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THE MODEL OF THE ANTECEDENTS AND CONSEQUENCES OF THE PHILOSOPHY
OF SUFFICIENCY ECONOMY UPON SMES

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ศศิธร มหาคุณาจิระกุล : ตัวแบบการศึกษาปัจจัยเชิงเหตุและผลของการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้กับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง (THE MODEL OF THE ANTECEDENTS AND CONSEQUENCES OF THE PHILOSOPHY OF SUFFICIENCY ECONOMY UPON SMES) อ. ที่ปริกษาวิทยานิพนธ์หลัก รศ. ดร. กุณฑลี่ รื่นรมย์, 274 หน้า.

ปรัชญาเศรษฐกิจพอเพียง เป็นปรัชญาที่พระบาทสมเด็จพระเจ้าอยู่หัวภูมิพลอดุลยเดช ทรงมีพระราชดำรัสตั้งแต่ปี พ.ศ. 2517 ปรัชญานี้ เป็นปรัชญาที่ยึดหลักทางสายกลางที่ชี้แนะทางการปฏิบัติเพื่อการพัฒนาอย่างยั่งยืนของประชาชนในทุกกระดับ ปรัชญานี้ประกอบด้วยปัจจัย 3 ประการ คือ ความพอประมาณ ความมีเหตุผล และการมีภูมิคุ้มกัน กับเงื่อนไข 2 ประการ คือ ความรู้ และคุณธรรม

งานวิจัยนี้เป็นงานวิจัยเชิงประจักษ์ที่มีการนำเสนอตัวแบบ (Model) ในการศึกษาอย่างเป็นระบบ เกี่ยวกับการนำปรัชญาเศรษฐกิจพอเพียงมาประยุกต์ ในการดำเนินธุรกิจของวิสาหกิจขนาดเล็กและขนาดกลาง (SMEs) โดยมีวัตถุประสงค์เพื่อค้นหาว่าปัจจัยภายนอกและปัจจัยภายในใดช่วยเพิ่มระดับการนำปรัชญาเศรษฐกิจพอเพียงมาประยุกต์กับ SMEs และต้องการทราบผลของการนำปรัชญาเศรษฐกิจพอเพียงมาใช้ในด้านการดำเนินงานด้านการตลาด การเงิน สังคมและสิ่งแวดล้อมของบริษัท ประชากรในการศึกษาคือ SMEs โดยแบ่งธุรกิจ SMEs เป็น 3 ประเภท คือ การผลิต การบริการ และการค้าส่ง ขนาดของกลุ่มตัวอย่างมี 703 บริษัท ข้อมูลที่ได้ทั้งหมดถูกนำมาวิเคราะห์ด้วยวิธี Structural Equation Modeling (SEM)

ผลการวิเคราะห์พบว่าปัจจัยภายใน ได้แก่ การมีวิสัยทัศน์ร่วม และภาวะผู้นำที่ยึดคุณค่าเป็นหลัก ส่วนปัจจัยภายนอก ได้แก่ เครือข่ายทางสังคม และการรับรู้ความไม่แน่นอนของสภาพแวดล้อม มีอิทธิพลเชิงบวกอย่างมีนัยสำคัญทางสถิติต่อระดับการนำปรัชญาเศรษฐกิจพอเพียงมาใช้กับธุรกิจ SMEs อย่างไรก็ตาม ผลการวิจัยพบว่า การสนับสนุนจากรัฐบาลมีอิทธิพลเชิงลบอย่างมีนัยสำคัญต่อระดับการนำปรัชญาเศรษฐกิจพอเพียงมาใช้กับ SMEs นอกจากนี้ยังพบว่า การนำปรัชญาเศรษฐกิจพอเพียงมาประยุกต์ช่วยทำให้ผลการดำเนินงานของ SMEs ทั้งในด้านการตลาด การเงิน สังคม และสิ่งแวดล้อมดีขึ้น

การศึกษานี้มีคุณประโยชน์ทั้งภาคทฤษฎีและภาคปฏิบัติ ผลการวิจัยสามารถนำมาใช้เพื่อช่วยเสนอแนะแนวทางในการพัฒนากลยุทธ์การตลาดและการวางแผนธุรกิจของ SMEs ซึ่งการนำปรัชญาเศรษฐกิจพอเพียงมาประยุกต์จะช่วยนำไปสู่เป้าหมายของความยั่งยืนในระยะยาว

สาขาวิชา บริหารธุรกิจ..... ลายมือชื่อนิติติ
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SASITHORN MAHAKUNAJIRAKUL: THE MODEL OF ANTECEDENTS AND CONSEQUENCES OF THE PHILOSOPHY OF SUFFICIENCY ECONOMY UPON SMES. ADVISOR: ASSOC PROF. GUNTALEE RUENROM, Ph.D., 274 pp.

The Philosophy of Sufficiency Economy (PSE) of His Majesty King Bhumibol Adulyadej has been brought up in the 1974 during His Majesty's speeches. This philosophy focuses on the middle path as the principle for sustainable development of Thai people at all levels. The PSE includes three elements: moderation, reasonableness and self-immunity, as well as two conditions which are knowledge and morality.

This research is an empirical research that presents a systematic model for SMEs adoption of the PSE into business practices. The objectives are to identify the internal and external factors that help firms to increase levels of the PSE adoption and examine the consequences of firms' performances in term of marketing, financial, social, and environmental performances. The population in this study is SMEs which are classified into three types: manufacturing, service, and trading. The total sample size is 703 firms. Structural Equation Modeling (SEM) is utilized to analyze the data.

Results from data analysis show that the internal factors which are shared vision and value based leadership. The external factors include social networks and perceived environmental uncertainty positively influence the level of firm adoption of the PSE in SMEs significantly. However, the results show that the government agency support negatively influences the level of firm adoption of the PSE in SMEs significantly. Moreover, adopting the PSE can help enhance SMEs' performances in the area of marketing, financial, social, and environmental performances.

This study is beneficial for both theoretical and practical aspects. The research results can help develop marketing strategies and business plans for SMEs. Thus, applying the Philosophy of Sufficiency Economy into business practices would help SMEs move toward the goal of business sustainability in the long run.

Field of Study : Business Administration Student's Signature

Academic Year : 2011 Advisor's Signature

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Chapter 1

Introduction

1.1 Rationale

The Philosophy of Sufficiency Economy (PSE) of His Majesty King Bhumibol of Thailand was first officially introduced in 1974 to provide guidance on appropriate conduct covering numerous aspects of life. It focuses on the ‘middle’ path as the principle for Thai people’s behavior and way of life at all levels (NESDB, 2000; Tantivejkul, 2011; Tinsulanonda, 2001).

In the royal speech given in 1974 introducing PSE, His Majesty the King placed importance on gradual development based on independence, sufficiency, moderation, reasonableness, and self-immunity (NESDB, 2011). His Majesty’s thoughts relating to sufficiency economy reappeared in his later lectures and speeches with an emphasis on building economic self-reliance as well as ensuring sufficient protection from internal and external shocks. PSE includes three elements: moderation, reasonableness, and self-immunity, and two conditions for the philosophy to work: knowledge and morality (Piboolsravut and Sufficiency Economy Working Group, 2003). The Philosophy of Sufficiency Economy began to get greater attention during the Thai financial crisis in 1997 (Office of the Royal Development Projects Board, 2004). The economic crisis during 1997 and 1998 led to massive wealth loss in Thailand and other countries and shook the Asian financial system to its foundations. However, during the Asian economic crisis, firms which had adopted PSE recovered at a faster rate (UNDP, 2007). For over 25 years, the Sufficiency Economy concept has been widely promoted as an approach to deal with potential impacts from future economic crises. The philosophy provides guidelines for Thailand and other developing countries on how to better benefit from globalization and how to achieve sustainability. This guidance is applicable to individuals, SMEs, large enterprises, and

the nation (Piboolsravut and Na Nakorn, 2003). King Bhumibol Adulyadej's Sufficiency Economy concept is an important tool to manage capitalism and to provide a process for happiness development applicable to all levels of practices (Kantabutra, 2006).

Although the concept has been widely discussed in Thailand, much research into PSE has been in the agriculture field and there has been little research focused on the business field. Currently, there are many growing businesses in Thailand. Small and medium enterprises (SMEs) played a vital role in the Thai economy. In 2009, it was estimated that around 37.8 percent of Thai GDP was produced by SMEs. There were approximately 2,884,041 such enterprises accounting for 99.42 percent of all enterprises in Thailand. SMEs were the most important employment area and accounted for 78 percent of all employment in Thailand (Office of Small and Medium Enterprise Promotion, 2009). SMEs have adopted the sufficiency economy approach as a guide to management and planning. Doi Chang Coffee, Bathroom Design and the Chumporn Cabana Resort, are some examples of SMEs adopting the Philosophy of Sufficiency Economy (RDPB, 2008). However, SMEs still suffer from misunderstanding in applying this philosophy in their business practices (Laukaikul, 2007; Ruenrom, 2009; Sasin, 2010; Wattanasupachoke, 2009). Therefore, this research addresses some of these misperceptions and provides a better understanding of King Bhumibol's Sufficiency Economy Philosophy in terms of business practices.

Previous research has shown that most Thai firms adopt the Philosophy of Sufficiency Economy. It was found that around 98-99 percent of Thai firms adopt the Philosophy of Sufficiency Economy in their business practices, ranging from a very low level of adoption to a very high level of adoption. More than 50 percent of Thai firms adopt the Philosophy of Sufficiency Economy at a moderate level of adoption (Ruenrom, 2009; The Center for Economic and Business Forecasting, 2007). Firms that have adopted this practice have achieved success over the long term (UNDP, 2007). However, less attention has been paid to the level of adoption by firms of the Philosophy of Sufficiency Economy, and also limited attention has been paid to what factors influence SMEs seeking higher levels of PSE adoption (Khunthongjan, 2009).

This research specifically examines the level of firm adoption of this philosophy in small and medium enterprises.

Various studies have proposed that internal factors such as value-based leadership and shared vision, and external factors such as social networks, government support, and perceived environmental uncertainty will facilitate firms to achieve a higher level of PSE adoption (Kantabutra, 2010; Khunthongjan 2009; Sasin, 2010). Among firms, shared values and internal relationships between parties facilitated meaningful communication that gave a firm or staff access to new knowledge and the adopting process (Woolcock and Naraya, 2000). Furthermore, Khunthongjan (2009) proposed that SMEs which followed the sufficiency economy concept required leadership based on foundational moral principles including honesty, patience, generosity, and diligence. However, the internal factors in a firm's adoption of the PSE concept have not been tested. Besides, the concern for uncertainty of environmental markets evoked by globalization has caused SMEs to adopt the Sufficiency Economy concept into their business practices (Kantabutra, 2006; Sasin, 2010; Yodpetch and Chirapanda, 2008). Although many scholars have discussed the effects of perceived environmental uncertainty, no previous empirical study has tested whether the perceived environmental uncertainty helps enhance a firm's adoption level of the Philosophy of Sufficiency Economy in SMEs. Furthermore, government agencies currently encourage and support firms to adopt the Philosophy of Sufficiency Economy (Kantabutra, 2006). The 'One Tambon One Product' (OTOP) program is another illustration of a government project supporting SMEs by applying the Sufficiency Economy Philosophy. Still, empirical studies of government support are scarce. This research is the first empirical test of the antecedents that help firms seeking higher levels of PSE adoption.

Furthermore, numerous studies support the finding that the Philosophy of Sufficiency Economy (PSE) helps firms sustain their business during an economic crisis. However, most academic articles about the Philosophy of Sufficiency Economy employ qualitative analysis such as case study analysis, focus groups, and interviews. Qualitative methods produce information only on the particular cases studied

(Churchill and Brown, 2007). Therefore, statistical analysis should be employed to enhance comprehension and strengthen the results. This research is the first systematic approach to developing a conceptual framework of the antecedents and the consequences of PSE adoption in SMEs.

Consider the consequences of the level of a firm's adoption of the Philosophy of Sufficiency Economy in SMEs. Prior studies found that economic performance, environmental performance, and social performance indicators were intended to measure the outcomes of an organization's performance. Kantabutra (2006) proposes a theoretical model for business organizations assessing the consequences of the adoption of the Philosophy of Sufficiency Economy in terms of financial performance and non-financial performance. Nevertheless, various researchers still confuse the units of measurement and indicators to assess the Philosophy of Sufficiency Economy in business due to a lack of empirical research. Previous studies suggest that the higher the level of SME adoption of the Philosophy of Sufficiency Economy, the better the SME's performance. However, the results are still inconclusive. Therefore, this research identifies the effect of the level of firm adoption of Sufficiency Economy on the SME's performances in the areas of marketing, financial, social, and environmental performance. A comprehensive understanding of this is definitely valuable to the public and private sectors in order to stimulate SMEs to achieve a higher level of adoption of the Philosophy of Sufficiency Economy into business practices.

In summary, this research is the first systematic approach to developing a conceptual framework; the first empirical test of the antecedents that help firms seeking higher levels of PSE adoption; and the first examination of the consequences of those antecedents for the performance of SMEs. Structural equation modeling was conducted to validate the proposed model and to test the hypotheses. This research contributes to the literature and provides guidelines to the public and private sectors that will help them better understand PSE and formulate strategy and marketing plans to achieve a higher level of PSE adoption.

1.2 Research Questions

The research questions for the study of the antecedents and consequences of the level of firm adoption of the PSE are as follows:

1. What are the external and internal factors affecting the level of firm adoption of the Philosophy of the Sufficiency Economy in SMEs?
2. How does the level of firm adoption of the Philosophy of Sufficiency Economy affect the consequences of the Philosophy of Sufficiency Economy for SMEs?
3. What are the external factors of firms affecting firm performance in SMEs?

1.3 Research Objectives

There are four objectives of this research. They are as follows:

1. To develop a conceptual model of the antecedents and consequences of the adoption of the Philosophy of Sufficiency Economy (PSE) for SMEs.
2. To identify the antecedents (internal factors and the external factors) that can best explain the level of firm adoption of the Philosophy of Sufficiency Economy (PSE) in small and medium-sized enterprises.
3. To investigate the consequences of the Philosophy of Sufficiency Economy (PSE) for SMEs.
4. To empirically examine the impacts of external factors on firm performance for SMEs.

1.4 Framework of the Study

When considering the level of firm adoption of the Philosophy of Sufficiency Economy in SMEs, there are four groups of constructs: internal factors, external factors, the level of SME adoption of the Philosophy of Sufficiency Economy, and firm performance. This framework is used as a basic framework in building “The conceptual model of the Antecedents and Consequences of the Philosophy of Sufficiency Economy for SMEs” in this dissertation. The proposed framework is shown in figure1.1.

External Factors

Social Networks

Government Agency Support

Perceived Environmental Uncertainty

**The SME Adoption of the
Philosophy of Sufficiency
Economy**

Firm Performance

Marketing Performance

Financial Performance

Social Performance

Environmental Performance

Internal Factors

Shared Vision

Value-Based Leadership

1.5 Theoretical Definitions

1. **Social Network** is defined as a set of actors and the set of ties representing some relationship, or lack of relationship, between the actors.
2. **Perceived environmental uncertainty** is defined as a firm's perceived inability to predict changes in environment accurately because of a lack of information, or knowledge necessary for decision-making.
3. **Government Agency Support** refers to government support of firms for adopting the Philosophy of Sufficiency Economy in their business organization.
4. **Shared Vision** is defined as the common clarity of company purpose and goals and it encompasses many aspects of a cooperative relationship.
5. **Value-Based Leadership** refers to a style of leadership based on foundational moral principles or values such as integrity, empowerment, and social responsibility (Reilly and Ehlinger, 2007).
6. **Firm adoption of the Philosophy of Sufficiency Economy** is defined as when a firm applies and deploys the 3 components (moderation, reasonableness, and self-immunity) and 2 underlying conditions (knowledge and morality) of PSE into their business practices.
7. **Moderation** refers to the idea of a middle way between want and excessiveness. Firms operate through the appropriate use of resources and within the proficiency area and resources available.

8. **Reasonableness** refers to reasoning based on knowledge, experience, and clear objectives. When operating, firms consider the direct and indirect impacts on stakeholders and focus more on long-term profits than short-term goals.
9. **Self-Immunity** refers to the ability of people to protect themselves against any external turbulence. Firms formulate strategies to deal with unpredictable situations and enterprise risks. Firm should focus on risk management, especially operational and financial risk.
10. **Knowledge** refers to wisdom and encompasses accumulating information with the insight to understand all available information. Firms should periodically update the information required for operating and provide regular training for staff at all levels.
11. **Morality** refers to ethical behavior, kindness, and social responsibility. Firms should operate in an ethical way, providing good quality products and services, and consider employees' quality of life.
12. **Marketing performance** is defined as the performance of the firm in retaining and achieving target markets and clients while introducing its business to new customers (Piriyakul, 2011; Sansook and Ussahawanitchakit (2010).
13. **Financial performance** refers to the results of a firm's operations or investment taken directly from the company's financial statements such as profit or revenue growth (Collins, Ericksen and Allen, 2005)
14. **Economic Performance** is defined as the measurement by selected indicators of the economic outcomes of an organization's activities and

the effect of these outcomes on a broad range of stakeholders (GRI, 2006).

15. **Environmental Performance** is defined as *'results of an organization's management of its environmental aspects (results may be measured against the organization's environmental policy, objectives and targets)'* (US EPA Region 7 Environmental Management System, 2009).
16. **Social performance** refers to performance measures indicating how well an organization has translated its social goals into practice. These goals include responding to the needs of clients, their families, and communities; delivering high-quality and appropriate financial services; and ensuring responsibility toward employees, clients, the community, and the environment (CGAP, 2003).
17. **Social Capital** is defined as the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual, organization, social unit, or country (Nahapiet and Ghoshal, 1998)
18. **Trust** is an implicit set of beliefs that the other party will refrain from opportunistic behavior and will not take advantage of the situation (Hosmer, 1995).
19. **Globalization** is defined as the process of increasing social and cultural inter-connectedness, political interdependence, and economic, financial, and market integrations that are driven by advances in communication and transportation technologies and trade liberalization.

20. Small and Medium-sized Enterprise (SME) is defined by the Thai Ministry of Industry as an independent company with fewer than 200 employees and a fixed capital of less than 200 million baht, excluding land and properties.

1.6 Contributions of the Study

The contributions of this study can be divided into two sections: theoretical contributions and managerial contributions.

1.6.1 Theoretical Contributions

1. This study develops a comprehensive model of the antecedents and consequences of the Philosophy of Sufficiency Economy for SMEs.
2. This study investigates the impacts of internal and external factors that have never been empirically tested before on the level of SME adoption of the Philosophy of Sufficiency Economy.
3. This study investigate the impact of external factors on firm performance for SMEs.
4. This study extends the existing literature on firm adoption of the Philosophy of Sufficiency Economy concept by examining the consequences of the Philosophy of Sufficiency Economy that have never been empirically tested before in SMEs.

1.6.2 Managerial Contribution

1. This study provides a better understanding for public and private managers about the adoption of the Philosophy of Sufficiency Economy into their business practices by firms, especially SMEs.
2. Managers and government agencies will be able recognize from the study the impacts of internal and external factors on the level of firm adoption of the Philosophy of Sufficiency Economy adoption in SMEs. This will help SMEs and the government in formulating strategies and policies to achieve a higher level of PSE adoption.
3. Managers will be able to realize the effect of the level of firm adoption of the Philosophy of Sufficiency Economy on the SMEs' performance in the areas of marketing, financial, social and environmental outcomes and will be able to identify which firm performance indicators are enhanced and required for the overall performance of the firm. This is certainly valuable for managers seeking to develop firms in line with the Philosophy of Sufficiency Economy.

1.7 Scope of the Study

This study employs structural equation modeling (SEM) to construct a conceptual model for the level of a firm's adoption of the Philosophy of Sufficiency Economy in SMEs. The unit of analysis in this study is firm (SME) represented by presidents, owners or middle-level managers (general managers or marketing managers) who are typically top decision makers within the SMEs and are most knowledgeable about the firm's overall activities. The sampling frame in this study is drawn from the Department of Business Development, Ministry of Commerce. Small and medium-sized enterprises in the sampling group in this study were chosen

purposely as the sampling group with outstanding characteristics. Data were collected through a mail survey questionnaire designed to fit the purpose of this study.

This study is divided into 5 chapters. Chapter one discusses the rationale and objectives of the study. Chapter 2 reviews the relevant literature, theories, the conceptual model and the hypotheses of antecedents and consequences of the Philosophy of Sufficiency Economy are proposed. Chapter 3 explains the research methodology in detail. Descriptive statistics, measurement reliability and validity, the structural model, findings and analysis are presented in Chapter 4. Finally, Chapter 5 presents the conclusions, discussions, theoretical and managerial contributions of the study. Moreover, the limitations of the study and future research topics are explained.

1.8 Summary

This chapter has described the rationale of the study, research questions, research objectives, the conceptual model, operational definitions, the theoretical and managerial contributions of the study, and the structure of the study.

Chapter 2

Literature Review

This chapter is arranged into 18 topics as follows: the first section deals with the introduction of the Philosophy of Sufficiency Economy, the Philosophy of Sufficiency Economy in the business contexts, definition of firm adoption of the Philosophy of Sufficiency Economy the SME situation in Thailand, globalization and the PSE, definition of SMEs in Thailand, situation of Thai SMEs in 2009-2010 , a theories-based framework which includes resource-based view theory, social capital theory and contingency theory, and hypotheses based on the theoretical foundations and some of their empirical findings are proposed. Moreover, the full model of the level of firm adoption of the Philosophy of Sufficiency Economy is proposed. This section also describes the relevant constructs and their relationships. Lastly, the summary of this chapter.

2.1 The Philosophy of Sufficiency Economy

All Thais are well aware of the Philosophy of Sufficiency Economy established by His Majesty King Bhumibol Adulyadej which serves as a direction for Thai economic and social development, especially in times of crisis. His Majesty King Bhumibol Adulyadej developed the Philosophy of the Sufficiency Economy to guide people in their livelihoods according to the middle path. The sufficiency economy concept is based on the Buddhist principle of the 'Middle Path' (Chairatana, 2006; Puntasen, 2010). Since 1974, His Majesty the King has included the sufficiency economy concept in his royal addresses and speeches on different events, starting with his royal address delivered to graduates from Kasetsart University on 18 July 1974, in which he said in part that:

“Economic development must be done step by step. It should begin with the strengthening of our economic foundation, by assuring that the majority of our population has enough to live on.... Once reasonable progress has been achieved, we should then embark on the next steps, by pursuing more advanced levels of economic development. Here, if one focuses only on rapid economic expansion without making sure that such plan is appropriate for our people and the condition of our country, it will inevitably result in various imbalances and eventually end up as failure or crisis as found in other countries.”

His Majesty the King’s royal speech
At Kasetsart University Commencement Ceremony
On July 18, 1974

Moreover, on the occasion of his royal birthday, on 4 December 1974, His Majesty the King said in his royal address at the Chitralada Villa, that:

“...no matter what others say – whether they will accuse Thailand of being old fashioned or obscurantist. So long as we have enough to live on and to live for – and this should be the wish and determination of all of us – without aiming for the apex of prosperity, we shall already be considered as the top in comparison with other countries in the present world....”

His Majesty the King’s royal speech
Given on the occasion of His Majesty’s Birthday anniversary
At Dusidalai Hall, Chitralada Villa, Dusit Palace
On December 4, 1974

The Sufficiency Economy principle supports the process of increasing global interdependence as well as the dependence of people on their natural environment through self-sufficiency (Sathirathai and Piboolsravut, 2004). Moreover, the concept has an emphasis on economic security for the Thai people before Thailand develops

to a higher level. However, his majesty's advice received less attention before the economic crisis in 1997(NESDB, 2000).

Since 1961, Thailand has embarked on a development path of capitalistic economic growth based on industrialization, export-oriented trade, foreign investment, private investment, and infrastructure development. Although this strategy of development has led to rapid economic and material progress as well as reduction in absolute poverty, it has also led to increased socio-economic inequality, environmental degradation and unsustainable development (Moraras, 2007).

In 1997, the economic crisis was a turning point in Thailand's history because it led to the questioning of Thailand's national development plan. The King advised the country to adopt the Philosophy of Sufficiency Economy in order to maintain stability and to quickly recover from the crisis (UNESCAP, 2006). Thai executives and economists began to pay attention to the sufficiency economy concept. Firms which had adopted the sufficiency economy concept could recover from the financial crisis and regain their business positions at a faster rate during the crisis period (Kantabutra, 2007; NESDB, 2000). His Majesty reiterated and expanded on the concept of Sufficiency Economy after the economic crisis in December 1997 and in the following years. The concept points the way for recovery that will lead to a more resilient, balanced, and sustainable development to be able to meet the challenges arising from globalization and other changes (Chairatana, 2006).

