interest rate, affects the performance of the saving Co-operatives and the credit union, which is one type of financial institution. Expert 10, who is the director of a store Co-operative, said that the strong competition from retail business since the fast branch expansion of modern trade and discount stores has caused the store Co-operatives to be unable to compete, because the scale and scope of their operation is smaller.

Working along with government policy has both good and bad results for the Co-operative's performance. Government policy does create some confidence for the Co-operative (Expert 5), such as exempting the deposit interest of Co-operative members from income tax and exempting the Co-operative from corporate income tax. This helps to attract people to become members (Expert 1). However, being under the supervision of the Ministry of Agriculture and Co-operatives entails a main goal for agricultural development, so the tasks of Co-operative support came second (Expert 4). It has also constrained the Savings Co-operative to be developed according to the rules put in place for other kinds of financial institutions, which are under the governance of the Ministry of Finance and the Bank of Thailand (Expert 8), while Expert 2 said that the government provides subsidies for some kinds of agricultural Co-operative, which grow perennial plants and it took a longer time to receive products. On the other hand,

the occurrence of subsidy corruption caused the Co-operative to receive only a small amount of the allocated subsidy.

As regards laws and regulations, the interviewees provided different opinions on the subject of strict regulations determined by the government. Expert 2 suggested that Co-operative laws and regulations are backward, inflexible, and not conforming to current business environments, therefore the Co-operative is not buoyant. The Co-operative's laws and regulations are fitted to only one kind of business for the Co-operative, so this is equivalent to having an efficiency constraint on the Co-operative (Expert 7). Therefore, the Co-operative cannot run a complete business (Expert 8). For example, the law does not have a loophole for the Co-operative to be both a manufacturer and a distributor, so taking advantage of the price of goods of the Co-operative is not possible (Expert 3). On the other hand, the law is applied to all kinds of Co-operatives, although each of them is different (Expert 5). In addition, the law puts some constraints on the qualification of the associate member (Expert 8). However, Experts 4 and 6 considered that the regulations should be strict and not allow the Co-operative to be too independent due to the nature of finance and accounting, which requires strict control.

Some experts mentioned that the operational problem of the government in supporting Co-operatives affects the Co-operative's performance. Expert 8 said that the Co-operative registrar does not have true knowledge about the Co-operative business so that Thai Co-operatives are not independent or being controlled by a person who has the relevant knowledge. Likewise, Expert 9, who is a manager of a secondary Co-operative, said that the officers of the CPD have no expertise. Although the Co-operatives obtained some suggestions from them it gave no benefits for the Co-

operative. However, Expert 10, who is a manager of a primary Co-operative, considered that the performance of the Co-operative was improved after its regulation amendment according to the CPD's recommendation. In addition, the accounting software of the CAD applied to the store Co-operative has the problem of unsuitability for the Co-operative working system, and is of lower quality than that of a department store's software. Therefore, controlling the stock of goods was a problem and there was still no support service when a software error was experienced (Expert 10).

7.3.2 What is the motivation behind a person wanting to be a Co-operative Board Member?

The interviewees considered that there are a variety of motives that lead people to work on Co-operative committees, such as altruism, financial benefits, political popularity, personal benefits and others.

(1) Altruism

All interviewees pointed out that the strongest motive for working on Co-operative committees was altruistic. Most Co-operative committees agree that the Co-operative has its own principles that greatly benefit its members (Expert 9). Moreover, the reasons they become Co-operative committee members are that they want to help others (Expert 4), to enrich Co-operative members' lives (Expert 4), to increase the life security of members, to build a better society (Expert 6), and to help develop their organizations (Expert 10).

In the areas of agricultural Co-operatives, most of the committees are local leaders, such as a village headman, sub-district headman or members of a sub-district Administrative Organization. These people are willing to devote themselves to their villagers. Moreover, villagers put their trust in those local leaders so it is normal to see

them automatically work as Co-operative committee members (Expert 1). Some may not want to take this position but they are begged by Co-operative members and cannot ignore the request (Expert 3).

Normally, Co-operative members are willing to work for their organization and do not want anything in return. It is true that Co-operative committees have few or even no benefits from their organization (Expert 2). In addition, they usually devote themselves too much to their organization (Expert 5). In some newly established Co-operatives, the Co-operative committees had to spend their own money on Co-operative expenses (Expert 2). Expert 7 said that Co-operative committees do not consider their position as Co-operative committee members as “a job”; instead, they already have their permanent jobs and they become Co-operative committee members because they just want to help. However, Expert 8 mentioned that at the stage of establishment, 60-70% of the Co-operative committee members appear to have such Co-operative ideology in their minds. If they do not have Co-operative ideology in their minds, organizations will not be successfully established. However, it was recently discovered that people volunteering to work as Co-operative committee members have other motives. For example, they may want to seek personal benefits or to maintain their personal interests.

(2) Financial benefits

Co-operative committee members gain financial benefits from their organizations in the form of attendance fees and bonuses, not a monthly salary (Co-operatives may provide a bonus for their committees, managers and officers, not over 10% of their net profit in each year). Some Co-operatives may provide their committees with travel and housing allowances (if needed) or life insurance. Other

welfare that committee members get is the same as that which members have. The committee members are not allowed to set up their payments. Instead, an annual general meeting of the Co-operative will approve them.

Most of the interviewees agreed that financial benefits rarely affect the Board Members' motives because the financial benefits they earn from the organization are very low compared to the regular income they gain from their permanent jobs (Experts 1, 3, 4, 8, 10). Most committee members already have their permanent jobs (Expert 6, 9). They understand that they will earn little or no financial benefit from the Co-operatives they work for (Expert 1).

However, it was found that there were some people who want to be Co-operative committee members because they just want to gain financial benefits from the organizations. An expert who works in an agricultural Co-operative revealed that there is a group of people who become Co-operative committee members because they want to gain benefits, for example bonuses and welfare from Co-operatives, such as savings Co-operatives or credit union Co-operative where high profits can be found.

> *"There may be some people volunteering to be on a committee due to benefits offered by the organizations. But only in some Co-operatives that are able to earn great profits. Nowadays, there are 4,000 agricultural Co-operatives throughout the country. There are only 2,800 agricultural Co-operatives that are able to earn profits, while another 1,200 make a loss. Therefore, gaining extra bonus or other welfare is not the main reason for people to become Co-operative committee members. Attendance fees, travel and housing allowance or other types of allowance provided by agricultural Co-operatives are very low compared to those provided by governmental or private organizations. Agricultural committees will gain only bonuses as stipulated by the Co-operative act, which is not over 10% of net profit each year."* (Expert 1)

It was mentioned by Experts 9 and 10 that store Co-operative can provide only few financial benefits for their committees, compared to those provided by savings and credit union Co-operatives. Committees of credit union Co-operative have high

expectations for gaining extra allowances and bonuses. Some credit-union Co-operatives even arrange annual excursions outside the country. Financial benefits seem to be the main reason for people to become committee members of savings and credit union Co-operatives in many provinces. Fierce competition between candidates often occurs. Some people are not eager to work as committee members of store Co-operative because they will earn only few benefits. They need to work hard, but get paid only a little. (Experts 9 and 10)

Responses from the interviewees reflected the fact that some Co-operative committees yearn for financial benefits. Expert 4 stated that people do not want to work for Co-operatives where bonuses are not paid. It is better to spend their time on their permanent jobs to earn more income. Expert 8 mentioned that some Co-operatives encounter problems because of financial benefits. Expert 10 stated that some Co-operatives arrange meetings without specific purposes because committees or members just want to get some money. The meetings they arrange take only half an hour.

(3) Political Popularity

Some interviewees mentioned that one important motive in working as a Co-operative committee member is to gain political popularity. This exists in a big Co-operative, in which the income of each member mostly depends on the Co-operative's performance.

Expert 3, a Board Member and manager of a large agricultural Co-operative, stated that reputation and popularity is a significant motive for working as a Co-operative committee member. Many former committee members volunteered to work as Co-operative committee members because they wanted to gain popularity before they entered local political competition.

The interviewee mentioned that there is a similar situation existing in many teachers' savings and credit Co-operatives. Since the service of teachers' savings and credit Co-operatives covers all provincial areas, the chairmen and committees will be voted for by all teachers throughout the province. After retiring, those committee members will normally join national political contests because they have already gained political popularity from people within their areas (Expert 4). Furthermore, political interference in teachers' savings and credit Co-operatives has gradually increased because teachers' savings and credit Co-operatives are a great bastion where politicians can develop their own personal popularity. Some politicians deliberately interfere in teachers' savings and credit Co-operatives by trying to support their party's committee members becoming the Co-operative chairmen (Expert 5).

(4) Personal benefits

Some interviewees pointed out that there might be some people who want to be a Co-operative committee member because they want to gain personal benefits (Expert 6), or they want to seek personal benefits from the organization (Expert 5, 8). It is clear that a great amount of money is often spent on election campaigns and buying votes for becoming Co-operative committee members. After they are selected, they will get money back through corruption (such as lobbying for purchase orders from companies that benefit committees), or through Co-operative management or service (Expert 4, 5, 6, 10).

However, some Experts pointed out that it is difficult for Co-operative committee members, who intend to earn personal benefits, to easily get what they want. There are security systems, regulations, the CAD and Co-operative members that control and periodically inspect them (Expert 1). Expert 9 stated that Co-operative

committees are only assigned to develop policy so they cannot gain much advantage from organizations. Corruption normally occurs in the management sector. Similarly, Expert 10 mentioned that Co-operative committees are not able to gain many advantages from being committee members.

(5) Others

Experts mentioned other motives for working as a Co-operative committee member, such as honor, connection and a better future career. These three motives are closely related.

Some Experts pointed out that one important motive is to receive honor and respect (Experts 8, 10). Expert 6 mentioned that one of our human needs is that of acceptance from others.

> *"Working with others teaches us how to begin friendship. We can share knowledge. The more we work, the more we are honored. It is a great reward that every human needs. People want to be respected. If we do not have respect, we do not have any good thing in our lives. Respect is a way for humans to improve themselves."* (Expert 6)

Expert 10 stated that career advancement is another reason that motivates Co-operative committee members. They want to have a higher position, for example being on a Co-operative league committee or working as a Co-operative consultant. Expert 9 mentioned that Co-operative committee members want to be promoted because they feel the need to be honored and respected.

Expert 8 said that some people want to be Co-operative committee members because they want to create connections, which will benefit their personal employment and future career advancement.

> *"The more they work, the more they will be connected. They are able to obtain better employment subsequently. After they realize that they are well equipped with a solid foundation of knowledge, they will look for better opportunities."*(Expert 8)

7.3.3 Does the motivation of the Co-operative Board Members affect the Co-operative's performance, and if so how?

Not many experts shared ideas on this question. Their perspectives provided both positive and negative motives that affect the Co-operative's performance.

Expert 1 mentioned,

> *"Motives greatly affect the Co-operative's performance because if Co-operative committees lack motivation, they will not pay close attention to the Co-operative's performance. They will work with no aims."*(Expert1)

Similarly, Expert 2 stated that motives greatly influence the Co-operative's performance. In addition, Expert 2 clearly identified positive and negative motives,

> *"Co-operative committee members who are willing to work will help organizations grow faster. On the other hand, Co-operative committees that aim at seeking personal benefits cannot lead their organizations to success."* (Expert2)

Experts 6 and 8 pointed out that one savings Co-operative, all of whose Board Members bought votes, is encountering performance problems because the committee members only want beneficial personal gain, not to work for the sake of its members.

Seemingly, financial motives are positively related to the Co-operative's performance because payment committees are to be set up that will depend on Co-operative members' decisions in general meetings (Expert 4). However, some interviewees revealed that financial motives (including other benefits) should complement other motives, but should not be the most significant motive for Co-operative committees.

> *"Significant motives for Co-operative committees to lead their organizations to success include the financial benefits that committee members receive, such as bonuses, attendance fees, travel allowances or other benefits, for example opportunities for further education, educational excursions, certificates and social acceptance. These benefits ensure that they get something in return from their organizations."* (Expert 5)

> *"At the beginning, committees need to pay for everything that causes them difficulty. It would be great if there were an appropriate payment offering for committees. Then they would be more than willing to work for their organizations."* (Expert 2)

> *"There should be an appropriate amount of financial benefit offered to committees. Fewer benefits cannot be an effective motivation, while too many benefits are also considered negative."* (Expert 1)

Interviewees revealed different perspectives about political motives.

Expert 1 pointed out that it is true that most people who become Co-operative committee members want to gain popularity, but they do not intend to interfere in the performance of the Co-operative. In the same way, Expert 4 mentioned,

> *"Taking a position of Co-operative chairman or committee member will help people to easily become a member of the House of Representatives. However, if they are not good enough, people will not select them."*(Expert4)

Expert 5 stated that the interference of politicians in the teacher's savings and credit Co-operatives would make the Co-operatives worse. Expert 3 illustrated the relationship between political motives and the Co-operative's performance. This Expert mentioned that it was found that if politicians become Co-operative committees, debts will be ignored because they do not want to lose their popularity. This would be a problem affecting the Co-operative's performance in the future.

The reason why political motives differently affect the Co-operative's performance is because of different expectations about the source of political popularity, such as the reputation gained from work or the reputation gained from work positions. Expert 5 suggested that there are many types of Co-operative committees who want to gain a good reputation. The first type is a person who wants to be a Co-operative committee member but does not want to work; the second is a person who

wants to be a Co-operative committee member because they want to gain reputation and want to develop their organizations. The latter will benefit their organization the most.

7.3.4 What causes the Board Members to have motivation and lose motivation in their work?

Interviewees' opinions about the factors that affect a Co-operative Board of Directors' motivation were analysed based on the framework of Vroom's Expectancy Theory, which consists of Expectancy, Instrumentality, and Valence. This framework was used to facilitate the analysis and comparison of the quantitative study, and is described in the next section.

7.3.4.1 Expectancy

As described in Chapter 4, Expectancy is the perception of how increased effort leads to increased performance, which can be affected by the following factors:

(1) Board Term

The regulation of the term of office for the Co-operative Board of Directors in Thailand was legislated in the Co-operatives Act B.E. 2542, Section 50:

> *".....A Board of Directors has a term of office of two years each from the date of election. When one year is completed in the first term of the first office of a Board of Directors, one-half of the members of the Board shall vacate the office by ballot. Such vacation of office shall be regarded as a complete term of office.*
>
> *Members of a Board of Directors vacating the office may be re-elected as Board Members, but not more than two consecutive terms of office."*

Most experts agreed that the term of office of a Board of Directors according to the Co-operative Act is too short. It brings negative results into effect for a person who loses the motivation to work on behalf of the Co-operatives' Board of Directors. An interviewee indicated two reasons why the term of office of a Co-operative's Board of Directors affects the Board of Directors' motivation.

The first reason is there is not enough time for actual working. A member of the Co-operative's Board of Directors who undertakes the position must spend time learning the position, rules, and discipline. After two years, members of the Board of Directors vacate the office and new members have to start learning everything again. Therefore, performance will not be continuous and motivation will decrease because there is not enough time for actual working (Experts 2, 5, 6, 8).

> *"Most members have never worked in or for a Co-operative directly and their former working experience varies. Therefore they lack previous knowledge and experience and must spend time learning the position and responsibilities before ultimately vacating the office. With two year terms and a maximum of two consecutive terms, members can accomplish little actual work and they are not able to proceed with large projects or long-term projects to benefit the Co-operative. As a result, some Board of Directors do not have the motivation for working extremely hard because they know that the term of office is short."* (Expert 6)

The second reason is temporary directors. The very short term of office causes the Co-operative's performance to be not as good as it should be because changing the directors often makes it difficult to find new Board Members. Sometimes the Co-operative is not able to find qualified directors to fill the vacated office (Expert 2, 5). This is especially true in an agricultural Co-operative because the members have less expertise (Expert 6). Therefore, some Co-operatives are only able to find directors just for the completion of a vacated term. Temporary directors do not have high motivation and are not good for the Co-operative.

> *"Because the Co-operative Act prohibits occupying the office for more than two consecutive terms, when members complete the maximum period of time in office, they must temporarily leave and they sometimes offer the names of their heirs or cousins as replacements. These are accidental and unwilling members who have no knowledge about the Co-operative, who do not attend the meetings to complete the year. There will be an interruption that will directly affect the Co-operative and members. This is a big problem for the agricultural Co-operatives."* (Expert 1)

From the above interviewees' opinion, it was indicated that determining the Board's term at present tends to create a negative result for a director's expectancy in Thailand.

(2) Board Size

In Thailand, determining the number of directors for a Co-operative Board is under the provision of the Co-operatives Act B.E. 2542, Section 50:

> *"A Co-operative shall have a Board of Directors consisting of a chairman and not more than fourteen other members of the Board of Directors who are elected from members....."*

Some experts suggested that too many directors will affect the Board of Directors' propulsion and negatively impact the ability to arrange meetings because they have to wait for confirmation from the directors. A meeting cannot be held if there is not a quorum (Expert 1, 2, 5). A large sized Board of Directors causes slow voting because they have to spend significant time and effort on communications, comprehension, and discussion to reach a consensus (Expert 3). The difficulty of propulsion of a large sized Board will cause a negative result on directors' expectancy, in Expert 5's opinion.

> *"Fifteen directors are suitable and sufficiently flexible for meetings, but more than fifteen are not. Because fifteen Board Members are workable, more than fifteen directors will cause complexity and make some directors feel that it is not to their advantage to make an effort, thus reducing enthusiasm."* (Expert 5)

However, the interviews indicated that opinions differ as to the suitable number of directors. Some agreed that fifteen directors are suitable, but others argued that fifteen is too many. In addition, interviewees gave different reasons to determine the number of directors, besides motivation.