The King Bhumibol Adulyadej's speeches are highly valued by Thais, not only because the Thai people respect the King, but also because His Majesty the King has been understanding and is committed to life-long learning and continuous development for the Thai people's well-being (Curry and Sura, 2007). Since the 1950's, His Majesty has worked hard to solve rural agricultural problems in Thailand and has set up 6 royal study centers in different regions of the country to do research into the development potential of each. It must have been clear to His Majesty the King that excessive commercialization is unlikely to resolve the poverty problem and may even worsen the trouble. In addition, as a more balanced approach to

development, the Sufficiency Economy Philosophy is more preferable (Isarangkun and Pootrakool, 2006).

The Philosophy of Sufficiency Economy ultimately aims to achieve major goals of harmony or balanced living, security, sustainability, and resilience, all of which are basic elements of happiness. Therefore, the Philosophy of Sufficiency Economy is basically a means to achieve happiness at the individual, community, and country levels (Indaratna, 2007).

To ensure accurateness in the interpretation of the Philosophy of the Sufficiency Economy, the Office of the National Economic and Social Development Board has invited expert persons to construct a definition for the Philosophy of Sufficiency Economy. The working group drafted an interpretation of the Philosophy of Sufficiency Economy by conducting a detailed study of His Majesty's speeches and projects that are related to the Philosophy of Sufficiency Economy with a view to arriving at a suitable interpretation. Afterward, His Majesty's clarification was sought, and royal approval to spread the statement of the philosophy was requested. The following is the interpretation of the Philosophy, with royal approval and sent by his Majesty's principal secretary to the NESDB on 29 November 1999 (NESDB, 2007).

“Sufficiency Economy” is a philosophy that stresses the middle path as the overriding principle for appropriate conduct by the populace at all levels. This applies to conduct at the level of the individual, families, and communities, as well as to the choice of a balanced development strategy for the nation so as to modernize in line with the forces of globalization while shielding against inevitable shocks and excesses that arise.

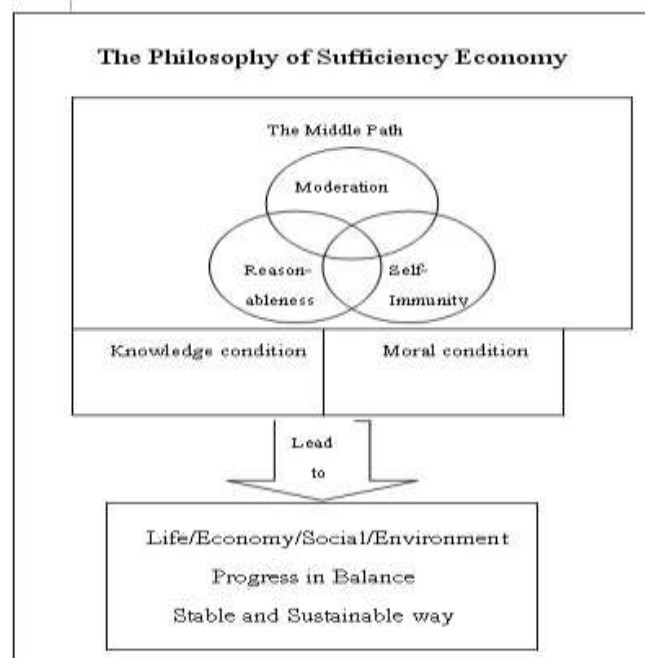
Sufficiency means moderation and due consideration in all modes of conduct, as well as the need for sufficient protection from internal and external shocks. To achieve this, the application of knowledge with prudence is essential. In particular, great care is needed in the utilization of untested theories and methodologies for planning and implementation. At the same time, it is essential to strengthen the moral

fiber of the nation, so that everyone, particularly political and public officials, technocrats, businessmen and financiers, adheres first and foremost to the principles of honesty and integrity, In addition, a balanced approach combining patience, perseverance, diligence, wisdom and prudence is indispensable to cope appropriately with honesty and integrity, In addition, a balanced approach combining patience, perseverance, diligence, wisdom and prudence is indispensable to cope appropriately with the critical challenges arising from extensive and rapid socioeconomic, environmental and cultural changes occurring as a result of globalization.”

(Cited in the unofficial translation from remarks made by His Majesty the King on various occasions, Sufficiency Economy Organization NESD, 2007).

In 2001, the Sufficiency Economy Working Group (SEWG) was set up jointly between the NESDB and the Crown Property Bureau to develop the Philosophy of Sufficiency Economy framework. The Sufficiency Economy Working Group (SEWG) had to work further on the interpretation of the Philosophy of Sufficiency Economy with royal approval on 29 November 1999 as described and defined above. However, the vital objective is to further its application to the development process in Thailand as well as expanding its application to guide the way of living and behaving for people of all levels. Not only can it be applied in agriculture, the Philosophy of Sufficiency Economy framework can also be applied for individuals, families, the community, and at the national level as stated in the definition (NESDB, 2004). The Philosophy of Sufficiency Economy framework comprises three components and two underlying conditions (Piboolsravut, 2004). Figure 2.1 illustrates the Sufficiency Economy Philosophy framework.

Figure 2.1
The Sufficiency Economy Philosophy Framework



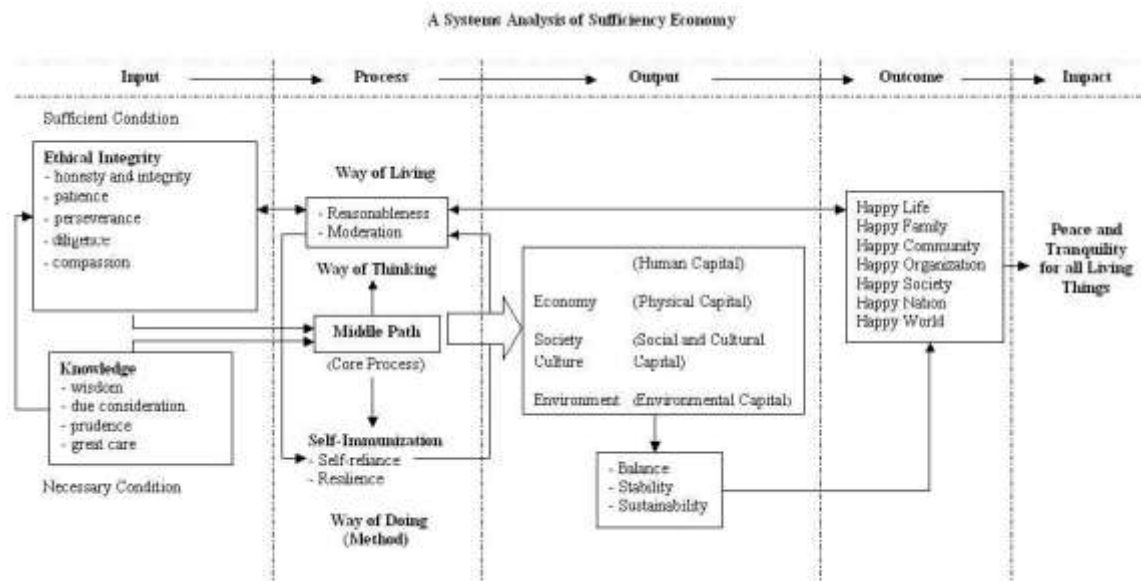
First, sufficiency entails three components:

- 1) **Moderation** refers to the idea of a middle way between want and excessiveness. The concept emphasizes appropriateness, reasonableness, and wisdom, which are necessary to deal with internal and external changes (Piboolsravut, 2004).
- 2) **Reasonableness** refers to evaluating reasons based on knowledge, experience, wisdom, and clear objectives (the balance between long-term and short-term focus) (Piboolsravut, 2004).
- 3) **Self-Immunity** refers to the ability of people to protect themselves against any external turbulence and to cope with events that are unpredictable or uncontrollable (Mongsawad, 2010).

Second, two underlying conditions necessary to achieve sufficiency are knowledge and morality.

- **Knowledge** refers to wisdom and it encompasses accumulating information with insight to understand all available information and experience in order to make prudent decisions (NESDB, 2004; Sasin, 2010).
- **Morality** refers to virtue, ethical behavior, honesty, straightforwardness, and readiness to work hard. People should conduct their lives with perseverance, harmlessness, and kindness. (Mongsawad, 2010; Piboolsravut, 2004).

Figure 2.2
A System Analysis of Sufficiency Economy



Source: Puntasen, October 7, 2008, The 4th IUCN Congress, Barcelona, Spain

The Sufficiency Economy concept requires thoroughness in planning, carefulness in applying knowledge, and adoption and implementation of plans. These three interlocking elements represent the three principles of the Sufficiency Economy Philosophy: moderation, reasonableness, and self-immunity. These three principles

are interconnected and interdependent (Mongsawad, 2010). By practicing these three principles with the two underlying conditions, people would be able to achieve major goals of harmony or balanced living, and sustainability, all of which are basic elements of happiness. Figure 2.2 illustrate a system analysis of the Sufficiency Economy framework.

Therefore, the Philosophy of Sufficiency Economy in this study refers to “*a philosophy that stresses the middle path as the overriding principle for appropriate conduct by the populace at all levels. This applies to conduct at the level of the individual, families, and communities, as well as to the choice of a balanced development strategy for the nation so as to modernize in line with the forces of globalization while shielding against inevitable shocks and excesses that arise*” (Cited in the unofficial translation from remarks made by His Majesty the King, Sufficiency Economy Organization NESDB, 2007).

The Sufficiency Economy Philosophy serves as a guide for the way of living and behaving for people of all levels: individuals, families, the community, and at the national level (Piboolsravut, 2004).

At the individual and family level, the philosophy encourages individuals to maintain honesty and truthfulness and to pursue a proper career, refraining from taking advantage of others. All of these virtues will lead to self-immunity and sufficient protection for individuals and families from the impacts arising from internal and external changes (Senanarong 2004).

At the community level, members of a sufficient community cooperate by sharing their efforts and exchanging their ideas, knowledge, skills, and experiences. They use community resources and develop community activities in ways that are appropriate to bringing happiness to community members (NESDB, 2000).

At the national level, sufficiency economy begins with the government developing a national plan that encourages and allows people to live their own lives.

Government cooperates with others in development and carefully implementing the plan step by step. The present government administration has adopted and emphasized the Philosophy of Sufficiency Economy as shown in the formulation of the present 10th National Economic and Social Development Plan (2007 – 2011) (NESDB, 2011).

Since the Philosophy of Sufficiency Economy provides a practical tool to develop humanity through the happiness development process, the government, the private sector, civil society and communities currently adopt this philosophy as a guideline for daily practice. Therefore, it is very useful to understand the internal and external factors that encourage and facilitate firms to adopt the Sufficiency Economy Philosophy.

2.2 The Philosophy of Sufficiency Economy in the Business Sector

Since application of the Philosophy of Sufficiency Economy is useful in various fields, it can be applied in the business sector (Mongsawad, 2010; Unsree, 2008). The Philosophy of Sufficiency Economy concept promotes good business practices (NESDB, 2011). Songerd and Hongsamad (2001) concluded that key elements of success business are that firms understand the Philosophy of Sufficiency Economy concept and guidance in PSE principles must be provided to those who are involved. Ruenrom (2009) found that most SMEs apply the sufficiency economy concept in their business practices. Some firms put the philosophy into marketing plans and formal visions, some SMEs apply PSE concepts to some extent and may not even know that they have already adopted the Philosophy of Sufficiency Economy. UNDP (2007) proposed that SMEs in Thailand are at the primary level of adopting the Philosophy of Sufficiency Economy and adoption will increase regularly over the long term to prevent disasters. The principles of good corporate governance are also in line with the philosophy of Sufficiency (The Stock Exchange of Thailand, 2006). Laukaikul (2007) applies the Philosophy of Sufficiency Economy to building a business brand. Sufficient branding means building a brand reasonably, with self-sufficiency and self-immunity moving towards brand sustainability. At the same

time, adding knowledge and corporate governance will facilitate firm awareness of society, and help brand building become responsible. Thus, sufficiency branding is the best way to build a brand to support a business that aims for sustainable growth.

Puntasen et al. (2003) reviewed royal speeches of His Majesty King Bhumibol Adulyadej to derive seven business practices that are consistent with the Sufficiency Economy Philosophy. These Sufficiency Economy business practices are as follows: (1) Proper use of technology (2) Focus on local and international market demands. (3) No greed or focus on short-term profits. (4) Emphasis on ethical behavior in the entire business operation. (5) Emphasis on risk diversification. (6) Focus on downside risk management such as not creating unmanageable debts. (7) Not performing beyond their business' ability to manage.

Therefore, in adopting the Philosophy of Sufficiency Economy in business practices, enterprises should focus more on sustainable and stable long-term profits than on short-term goals. Firms need to learn new information in order to deal with any unpredictable circumstances, operate in line with business ethics, be socially responsible, and be concerned about the environment at every step.

Most of the business research into the Philosophy of Sufficiency Economy has been in the form of case studies and supporting documents. Table 2.1 summarizes previous case studies on enterprises applying the Sufficiency Economy Philosophy. The majority of available research is case studies since a case study approach helps understand in the greater depth of the process of how the Philosophy of Sufficiency Economy has been adopted in the enterprise.

2.2.1 Moderation

As applied in business, moderation refers to the development of business through effective and appropriate use of available resources as well as concerns for debt management and business capital. Firma should have a long-term focus and take opportunity cost into consideration (Sasin, 2010). Ruenrom (2009)

states that moderation refers to not being greedy and to firms not performing business beyond their capacity. Firms should manage their obtainable resources and gain satisfactory returns. Bathroom Design (2010) defines moderation as firms operating their business in their area of expertise and not expanding into fields in which they lack experience. Firm should appropriately manage resources and finances. In this research, moderation in the business field refers to operating businesses through appropriate use of resources such as employees and raw materials. Firms operate in their areas of proficiency. Firms have sufficient liquidity and do not invest beyond their capability.

Ruenrom (2009), states that the moderation principle has a positive relationship with firm adoption of the Philosophy of Sufficiency Economy in the future. This means that to be successful in running a business in the future, moderation is a very important factor that firms should take into consideration. This is because environmental uncertainty such as political uncertainty makes it hardly to accurately predict Thai economic trends in the future, Therefore, SMEs should maintain an adequate level of liquidity and utilize resources efficiently.

Regarding moderation, firms need to adopt moderation to deal with the challenges of globalization (NESDB, 2007) and formulate business strategies to cope with external and internal threats, especially political and economic uncertainty. Firms should take great care in operating their finance and capital structures. The maximum debt financing level and cash maintained level should be focused on (Wattanasuprache, 2009). Firms are required develop financial statement to provide information about their financial position, performance, and changes in financial position (Bathroom Design , 2010). Moreover, firm should run their businesses in their fields of expertise and not in fields in which they have no experience. They should focus on debt management and find alternative resources such as alternative energy resources and recycled products (Sasin, 2010).

A Sasin (2010) study looked at Nopadol Panich, a small enterprise that focuses on the moderation principle. The firm concentrates on the middle path and appropriate use of resources. Nopadol Panich sells construction and design products to sub-contractors and individual homeowners. The owner's vision is not greedy and the firm will not expand its business into an area in which it is not proficient. Office equipment is being fully utilized. Nopadol Panich carefully purchases new equipment, considering whether existing equipment still works well. Overall, the firm could finance itself without the need for long-term debt while enjoying moderate annual growth of 9% during 2003-2007(Sasin, 2010).

Seenprachawong (2009) studied a small enterprise, "the Handicraft Preservation House" producing sa paper products and souvenirs. Aunt Fongkam started making sa paper on a small-business scale with attention to low cost. The firm invented its own technologies using local wisdom. It also managed its manufacturing capacity to ensure that the capacity was not beyond its ability to manage. Later on, Fongkam began to export. She diversified the range in order to spread risk, making items as varied as hospital gowns and elephant sculptures. After the government began to provide promotion for craft industries in the mid-1990s, the number of her business products expanded and sales increased (UNDP, 2007). This case study shows that moderation does not tell us not to expand a business, but firms should expand when they have enough resources and capacity to do.

In the same way, a Phiboonchai Mae Pranom (large enterprise producing food condiments) has a reasonably strong position on moderation. Over the years, the company has been expanding its business primarily with retained earnings, making steady step-by-step growth. With little debt, the company survived the 1997 Asian Economic Crisis. The company has very low collected debt and has a strong cash flow. Because of its moderation, the firm stays within its area of expertise and grows moderately. The firm expands only when capacity cannot handle the current and projected demand. Phiboonchai Mae Pranom has been able to meet its 10% growth target in the past five years (Sasin, 2010).

Therefore, for moderation in business, firms should use appropriate technology and resources. Firms should operate fields in which they have experience and expand only when the firm has enough resources and capacity. Moreover, firms should focus on managing finance and capital structures.

2.2.2 Reasonableness

Reasonableness refers to making decisions based on knowledge and creating a business plan based on rationality and clear objectives. The firm protects the benefits of all stakeholders and makes business profits in a suitable manner (SCG, 2009). Sasin (2010) proposes that reasonableness refers to concern for the direct and indirect impact on stakeholders, and not only in the short term, but in the long term. Ruenrom (2009) defines reasonableness as decision making based on information, insight, and clear objectives. Decision-makers comprehend and select the appropriate system, process, equipment, and technology by thoroughly taking into account all factors. In this research, reasonableness in business refers to making decisions based on knowledge, experience, and clear objectives without personal bias. The firm maintains a balance between long term and short term goals. When operating, the firm must consider the direct and indirect impact on stakeholders.

Regarding reasonableness, top management requires a rational evaluation for any action. This includes accumulated data and experience and analytical capability and self-awareness (UNDP, 2007). Moreover, Wattanasupprachoke (2009) explains that the owner or top management should be concerned with the firm's overall benefits. Decision making must be careful, based on clear understanding, flexible, unbiased and based on information. For example, Siam Cement Group, unlike other firms that lay-off staff during an economic downturn, has fair and reasonable payment for staff and perceives staff as a valuable resource of the firm. Top Executives of SCG make decisions based on all information and experience (Kusumavalee, 2006).

Mr. Benjatanachat, the owner of the bathroom design (2010) suggested that Bathroom Design, a medium-sized enterprise is an outstanding enterprise practicing reasonableness. Bathroom Design is a successful firm conducting business activities in accordance with the Philosophy of Sufficiency Economy (Bathroom Design, 2010). This company was founded in 1995 as a supplier of tailor-made bathroom shower enclosures imported from Australia. When making business decisions, the firm carefully considers the direct and indirect impact on stakeholders and the firm's overall benefit. For customers and buyers, Bathroom Design focuses on providing high-quality products. Quality control takes place from raw material procurement, in-process manufacturing, and final goods checkup. Bathroom Design has also established a coordinating officer to develop, manage, execute, and evaluate the company's alignment with corporate sustainability under the Sufficiency Economy Philosophy. Decision making is delivered without personal bias and is flexible.

Consistent with Benjatanachat (2010), Sasin (2010) studied Nopadol Panich Company, a large construction material retailing company as an outstanding example of reasonableness. The top management makes business decisions by careful consideration of all stakeholders. From a traditional-trade mini-store, today Nopadol Panich has become a modern-trade mega-store located in Chiang Mai. It is the first licensed supplier in the northern region of construction materials manufactured by Cement Thai Home Mart, a wholly owned subsidiary of the Siam Cement Group, one of the Thailand's largest industrial conglomerates.

During the 1997 Asian Economic Crisis, many construction material suppliers shut down but Nopadol Panich survived because of adopting the Philosophy of Sufficiency Economy. The firm carefully considered the direct and indirect impact of the Thai financial crisis not only for itself but for customers. Instead of forcing payment from customers or threatening legal action with some customers, the firm decided to extend the payment schedule and allow for up to 50% credit for certain customers, so that the struggling customers who, in normal economic times would not

have missed payment, had more time and means to manage their accounts payable. This action won customers' hearts and helped them to become loyal customers.

Reasonableness means making decisions based on understanding, information, experience, and clear objectives. The firm makes decisions in a timely manner. Moreover, the firm conducts business with great concerns for the benefits of all stakeholders and the firm's overall benefit.

2.2.3 Self-Immunity

Sasin (2010) defines self-immunity in the business field as policy that lessens business, economic, and social risks and that prepares firms for uncertainty. Benjatanachat (2010) defines self-immunity as the ability of firms to protect themselves from external factors including social, environmental, and cultural factors. Self-immunity in the business sector refers to planning to manage any changes from globalization (Ruenrom, 2009). In this research, self-immunity in the business field refers to the ability of a firm to formulate strategy and plan and operate in unpredictable situations and with enterprise risks. These risks include strategic risk, operational risk, financial risk, and regulatory risk.

Based on the concept of self-immunity, business should not expand too fast by over-borrowing (Sachayansrisakul, 2009). Building self-immunity reminds firm to use proper risk management systems to protect economic stability and to develop plans against globalization. In business, firms should develop risk management plans and marketing plans and periodically evaluate how well the firm's management system meets a set of expectations (Benjatanachat, 2010). Sasin (2010) and SCG (2009) proposed that firms need customer feedback and must develop marketing research and innovation to meet customer demand. Wattanasuprachoke (2009) found that financial risk, particularly exchange rate risk and interest rate risk, should be carefully in terms of self-immunity. Puntasen (2007) suggests Chumphon Cabana Resort and Diving Center Company as an outstanding case study for medium-sized enterprise best practice in the area of self immunity. Mr. Warisorn

Rukpan, the owner of the resort was once facing huge debt after expansion of the business. Warisorn faced the problems of financial and strategic risk because he used to run his business by buying everything necessary for the resort operation without taking into account efficient purchasing material and environmentally sound concepts.

The 1997 Asian Economic Crisis pushed Chumphon Cabana Resort and Diving Center to the point of collapse. Warisorn started to study the Philosophy of Sufficiency Economy and brought the concept into actual practice. Chumphon Cabana strives to minimize operational risk by gradually initiating several projects to cut costs, searching for alternative materials, enhancing self-reliance, and promoting sustainability of the resort business. Warisorn started growing rice and vegetables, and raising chickens within the resort using natural agriculture techniques. The staff at Chumphon Cabana helped produce various types of cleaning liquid and solutions for hotel use, such as liquid soap, shampoo, car and bathroom cleaners, and detergent. The resort has been using biodiesel mainly on boats for diving trips. At present, Chumphon Cabana Resort has overcome the business crises and continues to be a tourist attraction in Chumphon Province.

Nuttavuthisit (2005) studied an SME exporting jewelry applying the self-immunity concept. Pranda Jewelry was founded in 1973. The firm has developed its business for over thirty years, adjusting well to external change, and managing financial and operational risk well. The firm survived the 1997 economic crisis primarily because of its long-term relationship with trade partners. Since the owner is a highly credible person, even in the crisis, partners chose to buy diamonds from Pranda Jewelry. Currently, Pranda continues to conduct research and development for the company's products, seeking new market channels, taking care to hedge its foreign exchange risks and carefully monitoring and continuously evaluating all trade risks.

In the same way as Chumphon Cabana and Pranda jewelry, Bathroom Design imported roughly 26% of its raw materials and had a huge international debt during 1997. In order to alleviate the risk from exchange rate fluctuations, the firm

hedged foreign exchange and focused on domestic inputs where they were generally competitive with the best available products on the market. In the present, the firm also implements risk management plans and carefully monitors all business risks especially financial risk.

Therefore, regarding the self-immunity principle, firms should periodically monitor and evaluate all enterprise risks especially financial and operating risks protecting themselves against market changes and hedging some of the risks against unpredictability. Besides, firms should not depend on single supplier / buyer and search for alternative marketing channels.

2.2.4 Knowledge

Knowledge in business field refers to gathering information and insight into business. This includes effort to acquire new knowledge about the business (Sasin, 2010). Ruenrom (2009) defines knowledge as the condition that contains wisdom about the related information and how to use it in an organization. In this research, knowledge in the business field refers to the ability to accumulate relevant information and disseminate and manage knowledge in a business organization. Firms understand and have knowledge of their businesses.

Bathroom Design (2010) proposes that firms that adopt knowledge from the Sufficiency Economy concept should focus on improving the knowledge and skills of their employees by providing training programs, giving scholarship to staff to study, and rotating jobs within the organization. Wattanasuprachoke (2009) proposed that regarding the knowledge condition in the Sufficiency Economy concept, firms should provide regular training for staff at all levels, assess the training program, periodically update the information that is required for business and develop a database for top managers' decision making. Siam Cement Group and Doi Chang coffee are good illustrations of firms with an emphasis on the knowledge condition. Both of them focus on knowledge and human resource development. Siam Cement is one of the best examples of a large firm that applies the Philosophy of Sufficiency

Economy. The practice won SCG “H.M. the King's trophy for the Best Practice of the Philosophy of Sufficiency Economy, Competition for large Enterprises Category” in 2007 (Siam Cement Group, 2009).