> *"Fifteen directors are too many and cause slow working processes and voting flexibility for each subject. At present, eight directors is suitable."* (Expert 3)

"Nine directors are fine and fifteen directors as the law allows, are suitable. Their job is policy formulation and propelling the management section to implement it. If the number of directors is less than fifteen, it does not affect motivation" (Expert 10)

"Fourteen directors and one chairman are fine. If the number of directors is too small, it will cause the balance of the examination process to be reduced and there will be too many tasks for each member. In addition, if the number of directors is too large, some directors may not attend the meetings and there may not be a quorum. So, both higher and lower numbers have advantages and disadvantages; therefore a medium size is best." (Expert 1)

"At the moment, the number of directors not over fifteen is suitable. If there are too many directors, the expenses will increase. If there are too few directors, the working process will not be smooth." (Expert 6)

"The Law legislating the number of directors is reasonable, but the problem is they are not provided with the knowledge and practice to support working." (Expert 8)

(3) Chairman-Manager Duality

Most interviewees agreed that in principle, per se, the chairman and the manager should not be a duality. The reason why some Co-operatives have a chairman -manager duality may be the Co-operative is small, it might be a recent establishment, or to save expenses (Expert 5, 3).

The reason for separating the positions of the chairman and the manager is because of their different responsibilities. The manager coordinates and executes, but the chairman examines the overview and policy (Expert 8). Separating their responsibilities helps to make quick decisions and provides clear tasks (Expert 3). If the chairman does the manager's part, confusion will occur (Expert 2).

Another reason is the risk to the Co-operative management (Expert 5). The Board of Directors is authorized from the general meeting to control the management section. Therefore the chairman and the manager should not be a duality in order to counterbalance each other (Expert 1, 3) or to protect the chairman from self-arrogation

(Expert 4). Normally, acting within the law, documentation such as changes to the by-laws must be signed mutually between the Board Members (the chairman or vice chairman or assigned person) and the manager (the manager or vice manager). If one person serves as both the chairman and manager, there is a risk of easy corruption (Expert 3, 6) or the chairman may take advantages for himself or propel the policy in his own direction (Expert 7).

According to the above expert opinions, the experts do not identify the effect of chairman-manager duality on Board Member's expectancy directly, but their opinions imply that the duality may lower a Board Member's expectancy. If the chairman is the manager, he will have more power and effect than the other directors and they will think that they have no power to propel their policies or terms in the meetings, which will affect their motivation to express their opinions or examine the management section's performance.

(4) Board Skill

Co-operative directors are members who have different backgrounds in terns if knowledge, skills and experience and also different levels of Co-operative management knowledge or experience. The question in this interview was whether the experience of being on a Board of Directors of a private or non-profit organization affects his or her expectancy.

Some interviewees indicated that persons who had experience as a director of another organization would be confident and that Board skill would have a good effect on the Co-operative directors' expectancy.

> *"The Board of Directors mainly plays important roles that affect achievement because they are elected by the majority of the members. According to their tasks, they have to consider how they will propel their performance. If the directors lack*

knowledge and confidence or attend meetings by the term or temporary office, they cannot propel any policy to build prosperity." (Expert 8)

"Having experience as a director will be beneficial because the Co-operative's organizational management can be done. If such a person has ever worked for the private sector or their own business, he or she can adapt that experience to manage the Co-operative efficiently and build more confidence for working." (Expert 1)

Some interviewees indicated that experience gained by working for other organizations can be applied to working as a Co-operative's director, but it is not related to the effect of such experience on the director's motivation.

"If the Co-operative director has experience from an external organization, this will be excellent because knowledge of other fields can be applied and integrated to be beneficial for the Co-operative, especially aspects from various careers that will assist the ideas and the methods of the Co-operative further." (Expert 2)

However, some experts indicated that the skills and experiences of a director from other organizations may not be beneficial because Co-operative management is different from others.

"Having experience as a director from other organizations may not assist working in the Co-operative because of the different sciences. Doing business is different to Co-operative management. The Co-operative is a welfare organization and does not focus on profit. Having experience from other business organizations may be a disadvantage if he or she cannot change their old status to the new one, and they will expect large profits. I think that good business management does not mean good Co-operative management." (Expert 4)

(5) Board Function

All interviewees absolutely agreed that the Co-operative director should play a role to determine the policies and examine the management section's performance according to the objectives. In addition, the management section and the Co-operative's officials should perform their roles to manage the Co-operative, be responsible for the daily tasks and serve the members according to the determined policy of the Board of

Directors. However, experts did not give their opinions about the effect of the Board's function on the Board Member's expectancy directly, but some opinions reflect their perception related to the director's duties and how much that contributes to the Co-operative's performance.

Some experts indicated that a Co-operative that has its directors perform their roles actively should benefit from the good performance of the Co-operative, thus greatly reflecting the perception of the Board's function on Board Member's expectancy.

> *"The Co-operative that has an enthusiastic Board of Directors to determine its policies will have better performance, but this action can still be done less than 50% of the time because of the lack of knowledge regarding how the Co-operative works. Sometimes the directors perform service tasks more than determine policies."* (Expert 5)

However, some experts indicated that even if the Board Members actively perform their roles, the good performance of the Co-operative must come from efficient management and have enough operators. This reflects the perception that Board function rarely affects Board Member's expectancy.

> *"The Co-operative which has a Board of Directors motivated to determine policies and targets may have good performance results. When the Co-operative grows, it is necessary to have good management and governance because the powerful members will select a Board of Directors to be their delegates. Then, the delegates will see their officials serve the members. This is the principle of democracy where the underlying level controls the supervisor level, the supervisor level controls the middle level and operators work extremely hard to serve the underlying level."* (Expert 8)

> *"Being a director is a job that uses the brain, not muscles. A Board of Directors is not selected to serve members; their duties are managing the Co-operative. They must think about management, not only to serve the members - and it is necessary to have enough officials."* (Expert 4)

Interviewees' perceptions about the effects of Board function on the expectancy of Board Members differ. This may be caused by the perspectives and experiences of

each person, the strength of the Board and management, including the context of each Co-operative.

7.3.4.2 Instrumentality

As described in Chapter 4, Instrumentality is the perception of how much benefit will result from competent performance, depending on how the relationship between performance and outcomes is understood, along with transparency in the evaluation process. In relation to this concept, interviewees were asked two questions, namely what their perceptions of transparency are in determining Board remuneration, and what their perceptions are of the relationship between the Co-operative's performance and the direct and indirect benefits that they receive.

(1) Transparency

Most experts agree that the determination of the benefit of Thai Co-operatives is transparent. There are laws and regulations that clearly specify the types of benefit, covering allowances, attendance fees, accommodation costs, bonuses, and others. Other than these, the regulations also specify that the benefits and bonuses have to pass the approval of the Co-operative's annual general meeting before any payments are issued.

> *"Determination of the benefits of Co-operative committees is transparent, such as allowances, attendance fees, accommodation costs, etc. Payment of the benefit has to be specified in the Co-operative's regulations and principles by the Co-operative annual general meeting. Mostly, financial issues have to pass the approval of the Co-operative annual general meeting. Co-operative committees can't determine these by themselves. When the Co-operative has good profits, bonus payments at the end of the year have to agree with the specified act, which is not more than 10 percent of the net profit. This amount of money has to be paid to all members of the committee, the management, and employees. After that, the Co-operative's balance sheet has to be audited by the Department of Co-operative Auditing to certify the annual balance sheet. Then, this annual balance sheet has to be taken to the Co-operative annual general meeting to be approved before allocating the profit. All processes are controlled by the relevant laws. Moreover, there are inspections from both the public sector and the Co-operative annual general meeting corresponding to the Co-operative principle of being controlled by members based on the principle of democracy"* (Expert 1)

> *"Determination of the benefit of Co-operative committees are transparent due to being processed through the two budget systems: 1)There is a supported regulation or resolution and 2) The budget has been approved by the Co-operative annual general meeting before issuing the payment"* (Expert 5)

However, determination of the benefit in some newly established Co-operatives might not be transparent. The reason for this problem is because these Co-operatives have not had benefit regulation yet or their budget is supported by the public sector. The opinions of Expert 2 can be illustrated like this. The sample case is an agricultural Co-operative that depends on a grant-in-aid from a public organization and there is an unclear budget allocation process to the Co-operative.

> *"The welfare and expenses of the Co-operatives are allocated from public organizations. However, there is a problem of corruption, causing the Co-operatives not to receive the allocated budget or to receive only a half of the original allocation. It would be better if the budget were not transferred via the public system because it can be inspected. The Co-operative committees are volunteers. In the initial period, they have to respond to the expenses by themselves. Later, when the expenses are higher, they are unsustainable. If there is an appropriate determination of the benefits of the committees, it should fully support the committees to work correctly."* (Expert 2)

In view of the above opinions, most Co-operatives have transparent determination of committee benefits. This reflects the fact that Co-operative committees have high motivation in terms of instrumentality.

(2) Direct and Indirect Benefits

From the interviews with experts, it was found that the determination of direct and indirect benefits for Co-operative committees also affects the instrumentality of these committees.

The majority of experts think that most Co-operatives provide only small benefits for their committees (Experts 5, 8, 9, 10), particularly in comparison to committee benefits in public and private organizations (Expert 1). These benefits are much lower than the salary they would receive from doing their routine work (Expert

10). Moreover, the committees did not appear to have any privileges other than those that the members receive (Expert 1), except for only a few additional benefits for committee members in some Co-operatives (Expert 6). These opinions reflect the fact that committees think that their benefits have been overlooked with respect to their work and Co-operative outcomes, thus bringing negative impacts to the instrumentality of the Co-operative committees, as seen in the opinion of Expert 2:

> *"Most Co-operative committees are willing to volunteer and work for their Co-operatives. They must take care of the expenses by themselves at the beginning. Later, they will be unable to sustain these expenses. So, if there is some determination for Co-operative committees to benefit properly, this would support them to work better."* (Expert 2)

However, some interviewees say that the monetary benefits for each Co-operative are different. The interviewees who are on the committees of agricultural and store Co-operatives indicated that the benefit of the committees of savings Co-operatives or credit union Co-operatives is quite high (Experts 1, 9, 10). Some experts explained that there is high competition to be committee members on these financial Co-operatives (Expert 9), whereas it is hard to find committee members for other kinds of Co-operative (Expert 10). Nevertheless, there are also some experts from savings Co-operatives or credit union Co-operatives who said that these Co-operative committees receive only some benefit in the form of money (Expert 5, 6). Even though the experts are of contrasting opinions, this can be interpreted as meaning that the only thing that differs is the amount of money that the committee members receive. The perception of committees about the benefits that they receive should be similar.

Likewise, some experts point out that committee members also receive small benefits that are not in the form of money. Expert 10 indicates that committees are less well known and they obtain only small advantages from their position or rank.

Similarly, Expert 1 says that Co-operative committee members make little occupational progress because there are no higher positions in the Co-operative structure as there are in other organizations. These opinions reflect the fact that non-monetary benefits are not responsive to the operational outcomes of committees or the achievements of Co-operatives. As a result, negative impacts will be caused to the instrumentality of the Co-operative committees. However, it cannot be concluded that non-monetary benefits are not connected to the achievements of committees. Non-monetary benefits are of various types, and the opinions of experts do not cover such non-monetary benefits.

7.3.4.3 Valence

As far as the valence (the degree of value placed on performance outcomes) of the Co-operative committees is concerned, the experts are of the same opinion. They indicate that most committees do not worry too much about monetary benefit. Instead, they are volunteers who willingly devote their time to create advantages for other people, thus they do not have the motivation to benefit monetarily (Experts 5, 9). Moreover, most of them have their own permanent places of employment (Experts 5, 6, 7, 9) and know that the monetary benefit from Co-operatives is quite low. Sometimes they may also not receive any money, and may even pay some of the expenses themselves (Expert 1).

> *"In the opinion of general people, they may think that benefits are another important issue. But, the people who come to be on agricultural Co-operative committees already know that they have very few benefits before taking up the position. Committees, especially in primary agricultural Co-operatives, can't get allowances, as there is no money to allocate. Moreover, the chairman sometimes has to personally host committee members who participate at meetings, as the Co-operative hasn't yet made any profit or has only low profit, so the Co-operative can't pay for allowances. These committee members know the regulations beforehand concerning this. Therefore, they are not sorry if they receive no allowance. Their motivation arises from other aspects, such as the*

trust of Co-operative members and the willingness of committee members to pass on advantages and benefits to members." (Expert 1)

Nevertheless, individual Board Members may value each aspect differently, depending on their motivation. Some experts explained that committee members who receive low salaries from their routine work may value monetary benefits more than committee members who have high income (Expert 4). Committee members who have routine work, such as government officers, may make their regular work a priority because they may be inspected or disciplined if they work for their Co-operatives during work hours (Expert 10). Other motivations have been described in section 7.3.2.

7.4 Chapter summary

The data and opinions obtained from each expert have shown quite a degree of similarity in some aspects. They also show different ideas in many areas. Some data or opinions may reflect their perceptions, rather than the facts. Of course, each expert has different perceptions, depending on the personal background, such as role, status, experience, context, etc. Furthermore, opinions on some issues may be self-defensive. Most interviewees rarely talk about negative data or behaviour, such as corruption or the negative motivation of Co-operative committees in their organizations, for instance.

However, results from interviewing the experts for the qualitative study in this chapter do not aim to investigate the accurate facts. In contrast, the purpose of this study is to find out various viewpoints and perceptions rather than facts. Most importantly, the main variable in the model in this study is perception, requiring an in-depth explanation of the interview questions. The data and opinions derived in this chapter will be analysed, compared, and discussed, along with the results from the quantitative study, in the next chapter.

Chapter 8
Discussion and Conclusion

8.1 Introduction

This chapter discusses the results of the study to answer the main questions of this study i.e. "Does the motivation of Co-operative Board of Directors affect the Co-operative's performance, and to what extent?", and "Which factors affect the motivation of a Co-operative's Board of Directors?" The results from quantitative and qualitative analysis are discussed simultaneously to answer the above questions, and then the implications for practice are derived. Finally, the limitations of the study and recommendations for future research are presented.

8.2 Interpretation of the Results

The essence of the content of this section is to interpret the quantitative analysis obtained from SEM to explain the rationale behind the relationships among the variables in the model. The explanation of those relationships is drawn from the interpretation and discussion of the results by comparing the quantitative study results with the hypotheses, theory and previous studies, and experts' opinions. The structure of the content of this section is to interpret and discuss the results for each pair of relationships among variables in the model, which consists of:

(1) The relationship between the Board's work motivation and the Co-operative's performance

(2) The type of motivations that influence the Co-operative's performance

(3) Factors influencing Expectancy

(4) Factors influencing the multiplication of Instrumentality and Valence (IV)

(5) Other factors influencing the Co-operative's performance

8.2.1 Relationship between Board's work motivation and the Co-operative's performance

The study result supports hypothesis No. 1 (H1), i.e. the work motivation (MOTIVE) of the Co-operative Boards has a significant positive relationship with the performance of the Co-operative they serve, which is measured by return on equity (ROE52), having no loss in the last 2 accounting periods (NOLOSS) and CPD's classification of Co-operative's level of internal management quality (COOPLEVE). Expectancy (EXPECT) and Instrumentality multiplied by Valence (IV) of Co-operative Boards has a positive relationship with their work motivation, consistent with hypotheses No. 2, 3 and 4 (H2, H3 and H4).

The importance of the above result is that it provides knowledge about the direct relationship between the Board's work motivation and the Co-operative's performance, which has never been found in past related research. Some research work in the past addressed the motivation to become a Board Member or to work as a volunteer in a non-profit organization, but the studies did not investigate the relationship between such motivation and organizational performance. Although there were some studies emphasizing the relationship between extrinsic motivations, for example, financial compensation, positions, etc. and the performance of the firm, they neglected the difference between the motivation of Board Members and the process of motivations of the Board Members.

Even though there was some research in the past that studied the relationship between Board motivation and Board effectiveness (for example, Gross (1958), Alby

(1979) and Taylor et al. (1991), etc.), research in this area still had some problems. The results of this research lack reliability because the research method has several weaknesses, as discussed in Chapter 3, for example, the number of respondents is relatively small or there is a reliability problem with the data, etc. Another problem is the lack of criteria for defining and measuring Board effectiveness (Herman, Renz, and Heimovics, 1997, p.374) due to the lack of a clear understanding about the mechanism that connects Board effectiveness and firm performance (Herman and Renz, 2000).

This research is an effort to study another dimension of the relationship between Board motivation and the performance of organizations by using Vroom's Expectancy theory, which is a theory that has been recognized and widely used in research related to the study of motivation. This research has attempted to cover the weaknesses of past research on the motivations of Board Members in nonprofit organizations by using quantitative research methods. It utilized a relatively large sample size and data from several sources coupled with qualitative research methods.

8.2.2 Types of motivation that influence the Co-operative's performance

The descriptive statistics of variables which are the manifests of Instrumentality and Valence (see Table 6.4) reflect the fact that the people who took over the positions as Board Members had diverse motivations. By observing the variables which have the highest average scores, i.e. INSTRU6 and VALENCE6 ("Feeling good and satisfied by doing good for society and utilizing all one's potential"), it is shown that the Co-operative Board Members gave the most importance to doing activities for the benefit of others. This is consistent with the opinion of experts described in Chapter 7, and research in the past, which stated that altruism was an important motivation for people to work as a member of the Co-operative and other non-profit organizations (Ward and

McKillop, 2011; Guerrero and Seguin, 2008, Widmer, 1985), while financial incentives (INSTRU1 and VALENCE1, having increased financial benefit (Meeting Allowance, Bonus, Welfare) have the lowest average.