Siam Cement not only survived the Asian crisis, but also came out of it with its reputation intact. In the mid-1970s, the company began an aggressive diversification of its business including into petrochemicals, machinery, auto accessories, and various other pulp and paper interests. By the 1990s, Siam Cement had become the multi-national conglomerate SCG with a widely diverse organization that produced over 20,000 products and employed over 27,000 people. In 1997, Thailand faced an economic crisis, and Siam Cement was trapped not only by a huge foreign debt, but also faced a severe decrease in product demand (Kusumavalee, 2005).

Siam Cement could recover from the financial crisis because the firm highly valued its staff; recruiting, training and developing its employees. The firm provided a complete range of knowledge training and development programs that supported employees at all levels by stressing job-related performance as well as contributing to the advancement of each individual's career. All training programs were constantly updated through a knowledge management database system. Thus, staff gained knowledge and understanding of the structure of business systems, economics, market competition, production management, financial management, management and human resources (Kusumavalee, 2006).

In the case of SMEs, Doi Chang coffee is a good example of successful employment of the knowledge condition of PSE. Silpawatananun (2010) conducted a case study of the Doi Chang coffee business. The coffee is a world-class specialty coffee, single origin, 100% Arabica coffee. The villagers also have a center called the coffee academy which provides opportunities for people interested in learning about coffee at every stage of production. The villagers use high-quality, modern machinery and set up a business partnership with professionals from Canada. The combination of modern academic information with local wisdom resulted in the Doi Chang coffee

being an outstanding coffee business. The profits from their professional production of coffee will be reinvested in village development for health care and education.

Therefore, for the knowledge condition of PSE, information and knowledge are up-to-date, accurate, and well-organized. Information and knowledge are transferred safely and efficiently within firms. Staff's skill development is a key point of focus. For that reason, firms should improve the knowledge and skills of their employees by provide training programs, coaching, and regularly assessing them to ensure they have the knowledge and ability to work efficiently.

2.2.5 Morality

Morality in the business field is defined as truth and honesty in doing business. It refers to ethical behaviors and opposes exploiting others for personal excessive gains (Sasin, 2010). While morality refers to awareness of virtue, honesty, patience, endeavors, and the use of wisdom in daily work (Ruenrom, 2009), SCG (2009) considers morality in the business field as business organizations behaving in an ethical way, paying special attention to improving employee quality of life and promoting social responsibility. In this research, morality in the business field refers to ethical behavior, honesty, and faithfulness in business. Firms provide fair remuneration and welfare benefits to employees. Firms sell products/services to customers with good quality and reasonable prices.

With morality, firms should adopt good corporate governance practices and compliance with laws and regulations (UNDP, 2007). Wattanasuprachoke (2009) found that external auditors strengthen a firm's commitment to operate in ethical way. Moreover, his research shows that Thai firms have increasing awareness of corporate social responsibility (CSR) since they have realized the importance of CSR to promoting a firm's image and reputation. Moreover, Ruenrom (2009) finds that morality has a relationship with a firm adopting the Philosophy of Sufficiency Economy. This means that a business that is based on ethics can run successfully in the long run. Global communication networks lead to the simple flow of important

information, not only to individuals but to the public and private levels as well. Information is easy to access and is easy to ascertain if someone is doing something unethical. Therefore, to become successful, a business needs to be driven by strong ethical values.

Sasin (2010) analyzed Mae Pranom, a large sized enterprise, producing a ready-to-use bottled Thai chili pastes. In term of morality, this firm provides fair remuneration and various welfare benefits to employees. Staff at all levels have access to free accommodation, subsidized meals, free annual health checkups, and even scholarships for their school-aged children. For the community at large, the company supports the drug-free white factory project by educating employees and nearby local communities with drug prevention programs.

Similar to Mae Pranom, Nopadol Panich Company (a large-sized enterprise) and Bathroom Design (a medium-sized enterprise) are concerned for the health, safety, and environment of the organization and the community. For the customer, these firm's products and services are of good quality at a reasonable prices. For the community, these firms invest in technology reducing noise pollution from their production lines and promote water conservation during the finished goods testing phases. For the employees, these firms take good care of staff family members by providing free meals, subsidized housing, incentives, and company trips. The firms also implement corporate social responsibility programs. Staffs participate in charity and volunteer work, are involved in community projects and the firms provide budget from their annual profits for CSR efforts (Bathroom Design, 2010; Sasin, 2010).

In another case study that is reasonably strong in morality, Mahidol University Leadership Research Group (2006) investigated Theptarin, a small hospital in Bangkok. The results indicated that the hospital's 21 years of success focused on its core competency, social responsibility, human resource focus, innovation, and long-term relationships with staff and business partners. The hospital went through the 1997 economic crisis successfully due to international loans. The hospital has a very

strong teamwork culture, and trust and respect for its employees. During the crisis, it did not lay off any employees, but the top and mid-level managers decided to reduce their salaries to save costs. Currently, Theptarin hospital is one of the leaders in endocrine-related disease prevention and treatment in Asia.

Therefore, regarding the morality concept, firms should run their businesses in an ethical way. Firms do not take advantage of consumers. Employee quality of life and promoting social responsibility should be focused on. Firms implement a corporate social responsibility policy into their operations. Moreover, firms operate in a transparent manner, disseminating information of importance to stakeholders.

2.2.6 Empirical Studies of the Application of the Philosophy of Sufficiency Economy into Business Practices

Wattanasupachoke (2009) examined the relationship between the application of the PSE concept in organizational strategies and performance. The results show that the moderation principle, knowledge application condition, and morality condition have a positive impact on firm performance. Thongrad (n.d.) studied the causal factors and the results of the financial management behaviors by entrepreneurs following the Sufficiency Economy Philosophy. The financial management behaviors by following the Sufficiency Economy concept depended on the psychological traits of entrepreneurs, especially locus of control. Moreover, financial management by following the sufficiency economy concept enhances the financial performance of firms. Lekuthai (2007) compared selected industries and identified the industries that correspond well with the Philosophy of Sufficiency Economy using the input-output analytical method. The selected industries included agricultural products, food, textiles, wearing apparel, electronic appliances, office equipment and motor vehicles. The results show that the agricultural product industry, food industry, and electrical and electronics industry are more highly correspondent with the Sufficiency Economy Philosophy than other sectors. Onkaeo and Praneetpolgrang (2008) proposed the practical Philosophy of Sufficiency Economy

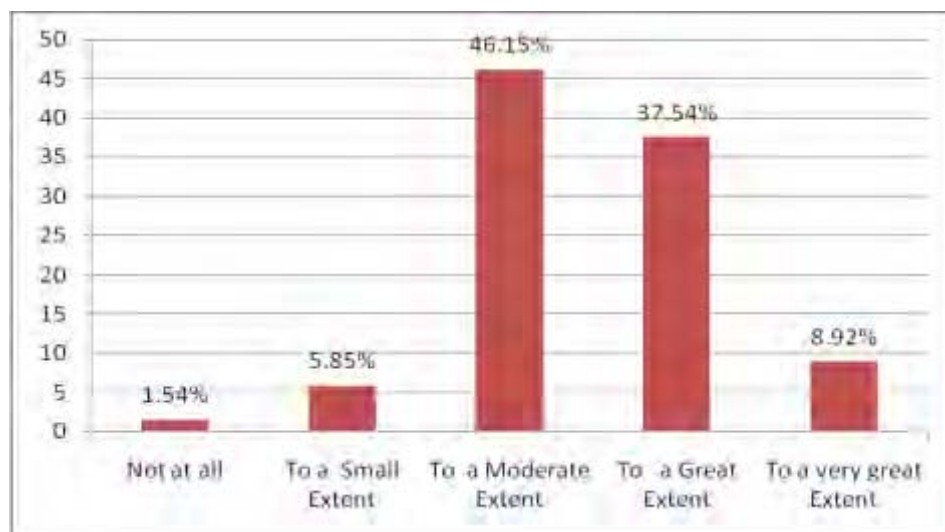
strategic management model for managing information technology (IT) in 20 Thai government organizations. The results show that both CIOs and the officials sampled in ICT organizations were willing to conform with the practical Philosophy of Sufficiency Economy strategic management model.

Furthermore, Kantabutra (2005) also examined the stage of development of Philosophy of Sufficiency Economy in the business sector. The results show that many Thai firms have more understanding and mostly adopt the Philosophy of Sufficiency Economy in their firms.

Ruenrom (2009) studied firms applying the Philosophy of Sufficiency Economy in business. The results show that most SMEs have a positive attitude towards the Sufficiency Economy concept. About 98.6 percent of SMEs adopt the Philosophy of Sufficiency Economy to form their business policy and market planning: 46.15 percent at a moderate extent, 37.54 percent to a great extent, 8.92 percent to a very great extent, and 5.85 percent to a small extent, respectively. In addition, 41.54 percent of SMEs adopt the sufficiency concept in overall business functions, while 58.46 percent adopt in some areas of business. SME adoption of the Sufficiency Economy concept is shown in figure 2.3.

Figure2.3

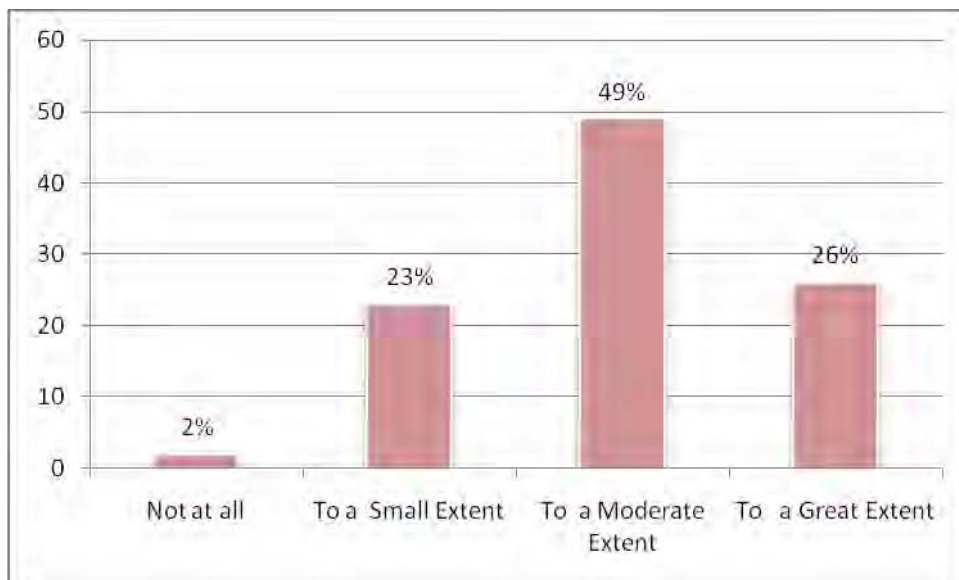
SME Adoption of the Sufficiency Economy Concept



Source: Ruenrom , 2010

Consistent with Ruenrom's (2010) study, the Center for Economic and Business forecasting (2007) found that 98 percent of business in Thailand adopt the Philosophy of Sufficiency Economy, with 26 percent highly adoptive, 49 percent moderately adoptive, 23 percent lowly adoptive and 2 percent adopting to a very low level or not adopting. Both results show that 99 percent of Thai enterprises or Thai businesses adopt the Philosophy into business practices. This survey was done with 3,073 respondents within 18 provinces of Thailand. Firm adoption of the Sufficiency Economy Concept is shown in figure 2.4.

Figure 2.4
Firm Adoption of the Sufficiency Economy Concept



Source: The Center for Economic and Business Forecasting, UTCC (2007)

Therefore, based on the available case studies, the literature, the empirical evidence and supporting documents relating to Thai enterprises adopting the Sufficiency Economy Philosophy into their business organization, the review indicates that SMEs adopt the Philosophy of Sufficiency and this concept can be well applied in the business sector.

2.3 Definition of Firm Adoption of the Philosophy of Sufficiency Economy

Carr (1999) defines adoption as the stage in which a technology or product is selected for use by an individual or an organization While, Schillewaert, Ahearne, Frambach and Moenaert (2005) defines adoption as the extent to which an individual frequently and fully uses and integrates something into one's ongoing routine. Iacovou, Benbasat and Dextor (1995) state that adoption is completed when all technical components have been implemented, processes have been revised, and the firm possesses the necessary knowledge to use the information system. In this research, firm adoption means a firm uses a new idea or new practices as the best course of action available in one's ongoing routine.

When applied to the business field, the Philosophy of the Sufficiency Economy promotes good and responsible business practices (NESDB, 2011; Sasin, 2010). According to His Majesty the King's royal speech given on the occasion of the Royal Birthday Anniversary.

"At that time, last year, I thought that it was understood, but lately, only last month, somebody who should be in the know, someone who has participated in development work for quite a long time, came to see me and said that the sufficiency economy was a very good system, and he indicated his understanding that the application of one-fourth of the sufficiency economy means the coverage of a quarter of the area in the country. The meaning of sufficiency economy and only one-fourth of its application did not mean the area of one-fourth, but one-fourth of the extent (level) of sufficiency.

I have to come right to the point because I am worried that even a person with a Ph.D. still misunderstood my point. Perhaps I did not speak clearly enough, but when I reread what I had written from my speech, I thought that it was clearly stated that 50 per cent sufficiency or even only 25 per cent sufficiency would be enough. I

meant that the application of the sufficiency economy does not necessarily mean full sufficiency and I may add that full sufficiency is impossible. If a family or even a village wants to employ full sufficiency economy, it would be like returning to the Stone Age. The word sufficiency has another meaning, a wider meaning. It does not only mean self-sufficiency but also means to have enough for the individual to live on. This sufficiency was mentioned to those who were present here in this hall -- when was it? 20 or 24 years ago, in 1974. From 1974 to 1998, it is 24 years, isn't it? On that day, I said that we should strive to have enough to live on."

His Majesty the King's royal speech given to the audience of well-wishers
 On the occasion of the Royal Birthday Anniversary
 At the Dusidalai Hall, Chitralada Villa, Dusit Palace
 On Friday, December 4, 1998

From His Majesty the King's royal speech, applying some extent (level) of the sufficiency economy framework means an individual/ institution has already adopted the Philosophy of Sufficiency Economy. Therefore, based on the review of the literature, the empirical evidence and the King's royal speech, Firm adoption of the Philosophy of Sufficiency Economy means that the firm applies the 3 components (moderation, reasonableness, and self-immunity), and the 2 underlying conditions (knowledge and morality) into business practices. This indicates that firm conducts business according to the sufficiency economy framework. The level of firm adoption of the Philosophy of Sufficiency Economy means the level or the extent to which a firm applies the 3 components (moderation, reasonableness, and self-immunity) and the 2 underlying conditions (knowledge and morality) into business practices.

2.4 Globalization and the Philosophy of Sufficiency Economy

Globalization is an interesting phenomenon since it is obvious that the world has been going through a process of revolutionizing towards increasing market, economic, financial, social, cultural, political, and environmental interdependence among nations. Globalization is defined as the process of increasing social and

cultural inter-connectedness, political interdependence, and economic, financial, and market integrations that are driven by advances in communication and transportation technologies, and trade liberalization (Eden and Lenway, 2001; Giddens, 1990; Molle, 2002; Orozco, 2002).

Globalization has clearly brought benefits to many people around the world. The advantages include raised productivity and employment, increased standard of living, revolutionized communications, competition, global economic growth and interdependencies through trade and FDI flows and scientific discoveries which will help us live longer (Gurría, 2007). However, globalization still has many downsides. These effects include changes in technology, changes in workforce characteristics and consumer preferences, foreign competition and new forms of competition, greater demand for high quality products and services, the volumes of products and services to be delivered change fast and unpredictably, consumer protection laws change, changes in international trade laws and grouping of countries for trade benefits, political uncertainty and terrorism (Kantabutra, 2010).

Many Thai and international economists have discussed the King's concept. At the tenth UN Conference on Trade and Development (UNCTAD) in February 2000, the Sufficiency Economy Philosophy was highly praised and His Majesty the King Bhumibol Adulyadej was recognized as the 'Developer King' (Sachayansrisakul, 2009). They agreed that the Philosophy of Sufficiency Economy was suited to mainstream economics because it accepted trade and globalization, and because it embraces an idea of optimization. The King's approach was considered useful both in terms of understanding what had drawn Thailand into the 1997 crisis, and in formulating more appropriate policies for the future. These economists incorporated the Philosophy of Sufficiency Economy into their recommendations for policies such as strengthening financial institutions through good governance, using flexible exchange rates and making more investment in R&D (UNDP, 2007).

To compare neo-classical economics and the Philosophy of Sufficiency Economy, neo-classical economics tries to understand human choices and explain the observed pattern using an optimizing framework. The Philosophy of Sufficiency Economy chooses the middle path based on moderation, reasonableness, and self-immunity under knowledge and morality conditions (Tabucanon, 2010). Moreover, the Sufficiency Economy concept is rooted in the Buddhist principle of the middle path (Chairatana, 2006). Thus, Sufficiency Economy diverges from conventional neo-classical economy by representing a more moderate form of mainstream economic development.

The Philosophy of Sufficiency Economy does not favor isolationism at the national level since it realizes the reality of Thailand's integration into the world. As a result, the Philosophy of Sufficiency Economy tries to encourage harmony and minimize negative consequences (Medhi, 2003; Moraras, 2007). Globalization has been cited as the major reason for the adoption of the Philosophy of Sufficiency Economy into business practices (Kantabutra, 2006; Sasin, 2010; Yodpetch and Chirapanda, 2008). Therefore, the Philosophy of Sufficiency Economy is not a rejection of globalization, but rather a means of succeeding in globalization (UN, 2007).

2.5 Definition of Small and Medium -Sized Enterprise (SMEs) in Thailand

There are various definitions of SME in different regions in the world. Therefore, the European Commission (2003) introduced a definition of small and medium enterprise (SME) in April of 1996. This definition of SMEs is standardized to be used for all cases. SMEs are classified into three groups including medium enterprises, small enterprises, and micro enterprises. The number of people employed in micro enterprises is less than 10, approximately 10-50 people for small enterprises and, approximately 50-250 people for medium enterprises. The definition is based on the number of paid employees, turnover, balance sheet total, and number of share

holdings by parent companies (Sevilla and Soonthornthada, 2000). Table 2.2 summarizes the SME definitions from various Thai institutions.

Table 2.2
Summary of SME Definitions from Various Thai Institutions

Institution	Small Enterprise		Medium Enterprise	
	Emplo yees	Capital	Employees	Capital
		(million baht)		(million baht)
The Federation of Thai Industry	50	20	50-100	20-100
Bank of Thailand	N/A	50	N/A	500
The stock Exchange of Thailand	N/A	40 (Paid Up Capital)	N/A	40 (Paid Up Capital)
Industrial Finance Corporation of Thailand	N/A	100	N/A	100-500
Department of Industrial Promotion	50	20	50-100	20-100
SME Bank	50	50	50-200	50-200
Office of Small and Medium Enterprises Promotion	50	50	50-200	50-200

In Thailand, many public and private institutions use various criteria for defining SMEs. The Industrial Finance Corporation of Thailand (IFCT) stated that an SME requires fixed assets of 100-500 million Baht but does not specify a number of employees. For the Federation of Thai Industry, an SME is an enterprise that has fewer than 100 employees and fixed capital less than 200 million baht. For the Bank of Thailand, a small enterprise has total assets of less than 50 million Baht whereas a medium enterprise has total assets less than 500 million baht. According to the Department of Industrial Promotion, an SME is an enterprise that has fixed assets of 20-100 million baht and 20-100 employees.

On September 11, 2002, the Ministry of Industry introduced the definition of Thai small and medium-sized enterprises (SME). An enterprise is classified as an SME if it has employees of less than 200 and fixed capital less than 200 million baht, excluding land and buildings. The work of part-time employees is counted. Overall, a small enterprise has fixed capital less than 50 million baht whereas a medium enterprise has fewer than 200 total employees. The Ministry of Industry classified SMEs in Thailand as follows:

1. Production Sector SMEs (includes agricultural processing, manufacturing, and mining).
2. Service Sector SMEs.
3. Trading Sector SMEs (includes wholesale and retail).

In business practices, according to the European Commission (2003), the definition of SME can be extended including number of share holdings by parent companies such that not more than 25% of SME capital should be owned by one large or many large companies. This means that many multinational companies in the form of franchise companies and joint-ventures between Thai and overseas companies that own more than 25% of an SME's capital should not be classified as Thai SMEs. This study defines Thai SMEs based on the Ministry of Industry September 11, 2002 criteria. The definition of SME provided by the Ministry of Industry, Thailand is shown in table 2.3.

Table 2.3

The definition of SME provided by the Ministry of Industry, Thailand

Type	Small Enterprise		Medium Enterprise	
	Employees	Capital (million baht)	Employees	Capital (million baht)
Production	Not more than 50	Not more than 50	51-200	51-200
Service	Not more than 50	Not more than 50	51-200	51-200
Wholesale	Not more than 25	Not more than 50	26-50	51-100
Retail	Not more than 15	Not more than 50	16-30	31-60

2.6 Situation of Thai SMEs in 2009- 2010

2.6.1 SMEs' Share of Gross Domestic Product in 2009

Considering the GDP of Thailand categorized by the economic activities, 11.6 percent was from the agriculture sector, 34.1 percent from the manufacturing sector, 30.9 percent from the service sector, and 14.1 percent from the trade and maintenance sector. Small and Medium Enterprises (SMEs) made up 37.8 percent of Thailand's GDP in 2009 and large enterprises made up 45.9 percent of the Thailand's GDP, decreasing 2.4 percent from the last year. When considering GDP share based on the size of the enterprises, Small Enterprises (SE) made up a higher share of GDP than Medium Enterprises (Office of Small and Medium Enterprise Promotion, 2009). SMEs' Share of GDP in 2009, Thailand is shown in figure 2.5.

Figure 2.5
SMEs' Share of GDP in 2009, Thailand

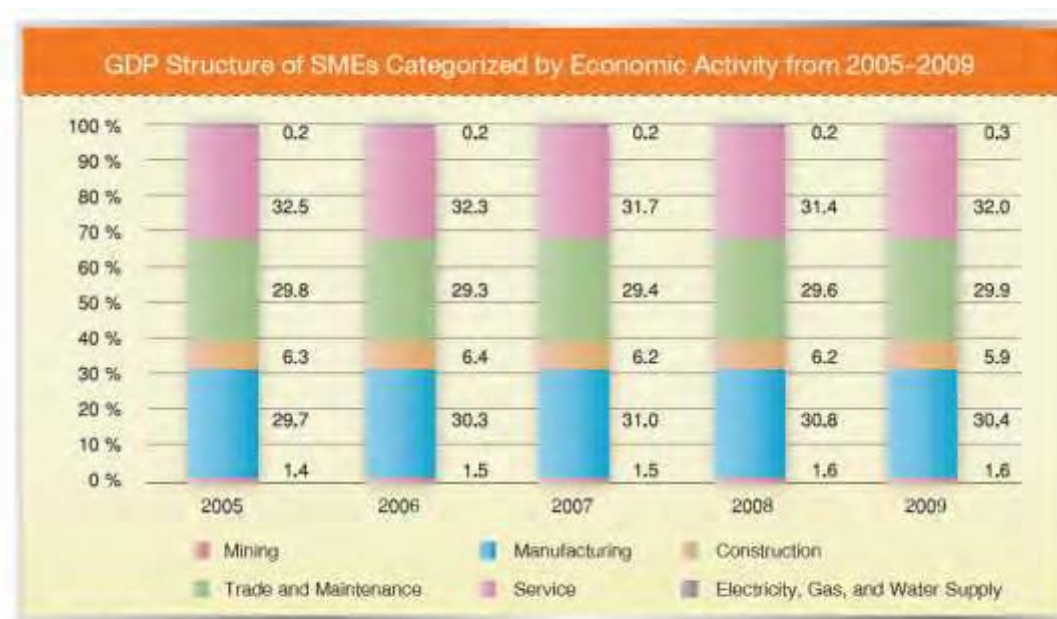


Source: Office of the National Economic and Social Development Board
Compiled by: The Office of Small and Medium Enterprises Promotion (OSMEP)

2.6.2 GDP Structure of SMEs Categorized by Economic Activity in 2009

When considering the GDP structure of SMEs categorized by economic activity in 2009, the service sector was the most important sector, accounting for 32.0 percent, followed by the manufacturing sector with 30.4 percent, and the trade and maintenance sector with 29.9 percent. The GDP contribution of SMEs from the manufacturing sector decreased more than the share of GDP from the service sector because of the decrease in purchasing power of consumers in the main markets of the country. Moreover, most tourists who visited Thailand in the latter half of the year were from Asian countries. GDP structure of SME categorized by Economic Activity in 2009 is shown in figure 2.6.

Figure 2.6
GDP Structure of SME Categorized by Economic Activity in 2009



Source: Office of the National Economic and Social Development Board
Compiled by: The Office of Small and Medium Enterprises Promotion (OSMEP)

2.6.3 Trade and Investment Situation of Thai SMEs in 2009- 2010

The export value of SMEs in 2009 was 1,589,199.87 Baht which was 30 percent of the overall exports of the country. The SMEs' export value was 46.5 percent of the GDP of SMEs and the main markets for SMEs' exports were Japan, the U.S., Hong Kong, and China. In 2009, although the overall export value for SMEs decreased, China had the highest market growth rate, increasing 17.29 percent. Concerning overall import value in 2009, SMEs imported mostly from Japan, China, the U.S., and Malaysia but global economic crisis caused a decline in domestic trade and investment. As a result, the import of products and raw materials from these countries decreased quite highly for each country (Office of Small and Medium Enterprise Promotion, 2009).

Regarding private consumption and investment by SMEs, the consumption was a reflection of the Private Consumption Index (PCI). There was also an increasing trend compared to the same quarter of the previous year. The March, 2010 PCI value increased by 7.39 percent from March, 2009. Private Consumption Index (PCI) showed growth in household electricity consumption, imports of consumer goods, and car sales. This was because of several positive factors including the better economic situation and the increasing confidence of consumers and investors, resulting in higher sales than the previous year.

In terms of investment, the Private Investment Index for the first quarter of 2010 grew 18.2 percent from the same period in 2009 due to the expansion of all private investment indicators. It was mainly from machinery and parts serving the volume of domestic commercial vehicle sales. The other reasons were commercial banks relaxed lending criteria and good investor confidence. Moreover, the Manufacturing Production Index for SMEs has been rising since November 2009, averaging 2.50 to 8.00 percent. The increasing index is a result of higher purchasing power of Thai partner countries such as Japan and the USA, a better global economic situation, and the confidence in Thai skilled labor (Office of Small and Medium Enterprise Promotion, 2009).

Table 2.4
Trade and Investment Situation of Thai SMEs in 2009- 2010

	2006	2007	2008	2009
Total Export (million baht)	4,930,985.40	5,241,962.60	5,853,828.20	5,199,912.37
SMEs Export (million baht)	1,452,479.00	1,575,971.60	1,691,144.90	1,589,199.87
Overall GDP at Annual Price (million baht)	7,850,193.0	8,529,836.0	9,075,493.0	9,050,715.0
SMEs' GDP at Annual Price (million baht)	3,050,565.1	3,298,529.4	3,457,685.3	3,417,860.7
Ratio of SMEs' export to the overall export	29.45%	30.06%	28.89%	30.56%
Ratio of the overall export to the overall GDP	62.81%	61.45%	64.50%	57.45%
Ratio of SMEs' export to SMEs' GDP	47.61%	47.78%	48.91%	46.50%

Source : Thai Customs Department / Office of the National Economic and Social Development Board
Compiled : The Office of Small and Medium Enterprises Promotion (OSMEP)

2.7 Theories Relevant to Firm Adoption

Adoption theories are aimed at understanding and explaining to what extent individuals or organizations adopt or purchase new offerings. A large number of theories have been used by virtually all adoption analysts including Stage theory, Theory of Reasoned Action by Fishbein and Ajzen (1975), Social Cognitive theory, Resource-Based View theory, Porter's models, Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), Rogers' Diffusion of Innovations theory, Social Capital theory, Institutional theory and Contingency theory. Table 2.5 presents previous studies that employed different firm adoption theories.

According to adoption theory, there are multiple factors involved in influencing concept, product, and idea adoption and theories of adoption recognize all these factors. However, there is no apparent agreement in the literature on which theories whether independently or in combination best explain business owner-manager adoption. Therefore, many researchers recommend integrating the theoretical framework since each theory has limited explanatory power (Escobar and Vredenburg, 2010).

First, institutional theory has been widely used in IT adoption research. Institutional theory asserts that firm adoption is shaped by social influences and pressure to conform (DiMaggio and Powell, 1983). DiMaggio and Powell (1983) claim that three types of institutional pressures determine technology adoption by individuals and firms in order to survive in the market). Three important types of institutional pressures are often discussed in innovation diffusion research: coercive, mimetic, and normative (DiMaggio and Powell, 1983). Coercive legitimization is firms' reaction to both formal and informal pressures by other organizations or society. Mimetic pressures are directly associated with imitation or copying of the practices and behaviors of competitors (DiMaggio and Powell, 1983). Normative pressures are related to a person's perceptions that are important to her/him and sharing norms among institutions (Zucker, 1987).

Moreover, many researchers in the MIS and consumer fields (Ajzen, 2005; Lee et al., 2006) use the theory of planned behavior, and by default the TRA, to explain behavioral intention to adopt. The theory of planned behavior (TPB) (Ajzen, 1991) is an extension of the theory of reasoned action (TRA) (Fishbein and Ajzen, 2010; Fishbein and Ajzen, 1975). Both theories hypothesize that an individual's intention to perform the behavior is a determinant of that behavior. Intentions are *“indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior”* (Ajzen, 2005). In 1991, Ajzen included a new construct to the theory of planned behavior which is perceived behavioral control. He states that the original model (TRA) was unable to deal with behaviors over which people have incomplete volitional control. Perceived behavioral control reflects an individual's perceptions that personal and situational factors obstruct the performance of the behavior. Ajzen (1991) argues that the more positive attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual's intention to perform the behavior.

The Technology Adoption Model (Davis, 1989) has been the groundwork for much technology adoption and diffusion research and it is rooted in the Theory of

Reasoned Action (TRA). For Technology Adoption Model, the two important independent variables of actual use of technology are: perceived ease of use, defined as *'the level to which a person believes that using a particular system would be free of effort'*, and Perceived usefulness, defined as *'the level to which a person believes that using a particular system would enhance his or her performance'*. The Technology Adoption Model posits that perceived ease of use plus perceived usefulness are predictors of an individual's attitude towards use and intentions to use a technology (Grandon and Pearson, 2004).

However, the Theory of Reasoned Action, Technology Adoption Model and theory of planned behavior are designed to measure and predict intention in the immediate future not the actual behavior of managers or consumers. They largely ignore the complex relationships between firm decision-makers and employees, family, and external parties.

In addition, the most well-known theory, Diffusion of Innovation theory (Roger and Shoemaker, 1971) seeks to explain the spread of new ideas. *Diffusion of Innovation is the communication process of ideas or innovations through a number of channels over time among members of a social system* (Rogers, 2003). Rogers defines an innovation as *"an idea, practice, or object that is perceived as new by an individual or other unit of adoption"*. The firm adoption processes involves agenda-setting, matching, re-inventing, clarifying, and routining. The stages of adoption include: knowledge, persuasion, decision, implementation, and confirmation.

Rogers defines an adopter category as *a classification of individuals within a social system on the basis of innovativeness*. Rogers suggests a total of five categories of adopters in order to standardize the usage of adopter categories in diffusion research. The adoption of an innovation follows an S curve when plotted over a length of time. The categories of adopters are: innovators, early adopters, early majority, late majority and laggards (Rogers, 2003).

In the Diffusion of Innovation Theory, the diffusion curve is divided into stages (Roger, 1995). Several researchers suggest that complex technologies or new ideas will not diffuse in sequential stages (Rogers, 1995). Many times it would not be clear what these stages would mean in relation to the observed behavior. Moreover, Attewell (1992) provides insight by arguing that know-how in sophisticated innovations is gained through learning by doing. Many firms are unlikely to adopt the know-how until they (partially) adopt and may not have an adoption stage like Rogers cited. Based on the reason suggested above, diffusion theory is not suitable to explain the level of firm adoption of the Philosophy of Sufficiency Economy.

In short, grounded in the literature, all the theories described above are applied and used for adoption studies. However, the Theory of Reasoned Action, Technology Adoption Model and Theory of Planned Behavior, and the Diffusion of Innovation Theory are broadly used during the pre-stage of adoption and early adoption decision (Roger, 1995). However, the Resourced-Based View was the basis used to examine the actual adoption stage and look at competitive advantage for firms adopting resources. It explains the factors affecting firm adoption and success with adoption (Melville, Kraemer and Gurbaxzni, 2004). Therefore, this research uses the Resourced -Based View theory , Social Capital theory, and Contingency theory as its underpinning theories.

2.8 Resourced-Based View Theory (RBV)

There has been extensive employment in marketing literature of the Resourced-Based View theory, either on its own or in combination with other theories, to explain factor impact or facilitate firm adoption and firm performance (Liebermann and Dhawan, 2005; Song, Droge, Hanvanich and Calantone, 2005). The resource-based view of the firm originates from Penrose's (1959) work and posits that the growth of a firm is both facilitated and limited by management exploring for the best usage of available resources. The resourced-based view focuses on the internal

capability of a firm in formulating strategy in order to sustain competitive advantage in its market.

Barney (1991) provides a precise and formalized description of this perspective. Resources include assets, knowledge, capabilities, processes, attributes, and know-how that are possessed by a firm, and that can be used to formulate and implement competitive strategies. Resources consist of tangible components such as financial and physical assets like property, plant and equipment, and intangible components such as human capital, patents, technology, and know-how (Amit and Schoemaker, 1993; Grant, 1991). Capability is defined as the ability of the firm to use its resources *“to affect a desired end”* (Amit and Schoemaker, 1993). Amit and Schoemaker (1993) define resources as *“stocks of available factors that are owned or controlled by the firm”*.

According to the Resourced-Based View theory, firms are unique bundles of resources which provide them with competitive advantage against other firms (Barney, 1991; Peteraf, 1993). However, not all resources are useful in differentiating a firm against its competitors. In order for a resource to be a differentiating factor, resources should satisfy four criteria which are that they are: valuable, rare, inimitable, and non-substitutable. The resource-based view recognizes that a firm's human capital is among the most important and valuable resources for improving performance (Barney, 1991; Becker and Gerhart, 1996; Hitt, 2000; Wright et al., 1994). However, for human capital to generate economic rents, firms need to assemble, integrate, and deploy human resources by improving leadership capabilities. Several researchers have adopted a resource-based perspective to address the issue of the contribution of leadership to business value (Vorhies and Morgan, 2005).

Several empirical studies explain firm adoption by using the Resourced-Based View theory. Escobar and Vredenburg (2010) studied the adoption of sustainable development employing the resource-based view to interpret the factor effects. Danall, Gallagher and Andrews (2000) explored the antecedents of organizational adoption

of environment management systems and found that resource capacity and management system capacity affect firm adoption.

Overall, the Resourced-Based View theory provides a theoretical basis for understanding the role of SME adoption of the Philosophy of Sufficiency Economy. It can be said that SMEs that own a valuable or unique managerial capability (value-based leadership) will gain a competitive advantage and successfully adopt the Philosophy of Sufficiency Economy.

2.9 Contingency Theory

Contingency theory is a major theoretical tool to view firms and it holds that firms adapt their structures in order to maintain fit with changing contextual factors in order to attain high performance (Donaldson, 2001). According to Hodge et al. (1996), contingency theory states that “*relationships among organizational characteristics, especially the relationships between structure and size and technology and environment, are contingent or dependent upon the situation or context.*” Contingency theory focuses on the impact of situational influences on strategic management and firm performance (Zeithaml, Varadarajan, 1988).

The foundations of contingency theory are from the systems approach of the 1950s. *The systems approach seeks to study the activities of a firm by reference to the context of the wider environment in which it is set* (Emmanuel et al., 1990). Whereas, at that time nearly all previous studies in organizational research had been universal in approach, selecting the single best organizational result, much of the work conducted in the late 1950s and early 1960s noted that particular forms of organization were best suited to particular environmental conditions. A study by Woodward in 1965 found it necessary to recommend different principles of management and strategy depending upon the nature of the production process. All these results indicated that there was no single form of organization that was best in all circumstances (Burrell and Morgan, 1979).

Contingency scholars emphasize that firm performance is a function of the equivalence between an organization and its environment, strategy, and structure (Duncan, 1972; Miles and Snow, 1978; Venkatraman and Ramanujam, 1986). Environment represents foundations of inputs in the form of individuals, groups, and organizations, as well as external environmental forces. Previous studies found that environmental uncertainty, technology complexity, law and regulation, and level of international competition had an impact on firm performance (Reed et al., 1996; Hendry, 1998; Gonzalez-Benito, 2002; Das et al., 2000). As a result of various forms of environmental influence and uncertainty, contingency scholars have concluded that no “best” or universal strategy or structure exists to match any one mix of environmental preferences. Therefore, firms need to determine how best to compete based on developing strategies and structures particular to the firm and the markets it serves.

Several studies have adopted contingency theory as the framework for firm adoption (Clegg, Hardy and Nord, 1996). Peter and Salazar (2010) used contingency and organizational learning theories to establish a theoretical foundation for understanding organizational adoption. Bredgaard (2004) used contingency theory to explain firm adoption of corporate social responsibility in Denmark, comparing between public policy and enterprise policy. Rosdahl (2002) studied the social responsibility of firms using contingency theory as the framework.

Yodpetch and Chirapanda (2008) employed contingency theory as the framework to analyze firm performance in applying the Sufficiency Economy Philosophy. According to contingency theory, the optimal strategy of a firm depends on many factors, for example availability of qualified employees and environmental uncertainty. Each firm has to find its own optimal strategy by considering the external and internal factors affecting the firm’s operation and performance. Understanding the effects of internal and external factors will help a company find the optimal strategy. Under this approach, managers need to evaluate and understand the effect of contingency variables. Therefore, firms can choose

appropriate strategy and business practices that follow the Philosophy of Sufficiency Economy in order to achieve organizational goals.

Therefore, the Resource-Based View theory is more likely to emphasize internal factors, while contingency theory is more likely to emphasize external factors, such as the perceived environmental uncertainty, that affect the level of firm adoption of the Philosophy of Sufficiency Economy in small and medium enterprises.

2.10 Social Capital Theory

Social capital is defined as *“the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual, organization or social unit”* (Nahapiet and Ghoshal, 1998). Nahapiet and Ghoshal (1998) identified three dimensions of social capital:

- 1) The structural dimension includes social relations. The term describes the overall pattern of relationships between actors.
- 2) The relational dimension refers to various social dynamics including trust. Trust is defined as *“an embedded set of beliefs that the other party will refrain from opportunistic behavior and will not take advantage of the situation”* (Hosmer, 1995). Trust can contribute to the success, failure, and adoption of new ideas.
- 3) The cognitive dimension of social capital is shared vision. Shared vision refers to a clear common goal of individuals in a firm which inspires working to achieve the objective (Hoe, 2007).

Social capital has been analyzed at different levels (Leana and van Buren, 1999). It can be considered as an asset of an individual (Coleman, 1990), of a firm (Tsai and Ghoshal, 1998), and of a country or a region (Mongsawad, 2010). Adler and Kwon (2002) proposed social capital as *“the goodwill available to individuals or groups. Its source lies in the structure and content of an actor’s social relations. Its*

effects flow from the information, influence and solidarity it makes available to the actor". At the firm level, social capital refers to connections with external parties that provide a firm or its employees access to new knowledge. The public level represents formal institutions such as law, order, and good governance (Nahapiet and Ghoshal, 1998). Previous studies have used social capital theory to explain firm adoption and firm performance in marketing literature (Coleman, 1988; Mol and Julian, 2009; Woolcock and Narayan, 2000). This study investigates shared vision and external social networks and government agency support as social capital factors influencing the firm adoption of the Philosophy of Sufficiency Economy in SMEs.

In sum, the Resourced-Based View theory, social capital theory, and contingency theory all have strong theoretical bases, proven empirical support, and applicability to a wide range of firm adoption; therefore this study adopts all these theories as a framework.

2.11 Social Networks

Many researchers have expressed how social networks facilitate information exchange (Starbuck, 1976). A social network is a set of ties representing some relationship or lack of relationship among the actors (Brass, et al., 1998). Nahapiet and Ghoshal (1998) stated that social networks includes the informal and the formal connections at any step of the value chain of activities such as those between customers, suppliers, members of public and private organizations, and other stakeholders. These networks reduce the amount of time and investment required to gather information, increase information and resource transfer and increase the pace of product innovation and firm adoption (Tsai and Ghoshal, 1998; Zander and Kogut, 1995).

Cooperation and network building activities among stakeholders will motivate firms to adopt the Philosophy of Sufficiency Economy into their practices (Tantivejkul, 2011). The office of the National Economic and Social Development

Board (2009) also suggests promoting knowledge of the Philosophy of Sufficiency Economy by means of social networks. Sasin (2010) suggested that social networks help firms to successfully adopt the Philosophy of Sufficiency Economy. In addition, Isarangkul na Ayudhya (2004) suggested that helpful networks can increase the extent of adoption of the Philosophy of Sufficiency Economy.

In 1997, Chumphon Cabana Resort (a medium enterprise) recovered from the economic crisis by beginning to grow plants, share knowledge of the Philosophy of Sufficiency Economy, and build networks with the community. This was the turning point of the whole operation and resulted in achieving happiness and well-being (Sasin, 2010).

The UNDP (2006) studied Inpaeng communities that were successful in adopting the Philosophy of Sufficiency Economy by building networks in the community. Most of them produced rice and faced the problem of huge debt. They decided to prioritize growing their own agricultural products such as rice for consumption. The network began to expand its activities beyond agriculture, production, and trade. These groups help to expand the networks as well as providing financial support. The network's activities include agriculture, community enterprises, health care, environmental conservation, and education. This coordination allowed the network to promote the Philosophy of Sufficiency Economy, and gain knowledge as well as technical and financial support. The development of intra-village industries and connections to other networks and organizations corresponds to the Philosophy of Sufficiency Economy in which communities are encouraged to expand to interact with outside markets and institutions. Also, Mongsawad (2010) proposed that social networks will motivate and facilitate firms to adopt the Philosophy of Sufficiency Economy.

For all the above reasons, frequent and close social networks reduce distrust, fear, and dissatisfaction from adopting the Philosophy of Sufficiency Economy. This permits firms to share important knowledge, and to create a common point of view and bring about successful implementation of the Philosophy of Sufficiency

Economy. The researcher suggests the closer the relationship within the social networks, the higher the level of firm adoption of the Philosophy of Sufficiency Economy. Besides, past research has shown that social networks affect firm performance (Hanna and Walsh, 2008; Gabbay and Leenders, 1999; Osori and Sackey, 2010). Pennings et al. (1998) found that social networks help improve macro-organizational performance. Lee and Lee and Penning (2001) found that association with other firms and venture capital companies directly improves firm performance. Social Networks create long-term relationships with suppliers, customers, and other firms with matching resources. Financial resources and management skills provided by venture capital firms create more wealth from their internal capabilities. Hansen (1995) similarly stated that social networks are positively associated with organizational growth. Therefore, the following hypothesis is offered.

H1a: Social networks have a positive influence on the level of firm adoption of PSE in SMEs.

H1b: Social networks have a positive influence on firm performance in SMEs.

2.12 Government Agency Support

Government plays a significant role in supporting the Philosophy of Sufficiency Economy (Isarangkun and Pootrakool, 2007; Mongkawad, 2010). Several studies found a link between government support and firm adoption since governmental and regulatory bodies may become more deeply involved in specifying the practices adopted and determining the extent and rate of adoption (Edwards, Marginson, Ferner and Tregaskis, 2007; Levis 2005; Stoneman and Diederer 1994).

The previous and the present government administrations adopted the Philosophy of Sufficiency Economy as the country's economic and social development path to support Thai citizens in every sector. One of the examples is the guidelines used in the nine and in the present tenth National Economic and Social Development Plan (2007 – 2011) (International Institute for Trade and Development, 2010; Ruenrom, 2009). The Asian economic crisis in 1997 caused Thailand economic

troubles. Most Thai people encountered serious economic problems. Therefore, the ninth plan was the first plan that followed His Majesty the King's Sufficiency Economy Philosophy as the method for sustainable development. The ninth plan caused Thailand's economy to grow around 5.7 percent/ year. The economy was stable and Thai people's quality of life improved (Office of National Economic and Social Development Board Committee, 2010).

The present tenth plan (2007- 2011), followed His Majesty the King's Sufficiency Economy Philosophy for a green and happy society in which Thai people have rights, strong families and community, peaceful society, quality economy, quality environment, good governance and democracy (Office of National Economic and Social Development Board Committee, 2010).

PM Abhisit emphasized the importance of the eleventh National Economic and Social Development Plan, which will come into effect in October, 2012. The Philosophy of Sufficiency Economy will be used as guidance for the eleventh National Economic and Social Development Plan. This plan will be used over a five-year period, from 2012-2016. This year the eleventh National Economic and Social Development Board Committee stipulated the 2027 vision as follows:

“Thai people must be proud to be Thai, have friendliness, a sufficient way of life, firmly believe in democratic culture and good governance principle, have adequate and quality infrastructure, social standards which are safe and secure, live in a good environment, support each other, have a good mode of production which is good for the environment, have sustainable food and energy, act based on the Philosophy of Sufficiency Economy, have the potential to compete in the world and to live in the region and in the world honorably” (Office of National Economic and Social Development Board Committee, 2010).

Based on the Philosophy of Sufficiency Economy, several governmental agencies such as Ministry of Public Health, Ministry of Agricultural and Cooperatives, Thai Agro Business Association, The Federation of Thai Industry,

Tourism Council of Thailand, and Institute of Sufficiency Economy have improved their roles in directing development by facilitating funding, and training and supporting communities in planning and implementing business and community programs and projects.

Government agencies fully supported the Royal Development Study Centers by improving coordination within the government sector and managing different government agencies and departments in order to provide optimum benefits (Office of the Royal Development Projects Board, 2004). Many government agencies and academic institutions conducted business research and provided scholarships related to the Philosophy of Sufficiency Economy such as the Division of Research Services of Mae Fah Luang, National Economic and Social Development Board (NESDB, 2000).

Another instance of a government project supporting the Sufficiency Economy Philosophy is the One Tambon One Product (OTOP) program. One Tambon One Product (OTOP) program is the government's project to promote special products from each village in Thailand. OTOP today encourages sustainable firm innovation at the Tambon level and provides an efficient and accessible framework through which entrepreneurs can bring their products to the local, provincial, national, and international marketplace. OTOP products cover a wide range of products, including handicrafts, garments, pottery, fashion accessories, household items, and foods (NESDB, 2007). The Government encourages each community to turn local wisdom into value-added products. Thai government agencies provide support in terms of technical knowledge, management, marketing channels, and networking technology for both domestic and international markets (NESDB, 2004). Furthermore, to lessen dependence on petroleum imports, government agencies fully support energy companies such as Eternal Energy public company, PTT, Dow Chemical, Golden Bio Diesel Company, and alternative energy resources projects into energy sources such as solar energy and bio-energy in accordance with the Sufficiency Economy Philosophy (NESDB, 2007).

In short, The Philosophy of Sufficiency Economy concept helps firms overcome serious issues. It is consequently necessary for Thai government agencies to promote the Philosophy of Sufficiency Economy into the business sector in order assist Thai firms to compete with those of other countries. The Philosophy of Sufficiency Economy enables Thai firms to achieve sustainable economic growth. Government agency support would lead to higher level of firm adoption of the Philosophy of Sufficiency Economy by SMEs. Although the literature on the impact of government agency support on firm adoption activity is prolific, no research has tested the impact of government agency support on the level of firm adoption of the Philosophy of Sufficiency Economy. Prior studies suggested that government agency' support affected firm performance (OECD, 2002; Park and Kim, 2010). Governments can amend the government policy, taxation, and import and export regulations, consequently enhancing firm performance (Wu and Leung, 2005). Hansen, Rand and Tarp (2009) found that government assistance had a positive influence on SME performance in Vietnam. In Malaysia, government supports directly improved firm performance. This is because government provides a lot of knowledge and technology from training and R&D institutes. Also, the legal rights and tax policies for investors and entrepreneurs are assured (Zainol and Daud, 2011). Peng and Luo (2000) found that government support helps improve macro-organizational performance Therefore, the following hypothesis is offered.

H2a: Government Agency support has a positive influence on the level of firm adoption of the PSE in SMEs.

H2b: Government Agency support has a positive influence on firm performance in SMEs.

2.13 Perceived Environmental Uncertainty

The perceived environmental uncertainty concept has been applied in various business-related fields including marketing, international business, strategic management, information systems, and accounting (Sawyer, McGee and Peterson, 2003). Perceived environmental uncertainty is viewed as a perception affecting

individual decision making in a dynamic environment. Perceived environmental uncertainty is defined as an individual's perceived inability to foresee changes in an environment precisely because of a lack of information or knowledge necessary for decision-making (Dimitratos, Lioukas and Carter, 2004; Milliken, 1987). Changes in the environment include changes in technologies, change in regulation, variations in customer preferences, and fluctuations in market demand (Jarworski and Kohli, 1993; Miles and Snow, 1978). Two macro-environmental (technological uncertainty and governmental uncertainty) and four micro-environmental (competitor; market turbulence, demand, market, and supply uncertainty) aspects have been measured in perceived environmental uncertainty studies (Ashill and Jobber, 2009).