However, the Instrumentality and Valence (IV) variables that are significantly correlated with effective motivations, which have influence on the Co-operative's performance, are not those of altruism. Nor are these effective motivations those of financial motivation, but they are being well-known in the community and society (IV8), receiving honors and awards from the Co-operative or government agencies (IV2) and feelings of accomplishment (IV7).

The importance of this result is that it challenges beliefs about the good motivation of the Co-operative's Board Members. The research in the past (e.g. Gross, 1958) and some experts have indicated that good motivations are those of a volunteer mind and altruism, which will make non-profit organizations or Co-operatives successful and developed, while the bad motivation is to seek one's own interest. However, this study found that the motivation of doing good for the benefit of society and that of the financial motivation do not have a significant relationship with effective work motivation of the Co-operative Board Members.

Why the motivation to do activities for the benefit of society does not have a significant relationship with effective work motivation (which means it is not related with the performance) is probably connected with the lack of clarity of the indicators that reflect the interests of society. A Co-operative is an organization that has the important principle to act for the benefit of members and society, causing the operation of the Co-operative to be complex and have a variety of purposes, with no conclusion of how to correctly measure its performance (Spear, Cornforth, Chaves and Schediwy

2004; Enjolras, 2004). Co-operative Board Members with incentives consistent with the principles of the Co-operative could have a different understanding regarding indicators about the performance of the Co-operative. Furthermore, the indicators used for the analysis in this model are the financial ratios of the Co-operative, which might not be appropriate indicators to measure the social benefits.

The reason why financial incentives do not have a relationship with the Co-operative Board's effective work motivation may be explained by the opinion of the experts, who argued that the financial compensation that Co-operatives provide to their Board Members is not much and people who became Board Members were aware of this issue already. In addition, it is possible that the respondents to the questionnaire survey did not truly answer this issue in order to maintain their own image.

As for the reason why the three IV variables above have a positive relationship with the effective work motivation of Board Members (which means that they affect the performance of Co-operatives indirectly), this can be explained as follows. These motivations themselves require an obvious output and outcome resulting from the Board performance because they are directly connected to the output and outcome of the Co-operative's performance that can be measured. For example, a director with the motivation of 'Being honored and awarded by the Co-operative or the public sector (IV2)' will try to push the performance of the Co-operative to meet the criteria to be awarded. This is consistent with the criteria of the government agencies, which often use the financial ratios to rank Co-operatives. Another example, if the directors have motivation to be well-known in the community and society (IV8), they will try to push their performance to the point that their Co-operative will have no loss (NOLOSS) or to

be classified as having good quality of internal management (COOPLEVE), so that the Co-operative will gain a good reputation.

However, characteristics of the three kinds of motivation (three components of IV) can be interpreted in two ways. The first is that these motivations come from the basic need of human nature to be respected and feel pride. The second is that these motivations are the desire to grow in their careers. If the second interpretation is chosen, this will conform to the past literature, which indicated that Board Members of the firms seek reputational benefit or opportunities to be a director in other organizations (see Chapter 3). In the case of Co-operatives, Board Members must be elected from Co-operative members, so there is less opportunity for a Board Member to be a Board Member in other Co-operatives. However, according to the opinions of some experts, Co-operative Board Members may have a motivation to build their reputation in order to be elected as Board Members of Co-operatives at the higher levels, such as the Co-operative Federation, Co-operative League, etc. In other words, being a Board Member in a Co-operative is used as a ladder to step up to a higher political level.

Furthermore, the analysis result also shows that instrumentality multiplied by valence has more influence on work motivation than expectancy (more value of standardized loading). This result can be explained as follows. Each Co-operative Board Member may perceive that their effort does not have much effect on the performance of the Co-operative, as a Co-operative is an organization with multiple objectives, both business and social objectives. Moreover, there are many factors that affect the performance of a Co-operative. This includes member participation, policies and promotions from the government, quality of the management team and employees,

and the competitive environment of the market. Many factors are beyond the control of the Board. However, what Board Members expect from working as a Board Member is closely related to the Co-operative's performance that can be measured. For example, if the Co-operative is profitable and can pay a lot of dividends to members, it will allow Board Members to be honored by the members and feel successful.

8.2.3 Factors that influence Expectancy

Variables which have a significant positive relationship with Expectancy are Board authority and function measured by BFUNC6 (A decision maker for strategy, policy, goals) and BAUTHO1 (Co-op Board rarely participates in Co-op activities); Board composition measured by BCOMPO4 (Co-op Board Members understand the context of the Co-op); Board meeting quality measured by BMEET2 (Agenda concerns small issues and is just to inform)and knowledge of directors measured by LNSEMINAR (average number of seminars on Co-op development attended in a year in term of log-transformations).

Board authority and function

The significant positive relationship between the level of Board authority and function and Board Members' Expectancy is consistent with hypothesis number 6 (H6), which specifies that the more the Co-op Board Members play a role as decision maker in Co-op's strategies, policies or goals (BFUNC6) and the more the Co-op Board Members participate in Co-op activities (BAUTHO1), the more confidence they have in achieving goals for their Co-ops; in other words, they have greater Expectancy.

The relationship between Board authority and function and Board Members' Expectancy might have never been directly studied before. However, it is found that

results of this research are consistent with other motivational theories such as Herzberg's Motivation-Hygiene Theory.

For example, to play a role as decision maker in Co-op's strategies, policies or goals (BFUNC6) reflects that a Co-op Board Member is trusted with the responsibility of their Co-op, honored and recognized by the Co-op members as well as other Co-op Board Members. For a Co-op Board Member, participating in Co-op activities (BAUTHO1) also reflects that the work itself is interesting and worth doing. Recognition and the work itself being interesting are "motivators", factors that make workers satisfied and motivated according to Herzberg's Motivation-Hygiene Theory.

Moreover, expert opinion (Expert 8) in Chapter 7, described how if the Co-op's Board of Directors cannot make decisions (BFUCN6 is low), the Co-op will grow with difficulty. Therefore, it is possible that Board authority and function has a relationship with Co-op's performance through a mediator like Expectancy.

Board composition

The significant positive relationship between the Board composition that has no experts outside the Co-op (BCOMPO4) and Board Members' Expectancy is consistent with hypothesis number 7 (H7), which specifies that the more number of the Co-op Board Members from inside the Co-op who understand the context of the Co-op, the more Expectancy the Co-operative Board Members have.

By allowing only a member of a Co-op to be a Board Member, a Co-operative gets a Board Member that understands the context of the Co-op well, which makes working in a Co-op fast and effective, as a Board Member from inside the Co-op is trusted and is familiar with other Co-op members and Co-op's system, making communication and cooperation within the Co-op easier than what it would be for a

Board Member from outside. This is inconsistence with Adams and Ferreira (2007) who found that it is better to have directors on the inside because directors from the outside may lack relevant specific information and this would make working in the organization difficult.

Moreover, a Co-op Board Member normally has a feeling of ownership more than a Board Member from outside the Co-op. Feelings of ownership might increase a sense of responsibility and enthusiasm. This explanation is consistent with previous studies which studied for-profit organizations and found that employee ownership could motivate employees and improve the company performance (Ownership Associates Inc., 2001).

Board meeting quality

The significant positive relationship between the level of Board meeting quality and Board Members' Expectancy is consistent with hypothesis number 11 (H11), which specifies that if the Board meeting has quality, in which the meeting agenda is not only small issues and not just to inform (BMEET2), the Co-op Board Members will have more confidence in terms of being able to drive the Co-operative to work and to achieve goals; in other words, they have more Expectancy.

The relationship between Co-op Board meeting quality and expectancy of a Co-op Board Member might have never been studied before. However, there might be some studies that considered the related variables.

For example, the research on Board (audit committee) meeting frequency, which can be used as a proxy for diligence, or Board meeting quality and firm performance conducted by Rebeiz and Salameh (2006) and Poudel and Hovey (2013) found that increasing the number of meetings does not necessarily enhance a firm's

performance but the quality of meetings is important to firm performance. Therefore, it could be summarized that Board meeting quality affects firm or Co-op performance through a mediator such as Expectancy.

Board knowledge, skill and experience

The significant positive relationship between knowledge of the Board Members (measured by the average number of seminars attended in a year in the form of log transformation - LNSEMINAR) and Board Members' Expectancy is consistent with hypothesis number 13 (H13), which specifies that the knowledge, skills and experience the Board Members obtained make them more confident that they have more potential to drive the Co-operative work to achieve goals; in other words, they have more Expectancy.

This result is consistent with the previous studies such as CPD (1985) and Rapeepat (1980) and also the expert opinions indicating that the knowledge and capability of the Co-operative Board is a key factor in the success of the Co-operatives in Thailand.

Moreover, it was not found that the experience of being Board Members in a for-profit organization (measured by the number of years on a Board in for-profit organizations, BEXPIR1) and the experience of being Board Members in a non-profit organization (measured by the number of years on a Board in non-profit organizations, BEXPIR2) had relationship with Expectancy.

This can be explained by some experts' comments. They indicated that the experience of being a Board Member in a business organization could not support working in the Co-operative due to the difference between business management and

Co-operative management. Good business management does not necessarily mean good Co-operative management.

The reason why the relationship between experience of being a Board Member in a non-profit organization and Expectancy was not found might be because a person who has never been a Board Member in a non-profit organization does not have experience and thus has to learn everything anew about working in a Co-operative. These people do not know whether their effort will be productive. Therefore, it is normal that they will have low expectancy.

At the same time, for the person who has had experience of being a Board Member in a non-profit organization, they possibly have low expectancy as well because as an experienced person they might think that working in non-profit organizations to achieve social goals is difficult by its nature because it requires cooperation from communities and other stakeholders. Moreover, non-profit organizations have limitations of funds and qualified personnel. Therefore, the people who have worked as a Board Member in non-profit organizations for a long period of time may have a perception that pushing work forward in an organization which has social purposes was difficult. (A Co-operative has some characteristics similar to those of non-profit organizations). This opinion might be contradictory with the opinions of some experts, who argue that the knowledge and experience from working on a Board in a business or non-profit organizations can be applied to manage a Co-operative as well, and also provide broader perspectives and confidence in being Co-operative Board Members.

Another interesting question was raised as to why the relationship between work experience in the Co-operative field (measured by the number of years of

experience in working for the Co-operative) and Expectancy was not found. The answer is that work experience in Co-operatives probably does not cover working only as the Co-operative Board, but it covers working in other positions as well. The expert opinions also indicated that many Co-operatives lack qualified Board Members since they were selected from members who had no knowledge of Co-operative management. The fact that there was no relationship found between the frequency of seminar attendance and Expectancy, nor was any relationship found between work experiences in the Co-operative probably implies that the Co-operative personal development and preparation system was under-developed, and therefore it required seminar attendance in developing the Board's knowledge.

Relationships between Expectancy and the five variables as mentioned above are comparable to the finding from prior literature, which indicates that a Board's capacity to perform comes from Board competency and Board motivation (Hillman et al., 2008;Boesen and Therkildsen, 2004; UNDP, 2006).

However, this study has found that the competency of the Co-op Board Members is not sufficient to yield a good performance but the Board should understand the context of the Co-op, participate actively and play a role as a decision maker in strategy, policy and goals. The Board meeting should have quality; the meeting agenda should not concern only small issues or merely inform Board Members in the meeting.

These five factors affect the Expectancy of Co-operative Board Members, which finally affect their work motivation and organizational performance.

Factors whose relationship with Expectancy was not found

The factors which were not found to have a relationship with Expectancy were the decision making system, Board size, Board term, Board structure and Chairman-Manager Duality.

A Co-operative's decision making system, which is measured by variables of Board Members' opinion on the system "one person, one vote (OPOV)", was not found to have any relationship with Expectancy. This result does not support hypothesis no. 5 (H5), which specifies that the OPOV system lowers the Co-operative Board Members' Expectancy, as they cannot control the decisions of the Board's agenda and push them into practice. The OPOV system, however, has been called into question on the basis of whether it is beneficial to the operation of Co-operatives or not. Those who disagree argue that this system causes a lack of incentive to make the Co-operative prosper, not in the same way as IOFs (Kraisin, 1997). This system makes "influence costs" increase due to the fact that Co-operative members, who have different and conflicting requirements, try to find a way to influence the decision of the Board to protect their own interests (Cook, 1995: 1157). Therefore, the Co-operative Board has difficulty to work because of the pressure from Co-operative members of various groups (some Board Members may represent members of some groups). They need to balance the views and protect the interests of all groups (Cook & Iliopoulos, 2000; Hendrikse, 2007). On the other hand, scholars from the other group consider that the OPOV system is beneficial to the work of the Co-operative Board, for example, Co-operative Board Members have an understanding of the interests of Co-operative members (Hansman, 1990). The decision-making process is transparent and participatory, and members certify the decisions that they participate in (Borgen, 2003). The

questionnaire respondents may have the same perspective as the latter group of scholars, who consider that the OPOV system does not obstruct the work of the Board; but it is a system that reflects the democratic ideology of Co-operatives. In addition, this study does not make a comparison between the Co-operative Board and the IOFs Board, so it cannot analyze the difference between motivations of Co-operative Board Members and motivations of IOF Board Members.

Board size, which is measured by the number of members on the Board and the opinion of the Board Members regarding the number of Board Members, does not have a significant relationship with the Expectancy. This means hypothesis no.8 (H8) is not supported. This result is consistent with the concept of Oster and O'Regan (2005) which stated that there is not a clear benefit from the division of labor based on the expertise of the members on a large Board of a Co-operative (which has been subtracted by the negative effect from the free rider problem of a large Board) because there are not many functions for the Co-operative Board as compared to those of the Board of non-profit organizations. This result may not be a surprise because the past research, both concerning profit organizations and the Co-operatives, does not show theoretical or empirical consensus about the relationship between Board size and organizational performance either (studies that support larger Boards are, for example, Pfeffer, 1987; Pearce and Zahra, 1992; Goodstein et al, 1994, etc.; studies that do not support larger Boards include Shaw, 1981; Lipton and Lorsch, 1992; Goodstein et al., 1994; Yermack, 1996; Bond, 2009; Gunderson et al., 2009, etc.).

Board term, which is measured by the Board Members' opinion on advantages of having Board term that is limited to two years per term, and cannot exceed two

consecutive terms, does not have a relationship with Expectancy, thus it does not support hypothesis no.9 (H9).

The result might be contrary to experts' opinion which states that Board term seems to have a negative relationship with Expectancy because the limitation of the Board term causes the Board Members not to have enough time to work, especially the new Board Members, who usually need time to learn for their new responsibility.

Moreover, some experts considered that the limitation of the Board term to no more than two consecutive terms makes the Co-operatives lack people who really want to be Co-operative Board Members. Therefore, some Co-operative Board Members are just temporary Board Members. They do not have knowledge about the Co-operative, and do not really want to work for the Co-operative. It is possible that the new or temporary Board Members may have some other specific motivations which are not the general motivation of Co-operative Board Members. However, the data collected from the questionnaire could not distinguish respondents who are new or temporary Board Members from others. Therefore, the motivation of this group cannot be analyzed.

The reasons why Board term does not have a relationship with Expectancy might be because samples in this study might be quick learners and do not require a long period of time to learn working as a Co-op Board Member. This might be the result of their long-term experience in works related to the Co-op field before coming to a Board position; they are ready to work as a Co-op Board. Therefore, even though the Board term is short, their expectancy is still high. Again, the data collected from the questionnaire could not distinguish respondents who have or do not have experience before they come to a Board position.

Another possibility is that once they come to a Board position, knowing that their working term is short, they will try to push their agendas forward in order to achieve their goals before their term ends.

Another explanation could be that working as a co-op Board Member is similar to working as part of a team. Knowing that other Co-op Board Members are competent and capable could make expectancy of a person high even though their Board term is short.

Board structure, which is measured by the Board Members' opinion on several characteristic of the current Board structure, does not have a relationship with expectancy, so hypothesis no.10 (H10) is not supported.

Information on other Board structure characteristics is obtained from the opinion of the Board Members regarding the effects of the current Board structure. These include whether the Board Members have excessive workload, whether the Board shares the duty according to the expertise of each Board Member, whether there is a check and balance on the Board's work, and whether there are too many steps in the decision making process. However, relationships between these variables and Board Members' expectancy have not been found. This may be because various current status of each of the Co-operative for e.g. workload, size or type etc. required different expertise, check and balance or structure due to which having a compound Board is not a necessary structure.

Chairman-Manager Duality does not have a relationship with the Expectancy, which does not support hypothesis no.12 (H12). The reason why the Chairman-Manager duality was not found to have a relationship with the Expectancy may be because having a chairman and manager as the same person can positively and

negatively affect Expectancy. The Board Member who holds the position of chairman and manager, has monopolized power. He has authority and power to push his own agenda and make a decision quickly and conveniently. Therefore, the position of chairman-manger duality affects his expectancy positively.

On the other hand, other Board Members who are not in the position of a chairman or manager are likely to have negative and low expectancy because they know that their agendas, plans or their decisions might be dominated by the Board Member holding the position of chairman and manager. Hence, in this case, their expectancy is affected negatively.