Jaworski and Kohli (1993) defined the business environment as the conditions that firm is facing, consisting of market turbulence, competitive intensity, and technological turbulence. Market turbulence is defined as the unpredictability regarding customers and their preferences which affects firm performance (Jaworski and Kohli, 1993). Competitive intensity refers to the market situation in which a firm has to compete. Lastly, technological turbulence is defined as the rate of technological change used to develop new products in the business (Jaworski and Kohli, 1993).

Several studies have examined environmental uncertainty as a perceptual phenomenon referred to as perceived environmental uncertainty (Lawrence and Lorsch, 1967; Milliken, 1987; Sawyer, 1993; Sawyer and Peterson, 2003). Duncan (1972) proposed that perceived environmental market uncertainty is a result of three conditions. *“(1) the lack of information regarding environmental factors associated with a given decision-making situation, (2) not knowing the outcome of a specific decision in terms of how much the organization would lose if the decision were incorrect, and (3) inability to assign probabilities with any level of confidence with regard to how environmental factors are going to affect the success or failure of the decision unit in performing its function.”* Since managers do not have the ability to react to the environment, firm responses to external environments are based on managers' perceptions of environmental conditions (Sawyer and Peterson, 2003). It is the perception of uncertainty, rather than the actual uncertainty in the environment

that influences the decisions managers make in response to their respective organization's operating environment. The level of perceived environmental uncertainty depends on managers' perceptions in dealing with the environment (Dimitratos, Lioukas and Carter, 2004). Moreover, Milliken (1987) proposed three components of perceived environmental uncertainty: state uncertainty, effect uncertainty and response uncertainty. State uncertainty is defined as the situation that occurs when managers do not feel confident that they understand what the major events in an environment are (Milliken, 1990). Effect uncertainty refers to the inability to predict the future events in the environment on the firm. Response uncertainty is the third type of uncertainty and characterizes an inability to predict the consequences of a response alternative.

In how it measured measuring environmental uncertainty, the previous literature of perceived environmental uncertainty could hardly be described as unified and conceptualized as a multidimensional construct. The three broad approaches: objective measures, perceptual measures, and both objective and perceptual measures were employed to measure environmental market uncertainty. All of these conceptualizations have their own merit. Some measure environmental uncertainty as perceptual (Child, 1972; Downey and Slocum, 1975; Starbuck, 1976). Some writers have suggested that it is necessary to measure environmental uncertainty objectively as a way of attempting to validate our perceptual measures (Starbuck, 1976). Many researchers (Downey et al., 1975; Downey, Hellriegel, and Slocum, 1977; Tosi et al., 1973) sought to measure both objective and perceived environmental market uncertainty. For example, Dean and Snell (1996) used objective measures of the environment based on the strategy literature.

Gerloff et al. (1991) employed three items each to measure state and effect uncertainty and response uncertainty based on Duncan (1972) but found wording and reliability problems.

In this study, perceived environmental uncertainty is conceptualized as a perceptual measure with multidimensional constructs comprising: market turbulence, competitive intensity, environmental volatility, and technology turbulence.

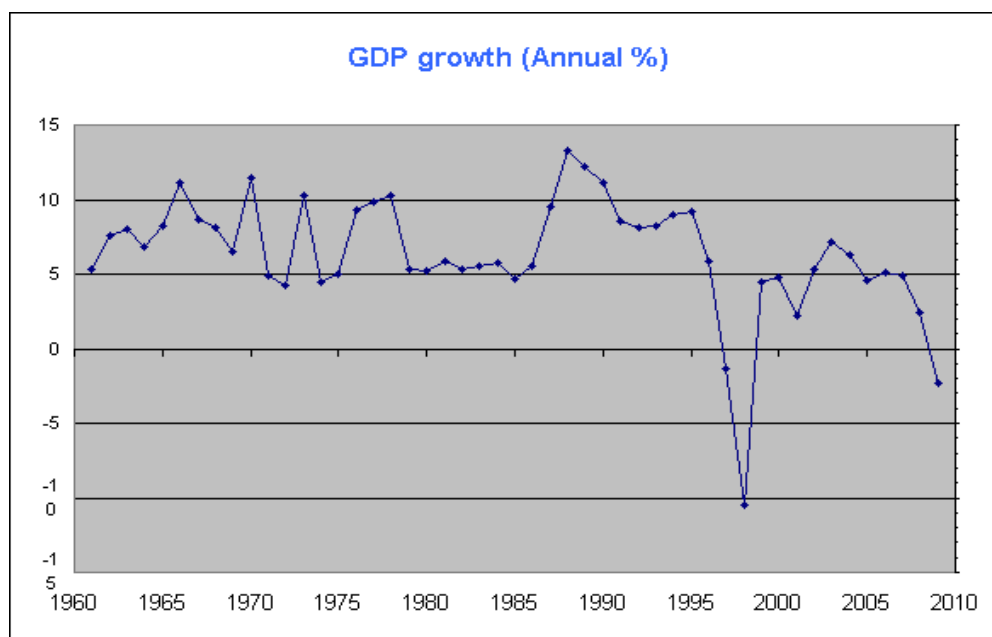
Due to the perceived environmental uncertainty and the global economy, firms are under pressure to innovate their products and services (Cummings and Oldham, 1997; Andriopoulos and Lowe 2000). Several studies have revealed that perceived environmental uncertainty increase the rate of adoption. Under the condition of high environmental uncertainty, firms need to innovate or adopt new strategies/ideas and products in order to survive and achieve success in the market. Environmental uncertainty also requires organizations to innovate faster and more efficiently (Baker and Sinkula, 2005; Brown and Eisenhard, 1997; Teece, Pisano and Shuen, 1997).

Prior studies suggested that perceived environmental uncertainty affected the firm adoption of the Philosophy of Sufficiency Economy in an enterprise (Kantabutra, 2006; Sasin, 2010; Yodpetch and Chirapanda, 2008). In Thailand, remarkable evidence has been found about the severe effects of the Thailand financial crisis in 1997. The Thai financial crisis occurred after many years of outstanding economic performance. The economy of Thailand is supportive of the free enterprise system. In Thailand, from 1985 to 1996, the economy grew at an average of over 9 percent per year, the highest economic growth rate of any country at the time. Between 1960 and the Asian crisis of 1997, GDP annual GDP growth fluctuated between 5 and around 10 percent per year.

The Asian economic crisis of 1997 caused the first drop into negative territory. The Thai government was eventually forced to float the Baht, on 2 July 1997. As a result, the currency crisis spread rapidly throughout the region and beyond (Bunyasrie, 2009). Thailand's economic boom came to a halt and this resulted in high unemployment (Kaufman, Krueger and Hunter, 1999). The Thai financial crisis was created by several factors such as the economic recession, the fixed exchange rate, the bursting of bubble economy, the financial liberalization policy, the high domestic interest rate policy, the ignorance of control and investigation in financial institutions,

the structural and managerial erosion of finance and securities, the political limitations and wrong decision making (Kaufman, Krueger and Hunter, 1999; Liebhold, 1999). From 1988 to 1990, there was GDP growth substantially higher than 10 percent. Afterwards, growth overall seemed to trend around 5 percent per year. A second plunge into negative territory occurred with the global crisis during 2008-2009, with negative GDP growth of 2.3 percent but this was not as severe as in 1997 because of the use of the Philosophy of Sufficiency Economy as a guideline in the formulation of the ninth and the present tenth National Economic and Social Development Plan (2007 – 2011) (International Institute for Trade and Development, 2010; Ruenrom, 2009). The ninth plan caused Thailand's economic growth of around 5.7 percent per year. The economy was stable and improved (NESDB, 2011). GDP Growth: Bank of Thailand, 2010 is show in figure 2.7.

Figure2.7
GDP Growth: Bank of Thailand, 2010



The Philosophy of Sufficiency Economy emphasizes the importance of protecting the country and its people against shocks (UN, 2007). Many firms in Thailand adopt the Philosophy of Sufficiency Economy due to the perceived environmental uncertainty caused by globalization (Sasin, 2010; UNDP, 2007).

Several firms, both small and large such as PTT, SCG, True Cooperation, DTAC, and Thainame.com, have adopted the Philosophy of Sufficiency Economy as a guide to management and planning to protect them from global environmental uncertainty. This approach encourages them to focus on sustainable profits, to adhere to an ethical approach to business, to pay special attention to their employees, to respect nature, and to have careful business management (Mongsawad, 2010; Thongpakdee 2005). Firms which have adopted this approach have enjoyed success over the long-term and have been found to enhance their performance (Knight, 2000).

The Philosophy of the Sufficiency Economy is advocated as it can conquer the economic uncertainty brought about by unexpected changes under conditions of rapid globalization (Lekuthai, 2007; Unseree, 2008). Santitaweeroek (2008) conducted a case study of one SME in the silk industry. The firm faced problems of political uncertainty and international risk. In adopting the Philosophy of Sufficiency Economy Philosophy, the firm decided to sell products within the domestic market instead and survive during the crisis. Moreover, Sasin (2010) studied one SME in the food business that faced a problem while applying the Philosophy of Sufficiency Economy. This problem occurred due to perceived environmental uncertainty. However, the problem lessened due to the firm taking care to hedge its foreign exchange risks. The Philosophy of Sufficiency Economy is an approach to balancing local and global agendas. Therefore, the impacts of perceived environmental uncertainty are manageable (Ministry of Foreign Affairs, 2007).

Hence, in accordance with prior literature, the Philosophy of Sufficiency Economy is useful both in understanding what drew Thailand into the 1997 crisis, and in developing more appropriate business practices for the future to protect Thai business against the effects of perceived environmental uncertainty. The Philosophy of Sufficiency Economy realizes the truth that Thailand is integrated into globalization and looks to minimize negative consequences of the environmental uncertainty problems. Firms being more concerned with perceived environmental uncertainty will lead to the higher level of firm adoption of the Philosophy of Sufficiency Economy (Ruenrom, 2009; Yodpetch and Chirapanda, 2008). Moreover,

prior empirical literature in management studies showed that PEU directly affected firm performance (Alvarez and Barney, 2005; McMullen and Shepherd, 2006). However, some studies found that PEU had no effect on firm performance (Carmeli and Tishler, 2006; William and Seaman, 2005). If the situation becomes highly unpredictable, the perceptions of SME owners vary more widely across stakeholders, while at the same time encouraging behaviors associated with highly uncertain environments. High perceived uncertainty will affect the quality of managerial decisions and thus the fit of a firm's strategy to its internal and external context. Therefore, the overall empirical results of PEU on firm performance are inconclusive. Therefore, the following hypothesis is offered.

H3a: Perceived Environmental Uncertainty (PEU) has a positive influence on the level of firm adoption of the PSE in SMEs.

H3b: Perceived Environmental Uncertainty (PEU) has a positive influence on firm performance in SMEs

2.14 Shared Vision

Tsai and Ghoshal (1998) stated that shared vision represents the common goals and desires of the members of firm to adopt or exchange. Staff who truly share a vision are bound together by a common ambition. This notion of shared vision refers to shared values and common purposes and understanding in a cooperative relationship (Morgan and Hunt, 1994; Parsons, 2002).

According to Nahapiet and Ghoshal (1998), shared vision increases the level of mutual understanding among firm members. Shared vision provides direction on what to care for and what to transform. Without shared vision, even if staff is motivated, it is difficult to know what to learn due to lack of clear direction (Hult, 1998). This is a major factor that obstructs firm adopting the Philosophy of Sufficiency Economy since several people still misunderstand about the concept of the Philosophy of Sufficiency Economy due to unclear vision.

Hart (1995) proposed that firms that demonstrated the capability of shared vision will be able to build up the skills necessary for developing or adopting earlier than firms without such a capability. Moreover, Swanson and Ramiller (1997) believe that shared vision plays an important role in the early stages of diffusion of a new innovation. Calantone et al. (2002) found that shared vision has a positive effect on firm adoption which subsequently affects firm performance. Still, much empirical research into shared vision found no direct influence on firm performance (Gutierrez, Montes and Sanchez, 2009)

In the tenth National Economic and Social Development Plan, the vision for Thailand is to develop the country to be a green and happy society through the King's Philosophy of Sufficiency Economy. The Philosophy of Sufficiency Economy was adopted as the guideline and vision for national development. His Majesty's vision of development has guided Thailand in a sustainable direction and will lead to articulation of a shared vision for the community (NESDB, 2011).

Vision is essential for leadership and is a process of inducing others to act toward a common goal. Vision creates a sense of direction for organizational members seeking to adopt the Philosophy of Sufficiency Economy. Staff will make it clear to followers what needs to be done (Kantabutra, 2005). Khunthonjan (2009) proposes that leaders in the Philosophy of Sufficiency Economy context must have the ability to share and disseminate vision. They should share vision and commitment, and use the vision to guide their daily business activities.

Some SMEs that have adopted the Philosophy of Sufficiency Economy and are promoting this practice as company vision are P.Y.M Service Company (cleaning service), Siam Ceramic Thailand Company (ceramic tableware products), and Srithep and Thai Company (plastic packaging). Kantabutra (2006) proposes that Siam Ceramic Thailand shared vision and understanding between parties which lead to successful adoption of the Philosophy of Sufficiency Economy. The vision of Siam Ceramic Thailand is *"to be the best provider of ceramic tableware in the world through moderation, diversification and morality"*. To ensure attainment of the

vision, Siam Ceramic Thailand leaders communicate the vision to organizational members who then interpret and use the vision to guide their daily decision-making and business activities. These will go in front to increase the level of mutual understanding among organizational members and use the vision to guide their work (Kantabutra, 2006).

In addition, Sasin (2010) suggests Bathroom Design Enterprises as a successful case of adopting the Philosophy of Sufficiency Economy. The firm shares knowledge and vision of the Philosophy of Sufficiency Economy across its organizations and industries, helping to nurture sufficiency economy practices throughout the entire firm.

Therefore, as suggested by the literature, shared vision sets the broad outlines for strategy development and for staff to conform to. This create a sense of unity within the firm and helps to clarify an organization's direction on what to do and what to learn regarding to the Philosophy of Sufficiency Economy. This research hypothesizes a positive relationship between shared vision and the level of firm adoption of the Philosophy of Sufficiency Economy. The shared vision will facilitate firms to achieve a higher level of adoption of the Philosophy of Sufficiency Economy. The following hypothesis is offered:

H4: Shared vision has a positive influence on the level of firm adoption of the PSE in SMEs.

2.15 Value-Based Leadership

Previous evidence suggested that ethical or value-based leadership is one of the important factors for success enterprises applying the Philosophy of Sufficiency Economy such as Bathroom Design, Kasikorn Thai, and Siam Cement Thailand (Kantabutra and Avergy, 2003; Sasin, 2010). Value-based leadership refers broadly to leadership based on moral principles or values such as social responsibility,

integrity, and empowerment (Reilly and Ehlinger, 2007). Value-based leadership operates in internal enterprise relations. Mussig (2003) argues that “*Values-driven leadership sets the function of the relationship as putting values into practice*” and “*the function of the leader may be to bring values to the relationship*”.

Value-based leadership is defined by Garg and Krishnan (2003) as an association between staff and leaders based on shared, strongly internalized ideological values advocated by the leader and strong follower recognition of these values. Ideological values means values about what is morally right and wrong. Such values are stated in terms of fairness, concern for all stakeholders, and personal moral responsibility.

According to O’Toole (2008), the attributes of value-based leadership include integrity, vision, trust, listening, respect for followers, clear thinking, and inclusion.

- Inclusion: Value-based leadership gives all staff the opportunity to contribute to the enterprises.
- Listening: Effective leaders listen to their subordinates because they respect them.
- Respect for followers: Value-based leaders will value and respect their subordinates.
- Clear thinking: The leader listens to opinions, needs, ideas, and desires of staff, and responds to these in an appropriate fashion.
- Integrity and morality: requires moral behavior, truth telling, and honesty.
- Vision: The leader should create a vision that the staff are able to adopt and are willing to follow. In the end, the leader’s vision becomes the staff’s vision because it is built on their needs and aspirations.
- Trust: will facilitate communication across borders as a basis for enterprises.

There is both theory and empirical evidence which suggests that leadership has a substantial effect on firm adoption (Akkermans and Helden, 2002; Caldeira and

Ward, 2003; Wixom and Watson, 2001). Moreover, previous studies have provided strong evidence that value-based leadership can contribute to a variety of positive organizational outcomes via a moderating variable or in the strategic management of the firm (Pearce, 2004; Pearce and Conger, 2003; Pearce and Manz, 2005; Waldman et al. 2001). Manz, Manz, Adams and Shipper (2011) proposed a conceptual model of the relationship between performance and value-based shared leadership by using two organizational values as moderators: valuing human resources and ongoing creative process. Emmons (1999) cites seven studies done since 1995 that found a significant relationship between spirituality and employee satisfaction which in turn affected firm performance. Fry (2003) summarized the effectiveness of value-based leadership by using empirical evidence from over 50 studies demonstrating that value-based leader behavior influences follower motivation and subsequently firm performance. Jun, Pingping and Weiku (2008) found that value-based leadership influenced the nature of corporate culture, that is, the ways organizations conduct their business, treat employees, or deal with customers and suppliers, which consequently affects the financial performance of companies.

Thaisriwichai (2010) stated that the major problem that impedes firms' successful adoption of the Philosophy of Sufficiency Economy is that the leadership does not understand this Philosophy. This leads to reluctance to adopt the Philosophy of Sufficiency Economy in to the organization (Thaisriwichai, 2010). Therefore, firms need leadership that has clear vision, morality and can motivate employees to promote and exchange ideas.

Bathroom Design is a company selling bathroom shower products. The owner of Bathroom Design, Watcharamongkol Benjatanachat has a very strong determination to adopt the Philosophy of Sufficiency Economy in his business. He pays great attention to his staff's ideas. He builds the Philosophy of Sufficiency Economy as a firm objective to which the staff must be willing to conform. Bathroom Design has established a coordinating officer to develop, manage, execute, and evaluate the company's alignment with the Philosophy of Sufficiency Economy

(Bathroom Design, 2010). His characteristics are consistent with value-based leadership styles.

Wattanoparsri (2006) suggests that Thainame.com Company also has a leadership that motivates the firm to adopt the Philosophy of Sufficiency Economy. He formed Thai URL, his own company, in 1999 to provide a local-language URL service. Pipat Yodprudtikan, founder of ThaiURL.com, is a successful businessman in the information technology industry. His behavior can be classified as demonstrating value-based leadership style. He promoted an understanding of the Philosophy of Sufficiency Economy to staff. He applied the principles of Buddhism and the Philosophy of Sufficiency Economy to his business and developed more and more concern for society and people. His new philosophy led him to establish the Thai Pat Institute, a non-profit organization, to promote public awareness of the Philosophy of Sufficiency Economy.

Khunthongjan (2009) studied SMEs that adopt the Philosophy of Sufficiency Economy. The evidence showed that successful SMEs require leadership based on foundational moral principles including honesty, patience, generosity, and diligence. Kantabutra (2007) proposed that firms that implementing the Philosophy of Sufficiency Economy require vision-based leadership able sustain firm performance in the long run. Vision-based leadership is one of the characteristics of value-based leadership. The Philosophy of Sufficiency Economy encourages corporate pursuit of sustainable profit via ethical approaches. The successful adoption must be inspired by moral or value-based leadership (Parnwell, 2005).

In sum, nowadays business leaders have the responsibility of balancing the short-term expectations of investors at the same time as building for the long-term and serving multiple stakeholders. Some firms may want to maximize profit growth rather than business growth. However, businesses adopting the Philosophy of Sufficiency Economy emphasize moderation in making profits and taking loans rather than maximizing profits and earnings. In order to increase the level of firm adoption of the Philosophy of Sufficiency Economy in the business sector, we require value-

based leaders to take action with a sense of ethical standards. Value-based leaders operate the enterprise by not separating the business from ethics. Value-based leadership will motivate and drive firms to increase the level of firm adoption of the Philosophy of Sufficiency Economy. This research hypothesizes a positive relationship between value-based leadership and the Philosophy of Sufficiency Economy as follows.

H5: Value-based leadership has a positive influence on the level of firm adoption of the PSE in SMEs.

2.16 Consequences of the Level of Firm Adoption of the Philosophy of Sufficiency Economy in SMEs

Thailand is now committed to sustainable development by means of the Philosophy of Sufficiency Economy (Juladalai, Yongpithayapong and Sangboonruang, 2008; Kantabutra, 2006; National Economic and Social Advisory Council, 2005). Sustainable development in Thailand can be classified in to three main categories, which are environmental sustainability, economic sustainability, and socio-cultural sustainability. These three categories are also related to each other in many ways as there are three pillars of sustainable development (OECD, 1998; World Bank, 2001).

According to the Philosophy of Sufficiency Economy, the cost of capital in business is not only the financial cost but also the human, social, and environmental cost. This is because the Philosophy of Sufficiency Economy profit coverage includes both internal and external stakeholders as well as the environment (Wattanoparsri, 2006). The Philosophy of Sufficiency Economy aims to achieve major goals of harmony or balanced living, security, sustainability, and resilience, all of which are basic elements of happiness (Indararattana, 2007). Kantabutra (2007) identified the elements of sustainable business performance for firms applying the Philosophy of Sufficiency Economy including (a) strong financial performance, (b) having the

ability to endure economic and social difficulties over time, and (c) maintaining a leadership position.

SMEs and large enterprises typically address social performance, environmental performance, and economic performance as three dimensions in measuring overall firm performance in terms of moving toward sustainable development (Dow Jones Sustainability Index, 2009; the Global Reporting Initiative, 2006; World Bank, 2001). Sustainable enterprises applying the Philosophy of Sufficiency Economy will deliver strong business performance (Kantabutra, 2007; Kusumavalee, 2006; Santitaweeroek, 2008).

Corporate sustainability and firm performance are two different constructs that are closely related and misunderstood. Firm performance refers to evaluative reflection of output and input aspects. So, output measures consider the firm's major objectives and highlight profitability that has financial and non-financial assessment whereas input measures focus on duty and activities that are useful in reaching the end outcomes (Li et al., 2009). For Dow Jones (2009), corporate sustainability is a business approach that creates value to the long-term shareholders through the use of opportunities and the management of risks that come from economic, social, and environmental aspects. Corporate sustainability emphasizes long-term time scales and makes comparisons over time (Bentley and Leeu, 2001). This study assesses SMEs at a certain stage of the Philosophy of Sufficiency Economy's adoption. Therefore, this study aims to assess firm performance of SMEs in terms of the environmental, social, and economic dimensions (marketing and finance) in moving toward sustainable development.

Previous literature has found that SMEs and large enterprises that adopt the Philosophy of Sufficiency Economy concept such as Niti Food, Nopadol Panich, Siam Cement, Phiboonchai Mae Pranom, and PTT, measure performance in terms of social, environmental and economic (finance and marketing) dimensions. Moreover, the previous case studies suggest that the higher level of SME adoption of the Philosophy of Sufficiency Economy, the better the firm's performance. Lekuthai

(2007) examined selected industries and identified industries that corresponded well with the Philosophy by using economic performance in terms of profitability, production linkage, employment generation, and foreign exchange earnings. Thongpakde (2005) studied the Philosophy of Sufficiency Economy framework and assessed firm performance in terms of economic impact, cultural impact, social performance, environmental performance.

The National Economic and Social Advisory Council, NESAC (2005) constructed a set of indicators based on the Philosophy of Sufficiency Economy in order to study the macro-level performance of the Thai government. The framework of the macro-study had 7 sections including: resources, environment and technology, educational institutions, ethics and culture, social, management of public sector, management of private sector, and science. In the private business sector, outcomes of the study are classified in terms of economic performance, social performance, and environment performance.

SCG and PTT assessed the economic performance dimension by using marketing and financial performance indicators (PTT, 2010; SCG, 2009). Yodpetch and Chirapanda (2008) suggested a positive relationship between the Philosophy of Sufficiency Economy and firm performance. The performance indicators in the study included financial performance, such as profitability, return on invested capital, gross margin, and growth of sales revenue; and marketing performance such as market share, market share growth, product quality, and the rate of new product introduction, market penetration, and customer loyalty. The literature review above suggests that the Philosophy of Sufficiency Economy possibly enhances the economic performance (marketing and financial), environmental performance, and social performance of firm.

Economic performance sustainability is intended to measure the economic outcomes of an organization's activities, including issues relating to customers, markets presence, and finance (GRI, 2006). JCI's sustainability report (Johnson Controls Inc.) provides detailed information in regards to the economic dimension

indicators composed of markets and finance sustainability indices performance (JCI, 2005). Grupo IMSA (2004) reported the economic dimension of sustainability regarding markets, customers, and finance.

This research focuses on the marketing effectiveness of firms adopting the Philosophy of Sufficiency Economy. Marketing effectiveness refers to the extent to which marketing objectives such as marketing shares; sales volumes and marketing position are obtained (Vorhies and Morgan, 2005). Therefore, to clearly measure marketing effectiveness, this research assesses the economic performance of firms in terms of marketing performance and financial performance. This research assesses firm performance in terms of marketing, finance, social, and environment performance. Moreover, this study will investigate all performance constructs (marketing, finance, social, and environment performance) to find the best firm performance construct in the model of antecedents and consequences of adoption of the Philosophy of Sufficiency Economy upon SMEs. Previous studies showed firms that adopt PSE will have a better firm performance (Kantabutra, 2006; Ruenrom, 2009; Wattanoparsri, 2006). It appears that the higher level of adoption of PSE, the better the SME performance. The hypothesis of firm performance under PSE is as follows.

H6: The level of firm adoption of the PSE has a positive influence on firm performance in SMEs.

2.16.1 Marketing Performance

Marketing makes a fundamental contribution to long-term business success. Therefore, performance outcomes are the consequence of market successes or when market positions are achieved (Day and Wensley, 1988). Sasin (2010) revealed that SMEs and large enterprises that adopt the Philosophy of Sufficiency Economy enhance their marketing performance. Kusumavalee (2005) founded that the sales volume and market share of Siam Cement Group have been gradually increasing after dramatically decreasing during the financial crisis of 1997.

It was the time that Siam Cement Group officially adopted the Philosophy of Sufficiency Economy in its business practices. Siam Cement Group (2009) proposed that marketing performance is positively related to firm adoption of the Philosophy of Sufficiency Economy. The more SCG adopted the Philosophy of Sufficiency Economy, the better the firm performance. Yodpetch and Chirapanda (2008) proposed a positive relationship between the Philosophy of Sufficiency Economy and firm performance. They measured marketing outcome in terms of market share, market share growth, product quality, profitability, market penetration, and customer loyalty.

Marketing performance assesses the relationship between marketing activities and the effectiveness of marketing activities while adopting the Philosophy of Sufficiency Economy. The evidence shows that firm adopting the Philosophy of Sufficiency Economy will enhance the marketing performance. Thus, it appears that the higher level of SME adoption of the Philosophy of Sufficiency Economy, the better the SME's marketing performance. The hypothesis of the marketing performance under the Sufficiency Economy Philosophy in SMEs is as follows.

H6a: The level of firm adoption of the PSE has a positive influence on firms' marketing performance in SMEs.

2.16.2 Financial Performance

Bathroom Design (2010) suggested a positive relationship between the financial performance of Bathroom Design Enterprises and the Philosophy of Sufficiency Economy. Sasin (2010) proposed a positive relationship between financial performance and firms applying the Philosophy of Sufficiency Economy concept. Yodpetch and Chirapanda's (2008) findings lend support to Sasin's (2010). Both proposed a positive relationship between the Philosophy of Sufficiency Economy and firm performance. However, Ruenrom (2009) studied SMEs in Thailand that adopted the Philosophy of Sufficiency Economy in their business practices. The study showed that there was no relationship between the debt

repayment ability of a firm and a firm that adopted the Philosophy of Sufficiency Economy.

In some previous studies, firms that adopted the Philosophy of Sufficiency Economy had better financial performance while some research showed that adopting the Philosophy of Sufficiency Economy delivered worse performance. Therefore, the research results into the effect of the adoption of PSE on financial performance are inconclusive. This leads to the following hypothesis:

H6b: The level of firm adoption of the PSE has a positive influence on firms' financial performance in SMEs.

2.16.3 Social Performance

Social performance measures the relationship of a business with its different stakeholder groups (WRI, 1997). According to WRI (1997) the four elements of social performance include employment practices, community relations, ethical sourcing, and social impact of product. The measurement of social performance involves investigating the structure of an organization, such as ownership, and issues regarding its staff and firm conduct in the market and local and wider community, such as services, products, market behavior, and other relations with clients and other stakeholders.

Siam Cement group (SCG) has been recognized as a very successful large enterprise applying the Philosophy of Sufficiency Economy. SCG makes a high contribution to society and its staff. Kusumavalee (2006) suggested that Siam Cement has a strong social performance. The company's staff was one of the most critical success factors for Siam Cement Group. Staff has flexibility in its work. There are no layoffs or aggressive human resource policies. Overall, Siam Cement evaluates firm performance in term of social, environmental, and marketing and financial performance.

Santitaweeroek (2008) found that firms applying the Philosophy of Sufficiency Economy will enhance their social performance. Lekuthai (2007) suggested that a firm that is applying the Philosophy of Sufficiency Economy should employ several indicators to assess social performance. Yodpetch and Chirapanda (2008) recommended using product quality as a social performance indicator to measure a firm applying the Philosophy of Sufficiency Economy.

Sasin (2010) showed that some firms that adopt the Philosophy of Sufficiency Economy assess social performance in terms of employment payroll, incentives and compensation per head, and the contribution of products and services to social welfare. Firms adopting the Philosophy of Sufficiency Economy make careful considerations of direct and indirect stakeholders (Sasin, 2010).

From the previous studies, it is apparent that firms, whether they have low or high adoption of the Philosophy of Sufficiency Economy, will have a positive social performance such as Siam Cement Group and Kasikorn Bank Group. However, only few studies report how to measure the social performance of firms adopting the Philosophy of Sufficiency Economy clearly. Most of them are studies of large-sized firms or firms that are listed in the Stock Exchange of Thailand that require disclosure in the annual report. Consequently, the hypothesis of SME performance under the Sufficiency Economy Philosophy is as follows.

H6c: The level of firm adoption of the PSE has a positive influence on firms' social performance in SMEs.

2.16.4 Environmental Performance

Environment performance is the relationship between the organization and the environment. It includes the environmental effects of resources consumed, the environmental impacts of the organizational processes, the environmental implications of its products and services, the recovery and processing of products, and meeting the environmental requirements of law (World Bank, 1999).

According to WRI (1997), the four elements of environmental performance of firms include material use, energy consumption, non-product output, and pollutant release.

Morgera, Kulolesi and Gobena (2009) suggested that firms, when engaging the Philosophy of Sufficiency Economy, should focus on improving environmental performance. Santitaweeroek (2008) proposed that adopting the Philosophy of Sufficiency Economy will lead to an increase in environmental performance. The indicators of environmental performance include community overcrowding, waste water, solid waste, and noise.

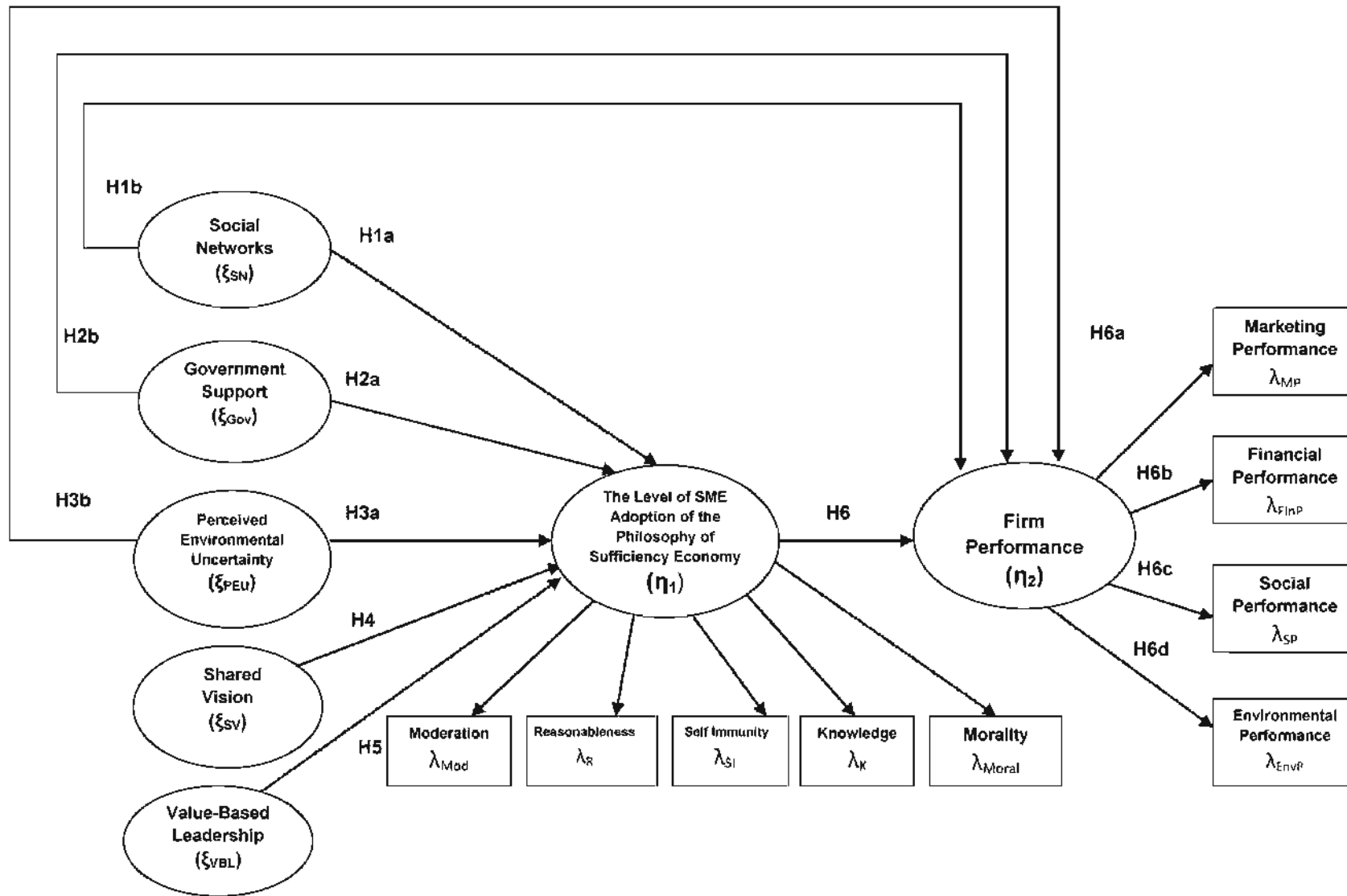
PTT Public Company Limited (PTT) and Siam cement group (SCG) enterprise have been successful in adopting the sufficiency economy concept. They measure firm environmental performance periodically. The evidence showed that SCG and PTT have a satisfactory environmental performance (PTT, 2009; SCG, 2009). SCG has systematic environment controls and guidelines in terms of energy conservation, climate change, water management, waste management, and eco-products. Sasin (2010) proposed that firms that adopt the Sufficiency Economy Philosophy such as Chumphon Cabana resort, Bathroom Design, Niti Food Co. Ltd., and Sompamas Engineering have enhanced their environmental performance.

In summary, the previous literature implies that applying the Philosophy of Sufficiency Economy helps increase firms' environmental performance. The higher the level of SME adoption of the PSE, the better the firms' environmental performance. Consistent with the social performance, only few studies report how to measure the environmental performance of firms adopting the Philosophy of Sufficiency Economy clearly. Consequently, the hypothesis of SME performance under the Philosophy of Sufficiency Economy is as follows:

H6d: The level of firm adoption of the PSE has a positive influence on firms' environmental performance in SMEs.

2.17 The Proposed Model of the Level of Firm Adoption of the PSE

Based on the previous discussion, the model of the antecedents and consequences of the adoption of the Philosophy of Sufficiency Economy upon SMEs is proposed in this current research. For this model, social networks, government agency support, and perceived environmental uncertainty act as external factors while value-based leadership and shared vision act as internal factors influencing the level of firm adoption of the Philosophy of Sufficiency Economy in SMEs. Finally, the last set of variables is the outcome of the level of firm adoption of the Philosophy of Sufficiency Economy in SMEs. The level of SME adoption of the Philosophy of Sufficiency Economy is proposed to enhance firm performance in term of marketing performance, financial performance, social performance and environmental performance. The exogenous constructs are shared vision, value-based leadership, social networks, government agency support, and perceived environmental uncertainty market. The endogenous constructs are the level of firm adoption of the Philosophy of Sufficiency Economy in SMEs and firm performance of SMEs. The proposed model is shown in figure 2.8



2.18 Summary

This chapter critically assesses the relevant theories, the concept of the PSE, factors affecting the level of firm adoption of the PSE, and the consequences of the PSE upon SMEs. The conceptual models are proposed. The 13 hypotheses of the firm performance under PSE in SMEs are summarized as below:

- H1a: Social networks have a positive influence on the level of firm adoption of the PSE in SMEs.
- H1b: Social networks have a positive influence on firm performance in SMEs
- H2a: Government Agency support has a positive influence on the level of firm adoption of the PSE in SMEs.
- H2b: Government Agency support has a positive influence on firm performance in SMEs.
- H3a: Perceived Environmental Uncertainty (PEU) has a positive influence on the level of firm adoption of the PSE in SMEs.
- H3b: Perceived Environmental Uncertainty (PEU) has a positive influence on firm performance in SMEs.
- H4: Shared vision has a positive influence on the level of firm adoption of the PSE in SMEs.
- H5: Value-based leadership has a positive influence on the level of firm adoption of the PSE in SMEs.
- H6: The level of firm adoption of the PSE has a positive influence on firm performance in SMEs.
- H6a: The level of firm adoption of the PSE has a positive influence on firms' marketing performance in SMEs.
- H6b: The level of firm adoption of the PSE has a positive influence on firms' financial performance in SMEs.
- H6c: The level of firm adoption of the PSE has a positive influence on firms' social performance in SMEs.
- H6d: The level of firm adoption of the PSE has positive influence on firms' environmental performance in SMEs.

Chapter 3

Research Methodology

The purpose of this chapter is to present the research methodology of this study. This chapter includes a discussion of research methodology, target population, sample size, sampling frame, data collection method, research instrumentation and measurement, and data analysis techniques.

3.1. Target Population

Several public and private institutions, such as the Sufficiency Economy Institution, Ministry of Agriculture and Cooperatives, ‘One Tambon One Product’ Project Institution, the federation of Thai Industry, the Department of Industrial Promotion, and the Office of the Royal Development Projects Board, encourage SMEs to adopt the Philosophy of Sufficiency Economy into their business practices. Small and Medium Enterprises (SMEs) play an important role in the Thai economy. Moreover, SMEs comprised the highest proportion (99.42 percent) of all Thai enterprises in 2009 (Office of Small and Medium Enterprise Promotion, 2009).

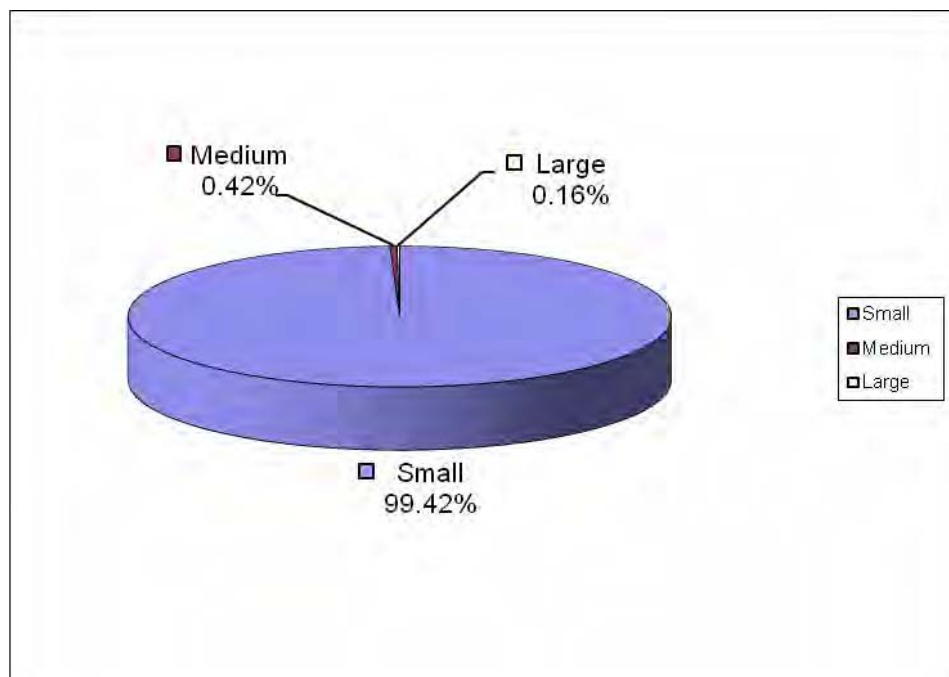
In this study, Thai small and medium enterprises (SMEs) are chosen as the target population. The industries selected for this study are classified into three groups: production (includes agricultural processing, manufacturing, and mining), service, and trading (includes wholesale and retail). The unit of analysis in this study is the firm (SME) as represented by presidents, owners, or middle-level managers (general managers or marketing managers) who are typically top decision-makers of the SMEs and are most knowledgeable about their firm’s overall activities.

3.1.1 Number and Employment of Thai SMEs in 2009

In 2009, the total number of Thai enterprises was 2,900,759. SMEs had 2,896,106 enterprises, and large enterprises had 4,653 enterprises which accounted for 0.16 percent of all enterprises. Small enterprises had the highest proportion of all enterprises at 99.42 percent or 2,884,041 small enterprises. The total number of medium enterprise was 12,065. Medium enterprises accounted for 0.42 percent of all enterprises (Office of Small and Medium Enterprise Promotion, 2009). Proportion of enterprises in Thailand in 2009 is shown in figure 3.1.

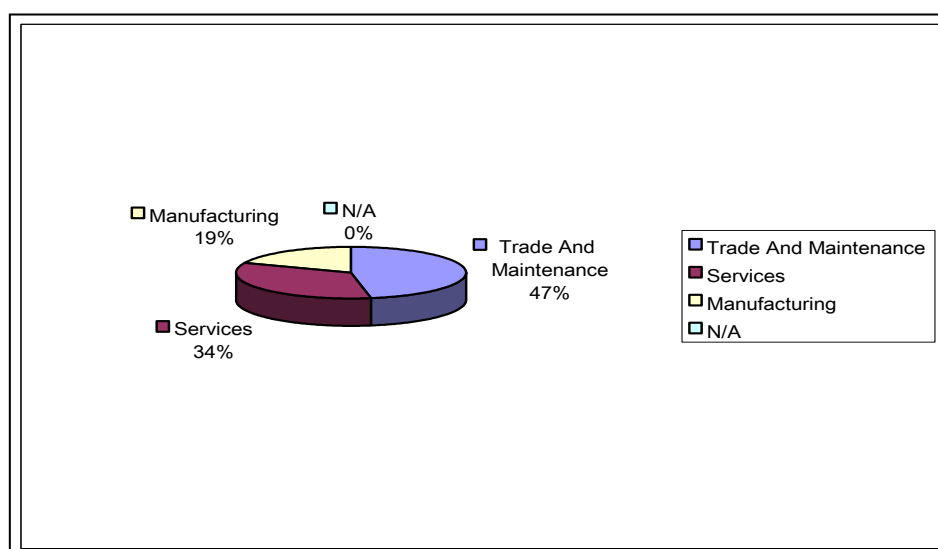
Figure3.1

Proportion of Enterprises in Thailand in 2009



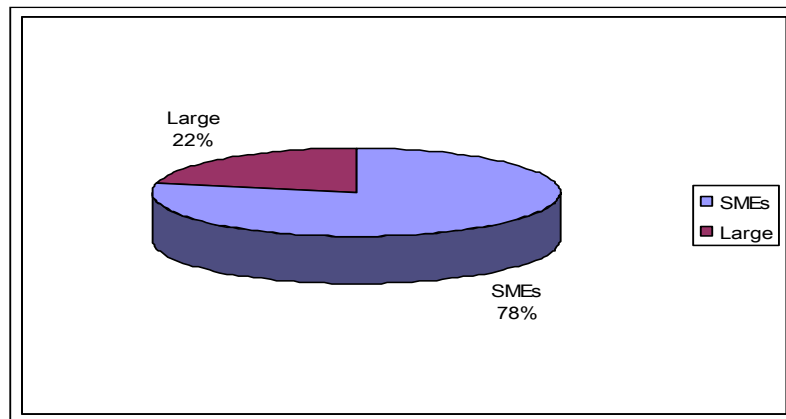
When classifying SMEs by economic activities, the trade and maintenance sector accounted for 1,371,488 enterprises and had the highest proportion. There were 975,552 enterprises in the service sector and 547,052 enterprises in the manufacturing sector. The trade and maintenance sector accounted for the most at 47 percent, the service sector 34 percent, and manufacturing 19 percent respectively. Proportion of SMEs classified by economic activities in 2009 is shown in figure3.2

Figure 3.2
Proportion of SMEs Classified by Economic Activities in 2009



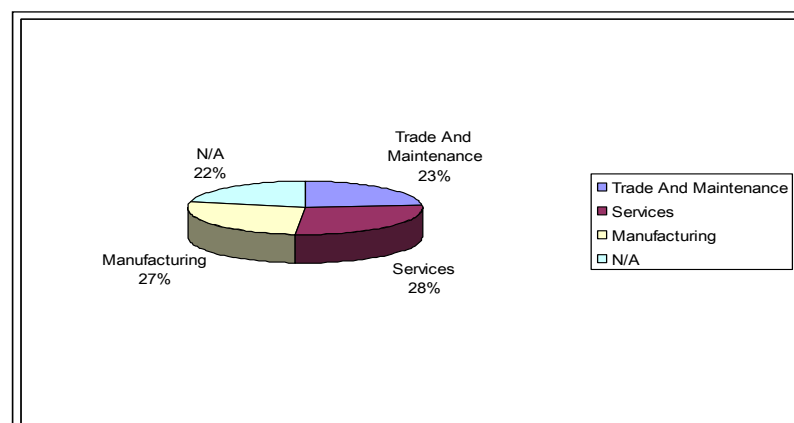
In terms of employment in 2009, SMEs had a larger number of employees than large enterprises. The total number of employees was 12,405,597 people, of which large enterprises employed 2,704,243 people and SMEs employed 9,701,354 people or 78.20 percent of all employment. Small enterprises had the highest share of all enterprises at 66.60 percent, and also had the highest share of SMEs at 85.17 percent. Proportion of employment classified by size in 2009 is shown in figure3.3.

Figure 3.3
Proportion of Employment Classified by Size in 2009



In terms of total employment by key economic activities in 2009, SME employment in three industry sectors was of similar proportion. The service sector accounted for the most employments by SMEs at 3,467,763 people with 23 percent of total SME employment. The manufacturing sector employed 3,320,409 people with 28 percent of the total, and the trade and maintenance sector employed 2,912,678 people with 27 percent of SMEs' employment (Office of Small and Medium Enterprise Promotion, 2009). Proportion of SMEs' employment classified by economic activities in 2009 is shown in figure3.4.

Figure 3.4
Proportion of SMEs' employment Classified by Economic Activities in 2009



3.2 Sample Size

This dissertation employs structural equation modeling (SEM) to analyze the data. In order to generate reliable results, structural equation modeling is used. To maximize the likelihood of accurate results, an estimation method to estimate parameters is used and requires a large sample size (Hair et al., 2006; Jackson 2007). McQuitty (2004) suggested that it is important to determine the minimum sample size required in order to achieve a desired level of statistical power with a given model prior to data collection. Jackson (2007) stated that a ratio of sample size per an estimated parameter should be greater than 10 for demonstrating sufficient sample size. Hair et al. (2006) and Schreiber et al. (2006) insisted that a ratio of 10 observations to 1 estimated parameter was acceptable; however a ratio of 5 observations to 1 estimated parameter was the least acceptable minimum. Although there is little consensus on the recommended sample size for SEM (Sivo et al., 2006), Garver and Mentzer (1999) proposed a critical sample size of 200. Guadagnoli and Velicer (1988) concluded that a sample size of 150 observations should be sufficient to obtain an accurate solution. Hutcheson and Sofronion (1999) recommend between 150 and 300 observations, with 150 recommended when there are few, highly correlated variables. In other words, as a rule of thumb, any number above 200 is understood to provide sufficient statistical power for data analysis. In this study, the total estimated parameters of the model are 89. Using the five for every free parameter estimate, the resulting minimum sample size is $5 \times 89 = 445$ observations. Thus, this study will use a sample size of at least 500 data points due to the minimum ratio recommended from Hair et al. (2006) and Schreiber et al. (2006).