As the effect of the chairman-manager duality on the expectancy is conditional on whether the Co-operative Board Member is a chairman-manager, the total effect of this factor on expectancy is averaged out so that the chairman-manager duality has no significant relationship with expectancy.

Support to Board Work, which is measured by the Board Members' opinion on support in working as a Co-operative Board Member (SUPPORT1-SUPPORT3), was not found to have a relationship with Expectancy, so hypothesis no.14 (H14) is not supported.

The reasons why support to Board work was not found to have a relationship with Expectancy might be due to certain kinds of resources (personnel, equipment or budget) not being necessary for a Co-operative Board Member. A Co-operative Board Member is not responsible for operation, but instead is responsible for decision making or strategic planning which require information, knowledge and time. These resources seem like a personal issue which a Co-operative could not help with much.

Even though a Co-operative might be able to support its Board Members to have more time to work or to work full time by providing them with financial support, most Co-operatives provide only a small amount of financial support. Therefore, support to Board work was not found to have a relationship with Expectancy.

8.2.4 Factors that influence IV

The variables which have a positive relationship with the Instrumentality and Valence of the Co-operative Board include COMRULE4 (the opinion of the Board Members on the fairness and reliability of the compensation-setting process (for meeting allowances, other allowances, bonuses))and LNMEETAL1Y (meeting allowances that Board Members receive in 1 year in form of log transformation).

The result seems to disagree with the variables which are the manifests of IV. These variables are non-financial returns, which consist of the honors and awards from the Co-operative or government agencies (IV2), the feeling of accomplishment (IV7) and the need to be known in the community and society (IV8).

Compensation-setting process

The positive relationship between the opinion of the Board Members on the fairness and reliability of the compensation-setting process (for meeting allowances, other allowances, and bonuses, COMRULE4) and IV, supports hypothesis no.15 (H15). This result may be explained as follows. A fair and reliable compensation-setting process is evidence that the Board Members are truly compensated according to their performance. Therefore, a good compensation-setting process supports the Co-operative Board Members being accepted and recognized by the Co-operative members, which is one of the needs of the Co-operative Board Members (IV8), because it reveals the performance of Co-operative Board Members. Furthermore, a reliable

compensation-setting process reflects the fact that the Co-operative has a clear system to evaluate the performance of the Board. The Board Members in such a Co-operative will have more opportunity to earn honors or awards from the Co-operative itself or government agencies, which supports a need of Co-operative members (IV2).

Financial compensation

The relationship between the amount of meeting allowance in the form of log transformation (LNMEETAL1Y) and IV is positive, which supports hypothesis no.16 (H16). However, the explanation of this relationship is different from those hypotheses and theories used in the studies on the relationship between financial compensation and organization performance (see Chapter 3). The possible explanation of this result is that the high meeting allowance reflects the pride of the Co-operative Board regarding the success of the Co-operative and the success of the Board itself. It also reflects the acceptance of members. The meeting allowance that the Board Members received during one year was computed from two variables: the meeting allowance that Board Members received from each meeting and the number of meetings that Board Members attend. A high meeting allowance per meeting may reflect the success and a good financial status of the Co-operative. A high number of meetings could also reflect the hard work of the Board Members contributing to the success of the Co-operative. Because the meeting allowance is only paid to Board Members, a high rate of meeting allowance may also reflect the fact that Board Members work successfully and the Co-operative members recognize that the Co-operative Board is a critical factor in the success of the Co-operative. While other rewards such as bonuses are paid not only to Board Members but also to the management division and all employees, they are not exclusively rewarded to Board Members and thus do not reflect the recognition and

acceptance of members to the Board Members in the same manner as the meeting allowance does. This argument is also supported by the correlation between the meeting allowance of the Board Members in the form of log transformation (LNMEETAL1Y) and a feeling of accomplishment (IV7), and the correlation between the meeting allowance and the need to be known in the community and society (IV8). These correlations are higher than those between meeting allowance and other IV variables.

Factors whose relationship with IV was not found

Factors that were not found to have relationship with IV consist of financial status, the financial burden and the welfare of the Co-operative members.

In this case, financial status is measured by income from the Co-operative as a percentage of total revenue (INCOTTIN); financial burden is measured by the personal expense as a percentage of total income (EXPENSE), and member welfare (BWELFARE, MBWF1 – MBWF9), which is measured by type of welfare that the respondents, as a Co-op member, received such as medical expenses, disaster aid, ordination aid or children's scholarship.

These variables do not support hypothesis no.17 (H17), hypothesis no.19 (H19) and hypothesis no.20 (H20). However, it is consistent with the manifest variables of IV and the opinion of experts, which indicate that the Board Members do not give value to monetary returns from the Co-operative and most of the Board Members have regular income from other sources as well. The income that they received from the Co-operative is much less than their regular income.

8.2.5 Other factors that affect the Co-operative's performance

In addition to relationships between the Board's motivation factors and the Co-operative's performance, the quantitative model in this research also analyzed the relationships between other factors and the Co-operative's performance. The primary objective of the inclusion of other factors is to use them as control variables. In addition, this makes it possible to compare the impact of the Board's motivation on the Co-operative's performance with impact of other factors. Results from the model show that the factors which have significant relationship with the Co-operative's performance are DUALITY (How does your Co-op appoint managers?), FINTYPE (financial-type Co-operative), and GOVSUP3 (Government price intervention).

CEO–chairman duality

In this study, it was found that CEO–chairman duality has a significant negative relationship with Co-op performance. Empirical evidence from previous studies showed mixed results (Yu, 2008).

CEO-chairman duality (CEO and chairman of the Board are represented by same individual) has a negative relationship with firm performance as evidenced by the results of most of the U.S. or European companies being studied. Why CEO-chairman duality is bad for firm performance, Larcker and Tayan (n.d.) (cited by Kiraz, 2013) have given the reasons as following:

A. When CEO and chairman of the Board is the same person, responsibility between the management and Board is not clear. Also, CEO cannot fully focus on the culture, operations and strategy of the corporation.

B. There might be a conflict of interest in some areas such as the recruitment of independent directors, long-term succession planning, executive compensation and CEO performance evaluation.

C. There is no clear authority of one spokesman to communicate with the public, management and the shareholders on behalf of the Board because CEO and chairman of the Board is the same person.

However, an increasing number of studies have shown that CEO–chairman duality might have a positive relationship with firm performance as well, such as Chinese companies which have different corporate governance structures from those of U.S. and European companies (Kiraz, 2013). This situation might be explained by Yu (2008), who found that CEO-chairman duality will have stronger positive relations with firm performance if the firm has an environment in which volatility is high and munificence is low.

For the case of Co-ops in Thailand, it might not be consistent with the condition indicated by Yu (2008). Co-ops in Thailand are in the context of sharing, giving and helping each other according to the Co-op philosophy (munificence is high) while volatility is not high because there is continuous support from the government.

Therefore, in this study, CEO-chairman duality, in the context of Thai Co-ops has a negative relationship with Co-op performance, and it affects Co-op performance directly, not mediated by expectancy and motivation of the Co-op Board Members.

Type of Co-operative

Compared to other factors in the model, being a financial Co-operative (FINTYPE) is the factor that has the most influence on the Co-operative's performance. This result is consistent with the performance statistics of Co-operatives, which

indicate that financial Co-operatives had better performance than non-financial Co-operatives. Co-operatives in the financial sector have better performance because they have lower costs and risks as compared to other financial institutions. Savings Co-operative and credit union Co-operatives take deposits from their members and give loans to members who live in the same community or work as an employee in the same organization, so access to information about borrowers' risk could be easy. Most savings Co-operatives are located in government organizations and private companies, so Co-operatives can issue loans to members with a low risk, because their members are government officials or employees of a company who have stable income. Furthermore, these Co-operatives also connect their financial information system with the payroll system of the organizations where the Co-operatives are located, enabling the Co-operatives to receive payment of the loan by deducting it from the salaries of members. Conversely, non-financial Co-operatives do not have any advantage over their competitors in the same industry.

Government support – Price intervention

From the analysis, it was found that government support, especially price intervention policy, has on balance a significant negative relationship with the Co-op performance. Price intervention can affect co-ops positively or negatively. If the government decides to intervene directly in the price of agricultural products by setting price floors or subsidizing cost of production, this will allow farmers to sell product for a high price or with a lower cost, causing their revenue to increase. Therefore, price intervention policy by the government will be beneficial for agricultural co-ops, which account for 52.1% of all Co-ops in Thailand (Table 6.5), and this will help improve the performance of agricultural Co-ops.

Moreover, the government can intervene in energy prices, such as oil, natural gas, etc. This policy might affect co-ops that consume a lot of energy and the cost of energy is a major cost of doing co-op business such as service co-ops that offer taxi service or fisheries co-ops. Price intervention in energy decreases the cost of doing business for some co-ops and also improves their performance.

However, price intervention by the government can negatively affect the co-ops because it weakens the co-ops. Some co-ops waited passively for help from the government and did not adjust or adapt themselves to the changing business environment. Motivation to improve their production to be more productive and less costly is low. Therefore, in the long run, when government support is delayed or does not cover all the area or sectors, these co-ops are affected negatively. This is consistent with Chirwa et al. (2005) and Mutunga (2008) who explained that the wrong type of government support could undermine the organization and lead to dependency.

Considering the context of the co-op in Thailand, most of the times the government is likely to use populist policies rather than focusing on human or organizational development. This is why it was found that price intervention by the government affect negatively on the co-op performance.

8.2.6 Result from the view of "Quantitative" and "Qualitative" method

From the results of analysis, , it is noteworthy that results obtained from the quantitative and qualitative analysis support each other in some aspects, while they seem to contrast in other aspects. The beginning of this section discusses these issues.

Table 8.1 summarizes the major results from the quantitative and qualitative analysis which supports each other and which seem to contrast each other. The table

also provides a conclusion for both results. For the issues which are in support of each other through the quantitative and qualitative analysis, the following was concluded:

a. Board motivation affects coop performance

b. Types of Board motivation that affect the coop performance are not financial benefits, but rather personal interests for e.g. to gain reputation or political popularity, to obtain honors or awards, and to achieve the feeling of accomplishment from working.

c. Factors affecting Board's expectancy are Board authority and function, Board skill, Board meeting quality and Board composition.

d. Compensation setting process affects Board's instrumentality & valence

For the issues in which the quantitative and qualitative analyses contrast each other, the following was concluded:

a. The result from the quantitative analysis shows that financial compensation correlates with Board's Instrumentality and Valence. On the other hand, based on the qualitative analysis, Board members do not seem to feel any motivation through financial benefits. Although these results seem to be contrast each other, it can be explained as follows: Financial compensation does not affect Board's Instrumentality and Valence, but correlates to Board's instrumentality and valence via an underlying variable of cooperative's success as it has been discussed above.

b. The quantitative analysis shows that types of Board motivation which affect the cooperative performance are those of personal interests, not altruism. However, from qualitative analysis, it was revealed that the type of coop Board motivation is altruism. For this issue, it was concluded that altruism is a major motivation of Co-

operative Board members, but is not functionally effective in reality to drive Co-operative's performance. Personal interests thus become functionally dominant.

Table 8.57: Comparison of results from quantitative and qualitative analysis

	Results from quantitative analysis	Results from qualitative analysis	Conclusion
Results supporting each other	Board motivation affects coop performance	Board motivation affects coop performance	Board motivation affects coop performance
	Types of Board motivation which affects the coop performance - To gain reputation - To obtain honors or awards - To gain the feelings of accomplishment from working - Financial benefits play no role	Types of motivation in becoming coop Board member - Political popularity - Honor, connection and a better future career - Personal benefits - Financial benefits play no role	Types of Board motivation which affects the coop performance is of - Personal interest, - Political popularity, - Honor, connection and a better future career
	Factors affecting Board's expectancy Board authority and function Board skill Board meeting quality Board composition	Factors affecting Board's expectancy Board function Board skill Board size Board term Chairman-manager duality	Factors affecting Board's expectancy Board authority and function Board skill Board meeting quality Board composition
	Compensation setting process affects Board's instrumentality & valence	Compensation setting process affects Board's instrumentality & valence	A reliable system to evaluate the performance provides opportunity to earn honors or awards
Results complementing each other	Financial compensation correlates with Board's instrumentality & valence	Board members do not find any motivation through financial benefits	Financial compensation does not affect Board's instrumentality & valence, but correlates to Board's instrumentality & valence via an underlying variable of the cooperative's success

	Results from quantitative analysis	Results from qualitative analysis	Conclusion
	Types of Board motivation that affect the cooperative performance is personal interests, not altruism	Type of coop Board motivation is altruism	Altruism is a major motivation of coop board members but is not functionally effective in reality to drive coop performance. Personal interests become functionally dominant.

Compared to most existing studies which use either quantitative or qualitative methods to answer research questions, this study has integrated both these methods in order to obtain better answers for the research questions at hand. As part of the quantitative method, samples were collected and analyzed using a statistical tool (structural equation modeling) while the qualitative method consisted of reviewing the literature and interviewing experts.

By making use of both quantitative and qualitative methods, more in-depth and fully detailed information can be gathered as part of the research findings because:

1) Using the quantitative method can answer the research questions in a way that qualitative method cannot.

Qualitative research provides information or opinions that cannot be empirically proven and in some cases cannot detangle conflict in diverse opinions. On the contrary, the quantitative research method can provide confirmation of the results and provide clearer answers to the same research questions.

For example, it was found from expert interviews (qualitative method) that all interviewees pointed out that the strongest motive for working in Co-operative committees was altruism. However, findings from the quantitative study indicates that the types of motivation that affect the Co-operative's performance are not those of

altruism, but those of personal interests, such as to gain reputation from the community or society, to obtain honors or rewards, and to gain the feeling of accomplishment from having done work.

Another such example consists of the different opinions of experts regarding the impact which policies set by the government has on Co-operatives. Some experts said that government policy positively impacts the Co-operative's performance because the policy does create some confidence for the Co-operative whereas some experts explained that the government policy affects the Co-operative's performance negatively because it creates some rules and regulations that put constraints over the development of the Co-operative. However, by using the quantitative method, it was found that government support, especially price intervention policy, had a significant negative relationship with the Co-operative's performance in the case of Thailand.

Moreover, the quantitative method of study could identify the magnitude of the relationship between the two variables which cannot be identified using the qualitative method. For example, the qualitative method might show that the government policy affects the Co-operative's performance negatively but it would not be able to show the magnitude of this relationship. However, through the quantitative method, it is shown that the Co-operative's performance receives direct effects from government policy (variable GOVSUP3) with the standardized coefficient of the effects was equal to -0.284 ($p < 0.01$).

2) Qualitative methods can answer the research questions in a way that the quantitative methods cannot.

Although the quantitative method can confirm the relationship between variables and provide better concrete estimation of the magnitude of the relationship, it

is not able to provide an in-depth understanding of the relationship. This is where the qualitative method would be used as it can explain the reason behind the statistics and give more insightful explanations.

For example, the quantitative method found the motivation factor that affects the Co-operative's performance is not altruism, but personal interests. By interviewing experts, it was found that Co-operative Board Members can also be motivated by personal interests because Co-operative Board Members have to forgo their own benefit, money or time, to work for the Co-operative, and to receive some personal benefits might help encourage their dedication towards the work done by the Co-operative. Another reason is that gaining reputation from working with Co-operatives and to obtain honors or rewards from their community or society will benefit their future career path. The quantitative method thus cannot provide such in-depth explanations.

Moreover, without the qualitative method, some useful variables or explanation might be excluded unintentionally. For example, it was found that one important Co-operative Board's decision making system, one-person-one-vote system, had no significant relationship with Co-operative Board motivation. Based on the quantitative method, this variable might be ignored. However, through the qualitative study, it was found that the one-person-one-vote system had both positive and negative impacts on Co-operative Board motivation. It impacts negatively because this system causes a lack of incentive for the developed Co-operative to prosper. Some experts suggested that it had a positive impact because this system makes the decision-making process transparent and participatory.

3) Using both the quantitative and qualitative method in the research provides new findings that cannot be found by other means.

For example, it is found from the qualitative study that Co-operative Board Members usually do not have enough knowledge and skill to work as a Board Member. The quantitative study shows that the average number of seminars on Co-operative development a Board Member attended in a year had a positive relationship with the Co-operative's performance (through Co-operative Board motivation). Furthermore, the experience from being Board Members in for-profit and non-profit organizations was not found to have relationship with Co-operative Board motivation and the Co-operative's performance. Using both quantitative and qualitative methods lead to a conclusion that the Co-operatives in Thailand had no potential or ability in training and developing their own Co-operative Board Members. This is because even though some of the Board Members had worked in the Co-operative for a long time and gained more experience (based on quantitative study), the Co-operative Board Members still had not enough knowledge and skills to work for the Co-operative (based on the qualitative study). Therefore, Board knowledge and skill that affect the Co-operative's performance, is gained from outside the Co-operative through the attendance of seminars.

8.3 Implications for Practice

The study results confirm the relationships among the variables under the framework of Vroom's Expectancy theory. This suggests that consideration should be given to more than just how to compensate Board Members in different ways, or how to recruit individual Board Members with appropriate motivation. Motivation should also be considered as a process, that is, motivation is an interaction between the

perception of Co-operative Board Members regarding the effect of their effort on the organization's performance, the relationship between the performance and the benefit they receive (What to receive and how much) and the value they put on what they receive. Consideration should also be given to the impact of environmental factors on the motivation of Co-operative Board Members. The above findings lead to practical proposals to enhance motivation for Co-operative Board Members and develop Co-operative's performance as follows.

Developing Co-operative Board evaluation and reward systems

From the results of the study, Co-operative Board Members who need or value the reputation and recognition from members and society or award from Co-operatives or the government, or Co-operative Board Members who value the feelings of accomplishment, are those who have motivation that positively affects Co-operative's performance.

There are two ways to obtain Board Members who have motivation that causes better performance of the Co-operative. This includes seeking individuals who have such motivation to be Co-operative Board Members, or giving proper incentives so that Co-operative Board Members will have the desired motivations. However, it is difficult to seek Co-operative Board Members who have such motivation because the source of Co-operative Board Members comes from election. The survey results confirm that the respondents gave the highest rating to the motivation of doing good for society, which is not a motivation that affects the performance of the Co-operative. Therefore, a possible guideline to create appropriate motivation of the Co-operative Board Members is to provide proper incentives or rewards for the Co-operative Board Members.

At present, the Co-operative movement in Thailand has given awards to Co-operative Board Members who have outstanding achievements at the national level, such as the National Co-operatist Award (provided by the CPD), and the Outstanding Saving Co-operatist Award (granted by the Federation of Savings and Credit Co-operatives of Thailand Limited). At the organization level, there are only a few Co-operatives providing awards to their members, Board Members and employees. Nevertheless, there is no system of giving awards in a hierarchical manner throughout the Co-operative movement to establish the motivation of all Co-operative Board Members. However, the selection criteria for the award is broad and unclear, for example, the criteria for selecting the National Co-operatist indicates that “the person who is eligible for being selected as a National Co-operatist must have apparent outstanding performance, be honest, perform work with sacrifice, dedicated to Co-operative work, committed to the Co-operative ideology, principles and methods, and have morality in both working and personal behaviour" (CPD, 2011e). Selection also uses the discretion of the selection committee to select the National Co-operatist, based on information prepared and presented by nominated persons (from the Co-operative federations or Co-operative league). Such an award consideration process may be due to the fact that most Co-operatives do not have mechanisms to evaluate the performance of the Board (Spear, Cornforth, Chaves and Schediwy, 2004; Enjolras, 2004).

The study result about factors associated with Instrumentality and Valence (IV) implies that incentives provided to Co-operative Board Members, whether monetary or non-monetary incentives, must reflect the dedication and work performance of the Board clearly. The Co-operative movement should set up honor certificates or rewards

to Co-operative Board Members in a hierarchical manner from the organization level to the national level. There should be a design of indicators and mechanisms to evaluate the performance of Co-operative Board Members which are clear, transparent and credible, in order to be used as information in providing awards or honoring certificates to Co-operative Board Members and Boards of Co-operatives at all levels across the country. In addition, the information about the performance evaluation of the Co-operative Board Members should be disclosed to the Co-operative's members and be used for the benefit of the Co-operative itself in providing different forms of incentives or rewards to Co-operative Board Members.

Board succession planning

The study results indicate that one factor that causes a higher expectancy of Co-operative Board Members is knowledge and skills, so one way to help improve the performance of Co-operatives is the obtaining of Co-operative Board Members who have knowledge and skills. However, the problem of current Co-operatives, according to experts' opinion, is the lack of quality members, making it difficult to seek quality Board Members. Therefore, each Co-operative should have a succession plan to prepare the Co-operative members to have knowledge about the Co-operative system, understand the role of members and Board Members and be knowledgeable about the business and management system of the Co-operative where they are members. This will make the Co-operative have a pool of quality members who will be elected to serve as Co-operative Board Members in the future.

New Board Member orientation

The study results indicate that seminar attendance of Co-operative Board Members is positively correlated with their expectancy. This implies that Co-operative

Board Members should develop their specific knowledge and the skills which are necessary for work as Co-operative Board Members. However, some experts considered that new Co-operative Board Members always need time to learn the Co-operative work until they are equipped to work efficiently. This always lasted for years until it was near the end of their term of office. Thus, Co-operatives should provide for the election of new Co-operative Board Members in advance of the time, so that the new Board Members will have an opportunity to obtain a set of orientations which will equip them to have sufficient knowledge and the skills necessary to serve the Co-operative.

The orientation for the new Co-operative Board Members should focus on training to develop their complete knowledge in a systematic way. Co-operatives should provide new Co-operative Board Members to learn from the current Co-operative Board Members by participating in the meetings of the Co-operative Board, being on sub-committees or sub-task forces, or having both formal and informal channels to talk with current Co-operative Board Members.

Promoting Good Co-operative Governance

The result of the study confirms that the Board authority and functions have a relationship with Board Member expectancy. However, some experts indicated that Board Members of the current Co-operatives do not have enough knowledge of Co-operative work, so they did not do what they should. This is consistent with prior literature, which shows that directors of a nonprofit organization lack awareness about their roles and responsibilities (Middleton, 1987: 143; Fenn, 1971; NCVO, 1992; Peck, 1995). Therefore, the Co-operatives should focus on the development of good governance in Co-operative organizations, also called 'Good Co-operative Governance',

especially the development of the Co-operative Board Members to have better knowledge and understanding about the principles and guidelines of Good Co-operative Governance, and the roles and responsibilities of the Co-operative Board Members. They should also provide a system to encourage the Co-operative Board to operate effectively, for example, providing orientation and development for the Co-operative Board Members, arranging a system for performance evaluation of the Co-operative Board Members, and developing the management section and members of staff for their quality and professionalism. The Co-operative promotion agencies should support the development of the whole system of Good Co-operative Governance, for example, supporting them with a body of knowledge, training and consulting them on the development of Co-operative governance, arranging a system for quality evaluation of Co-operative governance, etc.

The study results also imply other approaches that will help improve the Co-operative's performance, for example, improving the business competition environment in order to reduce monopolies, developing the advertising and public relations strategy of Co-operatives, etc. However, these guidelines are not directly related with the motivation of the Co-operative Board Members and, therefore, the researcher will not go into detail about these implications.

8.4 Contributions of the study

The key contributions made by this research can be summarized as follows. The literature review in this research contributes to the study of motivation theories and Board motivation. The taxonomic grouping of motivation theories was made, and the knowledge gaps on Board motivation in Co-operative, non-profit organization and for-profit firms were identified.

This study has used a comprehensive framework in studying Board motivation. There are three levels of the relationship within one framework which consists of the relationship between Board motivation and Co-operative performance, the determinants of Board motivation according to Vroom's motivation theory, and the determinants of each of the components of Vroom's motivation theory i.e. Expectancy, Instrumentality and Valence. All these relationships could be studied simultaneously by using SEM, which enables the researcher to estimate all direct and indirect effects among variables. Doing so also allows the researcher to identify which board motivation determinants affects Co-operatives performance which can be used in policy formulation.

Co-operative Board motivation determinants were also determined, which are Board function, Board authority, Board composition, Board meeting quality, and Board skills. This allows the researcher to compare the influence of each determinant on Board motivation which is helpful in setting Co-operative development strategies.

Some of the research findings discovered through this study included for example, Co-operative Board motivation has a significant positive relationship with the Co-operative's performance. The types of motivation that affects the Co-operative's performance are not those of altruism, but those of personal interests, such as to gain reputation from the community or society, to obtain honors or rewards, and to gain the feelings of accomplishment from working. The reason that these motivations are important to Co-operative Board Members is because these payoffs are useful for their future career prospects such as becoming a politician or a Board member of a larger organization in the future. Factors affecting Expectancy include Board authority and function, Board composition, Board meeting quality and Board skill. Finally, effective Board motivations are those of indirect benefits, not obtained directly from the

cooperative, and future benefits (future careers or opportunities), for example, political popularity or being part of the board in another organization.

Finally, this study provides policy recommendations that can effectively enhance the motivation of Co-operative Board members, for example, the development of Co-operative Board evaluation and reward system, the preparation of Co-operative members for Board succession, the orientation of new Board members and the promotion of Good Governance.

8.5 Limitations of the Study

Due to the scope and resource constraints of this study, this study has some limitations that deserve to be clarified. These limitations point to some issues that those who make use of this study should pay attention to.

1) The quantitative model used in this research is unable to quantify impacts of the factors that might affect Board motivation, but might not be applicable to Co-operatives in the past due to some conditions, for example, being restricted by rules or regulations on Co-operatives, and traditional practices. This is because the method used in this study is a kind of regression analysis, which is based on discovering relationships among variables from past behaviours. Therefore, behaviours which never occurred in the past are unable to be observed, for example, the impact of “one share one vote”, if implemented, on the Co-operative Board’s motivation, the impact of allowing non-Co-operative members to be on Board of Directors, etc. Discovering the impact of these factors will give more new alternative ways to improve Co-operative Board Members' motivation.

Furthermore, using regression analysis also makes it impossible to quantify the impact of the factors that, even though they occurred in the past, are applicable to all

Co-operatives causing no variation between observations. This will cause the Multicolinearity problem when conducting regression estimation. Such factors are rules and regulations, or other conditions that apply to all Co-operatives, for example, Board term limit, the “one person one vote” system.

Even though the study has included some questions to ask Board Members about their opinions on the impact of the above factors, the analysis result cannot be strongly conclusive at the same level of confidence as the analysis of other factors. This is because it is just the opinion of the Board Member, not the real situation that has occurred.

2) A Co-operative is a kind of organization, the objective of which is to create social impact rather than financial impacts. However, social impact is difficult to measure by its very nature. Furthermore, measuring the social impact of different types of Co-operative requires different indicators due to their different kinds of activities. Even though this study has attempted to use several non-financial indicators to measure the Co-operative’s performance in terms of social impact, most of them are input-based indicators, for example, member participation, the presence of full staff. Therefore, these indicators may not well reflect the performance of the Co-operative, particularly the performance in social terms. The results of the study might change if the indicators used to measure the performance of Co-operatives can cover more aspects of the Co-operative’s performance.

Due to the fact that the financial data obtained from CPD is not complete due to the lack of some data, some financial ratios might not be able to be computed. These financial ratios may help explain the relationship between the Co-operative’s

performance and the motivation of Co-operative Board Members better than existing indicators.

3) The data on the motivation of the Co-operative Board Members in this study has been collected from the method of self-assessment. This may cause a bias in the answers, as the Board Members may want to give a good impression. The motivation of Co-operative Board Members should be assessed by other entities, for example, Co-operative members, or other Board Members from the same Co-operative. However, such a method is difficult to pursue.

4) In this study, analysis results concerning the conflict of interest in being Co-operative Board Members are subject to being positively biased due to the limitation of the data collection method. All the data about Board motivations and their determinants used in this study have been collected from the opinions of Board Members themselves or managers whose behaviour is inevitably subject to the Board's control. Therefore, these data are subject to being biased because Boards and managers do not want to reveal their behaviours.

5) The data about financial and non-financial indicators used in this research to measure the Co-operative's performance is from only one year's observation, the year 2009. Therefore, it may not truly represent the performance of some Co-operatives if their performance was affected by some shocks, special events or other factors in that year. This will affect the analysis results if it is the case for many Co-operatives in the sample group. To solve this problem, the average performance over the past few years could be used instead of one year's performance. However, this should be done with caution because the average of performance over the past for over-long time periods may not represent the current performance of the Co-operative.

6) Different types of Co-operative may have different behaviours in detail. As this study analyzes Co-operatives' behaviours as a whole, it might have lost some details of behaviours of each type of Co-operative. The understanding of more details of behaviours will enable us to obtain more specific solutions for each type of Co-operative to improve Co-operative Board motivation. Nevertheless, analyzing the behaviours of different types of Co-operative requires much larger samples because there must be enough respondents for each type of Co-operative. Due to the limitation of time and financial resource in this study, this should be left for future research.

7)In this study, the latent variable “PERFORM”, which is measured by three manifest variables - ROE52, NOLOSS and COOPLEVE, has an AVE value of 0.489, which is slightly less than the threshold value of 0.5. This might have occurred because of a few variables, probably “ROE52” which is a financial indicator being used to measure co-op performance, has high measurement error variance. However, this variable is included in the model because it significantly helped improve the model’s fit and helped increase the correlation between Board motivation and the Co-operative’s performance. The latent variable “PERFORM” could have a higher reliability and validity, if other alternative indicators measuring co-op performance are included in the model in the future research.

8.6 Recommendations for Future Research

Even though this study has achieved its purpose in filling the knowledge gap on the effect of Co-operative Boards' motivation on the Co-operative’s performance and the determinants of Co-operative Boards' motivation, a knowledge gap in this area still exists. Future studies that could fill this knowledge gap are as follows.

1) As aforementioned in the research limitation section, this study cannot analyze the effect of factors that have or have not been applicable to Co-operatives over the past due to some conditions. These factors are, for example, Co-operative principles, rules or regulations on Co-operatives which are applied to all Co-operatives in Thailand, or large compensation to the Co-operative Board Members, which has not been applied to Co-operatives in Thailand. However, analyzing the effect of these factors is worth pursuing because it could lead to solutions for a significant change in Co-operative transformation, for example, changes in Co-operative principles or leading to the emergence of a new-generation of Co-operatives.

To analyze such factors, the data on Board Members' motivation from other types of organizations, such as IOFs or other non-profit organizations, should be collected and then combined with data from Co-operatives. Such data will enable us to compare Board motivation of Co-operatives with that of other types of organizations, and will lead to the discovery of the effect of those factors that have never been implemented in Co-operatives.

2) To solve the problem of the bias that may occur in the data about Board Motivation which is collected from the method of self-assessment, this data should be collected from different methods e.g. collected from other sources e.g. Co-operative members rather than from Board Members themselves. Analysis of the new data could be compared with this study and may lead to new findings on the working mechanisms of motivation of the Co-operative Board Members.

3) In this study, relationships among variables were analyzed based on their correlation, which is not enough to conclude whether these relationships are really causal relationships. Therefore, further studies should be pursued to answer this

question. This could be possible by using panel data (cross-sectional data combined with time-series data) with the capable analysis method. However, collecting such data about Board motivation is a challenge because it needs to follow the behaviour of the same Board Members for a period of time.

4) The measurement of the Co-operative's performance is still a challenge that should be further developed, particularly the measurement of performance in social or community terms because a Co-operative is a type of organization the objective of which focuses on social purposes. Development of the Co-operative's performance measurements will lead to a more accurate performance assessment, and the analysis of such data may lead to different conclusions from this study. However, it is difficult to measure and standardize social performances in order that they can be compared across different Co-operatives because the Co-operative activities are diversified by their very nature.

5) To analyze the conflicts of interest in being Board Members, data about Board Members' motivation should be collected from other sources rather than Board Members, managers, or employees of Co-operatives. Instead, data about conflicts of interest should be collected from the Co-operative's shareholders, who are Co-operative members, or other third parties who can observe the behaviour of Co-operative Board Members.

6) As different kinds of Co-operatives, e.g. Co-operatives from different sectors or Co-operatives in different locations e.g. urban and rural areas, may have different behaviours due to their activities or structures, there should be further studies to investigate the determinants of Board Member motivation of each kind of Co-operative. This will lead to more understanding about the mechanism of Board

motivation and also more specific recommendations for improving the Boards of each kind of Co-operative. If there are large enough samples for each kind of Co-operative in the data set, Multi-Group Analysis could be used to compare the behaviours of different kinds of Co-operatives under the SEM data analysis method.

7) From this study, it was found that the motivation of Co-operative Board Members has an effect on the Co-operative's performance. However, it is not clear through what channels the effect is sent. Therefore, it is recommended that future research insert variables of mediators between Board motivation and the Co-operative's performance. These mediators are factors which are related to the role of Co-operative Board Members both directly or indirectly, for example, the direction of the Co-operative operation, the effectiveness of work control, and responsiveness to changing environments. Such a study will enable us to know more about the working mechanisms of Board motivation and also the effectiveness of each channel, and will lead to more comprehensive solutions for improving the effectiveness of the Co-operative Board Members' operation.

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Appendices

Appendix I

Questionnaire for Co-operative Board Members

The script used to secure oral consent

1. Your opinion is completely confidential. You and your Co-op will not be identified or mentioned in the research. No reader can trace the source of this information.
2. Please answer the questionnaire truthfully for the purpose of the research and for the benefit of Co-op development. An overall analysis and evaluation will be given, thus being of no ill effect to you or your Co-op in any way.
3. Your participation in the study is entirely voluntary. You are free to ask queries about the study or any additional details you wish to know. You are also free to refuse answering any questions, should your prefer.
4. Answering the questionnaire may take you 30 minutes. You are free to withdraw from the interview or to leave at any time, without needing to give any reason or explanation.

Do you wish to participate? ___Yes ___ No (if "No" interview terminates)

Questionnaire division into four parts:

Part 1: Personal details of participants who answer the questionnaire

Part 2: Perceived relationship between work effort, performance and reward

Part 3: Information and opinions on the operation of a Co-op's Board of Directors

Part 4: Suggestions on the operation of the members of a Co-op's Board of Directors

<u>Part 1 information about the person answering the questionnaire</u>

1.1 Gender ○ Male ○ Female

1.2 Age ○Under 18 ○ 18 – 24 ○ 25 – 40 ○ 41 – 60 ○ Over 60

1.3 Highest Education

O Informal Study O Have not completed Primary School O Completed Primary School O Have not completed Junior High School O Completed Junior High School O Have not completed High School/Vocational School	O Completed High School / Vocational School O Completed Bachelor's Degree O Completed higher than a Bachelor's Degree

1.4 Occupation

O Farming one's own land O Worker in the agricultural sector O Employer/Executive in an organization O Business Owner O Professional (Lawyer, Accountant, Teacher…)	O Supervisor, Head of operations O Office Worker O Skilled Worker O Non-Skilled / Work in a Factory O Unemployed O Others, (Please specify)…….....