3.3 Sample Frame

The sampling frame in this dissertation covered small and medium-sized enterprises (SMEs) and is drawn from the Department of Business Development, Ministry of Commerce. The researcher expected that the response rate for this study would be approximately 10-20 percent based on previous studies (Edward et al.,

2007). Therefore, this study employs simple random sampling technique to send mail survey questionnaires to 3,000 SMEs in order to receive returned questionnaires for not less than 500 SMEs.

3.4 Data Collection Method

Data was collected through a mail survey questionnaire and a face-to face questionnaire. This study used multiple techniques to ensure that the response would not be less than 500 participants. Sufficient responses are important because a high survey response helps ensure that the survey results are representative of the survey population (Malhotra, 2007). Techniques employed to increase the response rate in this study are as follows:

1. An initial list of 3,000 SMEs contacted by telephone and e-mail to verify the correct name and address.
2. The first mailing contained a cover letter explaining the objective of this research, the questionnaire, the request form, and a self-addressed stamped envelope.
3. Providing incentives to the respondent with the mailing.
4. Following up the questionnaire through telephone and mails.

Since the study requires a minimum sample size of approximately 500, the survey questionnaire was conducted in two stages. First, the researcher contacted the initial list of 3,000 SMEs by telephone and e-mail to verify the names of the top management and the mailing addresses. The researcher distributed the first round questionnaire to 3,000 SMEs in Thailand during May 2011 and sent a follow up questionnaire to SMEs that did not respond during June 2011 and also pursued the questionnaire by telephone and mails. This study required a response rate around 16.67 % (500/3000). A total returned questionnaires are 703 and the response rate equal 23.43 %(703/3000).

Table 3.1
Timeline for Data Collection and Analysis

Process	Month											
	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	
In-Depth Interview												
Focus Group												
Pretest and Initial Contact												
to Verify the Company Name and Address												
Distribute 1st Questionnaire												
Collect the Questionnaire Return												
Resend A Questionnaire to Non-Respondent firms												
Follow Up												
Analyze and Interpret the Data												
Prepare the Research Report												

3.5 Research Instrument and Questionnaire Development

Data were collected through a questionnaire designed to fit the purpose of this study. The questionnaire consists of a set of questions and is divided into six main parts. The first part is about the respondent's information. The second part is about the company's profile which includes type of business, number of employees, and time period of doing business. The third part is about the level of firm adoption of the Philosophy of Sufficiency Economy. The fourth part is about the respondent's attitude toward internal and external factors. The fifth part is a questionnaire about the marketing, finance, social, and environmental performance of SMEs adopting the Philosophy of Sufficiency Economy. The last part is about the perception and the application of the Philosophy of Sufficiency economy in enterprises in Thailand.

To ensure content validity and reliability, the questionnaire development procedure included the following steps. First, a draft of questions was developed by an extensive review of previous literature to capture the measure of each key variable.

A second version of the questionnaire was prepared and revised after discussion with three marketing academics, advisers, and conducting three focus groups with SME owners. Discussion guides and summary of the focus group results are included in an Appendix G.

After that, a third version of the questionnaire was developed. The measurement items derived from the third version of the questionnaire were translated into Thai and back-translated by two independent bilingual experts using the method suggested by Churchill and Brown (2007). This involved original translation, back-translation, and extensive refinements until the translated instruments possessed both conceptual and functional equivalence. The original and back-translated English questionnaires were then compared by a third specialist to check the quality of the translation (Cavusgil and Das, 1997; Churchill and Brown, 2007; Mintu, Calantone, and Gassenheimer, 1994). Some modifications were made to the research instrument to make sure that all measures were clearly understood.

The third version of questionnaire was pretested and completed by using personal references to select 30 SMEs as respondents for preliminary questionnaires. Pre-testing the questionnaire is an important step to ensure the appropriateness of the structure, language and measurement items before sending the mail survey questionnaires to respondents (Malhotra, 2007). After they completed the preliminary questionnaire, the researcher conducted in-depth interviews to check for any confusion in the questions and to detect errors of ambiguity in language. The scales' reliability and content validity of the preliminary questionnaire was also assessed. Some modifications were made to the research instruments to make sure that respondents understood all questions in the questionnaire.

3.6 Variable Measurement

3.6.1 Social Networks

Social networks are measured using 3 items adapted from Appleyard (1996). Each item was measured on a five-point Likert scale with anchors at ‘strongly disagree’ and ‘strongly agree’.

1. Firm has good relationship with customers.
2. Firm has good association with its suppliers.
3. Firm provides support to community/neighbor requests.

3.6.2 Government Agency Support

Government Agency Support is measured using 4 items adapted from Li and Gima (2002). Each item was measured on a five-point Likert scale with anchors at ‘strongly disagree’ and ‘strongly agree’.

1. Government agencies provide useful information about business operations to SMEs
2. Government agencies provide sources of fund to SMEs such as the SMEs bank.
3. Government agencies provide necessary technologies for product and service development to SMEs.
4. Government agencies provide tax benefits to SMEs.

3.6.3 Perceived environmental uncertainty

Perceived environmental uncertainty is measured using subjective measures. Prior research suggests that perceptual measures should be used in measuring environmental uncertainty (Matanda and Freeman, 2009), as they provide a more valid view of how managers deal with the environment than objective ones. Perceived environmental uncertainty is measured by using 4 items adapted from

Jaworski and Kohli (1993), and Ganesan (1994). Each item is measured on a five-point Likert scale with anchors at ‘strongly disagree’ and ‘strongly agree’.

1. The competitive intensity has been very high and uncertain.
2. It is difficult to monitor price changes for products or services in the market.
3. The demand for the products or services from customers is unpredictable.
4. Technology in the industry changes rapidly.

3.6.4 Shared Vision

Shared vision is measured using 4 items adapted from Jehn (1995). Each item is measured on a five-point Likert scale with anchors at ‘strongly disagree’ and ‘strongly agree’.

1. Firm has a vision related to the Philosophy of Sufficiency Economy.
2. Firm disseminates information about the Philosophy of Sufficiency Economy.
3. Everybody in the firm agrees with the vision related to the Philosophy of Sufficiency Economy.
4. The Philosophy of Sufficiency Economy is well-known to everybody working here.

3.6.5 Value-Based Leadership

The measure contains 4 items which are adapted from O’Toole, (1996). Each item was measured on a five-point Likert scale with anchors at ‘strongly disagree’ and ‘strongly agree’.

1. Leadership is virtuous and honest.
2. Leadership shows concern and helpful to subordinates in the firm.
3. Leadership has the ability to communicate to others.
4. Leadership listens to staff opinions.

3.6.6 The Level of Firm Adoption of the Philosophy of Sufficiency Economy

Respondents were required to indicate on a 5-point Likert-type scale the extent to which they agreed with each statement regarding the level of firm adoption of the Philosophy of Sufficiency Economy into business practices. Responses were coded on a scale of zero (not at all) to four (to a very great extent).

3.6.6.1 Moderation

Moderation is measured using 6 items adapted from Sasin (2010) and Wattanasupachoke (2009).

1. Firm operates business in area of expertise. (For example, an expert cooking will open a restaurant).
2. Firm operates business by not setting goals beyond firm's ability.
3. Firm has appropriate liquidity.
4. Firm has an appropriate financial plan.
5. Firm has makes appropriate use of instruments and raw materials for operating business.
6. Firm has an appropriate number of employees.

3.6.6.2 Reasonableness

Reasonableness is measured using 4 items adapted from Ruenrom (2009) and Wattanasupachoke (2009).

1. Firm makes decisions in a timely manner.
2. Firm makes decisions with all information provided.

3. Firm makes decisions taking into account benefits to shareholders, such as customers, suppliers or the community.
4. Firm has a business plan for operating its business.

3.6.6.3 Self- Immunity

Self-Immunity is measured using 6 items adapted from Puntasen et al. (2007), Sasin (2010), Wattanasupachoke (2009), and newly created by the researcher.

1. Firm can adapt to change in order to survive in the market
2. Firm tries to avoid overdependence on a single supplier / buyer.
3. Firm carefully monitors and continuously evaluates all business risks especially financial risk. For example, if the firm has a high debt or that customer may default on debt.
4. Firm searches for new marketing channels.
5. Firm searches for alternative materials to substitute for original material.
6. Firm manages capital appropriately. For example, firm does not borrow money beyond debt capacity.

3.6.6.4 Knowledge

Knowledge is measured using 4 items adapted from Ruenrom (2009), Sasin (2010), and Wattanasupachoke (2009).

1. Firm searches for up-to-date information when operating its business.
2. Firm understands and has a thorough knowledge of its own business.
3. Firm collects data systematically that is easy to use within firms.

4. Firm provides staff training to develop knowledge t
useful for the job.

3.6.6.5 Morality

Morality is measured using 6 items adapted from Sasin (2010), Wattanasupachoke (2009), and newly created by the researcher.

1. Firm operates business with honesty.
2. Firm does not to take advantage of consumers.
3. Firm has followed good practice both direct and indirect with relevant people such as business partners, shareholders, employees, hirelings, the community and society.
4. Firm provides fair and on-time remuneration to employees or hirelings.
5. Firm implements corporate social responsibility as a policy or principle of the firm.
6. Firm provides products and services are good quality at reasonable price.

3.6.7 Marketing Performance

Marketing performance is measured using 3 items adapted from Punthasen et al. (2003) and Yodpetch and Chirapanda (2008). The items are graded on a 5-point Likert scale with anchors at 'far below expectations' and 'far above expectations'.

1. Sales volume
2. Sale Growth
3. The number of customer increase

3.6.8 Financial Performance

Financial performance is measured using 3 items adapted from Sasin (2010) and Ruenrom (2009). The items are graded on a 5-point Likert scale with anchors at 'far below expectations' and 'far above expectations'.

1. Profitability
2. Debt Repayment Ability
3. Working Capital

3.6.9 Social Performance

Social performance is measured using 3 items adapted from Punthasen et al. (2003) and Santitaweeroek (2008). The items are graded on a 5-point Likert scale with anchors at 'far below expectations' and 'far above expectations'.

1. Health problems that are derived from work.
2. Firm ensures a work/life balance among employees.
3. Working environment for employees
4. Relationship with the community and willingness to cooperate the community.

3.6.10 Environmental Performance

Environmental performance is measured using 3 items adapted from Punthasen et al. (2003) and GRI (2006). The items are graded using a 5-point Likert scale with anchors at 'far below expectations' and 'far above expectations'.

1. Reduced garbage.
2. Reduced air pollution in factory/firm.
3. Reduced electricity consumption.

3.6.11 Perception and Application of the Philosophy of Sufficiency

Economy

1. Have you ever heard or read about the Philosophy of Sufficiency Economy?

No Yes

2. Do you understand the Philosophy of Sufficiency Economy?

Not Understand Least Little
 Moderate Most the Most

3. Do you think companies should adopt the Philosophy of Sufficiency Economy in the future?

Should Should not

4. Do you think your company adopts the Philosophy of Sufficiency Economy?

Adopt Does not Adopt

3.6.12 Control Variables

Prior researchers in the Philosophy of Sufficiency Economy and related fields suggest that firm size and type of industry could affect firm adoption and firm performance. Therefore, this study uses firm size and industry type as control variables (Khunthongjan, 2009; Lekuthai, 2007; Ruenrom, 2009; Husted and Allen, 2006). Firm size is measured by the number of the firm's employees. Firm size is included to control for potential scale economies that would cause performance differences between larger and smaller firms (Ruenrom, 2009; Vorhies and Morgan, 2005). This study measures firm size by a single item representing the number of employees (1-50, 51-250). In addition to firm size, industry type is another important factor that could affect a firm's performance. Lekuthai (2007) reports that different types of industries will have varying propensities to engage in the Philosophy of

Sufficiency Economy initiatives. This study controls for industry-specific effects by coding SMEs into three major groups: Manufacturing, Services, and Trading (Retailing and Wholesaling) based on previous research in the Philosophy of Sufficiency Economy studies (Khunthongjan, 2009; Lekuthai, 2007).

3.7 Data Analysis Method

Based on the literature review and findings from the initial stages of the research, a model of the antecedents and consequences of the Philosophy of Sufficiency Economy was developed and tested and analyzed using Structural Equation Modeling (SEM). The reliability of each of the variables and factors was tested using Cronbach's coefficient alpha with the SPSS statistical analytical program that is widely used to test the internal consistency of multi-item scales.

Structural Equation Modeling (SEM) represents an extension of other multivariate techniques, most notably, factor analysis and multiple regression analysis. Hair et al (2006) highlights this point in defining Structural Equation Modeling as a multivariate technique combining aspects of multiple regression and factor analysis to estimate a series of inter-correlated dependent relationships simultaneously. The software used for analyzing the data in this study is LISREL.

The first step tested the validity of the model by assessing construct validity. Confirmatory factor analysis was employed to assess the fit and validity of each construct. Next, the structural model designated the causal relationships between the latent variables. This stage compared the observed covariance matrix and the estimated covariance matrix. The structural model offers estimates of the hypothesized interrelationships among the variables (Hair et al., 2006; Jöreskog and Sörbom, 2007). Therefore, 6 hypotheses for the level of SME adoption of the Philosophy of Sufficiency Economy were tested in this stage.

3.8 Summary

This chapter explains the research methodology used to test the proposed model and hypotheses. This current study collected data from Thai SMEs that were registered with the Department of Business Development, Ministry of Commerce. This study employed simple random sampling techniques to launch mail survey questionnaires to 3,000 SMEs in order to reach a sample size of not lower than 500 SMEs. Finally, Structural Equation Modeling was employed for data analysis.

Chapter 4

Data Analysis

In Chapter 4, the proposed model and hypotheses were tested and reported. Results of the data analysis are presented in 8 parts. The first part describes the proposed model to be tested. The second part is the preliminary analysis. This part reveals the results of normality test, control variables test, descriptive statistics and correlation matrices of constructs in the proposed model. The third part describes analysis of firm demographics. The sample is classified according into three industry types: manufacturing, retail and service. The fourth part analyses the perceptions and application of the philosophy of Sufficiency Economy. The fifth part reports the quality of the research instruments. In this part, content validity, reliability and construct validity are examined. Part six shows the results of the estimated structural model. Part seventh demonstrates the hypothesis testing, coefficient of determination (R^2) and indirect effects.

4.1 The Proposed Model to be Tested

This study investigates all variables for the proposed model. The total numbers of observed variables in this study are fifty eight variables and they are classified into two groups: nineteen observed variables belong to exogenous variables, and thirty nine observed variables are endogenous variables. Abbreviations of all constructs and observed variables in this study are presented in Table 4.1.

For the exogenous variables, they are grouped into five constructs. There are three constructs which are social networks (SN), government agency support (GOV), perceived environmental uncertainty (PEU). These three constructs are considered to

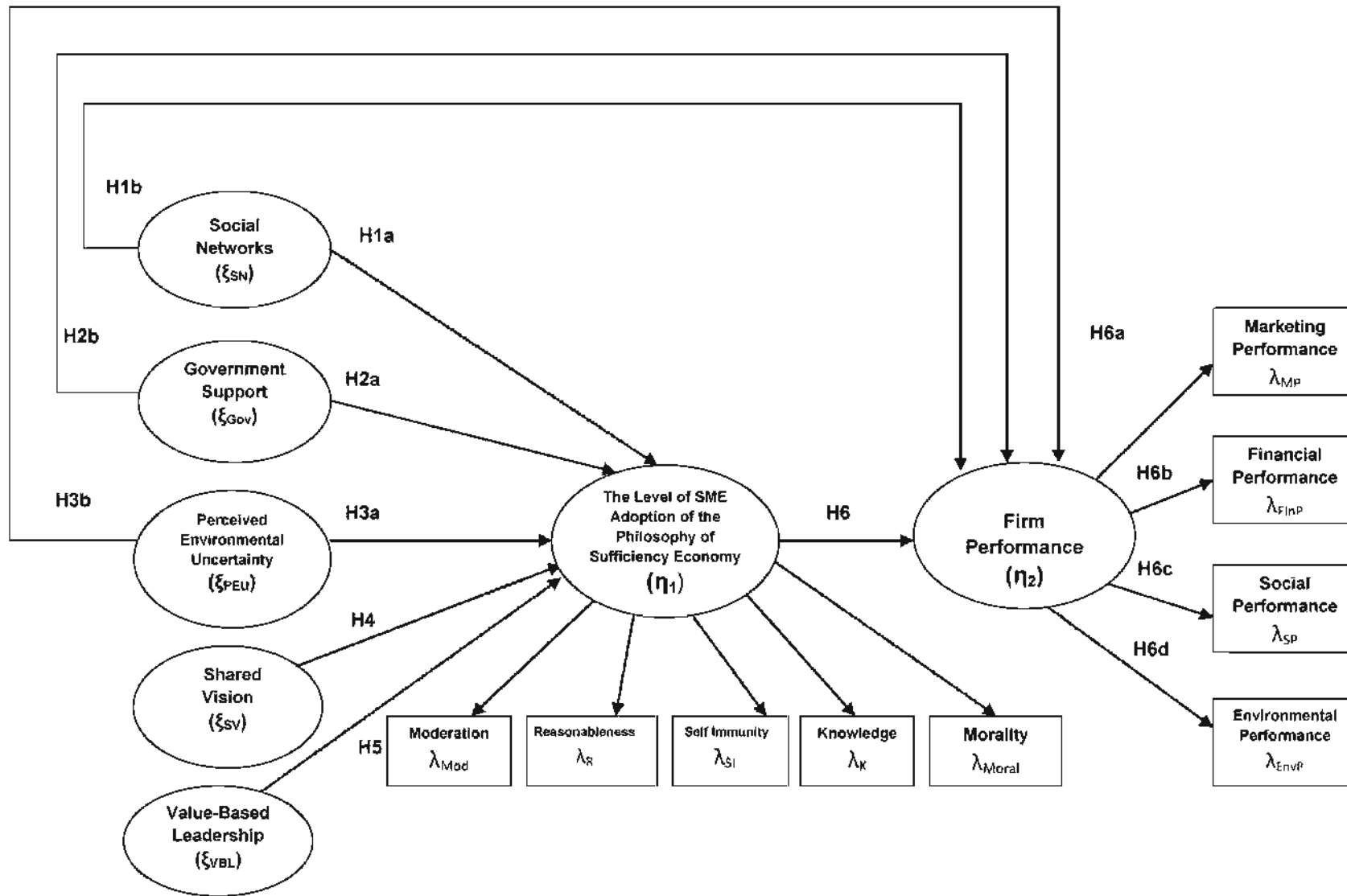
be the external factors. Two constructs are shared vision (SV), and value-based leadership (VBL). These two constructs are considered to be internal factors.

The endogenous variables are grouped into two main constructs and nine sub-constructs. The two main constructs are the level of firm adoption of PSE and firm performance (FP). PSE construct has five sub-constructs. They are Moderation (Mod), Reasonableness(R), Self-Immunity (SI), Knowledge (K) and Morality (Moral). Firm performance (FP) construct has four sub-constructs. They are marketing performance (Mktp), financial performance (Finp), social performance (SP) and environmental performance (EnvP).

A model of the antecedents and consequences of the Philosophy of Sufficiency Economy and 13 hypotheses testing is shown in Figure 4.1

Table 4.1
Abbreviations of Exogenous Latent and Endogenous Latent
Constructs and Variables

Constructs	Abbreviation	
	Construct	Observed Variable
<u>Exogenous Variables</u>		
External Factors		
1) Social Network	SN	SN1,SN2 and SN3
2) Government Agency Support	GOV	GOV1,GOV2,GOV3 and GOV4
3) Perceived Environmental Un Uncertainty	PEU	PEU1,PEU2, PEU3 and PEU4
Internal Factors		
4) Shared Vision	SV	SV1,SV2,SV3 , and SV4
5) Value- Based Leadership	VBL	VBL1,VBL2,VBL3, and VBL4
<u>Endogenous Variables</u>		
1) The levels of Firm Adoption of PSE	PSE	Mod, R, SI, K and Moral
<u>Sub-Endogenous variables</u>		
Moderation	Mod	Mod1, Mod2, Mod3,Mod4,Mod5 and Mod6
Reasonableness	R	R1,R2,R3 and R4
Self-Immunity	SI	SI1,SI2, SI3, SI4, SI5 and SI6
Knowledge	K	K1,K2,K3 and K4
Moral	Moral	Moral1, Moral1, Moral3, Moral4,Moral5 and Moral6
2) Firm Performance	FP	MktP, FinP, SP and EnvirP
<u>Sub-Endogenous variables</u>		
Marketing Performance	MktP	MktP1, MktP2 and MktP3
Financial Performance	FinP	FinP1, FinP2 and FinP3
Social Performance	SP	SP1,SP2,SP3 and SP4
Environmental Performance	EnvP	EnvP1, EnvP2, EnvP3 and EnvP4



4.2 Preliminary Data Analysis

The objective of the preliminary analysis is to investigate all variables in the proposed model. The collected data in this study was edited for completeness and legibility. This section is organized into 4 parts. First, a normality test on data is carried out. It is done by assessing observed variables' skewness and kurtosis (Hair et al., 2006). A total of 703 usable observations are included in the sample which equals 23.43 percent of a response rate. Second, this study tests two control variables (firm size and type of industry) to account for the influence of different types of industry- and firm-size factors. This study tests the mean differences among groups for each variable to examine whether these two control variables should be added into the model. Third, descriptive statistics such as mean, minimum and maximum of constructs are analyzed. Then, correlation matrices of constructs are reported in this section. Correlation matrices of constructs are investigated for testing a relationship among the 16 constructs.

4.2.1 Normality Test of Data

The skewness and kurtosis of indicators of all constructs are examined. The assumption of normality is essential for the tests of significance. If the data does not satisfy this assumption, the results may be biased (Sori, Hamid, Nassir and Mohamad, 2006). Table 4.2 reports skewness, $Z_{skewness}$, kurtosis and $Z_{Kurtosis}$ estimates of the 58 indicators of the proposed model of the antecedents and the consequences of the Philosophy of Sufficiency Economy. A variable will have normal distribution if it has value of $Z_{skewness}$ and $Z_{Kurtosis}$ within the range of ± 1.96 at the 95% (Hair et al., 2006). In this study, 14 constructs were measured by 58 indicators. $Z_{skewness}$ of all 58 indicators are within the range of ± 1.96 critical value. As for Kurtosis, $Z_{kurtosis}$, 3 out of 58 indicators are out of range of ± 1.96 . The $Z_{kurtosis}$ statistics indicate that 3 indicators of 58 indicators are higher than normally distributed. Three indicators (R4, MOD2, and FP1) have positive kurtosis with a significant degree. The findings in this study show that most of the data are normally distributed; fifty five of fifty eight

variables have normal distribution. However, from the analysis, the data may encounter small problem of non-normal distribution of variables and constructs. However, since the sample size is large, it tends to diminish the detrimental effects of non normal distribution (Hair et al., 2006). Due to large sample size used in this study (N=703), therefore, the results of the proposed model of antecedents and consequences of the philosophy of Sufficiency Economy are robustness and are not considered having impact from non-normal distribution.