1.5 Which sector are you in?

O Agriculture, Fisheries, Forestry O Mining and Quarrying O Manufacturing O Electricity, Gas and Water Supply Units O Construction O Restaurant and Hotel O Education O Employee in a personal household O Health Service	O Logistics and Warehouse OFinancial Institution O Wholesale and Retail Trading O Real Estate O Government or Public Service O Social Service and other personal services O International Organization OOther services

1.6 Overall Monthly income from every source

O Less than 5,000 Baht O 5,000 – 10,000 Baht O 10,001 – 20,000 Baht

O 20,001 – 30,000 Baht O 30,001 – 40,000 Baht O 40,001 – 50,000 Baht

O 50,001 – 70,000 Baht O 70,001 – 90,000 Baht O more than 90,001 Baht

1.7 Source of income (Can choose more than 1 number)

O Wage and Salary O Net profit from business operations

O Net profit from agricultural operations O Pension

O Compensation from employer O Aid from family, relatives or friends

O Aid Welfare for Elderly and Disabled O Rent from property or land

O Yield from bank deposit, loan or bond O Others (Please specify)……

1.8 Benefit received from the Co-op

1) Benefit received as a Co-op Board Member

OMeeting Allowance.....Baht/per time (Please identify the frequency of the Board meeting....…….....Times/month)

O Other Allowances……..Baht

O Bonus……..Baht/year or.....percent of the Co-op's net profit last year

OOther fringe benefits or non– financial welfare (If any – please identify only what is different from that received as a Co-op member)

…..……

……

2) Benefit received as a member of the Co-op

O Average dividends/share (Baht).....Number of shares you have in the Co-op.....

Or, calculate as a percent of the total Co-op share (%).....

OOther welfare (Can choose more than 1 answer)

O Medical expenses O Marriage O Disaster aid

O Ordination aid O Children's Scholarship O Retirement

O Funeral expenses O Child birth O Others.....

OWelfare provided by the Co-op covers whom? (Can choose > 1 answer)

O Parent O Spouse O Children O Others……

1.9 In a month, the average cost of living as a percent of your total income from all sources you receive …….....

Part 2 Perception of the relationship between work effort, performance and reward

2.1 Relationship between Effort and Performance (Expectancy)

1) In your current context, how possible is it for your Co-op to improve or to reach its goal due to your hard work?

O Very difficult O Rather difficult O Can't say O Quite possible O Highly possible

2) "It is a general rule that 'If one makes an effort, one will meet with success'. In your experience how applicable is this general principle in working in your Co-op?"

O Completely inapplicable O Not very applicable O Can't say

O Fairly applicable O Highly applicable

2.2 Relationship between Performance and Reward (Instrumentality)

1) Do you agree that if you work hard for the Co-op, you will have a chance to get these incentives?

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
1) Having increased financial benefit (Meeting Allowance, Bonus, Welfare)							
2) Being honored & awarded by the Co-op or the Public Sector							
3) Having more work personally assigned							
4) Taking on more challenging work tasks							
5) Gaining admiration and respect and being loved by colleagues and people in							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
the community							
6) Feeling good and satisfied through doing good for society and utilizing all one's potential							
7) Feelings of accomplishment							
8) Being well known in the community and society							
9) Being healthy							

2) As a member of a Co-op's Board of Directors, are you satisfied with the current benefit you get from the Co-op?

Beneficial Items	Strongly Dissatisfied 1	Dissatisfied 2	Slightly Dissatisfied 3	Neutral 4	Slightly Satisfied 5	Satisfied 6	Strongly Satisfied 7
1) Meeting Allowance							
2) Bonus							
3) Welfare							

2.3 How important are these rewards to you? (Valence)

Items	Mostly Unimportant 1	Unimportant 2	Slightly Unimportant 3	Neutral 4	Slightly Important 5	Important 6	Mostly Important 7
1) Increased financial benefit (Meeting Allowance, Bonus, Welfare)							
2) Being honored & awarded by the Co-op or the Public							

Items	Mostly Unimportant 1	Unimportant 2	Slightly Unimportant 3	Neutral 4	Slightly Important 5	Important 6	Mostly Important 7
Sector							
3) Having more work assigned							
4) Taking on more challenging work tasks							
5) Gaining admiration and respect and being loved by colleagues and people in the community							
6) Feeling good and satisfied by doing good for society and utilizing all one's potential							
7) Feelings of accomplishment							
8) Being well-known in the community and society							
9) Being healthy							

2.4 Your current work as a Co-op Board Member (Motivation / Effort)

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
1) You wish to sacrifice more time and ability in working for the Co-op							
2) You wish to develop yourself to increase your quality of work for the Co-op							
3) You wish to take more responsibilityin the Co-op's work							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
4) You feel that other Board Members respect and value having you work as a Board Member							
5) You feel that being a member of the Co-op Board is important to you							
6) You feel that your decision-making has a significant impact on improving the standard of living for Co-op members							
7) You feel that you have sacrificed more effort than other Board Members							

Part 3 Information and Opinions on the operation of a Co-op's Board of Directors

3.1 How different is using a "one person-one vote system" in the Co-op to the "one share-one vote system" used in investor-owned firms?

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
1) The one person-one vote system reflects the Co-op members' voice more equally							
2) In the one person-one vote system, a Co-op member's voice is less likely to be dominant							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
3) The one person-one vote system takes more time to reach a final conclusion							
4) In the one person-one vote system, decision-making is more correct							
5) Others (Please specify)							

3.2Board Size

1) Total number of Co-op Board Members in your Co-op.....

2) Do you agree that (according to your answers in previous questions), your number of Co-op Board Members has caused…?

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) A variety of expertise composed by the Co-op Board Membership							
(2) Wide networks formed by Co-op Board Members							
(3) Good representation from each group of Co-op Board Members							
(4) Flexible Board meetings where conclusions are easy to reach							
(5) Each Board Member can fully express their opinions							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(6) Others (Please specify).....							

3) In your opinion, is the current number of Co-op Board Members in your Co-op appropriate?

○No, it is too small ○Yes, it is appropriate (Skip to question 3.3) ○No, it is too many

4) If there is no limitation by law, how many Board Members is appropriate in working for a Co-op? .....

3.3 Board Term

1) In your opinion, is the current term (2 years per term) of Co-op Board Membership appropriate?

○ No, it is too short ○ Yes, it is appropriate (Skip to question 3) ○ No, it is too long

2) If there were no limitation by law, how many years per term do you think is appropriate for a Co-op Board Member to work for the Co-op? ……. (Years)

3) Do you agree that limiting the Board term to 2 years per term has caused…?

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) The Co-op Board Membership is given sufficient time to work continuously							
(2) The Co-op Board focuses on short-term projects, rather than long-term projects							
(3) Co-op Board Members must be responsible to members in order to receive enough votes to return them to							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
their position							
(4) A position on the Co-op's Board of Directors might be monopolized by some Co-op members or interest groups							
(5) Co-op members are not willing to be Board Members							
(6) Others (Please specify)							

4) In your opinion, is the current term (limited to 2 consecutive terms) of being a Co-op Board Member appropriate?

O No, it is too short O Yes, it is appropriate (Skip to question 6) O No, it is too long

5) If there were no limitation by law, do you agree with limiting the Co-op Board term not to exceed 2 consecutive terms? And how should this be done?

O Should not limit it

O Should limit it by not exceeding.....consecutive terms

O Others (Please specify).....

6) Do you agree that limiting the Co-op Board term not to exceed 2 consecutive terms has caused…?

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) The Co-op Board has a long enough time to work continuously							
(2) The Co-op Board focuses on short term projects, rather than long term projects							
(3) A position on the Co-op's Board of Directors might be monopolized by some Co-op							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
members or interest groups							
(4) There is a lack of qualified members to apply to be Co-op Board Members							
(5) Committees lack responsibility to members, as they have no right to be Committee members again							
(6) Others (Please specify)							

3.4 Board Structure

1) In your opinion, is your current Co-op Board structure appropriate?

- O Most appropriate
- O Appropriate
- O Neutral
- O Inappropriate
- O Most Inappropriate
- O Don't know

2) Do you agree that your current Board structure would make.....?

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) Co-op Board Members have a lot of work and have no time to consider the strategic issues							
(2) There is delegation and specialization in your Co-op Board							
(3) Co-op operations are transparent because there is a check and balance							
(4) Co-op operations are slow							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
because there are many steps to the decision-making process							
(5) Others (Please specify)							

3.5 Board composition

1) Do you agree with the law that limits outside experts from becoming Co-op Board Members?

- O Strongly agree
- O Agree
- O Neutral
- O Disagree
- O Strongly disagree
- O Don't know

2) Do you agree that having no outside Co-op expertise in being a Co-op Board Member, causes….

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) Skills and expertise in the Co-op Board do not vary enough for the work of the Co-op Board							
(2) Co-op Board composition lack specific expertise that is necessary to the work of the Co-op Board							
(3) Each Co-op Board Member lacks freedom in making decisions							
(4) Co-op Board Members understand the context of the Co-op because they are also members of the Co-op							
(5) Co-op Board Members are							

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
responsible to their members because they are their members' representatives							

3.6 Experience, knowledge, and skill in working as a Board Member

1) The total number of For-Profit organizations for which you are/ have been a Board Member..... for a total number of how many years? ……

2) The total number of Non-profit organizations for which you are/ have been a Board Member.....for a total number of how many years? ……

3) Your work experience related to your Co-op field (Number of years)……..……

4) Number of seminars on Co-op development that you attend in a year ……

3.7 Board authority and function

1) Can the Co-op Board exert enough authority to function in driving the Co-op forward to success according to the Co-op Board's plan?

○ No, it has too much authority ○ Yes, it has enough ○ No, it has too little authority

2) Opinions on the authority and function of your current Co-op Board – Do you agree that…

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) Your Co-op Board rarely participates in Co-op activities							
(2) Your Co-op Board only approves plans and policies proposed by the manager							
(3) Your Co-op Board actively sets policies and goals for the Co-op							

3) How many hours per week, on average, do you spend working for Co-op?.....Hrs/week

4) In working for the Co-op, what activity do you spend most of your time on? (Please rank 1 - 3)

……Preparing the meeting/meeting
……Controlling the managers
……Planning for the Co-op
……Self-development to work for the Co-operative
……Building Co-op networks
……Others (Please specify).……

3.8 Opinions on support in working as a Co-op Board Member – Do you agree that…

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) You have been supported and received enough resources (budget, personnel, equipment) to work as a Co-op Board Member							
(2) You have enough time to work as a Co-op Board Member							
(3) Co-op Board Members should work full time in the Co-op							

3.9 Board Meeting

1) In each meeting, what agenda item takes most of the time in your Co-op meeting?

O Financial Report
O Management within the Co-op
O Co-op operational strategy
O Report on Co-op performance
O Problems and petitions of members
O Future projects

3.10 The compensation setting process of the Board of Directors

1) Is there any compensation you received as a Board Member which is not written in the Co-ops' regulations?

O No O Yes (Please specify).....

2) Is there a Key Performance Index (KPI) in evaluating Board Member performance in your Co-op?

O Yes, there is O Other KPIs are used (For example, Co-op performance)

O No

3) Does your Co-op use KPI for Board Members in setting their compensation (of all allowances and bonuses)?

OYes, it does ONo, it doesn't

4) Opinions on the compensation setting process of the Board of Directors

Items	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) The compensation-setting process (for meeting allowances, other allowances, bonuses) is fair and reliable							
(2) Benefits received from the Co-op, both financial and non-financial, are fair and appropriate to one's workload							
(3) Compensatory practices should be redesigned in order to increase motivation in working for the Co-op							

Part 4 Suggestions for Co-op Board Members' operations (If any)

4.1 Top 3 things that should change in the Co-op so that the Co-op will be more competitive:

1).....

2) .....

3) .....

4.2 Please specifically recommend any measure to increase the motivation of Co-op Board Members in working for the Co-op

.....

.....

.....

.....

.....

.....

Appendix II

Questionnaire for Co-operative managers

The script used to secure oral consent

1. Your opinion is completely confidential. You and your Co-op will not be identified or mentioned in the research. No reader can trace the source of this information.
2. Please answer the questionnaire truthfully for the purpose of the research and for the benefit of Co-op development. An overall analysis and evaluation will be given, thus being of no ill effect to you or your Co-op in any way.
3. Your participation in the study is entirely voluntary. You are free to ask queries about the study or any additional details you wish to know. You are also free to refuse answering any questions, should your prefer.
4. Answering the questionnaire may take you 45 minutes. You are free to withdraw from the interview or to leave at any time, without needing to give any reason or explanation.

Do you wish to participate? ___Yes ___ No (if “No” interview terminates)

Questionnaire division into eight parts:

Part 1: General information about the Co-op

Part 2: General information about the Co-op's Board of Directors

Part 3: Information about the operation of the Co-op's Board of Directors

Part 4: Characteristics of the Co-op’s products and services

Part 5: Characteristics of the Co-op’s members

Part 6: Characteristics of management in the Co-op

Part 7: Factors supporting the Co-op’s operations

Part 8: Suggestions and recommendations

<u>Part 1: General information about the Co-op</u>

1.1 Co-op address:

District…….**Province**……

1.2 Co-op location: ○ Inside municipality area ○ Outside municipality area

1.3 Number of years the Co-op has been established…….....

1.4 Co-op activities (Can answer more than 1 selection)

What activities?

- O Providing and selling products and services
- O Providing welfare to members
- O Collecting products from members and selling to public
- O Providing and selling raw materials
- O Depositing or raising funds from members
- O Providing hedging tools to members
- O Others (Please specify).....

Who does the Co-op do business with?

O Only with members O The public O Others, please specify.....

Part 2: General information about the Co-op's Board of Directors

2.1 Total number of members on the Co-op's Board of Directors……

2.2 Total number of sub-committees or working groups in the Co-op……

Please specify all sub-committees or working groups set up in your Co-op

.....

.....

.....

2.3 How does your Co-op appoint managers?

- O Co-op Board hires a third party to be a manager
- O Co-op Board hires a Co-op member to be a manager
- O Co-op Board appoints some "Co-op Board Members" to be Co-operative managers
- O Co-op Board appoints "Chairman of Co-op Board" to be a Co-operative manager
- O Others (Please specify).....

Part 3: Information about the operation of the Co-op's Board of Directors

3.1 What type of relationship does a Co-op manager have with Board Members? (Please choose only 1 option)

O Empowering manager O Reviewing and controlling manager's operations

O Counseling manager O Commanding manager

O Providing guidance for manager OSupporting manager to fulfill the role

O Others (Please specify).....

3.2 What are the roles of a Co-op's Board Members? (Can answer more than 1 option)

O No clear authority and function

O Slightly associated with the operation of a Co-op

O Considering only specific issues proposed by Co-op staff

O Authorizing employees to operate

O As audit performance, general administrator

O A decision maker for strategy, policy, goal

3.3 Do Board resolutions provide clear guidelines for operational-level staff? (Mark "✓" in the box.)

Mostly Unclear 1	Unclear 2	Somewhat Unclear 1	Neutral 4	Somewhat Clear 5	Clear 6	Mostly Clear 7

3.4 How many days in advance does a Co-op's Board Members receive information before the meeting?

O On the meeting day O 1 – 2 days before the meeting day

O 3 – 4 days before the meeting day O 5 – 6 days before the meeting day

O More than a week before the meeting day

3.5 Mostly, who sets the meeting agenda?

OChairman OBoard resolution O Manager

O Co-op's employees O Proposal from members O Others (Please specify)...

3.6 How often is a Board meeting organized?.....Times/month

3.7 How long on average is one Co-op Board meeting?.....Hours/ meeting

3.8 On average, does the meeting start on time?

O On time O Before time O Late by 1-15 minutes

OLate by 16-30 minutes O Late by 31-45 minutes O Late by 46-60 minutes

O Late by more than 60 minutes

3.9 How often is there follow-up after a Co-op Board meeting?

Least Often 1	Very Rarely 2	Rarely 3	Moderately 4	Often 5	Very Often 6	Most Often 7

3.10 How does your Co-op Board mostly follow-up the resolutions from a Board meeting? (Please choose only 1 answer)

- O By setting an agenda at the next meeting for follow-up
- O By following-up at the Board meeting, but not as part of the agenda
- O By following-up informally outside the Board meeting
- O Other (Please specify).....

3.11 Is there disclosure or communication of Board meeting resolutions to these groups of people?

Disclose Issues to:	None	Least Often 1	Very Rarely 2	Rarely 3	Moderately 4	Often 5	Very Often 6	Most Often 7
1) Co-op employees								
2) Co-op members								
3) People who are interested								
4) Others (Please specify) ……								

3.12 If a conflict occurs in the Co-op meeting, how often does the Board use these methods to solve the problem?

Resolve Issues by:	Least Often 1	Very Rarely 2	Rarely 3	Moderately 4	Often 5	Very Often 6	Most Often 7
1) Doing nothing							
2) Board majority vote							
3) Decision of the Co-op							

Resolve Issues by:	Least Often 1	Very Rarely 2	Rarely 3	Moderately 4	Often 5	Very Often 6	Most Often 7
Board Chairman							
4) Majority vote in the members' meeting							
5) Others (Please specify) ……							

3.13 How often do these following situations happen? (Conflicts of Interest amongst the Board of Directors)

Conflicts of Interest Issues:	None	Least Often 1	Very rarely 2	Rarely 3	Moderately 4	Often 5	Very Often 6	Most Often 7
1) Some Co-op Board Members have Conflicts of Interest in running the Co-op								
2) You as a Co-op manager try to do something to solve the problem								
3) Some Co-op Board Members own a business or become partners of a company doing business with the Co-op								

3.14 Opinion about Board Meetings

Issues	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
(1) Most Co-op meeting agenda is set by the Secretary of the Board							
(2) Most Co-op meeting agenda							

Issues	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
concerns small issues and is just to inform							
(3) All Co-op Board Members attend every meeting							
(4) Every member of a Co-op's Board of Directors can express opinions and ask questions openly and freely							
(5) Some members of a Co-op's Board of Directors can have influence on other Board Members' decisions							
(6) Most Board resolutions are from a majority vote of the Board							
(7) Most Board resolutions are concluded after discussing reasonably until a final conclusion is reached							
(8) Most Board resolutions are made by Decision of the Chairman of the Board							
(9) Co-op Board Members receive information in advance and have enough time to prepare to attend the meeting							
(10) Documents for the meeting have enough information to consider for decision-making, especially information about options in decision-making and							

Issues	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
the advantages and disadvantages of each alternative							
(11) Co-op Board Members follow up the resolutions of the Board continuously							

Part 4: Characteristics of the Co-op's products and services

4.1 Number of products and services your Co-op produces or procures(Please specify)

1) ……

2) ……

3) ……

4) ……

5) ……

4.2 What are the selling points of products and services provided or procured by your Co-op? (Can answer more than 1 option)

O Price O Quality O Different qualifications

O Uniqueness / Beauty O After-sales service O Distribution Channel

O PR / Advertisement O Others (Please specify).....

4.3 If your Co-op's products and services compete with other producers, how is the competitive condition in the market? (Answer only 1 option)

O Only 1 producer (Monopoly) O Few producers (Oligopoly)

O Many / a lot of producers (Competitive)

4.4 If your Co-op's products and services compete with other producers, how big is the market share your Co-op has in the market you have been in? (Answer only 1 option)

O Less than 5% O 6-10% O 11-20% O 21-30%

O 31-40% O 41-50% O More than 50%

Part 5: Characteristics of the Co-op's members

5.1 Average monthly income of the Co-op's members (Answer only 1 option)

- ○ Less than 5,000 Baht
- ○ 5,001 - 10,000 Baht
- ○ 10,001 - 15,000 Baht
- ○ 15,001 - 20,000 Baht
- ○ 20,001 - 25,000 Baht
- ○ 25,001 - 30,000 Baht
- ○ More than 30,000 Baht

5.2 Average education level of the Co-op's members (Answer only 1 option)

- ○ Lower than primary education
- ○ Graduated Junior High School
- ○ Graduated High School
- ○ Graduated Vocational Study
- ○ Graduated Bachelor's Degree
- ○ Higher than Bachelor's Degree

5.3 Proportion of Co-op's members by member's occupation (from highest to lowest)

No.	Occupation of members	% of Co-op's total membership
1		
2		
3		
4		

5.4 Proportion of Co-op's members by type of relationship with the Co-op (From highest to lowest)

No.	Co-op's members by type of relationship	% of Co-op's total membership
1	Customers of the Co-op	
2	Suppliers of the Co-op	
3	Both customers & suppliers of the Co-op	
4	Others (Please specify)…….....	

5.5 Participation of Co-op's members

No.		% of total Co-op's members
1	Number of Co-op's members that had a transaction with the Co-op last year	
2	Number of Co-op's members that attended the annual meeting last year	
3	Yearly turnover rate of Co-op's members	

5.6 Does your Co-op have a policy to restrict membership? If there is, on what conditions? (Can answer more than 1 option)

- O No restrictions
- O Yes, there are. Restricted by:
- O Occupations set by the Co-op
- O Income level higher than the standard set by the Co-op
- O Income level does not exceed the standard set by the Co-op
- O Residential area where the Co-op is located
- O Must be a staff member of that workplace or school/university
- O Others (Please specify)…….....……

Part 6: Characteristics of management in the Co-op

6.1 Does your Co-op have a marketing agreement with members?

- O No
- O Yes, there is a buying agreement with members
- O Yes, there is a selling agreement with members
- O Yes, there is another agreement with members (Please specify).....

6.2 Does your Co-op have a problem in management?

Issues	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
Management problem							
1) Members of staff lack knowledge and expertise in the field of work.							
2) Not enough staff							

Issues	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
3) Staff lack knowledge in marketing							
4) High operating costs							
5) Lack of information necessary for the operation and administration							
6) Others (Please specify)							
Financial problem							
1) Lack of working capital							
2) Difficulty of access to financial resources							
3) High financial costs (High interest rates							
4) Lack adequate accounting standards							
5) Doesn't have financial and investment planning							
6) Low return on investments							
7) Others (Please specify)							

6.3 At what level of internal management quality has your Co-op been classified?

O Need to fix O Should be improved O Fair

O Good O Very good O Not classified

6.4 Does your Co-op engage in goal setting and planning for the Co-op's operations?

O No

O There are yearly goals and yearly plans

O There are long-term goals and plans (For example, a 3 year plan or a 5 year plan)

O There are short term goals and plans (Less than 1 year)

Part 7: Factors supporting the Co-op's operations

7.1 Does your Co-operative get any support from a Co-operative League?

	Yes	No
1) As a source destination for Co-op deposits and investment		
2) To provide such financial support as loans, subsidies		
3) To provide hedging tools for the Co-op		
4) To provide technical and administrative support		
5) To educate and train the Co-op staff		
6) To provide marketing assistance and buy products and services from the Co-op		
7) To provide R&D assistance for new products and production process development		
8) For PR, to empower the Co-op, to increase negotiating power with the government		
9) Others (Please specify).....		

7.2 How do existing laws and regulations affect the Co-op's operations in these areas?

Issues	Most Worse Off -3	Slightly Worse Off -2	Slightly Worse Off -1	Neutral 0	Most Better Off 1	Slightly Better Off 2	Most Better Off 3
1) Co-ops security and standard							
2) Co-op reliability in the eyes of members							
3) Operating costs of the Co-op							
4) Flexibility in running Co-op							
5) Free from intervention by politicians							
6) Effectiveness in decision-making by the Co-op Board							
7) Co-op competitiveness							
8) Others (Please specify)							

Issues	Most Worse Off -3	Slightly Worse Off -2	Slightly Worse Off -1	Neutral 0	Most Better Off 1	Slightly Better Off 2	Most Better Off 3
.....							

7.3 Does your Co-op benefit from government policies in these areas?

	Yes	No
1) Financial support such as low interest rate loans, subsidies		
2) Subsidy for factors of production		
3) Price intervention		
4) Technical and administrative support		
5) Others (Please specify).....		

<u>Part 8: Suggestions and recommendations</u>

8.1 Do you have suggestions about the operation of the Co-op's Board of Directors? (Please provide clear and concrete examples)

……
……
……
……
……
……

8.2 In your opinion, what are the important problems and hindrances in the operation of the Co-op's Board of Directors?

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……
……
……
……
……
……
……

8.3 Do you have any suggestions on the Federation of Co-ops, Co-operative League, government policies? What kind of support would you like to have from them? And what laws or regulations you would like to change, and how? (Please provide clear and concrete examples)

……
……
……
……
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……
……
……

Appendix III
Assessing Content Validity of the Questionnaires

There are three experts who participated in assessing the content validity of the two questionnaires, which are questionnaires for Co-operative Board Members and Co-operative managers. These experts include:

- Police General Niphot Weerasunthorn, the Board chairman of the Saving and Credit Co-operative of Royal Thai Police Headquarters Limited. He is also the Board chairman of the Federation of Saving and Credit Co-operative of Royal Thai Police Headquarters Limited
- Assistant Professor Suchin Pleehajinda, department of Co-operatives, faculty of economics, Kasetsart University. He is also the advisor to the savings Co-operative of Kasetsart university, and the former vice president of the savings Co-operative of Kasetsart university
- Assoc. Prof. Jutatip Patrawart, department of Co-operatives, faculty of economics, Kasetsart University. She is also a scholar of the Co-operative Academic Institute.

All experts assessed the questionnaires by giving a score for each question. The assessment forms used a 3-point scale as follows.

- Scoring +1 = Certain that the test is congruent with the objectives or content.
- Scoring 0 = Uncertain that the test is congruent with the objectives or content.

- Scoring -1 = Certain that the test is NOT congruent with the objectives or content.

Then, the values of Item-Objective Congruence Index (IOC) were calculated from the following equation:

$$IOC = \sum R / N$$

where $\sum R$ = Sum of scores checked by at least three specialists

N = Number of specialists

The result of the assessment is shown in Table A3.1 and Table A3.2.

Table A3.1: IOC values of the questionnaire for Co-operative Board Members

No.	Items	Expert1	Expert2	Expert3	IOC Index	Interpretation
1	MEETAL1T	1	1	1	1	✓
2	MEETAMON	1	1	1	1	✓
3	BONUS	1	1	1	1	✓
4	INMEMBER	1	1	1	1	✓
5	EXPENSE	1	1	1	1	✓
6	EXPECT1	1	1	1	1	✓
7	EXPECT2	1	1	1	1	✓
8	INSTRU1	1	1	1	1	✓
9	INSTRU2	1	1	1	1	✓
10	INSTRU3	1	1	1	1	✓
11	INSTRU4	1	0	1	0.67	✓
12	INSTRU5	1	1	1	1	✓
13	INSTRU6	1	1	1	1	✓
14	INSTRU7	1	1	1	1	✓
15	INSTRU8	1	1	1	1	✓
16	INSTRU9	1	-1	1	0.33	X
17	VALENCE1	1	1	1	1	✓
18	VALENCE2	1	1	1	1	✓
19	VALENCE3	1	1	1	1	✓

No.	Items	Expert1	Expert2	Expert3	IOC Index	Interpretation
20	VALENCE4	1	0	1	0.67	✓
21	VALENCE5	1	1	1	1	✓
22	VALENCE6	1	1	1	1	✓
23	VALENCE7	1	1	1	1	✓
24	VALENCE8	1	1	1	1	✓
25	VALENCE9	1	-1	1	0.33	X
26	MOTIV1	1	1	1	1	✓
27	MOTIV2	1	1	1	1	✓
28	MOTIV3	1	1	1	1	✓
29	MOTIV4	1	1	1	1	✓
30	MOTIV5	1	1	1	1	✓
31	MOTIV6	1	1	1	1	✓
32	MOTIV7	1	1	1	1	✓
33	ONEMAN1	1	1	0	0.67	✓
34	ONEMAN2	1	1	0	0.67	✓
35	ONEMAN3	1	1	0	0.67	✓
36	ONEMAN4	1	1	0	0.67	✓
37	BSIZE	1	1	1	1	✓
38	BSIZE1	1	1	1	1	✓
39	BSIZE2	1	1	1	1	✓
40	BSIZE3	1	1	1	1	✓
41	BSIZE4	1	1	1	1	✓
42	BSIZE5	1	1	1	1	✓
43	YEARTERM	1	1	1	1	✓
44	TERM2Y1	1	1	0	0.67	✓
45	TERM2Y2	1	1	0	0.67	✓
46	TERM2Y3	1	1	0	0.67	✓
47	TERM2Y4	1	1	0	0.67	✓
48	TERM2Y5	1	1	0	0.67	✓
49	NUMTERM	1	1	1	1	✓
50	B2TERM1	1	1	0	0.67	✓

No.	Items	Expert1	Expert2	Expert3	IOC Index	Interpretation
51	B2TERM2	1	1	0	0.67	✓
52	B2TERM3	1	1	0	0.67	✓
53	B2TERM4	1	1	0	0.67	✓
54	B2TERM5	1	1	0	0.67	✓
55	BSTRUCT	1	1	0	0.67	✓
56	BSTRUCT1	1	1	0	0.67	✓
57	BSTRUCT2	1	1	0	0.67	✓
58	BSTRUCT3	1	1	0	0.67	✓
59	BSTRUCT4	1	1	0	0.67	✓
60	BCOMPO	1	1	0	0.67	✓
61	BCOMPO1	1	1	0	0.67	✓
62	BCOMPO2	1	1	0	0.67	✓
63	BCOMPO3	1	1	0	0.67	✓
64	BCOMPO4	1	-1	0	0	X
65	BCOMPO5	1	1	0	0.67	✓
66	EXPIR1	1	1	1	1	✓
67	EXPIR2	1	1	1	1	✓
68	EXINCO-OPERATIVE	1	1	1	1	✓
69	SEMINAR	1	1	1	1	✓
70	BAUTHO	1	1	0	0.67	✓
71	BAUTHO1	1	1	1	1	✓
72	BAUTHO2	1	1	1	1	✓
73	BAUTHO3	1	1	1	1	✓
74	WORKHR	0	1	-1	0	X
75	BMAINAC	0	0	-1	-0.33	X
76	SUPPORT1	1	1	0	0.67	✓
77	SUPPORT2	1	1	0	0.67	✓
78	SUPPORT3	1	1	0	0.67	✓
79	AGENDA	1	1	1	1	✓
80	COMRULE1	1	1	0	0.67	✓
81	COMRULE2	1	1	0	0.67	✓

No.	Items	Expert1	Expert2	Expert3	IOC Index	Interpretation
82	COMRULE3	1	1	0	0.67	✓
83	COMRULE4	1	1	1	1	✓
84	COMRULE5	1	1	1	1	✓
85	COMRULE6	1	1	1	1	✓

Table A3.2: IOC values of the questionnaire for Co-operative managers

No.	Items	Expert1	Expert2	Expert3	IOC Index	Interpretation
1	LOCATION	1	1	1	1	✓
2	CO-OPERATIVEAGE	1	1	1	1	✓
3	CO-OPERATIVEBIZ	1	1	1	1	✓
4	CUSTAR	1	1	1	1	✓
5	EMPLOYEE	1	1	1	1	✓
6	NOCOM	1	1	1	1	✓
7	INTERNET	1	1	1	1	✓
8	STRUCTUR	1	1	1	1	✓
9	MANAGER	1	1	1	1	✓
10	RLSBOMA	1	1	1	1	✓
11	BFUNC	1	1	1	1	✓
12	RESOLU	1	1	1	1	✓
13	DAYSB4	1	1	1	1	✓
14	AGDSET	1	1	1	1	✓
15	MEETTIME	1	1	1	1	✓
16	ONTIME	1	1	0	0.67	✓
17	FOLLOW1	1	1	1	1	✓
18	FOLLOW2	1	1	1	1	✓
19	COMMUN1	1	1	1	1	✓
20	COMMUN2	1	1	1	1	✓
21	COMMUN3	1	1	1	1	✓
22	CONRESO1	1	1	1	1	✓
23	CONRESO2	1	1	1	1	✓
24	CONRESO3	1	1	1	1	✓
25	CONRESO4	1	-1	-1	-0.33	X
26	CONOFIN1	1	1	1	1	✓
27	CONOFIN2	1	1	1	1	✓
28	CONOFIN3	1	1	1	1	✓
29	BMEET1	1	1	1	1	✓
30	BMEET2	1	1	1	1	✓
31	BMEET3	1	1	1	1	✓
32	BMEET4	1	1	1	1	✓
33	BMEET5	1	1	1	1	✓
34	BMEET6	1	1	1	1	✓
35	BMEET7	1	1	1	1	✓
36	BMEET8	1	1	1	1	✓
37	BMEET9	1	1	1	1	✓
38	BMEET10	1	1	1	1	✓

No.	Items	Expert1	Expert2	Expert3	IOC Index	Interpretation
39	BMEET11	1	1	1	1	✓
40	PRODUCT	0	1	0	0.33	X
41	USP	1	1	1	1	✓
42	COMPETE	1	1	1	1	✓
43	MKSHARE	0	-1	-1	-0.67	X
44	MEMINCOM	1	1	1	1	✓
45	MEMEDU	0	1	1	0.67	✓
46	MEMOC	1	1	1	1	✓
47	RLSMEMCO	0	1	1	0.67	✓
48	BIZMEMCO	1	1	1	1	✓
49	MEMMEET	1	1	1	1	✓
50	TURNOVER	1	1	1	1	✓
51	MEMLIM2	-1	1	1	0.33	X
52	MKAGREE	1	1	1	1	✓
53	PROB1	1	1	1	1	✓
54	PROB2	1	1	1	1	✓
55	PROB3	1	1	1	1	✓
56	PROB4	1	1	1	1	✓
57	PROB5	1	1	1	1	✓
58	PROB6	1	1	1	1	✓
59	PROB7	1	1	1	1	✓
60	PROB8	1	1	1	1	✓
61	PROB9	1	1	1	1	✓
62	PROB10	1	1	1	1	✓
63	PROB11	1	1	1	1	✓
64	COOPLEVE	1	1	1	1	✓
65	BIZPLAN	1	1	1	1	✓
66	FEDSUP1	1	1	1	1	✓
67	FEDSUP2	1	1	1	1	✓
68	FEDSUP3	1	1	1	1	✓
69	FEDSUP4	1	1	1	1	✓
70	FEDSUP5	1	1	1	1	✓
71	FEDSUP6	1	1	1	1	✓
72	FEDSUP7	1	1	1	1	✓
73	FEDSUP8	1	1	1	1	✓
74	IMOFREG1	1	1	1	1	✓
75	IMOFREG2	1	1	1	1	✓
76	IMOFREG3	1	1	1	1	✓
77	IMOFREG4	1	1	1	1	✓
78	IMOFREG5	1	1	1	1	✓

No.	Items	Expert1	Expert2	Expert3	IOC Index	Interpretation
79	IMOFREG6	1	1	1	1	✓
80	IMOFREG7	1	1	1	1	✓
81	GOVSUP1	1	1	1	1	✓
82	GOVSUP2	1	1	1	1	✓
83	GOVSUP3	1	1	1	1	✓
84	GOVSUP4	1	1	1	1	✓

Appendix IV

Letter requesting an interview appointment

TO

SUBJECT: Request for an interview appointment

ATTACHMENT: Interview topics

This letter is to request your permission for an interview appointment. I am conducting a research entitled, '*Enhancing Board Motivation for Sustainable Competitive Performance of Thailand's Business Co-operatives'* and would very much appreciate your support in providing your perspective as an expert on the subject.

The Board of Directors of an organization plays an important role in driving the organization to achieve its goals. However, operating within the context of Co-operative ideology and its rules and regulations, Co-operatives face several problems which cause Board Members to lose motivation. This study aims to examine the working mechanism of Co-operative Board Members' motivation and its impact on the Co-operative's performance in Thailand. The study hopes to offer recommendations for enhancing Co-operative Board Members' motivation so that the Co-operative's performance can be improved, making Co-operatives a key driver for economic development in Thailand. Your participation would help in advancing knowledge of the field of business Co-operatives management in the case of Thailand.

A list of interview topics is attached herewith. Your participation in the study is entirely voluntary. You are free to ask queries about the study or any additional details you wish to know. You are also free to refuse answering any questions, should you prefer. You are free to withdraw from the interview or to leave at any time, without needing to give any reason or explanation. Data which you provide along with any personal data, will be stored in my personal storage which can only be accessed by me, thus ensuring confidentiality. At the end of the project, all data will be destroyed permanently. Excerpts from the interview may be used in the final research report and subsequent publication in academic and professional journals. In view of this, whenever required, the identifying labels (i.e. your name and affiliation) will be anonymous. Furthermore, any changes to these conditions which relate to you will only be made with your approval.

Please do not hesitate to ask any further questions prior to the interview.

Your agreement for the interview appointment will be taken as your consent to take part in this study.

I hope to receive your acceptance in participating in this study.

Yours sincerely,

Kriengsak Chareonwongsak

Acceptance Form

Request for an interview appointment for a study entitled '*Enhancing Board Motivation for Sustainable Competitive Performance of Thailand's Business Co-operatives'*

This is to confirm that I, …….(name),

☐ accept a request for an interview and voluntarily agree to participate in the study by giving:

☐ person-to-person interview on ……. [date] at ……...[place]

☐ phone interview on ……. [date] with phone number ……..

☐ decline a request for an interview and will not participate in the study.

……

( )

Interview topics

The issues for the interview are as following:

1) What is the most important factor affecting the performance of your Co-operative? These can be micro factors, e.g. the operation of Co-operatives, quality of employees, etc, or macro factors e.g. rules and regulations, or support from the government.

2) What is the motivation behind a person who wants to be a Co-operative Board Member?

3) Does the motivation of the Co-operative Board Members affect the Co-operative's performance, and if so how?

4) What factors cause the Board Members to gain or lose motivation in their work?

Appendix V

Summary of how to measure Expectancy, Instrumentality, Valence and Motivation

For this study, the questions used to measure the Expectancy, Instrumentality, Valence and Motivation in the questionnaire are based on several previous studies.

Chiang and Jang (2008, p.314) stated that Expectancy is affected by an individual's expectancy perception, including (1) self-efficacy (2) goal difficulty (3) perceived control (4) past experience (5) self-confidence, (6) the perceived difficulty of the performance goal. Earlier literature measured Expectancy by asking the possibility or likelihood (Pritchard and Sanders, 1973; Matsui and Terai, 1975; Klein, 1991), the frequency of getting something back if a subject spent time and effort on it (Kominis and Emmanuel, 2007) or even an opinion (agree or disagree) (Mitchell and Nebeker, 1973; Chiang and Jang, 2008).

Examples of questions used to measure Expectancy and response guidelines are shown in Table A4.1.

Table A4.1: How to measure Expectancy

Paper	Means of measurement
Mitchell and Nebeker (1973)	7-point scale the degree to which he felt that the time he spent on academic activities would lead to good grades. Scale values ranged from 0 to 6.
Pritchard and Sanders (1973)	- Asking about the possibility (0 – 10) of this situation occurring: (a) If a person studies very hard, he will learn the system (b) If I study very hard, I will learn the system, (c) If a person puts in a great deal of work, effort, and home study on learning the system, he will pass the system test.
Matsui and Terai	(1) "What would you estimate to be your own likelihood of signing

Paper	Means of measurement
(1975)	this person up without the introduction of an influential person?" - The response alternatives included "completely certain," "very promising," "fifty-fifty," "rather difficult," and "completely hopeless." (2) "What do you estimate to be the probability of your improving or maintaining your present sales amount by your efforts?" - Response alternatives included "highly possible," "quite possible," "cannot say," "rather difficult," and "very difficult." (3) "It is a general rule that, 'If one makes an effort, one will meet with success'. In your experience how applicable is this general principle in the case of life insurance sales?" - Response alternatives included "highly applicable," "fairly applicable," "cannot say," "not very applicable," "completely inapplicable."
Klein (1991)	- Response alternatives were 0, 25, 75, 50, 100 - Please indicate below what you think your chances are of obtaining those grades. - What are the chances in 100 that you will obtain at least a 1.0? 1.5? 2.0? 2.5? 3.0? 3.5? and 4.0?
Kominis and Emmanuel (2007)	(1) How often do you feel that you can actually reach the standards of performance, as these are defined by the PMERS of the company, if you put a great deal of effort into your job? - Response alternatives: 1 = Never, 4 = Sometimes, 7 = Almost always.
Chiang and Jang (2008)	- 7-point scale from 1 (strongly disagree) to 7 (strongly agree) (1) If I work very hard, my job performance will significantly improve (2) If I work very hard, I will get a lot more accomplished (3) If I put more effort into my job, my productivity will improve significantly (4) If I put more effort into my job, I will definitely be regarded as an effective employee

Source: The author’s compilation

Factors affecting the individual's instrumentality perception are trust, control, and policies (Chiang and Jang, 2008, p.314).

Chiang and Jang (2008) separated Instrumentality into extrinsic and intrinsic. Extrinsic Instrumentality is (1) getting good pay (2) getting monetary bonuses (3) getting pay increases (4) having more opportunities for promotion. Intrinsic Instrumentality is (1) having more responsibility and control over my job (2) taking on more challenging work tasks (3) having feelings of accomplishment (4) feeling very good about myself (Table A4.2).

Numbers of rewards are varied. Rewards list used in analysing Instrumentality in many studies can be obtained from the interview with employees and supervisor (Pritchard and Sanders, 1973; Matsui and Terai, 1975) or drawn from the literature (Chiang and Jang, 2008).

Examples of questions used to measure Instrumentality and response guidelines are shown in Table A4.2.

Table A4.2: How to measure Instrumentality

Paper	Means of measurement
Gavin (1973)	- 21 rewards listed such as High pay, giving help to others, feeling of security and promotion. By asking 2 main questions: (a) How frequently does working hard lead to this reward? (b) How frequently does good job performance lead to this same reward?
Mitchell and Nebeker (1973)	- An estimate was made by the subject as to the degree to which obtaining good grades contributed to or detracted from the possibility of obtaining each outcome. - The rating was made on a 7-point scale with values ranging from +3 to -3.
Pritchard and Sanders (1973)	- 15 potential job outcomes obtained from the interview with employees and supervisor.

Paper	Means of measurement
	1. Gaining admiration and respect from my fellow workers 2. Getting more work assigned to me 3. Being able to do my job without the help of others 4. Having my supervisor checking on my work 5. Being promoted 6. Working more consistent hours 7. Working better hours 8. Working more hours 9. Getting an opportunity to put my training knowledge to work immediately 10. Working with people who really know their jobs 11. Getting more responsible tasks to do 12. Keeping my job (i.e., not being fired) 13. Feeling a sense of accomplishment for mastering a difficult task 14. Being able to truly contribute to the operation of the organization 15. Getting a pay rise - By asking about the possibility (0 – 10) of this situation to occur by:
Matsui and Terai (1975)	- A set of 17 outcomes was first obtained in interviews with IS female life insurance sales representatives. - It indicates their perceptions of the possibility of "doing a good trade" leading to each of the 17 outcomes, respectively. - The response alternatives were "very highly possible," "highly possible," "quite possible," "possible to a slight degree," and "impossible,"
Kominis and Emmanuel (2007)	(2) How often do you feel that your actual performance is captured and reflected properly by the PMERS of the company? (3) How do you feel that the award of <Reward A> actually depends on yours evaluated performance as this is assessed by the PMERS of the company? - Response alternatives include 1 = Never, 4 = Sometimes, 7 = Almost always.

Paper	Means of measurement
Chiang and Jang (2008)	- 8 items of instrumentality were drawn from the literature (Gavin, 1970; Matsui and Ohtsuka, 1978; Reinharth and Wahba, 1975) - Separate between Extrinsic instrumentality and Intrinsic instrumentality - Extrinsic instrumentality: Performing well in my job will definitely result in my… (1) getting good pay (2) getting monetary bonuses (3) getting pay increases (4) having more opportunities for promotion - Intrinsic instrumentality: Performing well in my job will definitely result in my… (1) having more responsibility and control over my job (2) taking on more challenging work tasks (3) having feelings of accomplishment (4) feeling very good about myself

Source: The author's compilation

Chiang and Jang (2008, p.314) identified Valence as the function of needs, goals, values and preferences. Normally, it is the same list as Instrumentality, but Chiang and Jang (2008) used Valence variables different from Instrumentality variables. Examples of questions used to measure Valence and response guidelines are shown in Table A4.3.

Table A4.3: How to measure Valence

Paper	Means of measurement
Gavin (1973)	- The same 21 rewards listed as Instrumentality - 9 point scale (Extremely undesirable to Extremely desirable)
Mitchell and Nebeker (1973)	- Three were considered to be intrinsic (1) Feelings of accomplishment (2) Self-confidence, (3) Appreciation of ideas.

Paper	Means of measurement
	- Two were labeled extrinsic and impersonal (4) A good job (5) Admission to graduate school. - Four were classified as extrinsic and social, (6) Socially attractive (7) Parental praise (8) Respect from peers.
Pritchard, R.D. and Sanders, M.S. (1973)	- The same 15 rewards listed as Instrumentality - 11 point Likert-scale ranging from +5 (Extremely Good), 0 (Neutral), -5 (Extremely Bad)
Matsui and Terai (1975)	- A set of 17 outcomes was first obtained in interviews - 9-point Likert scales were provided for the subjects' responses, ranging from +4 (extremely good) through 0 (indifferent) to —4 (extremely bad). - The 17 outcomes contained 13 with positive valence (e.g., "Saving up against insecurity in days to come.") and 4 with negative valence (e.g., "Opposition of my family to my having an outside job.").
Parker and Dyer (1975)	- 9-point scales ranging in values from -4 to +4. - Outcomes were selected from previous expectancy theory research and from data gathered in the preliminary interviews. 1. Working in an organization where personnel policies directly affect me and my future are arbitrarily changed without consultation or agreement with me 2. Future promotions 3. A feeling of camaraderie among the members of the organization 4. Having my wife and/or children satisfied with the nature of my job and its demands 5. Working for an organization that recognizes my contributions 6. Frequent separation from my family of more than a few days duration because of the demands of my job 7. Having future job assignments I prefer 8. Having a job or profession that provides adventure, zest, or excitement

Paper	Means of measurement
	9. Making enough money to provide for future needs and security 10. Relatively frequent transfers to a new location and job 11. Having a job I don't like 12. A feeling of pride and self-esteem in the way I earn my living 13. Being involuntarily retired before I want to retire 14. Considerably more authority and responsibility 15. A feeling that my job and what I do are important 16. Having a job where there will be challenge and opportunity for personal growth 17. Earning twice as much money 18. Being under a great deal of pressure in my job 19. Being in charge of an organization 20. Living in a place I am happy to live in 21. A job that gives a feeling of worthwhile accomplishment 22. Working in an organization where there are arbitrary and/'or inequitable rules, regulations, or policies which I or my immediate superior in the organization are powerless to correct 23. Feeling of self-fulfillment 24. Opportunity for independent thought and action 25. A great feeling of satisfaction from my work
Pritchard, Deleo and Von Bergen, Jr. (1976)	- 50 usable incentives was selected and reduced to 8 incentives - 17 point-Likert scale included “Extremely attractive”, "Neither attractive nor unattractive” to "Extremely unattractive. (1) Special award for outstanding performance sent to new Commanding Officer. (2) Special award for outstanding performance sent to parents. (3) Being excused from squadron details for one week. (4) Getting a 3-day pass over the weekend. (5) Getting a Walker's Pass for a week? (6) Being able to leave class 1 hr earlier. (7) Not having to go to class for 1 day. (8) Wearing any uniform desired for a week.
Kominis and	- Ask subject to list and rate the reward themselves by asking: Please identify as many as possible Outcomes – Rewards associated with

Paper	Means of measurement
Emmanuel (2007)	your own job. Then rate these Job Outcomes – Rewards on the basis of how important (desirable) each of them is to you - 7 point Likert scales (1 = Unimportant, 3 = Moderately desirable, 7 = Extremely desirable)
Chiang and Jang (2008)	- Valence was also drawn from the literature (Galbraith and Cummings, 1967; Gavin, 1970; Mobley, 1971; Mitchell, 1974). - Separated between Extrinsic Valence and Intrinsic Valence - Extrinsic Valence (1) Good salary/wage (2) More monetary bonuses (3) More pay increases (4) Interesting work (5) Opportunities for advancement/promotion - Intrinsic Valence (1) More responsibility/control over my job (2) More challenging work tasks (3) Full use my skills and abilities (4) Feelings of accomplishment (5) Personal growth and development
Klein (1991)	- 7 point-Likert scale -3 = Very Unattractive, 3 = Very attractive - Please indicate how attractive it would be for you to obtain the following possible grades in this class. - How attractive is obtaining a 1.0? 1.5? 2.0? 2.5? 3.0? 3.5? 4.0?

Source: The author's compilation

To measure the level of motivation, a list of questions is also used. Subjects are asked to respond to questions which have the answer choices in a Likert-type scale. The number of questions and styles of question are various, as illustrated in Table A4.4.

Table A4.4: How to measure the level of Work Effort or Motivation

Paper	Means of measurement
Pritchard, R.D. and Sanders, M.S.	- A self-report measure of effort was obtained by averaging the responses to four 7-point Likert items.

Paper	Means of measurement
(1973)	(1) Level of effort put into learning the system (2) Level of effort in relation to other people in the training program (3) Level of effort in relation to the amount needed to pass the system test (4) Frequency of keeping up with the class assignments
Silva (2005)	Board Members were asked about their level of involvement in the firm and how seriously they view their role as Board Members. Seven items on a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) are: 1) Most decisions made by the Board of Directors are completely independent from CEO intervention. 2) I feel that my participation in Board decision making is valued by my Board Members. 3) The CEO's opinion in Board discussions is integral to the discussions of Board Members. 4) Being a Board Member is important to me. 5) Decisions I make significantly affect the lives and well-being of others. 6) I have a lot of autonomy in my job as a Board Member. I have a lot of freedom in doing my work. 7) My job as a Board Member gives me many chances to use my personal initiative or judgment in carrying out my duties.
Chiang and Jang (2008)	- 4 items were adapted to measure work motivation (Arvey and Mussio, 1973; Ivancevich, 1976; Kopelman 1979; Landy and Guion, 1970). - 4 questions used to estimate work motivation. - When I am highly motivated, I will definitely…. (1) Expand more effort on the job (2) Enhance quality of my job performance (3) Increase productivity on the job (4) Be willing to get involved in my job

Source: The author’s compilation

The result of the studies on Motivation using Vroom's Expectancy Theory as a framework by Pritchard and Sanders (1973, p.55) indicated that the Valence of job outcomes was by far the best single predictor of work motivation. While Chiang and Jang (2008, p.213) found that Intrinsic motivation factors (Intrinsic Instrumentality and Intrinsic Valence) are more influential than extrinsic factors for hotel employees. Besides those studies, Kominis and Emmanuel (2007) pointed out that both extrinsic and intrinsic rewards have a significant positive impact on managerial motivation.

Appendix VI

Calculation of Financial Ratios

The formulas used in calculating financial ratios in this study are presented below.

1. Liquidity Ratios

$$\text{1) Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Current ratio is used to analyze firm’s liquidity. It indicates a firm’s ability to meet its current obligations in the short term. If a company's current ratio is more than 1, it is generally considered to have good short-term financial strength. If the current ratio is below 1, then the company may have problems meeting its short-term obligations.

2. Profitability Ratios

$$\text{1) Return on Assets} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

This measures how efficient the organization is at using its assets to generate earnings. The higher the return on assets number, the better, because it means that the company is earning more money with a smaller investment.

$$\text{2) Return on Equity} = \frac{\text{Net Profit}}{\text{Shareholder’s Equity}}$$

This measures a firm's efficiency at generating profits from shareholders' equity or how much profit it is able to generate given the resources provided by its stockholders. The higher returns on equity, the better it is for firms.

3) Net Profit Margin Percentage = Net Profit x 100

Revenue

3. Efficiency Ratios (Activity Ratios)

- Account Receivable Turnover
- Average Collection Period
- Total Asset Turnover
- Fixed Asset Turnover

4. Leverage Ratios (Debt Ratios)

- Debt-to-Equity