Table 4.2
Skewness and Kurtosis Statistics of Indicators

Indicators	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
SN1	703	-0.248	0.092	-0.828	0.184
SN2	703	-0.065	0.092	-0.539	0.184
SN3	703	-0.119	0.092	-0.515	0.184
GOVS1	703	-0.581	0.092	0.107	0.184
GOVS2	703	-0.523	0.092	-0.038	0.184
GOVS3	703	-0.537	0.092	0.195	0.184
GOVS4	703	-0.505	0.092	-0.08	0.184
PEUM1	703	-0.885	0.092	0.936	0.184
PEUM2	703	-0.943	0.092	1.132	0.184
PEUM3	703	-0.804	0.092	1.259	0.184
PEUM4	703	-0.752	0.092	1.416	0.184
SV1	703	-0.339	0.092	-0.009	0.184
SV2	703	-0.382	0.092	0.154	0.184
SV3	703	-0.292	0.092	-0.056	0.184
SV4	703	-0.7	0.092	1.331	0.184
VBL1	703	-0.97	0.092	1.009	0.184
VBL2	703	-0.591	0.092	0.496	0.184
VBL3	703	-0.514	0.092	0.344	0.184
VBL4	703	-0.657	0.092	1.069	0.184

Table 4.2 (Cont.)
Skewness and Kurtosis Statistics of Indicators

Indicators	N	Skewness	Kurtosis	Indicators	N
		Statistic	Std. Error	Statistic	Std. Error
MOD1	703	-1.478	0.092	1.865	0.184
MOD2	703	-1.138	0.092	2.673	0.184
MOD3	703	-0.266	0.092	-0.66	0.184
MOD4	703	-0.571	0.092	0.265	0.184
MOD5	703	-0.136	0.092	-0.89	0.184
MOD6	703	-0.027	0.092	-0.746	0.184
R1	703	-0.52	0.092	0.359	0.184
R2	703	-0.116	0.092	-0.822	0.184
R3	703	-0.233	0.092	-0.663	0.184
R4	703	-1.18	0.092	2.695	0.184
SI1	703	-0.265	0.092	-0.727	0.184
SI2	703	-1.295	0.092	1.416	0.184
SI3	703	-0.832	0.092	0.817	0.184
SI4	703	-0.886	0.092	0.529	0.184
SI5	703	-0.938	0.092	1.13	0.184
SI6	703	-1.163	0.092	1.89	0.184
K1	703	-0.34	0.092	-0.477	0.184
K2	703	-0.952	0.092	1.159	0.184
K3	703	-0.367	0.092	-0.36	0.184
K4	703	-0.707	0.092	0.414	0.184
MORAL1	703	-0.763	0.092	0.359	0.184
MORAL2	703	-0.562	0.092	0.121	0.184
MORAL3	703	-0.509	0.092	-0.03	0.184
MORAL4	703	-0.49	0.092	-0.754	0.184
MORAL5	703	-0.335	0.092	-0.493	0.184
MORAL6	703	-0.494	0.092	-0.499	0.184
MktP1	703	-0.857	0.092	1.689	0.184
MktP2	703	-0.877	0.092	1.202	0.184
MktP3	703	-0.929	0.092	1.485	0.184
FinP1	703	-0.796	0.092	2.967	0.184
FinP2	703	0.276	0.092	-0.824	0.184
FinP3	703	0.08	0.092	-0.262	0.184
SP1	703	-0.092	0.092	-0.139	0.184
SP2	703	0.242	0.092	-0.694	0.184
SP3	703	0.275	0.092	-0.872	0.184
SP4	703	0.162	0.092	-0.615	0.184
EnvP1	703	0.096	0.092	-0.742	0.184
EnvP2	703	0.174	0.092	-0.942	0.184
EnvP3	703	0.023	0.092	-0.688	0.184

4.2.2 Control Variables

The research wants to explore whether firm size and type of industry should be included in the model as control variables. Therefore, the firm size and the type of industry are investigated by checking mean differences among groups for each construct in the proposed model.

4.2.2.1 Mean Difference Among Types of Industry

This study controls for industry effects by coding SMEs into 3 major groups: manufacturing, services, and trading based on previous literatures (Khunthongjan, 2009; Lekuthai, 2007). Table 4.3 presents the results of testing the mean differences of types of industry, using the analysis of variance. If the findings do not reveal significant differences of means of all variables, thus type of industry will not be included into firm adoption of PSE framework. A basic assumption of ANOVA states that variances must be equal across groups. Thus, Levene 's test is used to assess as a preliminary step to testing for the equality of variances across groups (Hair et al., 2006). The result of Levene 's test shows that all seven constructs have equal variances across groups at a level of significance 0.05. Thus, F-test in one-way analysis of variance is used to assess the mean effects.

After performing the F-test, the results of analysis show that seven constructs do not have mean differences at a level of significance 0.05. Therefore, it can be concluded from the analysis that different groups of types of industry do not have an impact upon the analysis of the proposed model. Thus, this control variable will be excluded from the model.

Table 4.3
Mean Differences Among Type of Industry

Constructs	Levene 's test (p-value)	F	p-value
SN	0.987	0.215	0.806
GOVS	0.918	0.444	0.642
PEUM	0.685	0.502	0.605
SV	0.918	0.177	0.838
VBL	0.934	0.295	0.744
PSE	0.807	0.066	0.936
FP	0.646	0.352	0.704

4.2.2.2 Mean Difference Between Firm Size

Firm size may cause performance differences between larger and smaller firms (Ruenrom, 2009; Vorhies and Morgan, 2005). Therefore, the means between groups of firm size is examined. Firm size is separated into two groups by using a number of employees as criteria: less than 50 employees and 50- 200 employees. If the findings do not reveal a significant difference of mean of all constructs, thus firm size will not be included into firm adoption of the PSE framework. The findings are shown in Table 4.4.

The results shows that for all seven constructs (social networks, government agency support , perceived environmental uncertainty, value-based leadership , shared vision , firm adoption of PSE and firm performance), there are no differences in means among different firm sizes at a level of significance 0.05. Therefore, it can be concluded from the analysis that firm size does not have an impact upon the proposed models. Thus, this control variable will be excluded from the model.

Table 4.4
Mean Difference between Firm Size

Constructs	t-test for Equality of Means		
	t	df	p-value
SN	-0.015	701	0.988
GOVS	1.591	701	0.712
PEUM	-0.696	701	0.486
SV	-0.333	701	0.739
VBL	-1.426	701	0.754
PSE	-2.468	701	0.084
FP	-0.316	701	0.752

4.2.3 Descriptive Statistics of Constructs

The purpose of reporting descriptive statistics is to describe the characteristics of raw data in quantitative terms. Thus, descriptive statistics which are mean, median, standard deviation (S.D.), minimum and maximum of variables in the model of antecedences and consequences of the Philosophy of Sufficiency Economy are reported in this section. The fourteen constructs include social networks, government agency support, perceived environmental uncertainty, shared vision, value-based leadership, moderation, reasonableness, self-immunity, knowledge, moral, marketing performance, financial performance, social performance and environmental performance. Means of all 14 constructs range from (GOV) 3.05 to (Morality) 4.21 for overall construct. The missing values for each variable are not more than 10%, and were replaced by the variables' mean value. Table 4.5 reports descriptive statistics of constructs.

For the three external factors of firms: the means range from 3.05(GOV) to 4.09 (SN). The mean of government support is the lowest mean among the external constructs. The mean among three industries of PEU (mean=3.82 to mean=3.86) and SN (mean=4.08 to mean=4.11) are slightly the same.

For the two internal factors of firms, the means of internal factors are slightly higher than the means of external factors. The mean of VBL is the highest (mean=4.14, S.D. =0.64) and mean of SV is the lowest (mean=3.89, S.D.=0.67) mean between internal constructs.

For sub-constructs of PSE, the means of PSE range from 3.92 (MOD) to 4.21(Morality). The mean of morality is the highest (mean=4.21, S.D. = .604) mean among five PSE sub- constructs .Among the three industries, the mean of moderation in manufacturing industry is lowest (mean=3.91, S.D. =.603), whereas in retails firms is highest (mean=3.93, S.D. =.629).

For the means of firm performance construct and sub-constructs of firm performance, the mean of environmental performance is the highest (mean=3.89, S.D.=0.64) and mean of financial performance is the lowest (mean=3.74, S.D.=0.64). The means of firm adoption of PSE among three industries are not greatly different, the mean values range from 3.71 to 3.91, SD = 0.63 – 0.67. The mean of financial performance in manufacturing industry is lowest, mean = 3.71, SD = 0.63; whereas the means of environmental performance in service industry is the highest, mean = 3.91, SD = 0.67. The mean of financial performance and social performance for the whole sample (mean = 3.74, SD = 0.64, mean = 3.76, SD = 0.66, respectively) are almost the same. In the similar pattern, the means of marketing and environmental performance constructs are about the same (mean =3.84, SD = 0.89, mean = 3.89, SD = 0.64, respectively).

Table 4.5
Descriptive Statistics of Constructs

Variables	Type of Firms	N	Mean	S.D.	Minimum	Maximum
Exogenous Variables						
SN	Manufacturing	200	4.08	0.61	3	5
	Retail	300	4.08	0.6	3	5
	Service	203	4.11	0.6	3	5
	Total	703	4.09	0.6	3	5
GOV	Manufacturing	200	3.02	0.94	1	5
	Retail	300	3.09	0.92	1	5
	Service	203	3.03	0.93	1	5
	Total	703	3.05	0.93	1	5
PEUM	Manufacturing	200	3.86	0.64	1.25	5
	Retail	300	3.88	0.65	1.25	5
	Service	203	3.82	0.68	1.25	5
	Total	703	3.86	0.66	1.25	5
SV	Manufacturing	200	3.87	0.66	2	5
	Retail	300	3.9	0.68	2	5
	Service	203	3.89	0.66	2	5
	Total	703	3.89	0.67	2	5
VBL	Manufacturing	200	4.13	0.63	2.25	5
	Retail	300	4.13	0.65	2.25	5
	Service	203	4.17	0.63	2.25	5
	Total	703	4.14	0.64	2.25	5
Endogenous Variables						
Mod	Manufacturing	200	3.91	0.603	2.17	5
	Retail	300	3.93	0.629	2.17	5
	Service	203	3.93	0.593	2.17	5
	Total	703	3.92	0.611	2.17	5
R	Manufacturing	200	4.1	0.599	2.75	5
	Retail	300	4.11	0.616	2.75	5
	Service	203	4.1	0.59	2.75	5
	Total	703	4.11	0.603	2.75	5
SI	Manufacturing	200	4.05	0.735	2	5
	Retail	300	4.06	0.756	2	5
	Service	203	4.06	0.755	2	5
	Total	703	4.06	0.749	2	5
K	Manufacturing	200	4.04	0.72	1.5	5
	Retail	300	4.05	0.727	1.5	5
	Service	203	4.06	0.729	1.5	5
	Total	703	4.05	0.725	1.5	5

Table 4.5 (Cont.)
Descriptive Statistics of Constructs

Variables	Type of Firms	N	Mean	S.D.	Minimum	Maximum
Endogenous Variables						
Moral	Manufacturing	200	4.2	0.601	2.67	5
	Retail	300	4.21	0.608	2.67	5
	Service	203	4.23	0.602	2.67	5
	Total	703	4.21	0.604	2.67	5
MktP	Manufacturing	200	3.8	0.9	0	5
	Retail	300	3.88	0.86	0	5
	Service	203	3.84	0.94	0	5
	Total	703	3.84	0.89	0	5
FinP	Manufacturing	200	3.71	0.63	2.33	5
	Retail	300	3.75	0.63	2.33	5
	Service	203	3.74	0.67	2.33	5
	Total	703	3.74	0.64	2.33	5
SP	Manufacturing	200	3.74	0.65	2.5	5
	Retail	300	3.77	0.66	2.5	5
	Service	203	3.78	0.67	2.5	5
	Total	703	3.76	0.66	2.5	5
EnvP	Manufacturing	200	3.88	0.63	2.67	5
	Retail	300	3.89	0.64	2.67	5
	Service	203	3.91	0.67	2.67	5
	Total	703	3.89	0.64	2.67	5

4.2.4 Correlation Matrices of Constructs

A correlation matrix demonstrates the correlations among sixteen constructs (5 exogenous constructs, 2 main endogenous constructs, and 9 sub-endogenous constructs) which show the relative strength and direction of a linear relationship among constructs. Thus, a correlation matrix of constructs of the model of the antecedences and consequences of the PSE is shown in Table 4.6.

A correlation matrix presents the correlations among sixteen constructs. Correlations among 16 constructs are positive and significant (between 0.048 and 0.911, p -value < 0.05). The only exception is a correlation between

government support (GOV) and self immunity (SI) shows insignificant relationship ($r=0.048$, $p\text{-value}>0.05$).

The level of firm adoption of PSE (PSE) is positively related to its antecedences; social networks (SN), government agency support (GOV), perceived environmental uncertainty (PEU), shared vision (SV) and value-based leadership (VBL) at a level of significance 0.05, ranging from 0.167 (GOV) to 0.587 (VBL). These internal and external factors antecedences have some relationship with PSE construct.

Among the five first-order constructs of PSE which are MOD, R, SI, K and Moral, all correlations are positive and significant between 0.406 (Moral) and 0.835(R), $p\text{-value} < 0.05$. The correlation between PSE and five first-order constructs of PSE construct are positive and significant, between 0.824 (SI) and 0.911(R), $p\text{-value} < 0.05$. Therefore, it can be concluded that PSE has a strong relationship with its five first-order constructs.

PSE is positively related to the firm performances: FP, MktP, FinP, SP and EnvP constructs at a level of significance 0.05, ranging from 0.311 (MktP) to 0.549 (SP). Firm performance is significantly positive with other four firm performance constructs, between 0.778 (EnvP) and 0.831(SP), $p\text{-value} < 0.05$. It can be said that firm performance construct has a strong relationship with its other firm performance outcomes, i.e., MktP, FinP, SP and EnvP.

4.2.5 Correlation Matrices of ETA and KSI

A correlation matrix of constructs of ETA and KSI is shown in Table 4.7. Correlations among 7 constructs of ETA and KSI are positive (between 0.19 and 0.71). The results show that correlations among 7 constructs of ETA and KSI have some correlations among themselves. Therefore, the analysis for SEM can be preceded.

Among the antecedents (ETA) which are SN, GOV, PEU, SV and VBL, all correlations are positive between 0.406 (Moral) and 0.835(R). The consequences (KSI) are included PSE and FP. The PSE has a moderate correlation (0.67) with FP.

Correlations between PSE and antecedents (ETA) have positive relationships range from 0.21 (GOV) to VBL (0.69). Therefore, it can be concluded that PSE has a moderate relationship with these internal and external factors antecedences. Correlations between PSE and antecedents (ETA) have positive relationships range from 0.19 (PEU) to SN (0.62). It can be concluded that FP also has a moderate relationship with these internal and external factors antecedences.

Table 4.7
Correlation Matrix of ETA and KSI

	PSE	FP	SV	VBL	GOV	PEU	SN
PSE	1						
FP	.67	1					
SV	.63	.52	1				
VBL	.69	.50	.71	1			
GOV	.21	.36	.45	.38	1		
PEU	.24	.19	.26	.22	.19	1	
SN	.52	.62	.66	.59	.37	.20	1

4.3 Analysis of Firm Demographics

The section analyses firms' demographics which are classified according to three industry types of SME: service, trading and manufacturing. A total returned questionnaires are 703 and the response rate equals 23.43%. The majority of respondents (75.6 percent of respondents) are owners of SMEs and 24.44 % of respondents' held a top management position. This is greatly favorable, in the same that all questionnaires were completed by those knowledgeable about firms' operation and management. The characteristics of firms' profiles (firm's age, number of employees, firm's income, firm size and firm's region) are shown as the following.

4.3.1 Firm Age

Table 4.7 shows age of firms. The data reveals that 347 firms or 49.3 % of firms are established between 1-4 years and 206 firms (or 29.3 %) of firms are established between 5-9 years. The highest percentages are firms aged between 1-4 years old. There is 43.5% or 87 firms in manufacturing industry, 50.0% or 150 firms in retail industry and 54.2% or 110 firms in service industry, respectively. Table 4.7 shows age of respondents' firms by type of industry.

Table 4.8
Firm Age by Type of Industry

Firm Age	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
1- 4 Years	87	43.5	150	50	110	54.2	347	49.3
5-9 Years	65	32.5	85	28.3	56	27.6	206	29.3
10-14 Years	32	16	40	13.3	24	11.8	96	13.6
15 Years and upper	16	8	25	8.3	13	6.4	54	7.69
Total	200	100	300	100	203	100	703	100

4.3.2 Number of Employees

Table 4.8 show firms classified by number of employees. 348 firms or 49.51% of firm's employees are between 1 and 50 employees. There are 57 firms or 57.7% for manufacturing industry, 173 firms or 57.7% for retail industry and 118 firms or 58.1% for service industry. 74.27% of total firms employ less than 50 employees.

Table 4.9
Number of Employees by Type of Industry

Number of Employees	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Less than 10 employees	87	15	47	15.7	40	19.7	174	24.76
10-50 Employees	57	57	173	57.7	118	58.1	348	49.51
51-100 Employees	27	13.5	37	12.3	26	12.8	90	12.81
101-250 Employees	29	14.5	43	14.3	19	9.4	91	12.95
Total	200	100	300	100	203	100	703	100

4.3.3 Firms' Average Revenue

Firm's revenue is demonstrated in Table 4.9. More than half of the total sample, 448 firms or 63.5% of all firms have revenue less than 50 million Baht. 158 firms or 22.48% of firms have revenue less than 5 million baht and 155 firms or 22.4% of firms have revenue between 10-50 million Baht respectively. Regarding the highest of firms in each industry, firms report revenue less than 5 million Baht are 47 firms or 23.5% in manufacturing industry, 50 firms or 24.6% in service industry. For a retail industry, the highest percentage reported is 65 firms or 21.7% which have income between 10-50 million Baht.

Table 4.10
Firm's Income by Type of Industry

Firm's Income (Million Bt.)	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Less than 5 million	47	23.5	61	20.3	50	24.63	158	22.48
5-10 million	37	18.5	55	18.3	43	21.2	135	19.33
10-50 million	43	21.5	65	21.7	47	23.2	155	22.05
50-100 million	33	16.5	53	17.7	29	14.3	115	16.16
100-400 million baht	13	6.5	25	8.3	18	8.9	56	7.9
More than 400 million baht	27	13.5	41	13.7	16	7.9	84	11.7
Total	200	100	300	100	203	100	703	100

4.3.4 Firm Size

Firm size is shown in Table 4.10. Of 703 observations, 552 firms or 74.25% are small- sized firm. 181 or 25.6% are medium –sized firm. There are 144 firms or 72% in manufacturing industry, 220 firms or 73.4% in retail industry and 158firms or 77.8% in service industry.

Table 4.11
Firm Size by Type of Industry

Size's company	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Small	144	72	220	73.3	158	77.8	522	74.4
Medium	56	28	80	26.7	45	22.2	181	25.6
Total	200	100	300	100	203	100	703	100

4.3.5 Firm's Region

Firm's region is shown in Table 4.11. The sample is classified according to six regions of Thailand, 198 firms or 28.16 % are from central part, 116 firms or 16.50% are from northeastern part, 112 firms or 15.93% are from northern part, 102 firms or 14.50% are from southeastern part, 95 firms or 13.51% are from eastern part and 80 firms or 11.37% are from western part. It should be noted that 198 firms or 28.16% of all firms in the sample are from central part of Thailand.

Table 4.12
Firm's Region by Type of Industry

Region	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Central	59	29.5	87	29	52	25.61	198	28.16
Northern	39	19.5	42	14	31	15.27	112	15.93
Southern	30	15	43	14.33	29	14.28	102	14.5
Northeastern	26	13	62	20.67	28	13.79	116	16.5
Eastern	25	12.5	36	12	34	16.7	95	13.5
Western	21	10.5	33	11	26	12.8	80	11.3
Total	200	100	303	100	200	100	703	100

4.4 Perception and Adoption of the Philosophy of Sufficiency Economy

The section analyses firms' perception and adoption of the Philosophy of Sufficiency Economy (PSE) of three industry types of SME which are manufacturing, retail and service.

4.4.1 Know of the Philosophy of Sufficiency Economy (PSE)

Firm respondents that know the PSE reports in Table 4.12. 666 firms or 94.73% know the PSE. Only 37 firms or 5.27 % said they did not know the PSE. Among the three industries, the percentages of firms that heard about PSE are about the same, 189 firms or 94.5 % in manufacturing industry, 282 firms or 94 % in retail industry and 195 firms or 96.06 % in service industry.

Table 4.13

Know of the Philosophy of Sufficiency Economy (PSE) by Type of Industry

	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Yes	189	94.5	282	94	195	96.06	666	94.73
No	11	5.55	18	6	8	3.94	37	5.27
Total	200	100	300	100	203	100	703	100

4.4.2 Understand the Philosophy of Sufficiency Economy (PSE)

Table 4.13 shows how much firms understand the PSE. Respondent 277 firms or 39.13% answer that they moderately understand the PSE. 202 firms or 28.7% answer that they very understand the PSE. From the data, only 13 firms or 1.9% answer

that they do not understand the PSE at all. However, for firm that say that they understand the PSE from “moderate/very/extremely”, the total combined is shown to be 504 firms or 71.7% of all firms.

Table 4.14
Understand the Philosophy of Sufficiency Economy (PSE)
By Type of Industry

	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Not At All	4	2	5	1.7	4	2	13	1.9
Least	25	12.5	36	12	23	11.3	84	11.93
Less	29	14.5	40	13.3	33	16.3	102	14.7
Moderate	79	39.5	123	41	75	36.9	277	39.13
Very	57	28.5	87	29	58	28.6	202	28.7
Extremely	6	3	9	3	10	4.9	25	3.63
Total	200	100	300	100	203	100	703	100

4.4.3 Whether to adopt the Philosophy of Sufficiency Economy (PSE)

Table 4.14 shows whether SMEs should adopt the PSE. Respondents were asked whether SME companies should adopt the Philosophy of Sufficiency Economy. 669 firms or 95.27 % of 703 firms answer that SMEs should adopt the PSE. Only 34 firms or 4.73% say that SMEs should not adopt the PSE.

Table 4.15
Whether Firms should adopt the Philosophy of Sufficiency Economy
By Type of Industry

	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Should not adopt	10	5	16	5.3	8	3.9	34	4.73
Should adopt	190	95	284	94.7	195	96.1	669	95.27
Total	200	100	300	100	203	100	703	100

4.4.4 Firm Adoption of the Philosophy of Sufficiency Economy (PSE)

Table 4.15 shows SMEs adoption the PSE is shown in table 4.15. They were asked the level of PSE adoption to their businesses. 323 firms or 45.66% answer that they very much adopt the PSE to their businesses. 172 firms or 24.43% answer that they extremely adopt the PSE to their businesses. Only 9 firms or 1.28% say that they do not adopt the philosophy of Sufficiency Economy in their businesses.

Table 4.16**Firm Adoption of the Philosophy of Sufficiency Economy by Type of Industry**

Level of Adoption	Type of Firm Industry						Total	
	Manufacturing		Retail		Service			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Not At All	3	1.5	4	1.3	2	1	9	1.28
Least	5	2.5	4	1.3	3	1.5	12	1.75
Less	23	11.5	32	10.7	23	11.4	78	11.16
Moderate	30	15	43	14.3	36	17.7	109	15.72
Very	92	46	143	47.7	88	43.3	323	45.66
Extremely	47	23.5	74	24.7	51	25.1	172	24.43
Total	200	100	300	100	203	100	703	100

4.5 The Quality of the Research Instruments

The quality of the research instruments including content validity, reliability test, and construct validity of the PSE model are assessed. The objective is to assess the reliability and the validity of their observed variables assures the quality of the measurement instruments in order to further analysis of the structural model (Joreskog and Sörbom, 2007).

4.5.1 Content Validity

Content validity refers to *“the degree to which the content of the items reflects the content domain of interest”* (APA, 1954). The questionnaire was created with 71 items which were later checked for their content validity by three experts in the field based on the Item-Objective-Congruence (IOC) Index (Rovinelli and Hambleton, 1977). An evaluation using the index of IOC is a process where experts rate individual items in the questionnaire (Rovinelli and Hambleton, 1977). Content experts evaluate each item

by giving the item a rating of -1, 0 or 1. After the experts complete an evaluation of the items, the ratings are combined to provide indices of item-objective-congruence measures for each item on each objective. The range of the index score for an item is -1 to 1. Where 1 is clearly measuring, -1 is clearly not measuring, or 0 is the degree to the content is unclear for each item. The experts are not told which constructs the individual items are intended to measure, thus they remain independent and unbiased evaluators. An index of -1 can be interpreted as complete agreement by all experts that the item is measuring all the wrong objectives. An index of +1 can be interpreted as complete agreement by all experts that the item is measuring the correct objective. The items with IOC index higher than 0.5 are acceptable (Rovinelli and Hambleton, 1977). The results of IOC index show in Table 4.17. The results showed that the questionnaire in this research had high IOC. The total score rating from all experts are more than 0.70 for each part of questionnaire. Therefore, reliability and construct validity will be examined in the next section.

Table 4.17
Item –Objective Congruence from Experts

IOC Index	Question Part1	Question Part2	Question Part3	Question Part4	Question Part5	Question Part6	TOTAL Items
1	3	6	22	16	13	4	64
0.70-.099	-	-	4	3	-	-	7
Total Item	3	6	26	19	13	4	71

4.5.2 Reliability Test

Reliability is the ability of a measure to obtain the internal consistency of a set of variables. High reliability of a construct exhibits high opportunity that all variables in a construct measure the same thing (Churchill and Brown, 2007). To estimate reliability, reliability of all 16 constructs is tested by using Cronbach's alpha (α) (Cronbach, 1951). Table 4.16 summarize Cronbach's alpha of all 16 constructs. Nunnaly

(1978) has indicated Cronbach's alpha 0.7 to be satisfactory reliability coefficient. A coefficient of 0.9 or more indicates a high degree of reliability.

All 16 constructs have reliability indices range from 0.787 to 0.964 which indicate high reliabilities of all constructs. The government support (GOV) has highest reliability equals to 0.964. In conclusion, the results of reliability testing show that all seventeen constructs of the model of the antecedents and consequences of the PSE have high reliabilities which mean high internal consistency of a set of constructs in the model.

Table 4.18
Cronbach 's Alpha of All Sixteen Constructs

Constructs	Number of Items	Cronbach 's Alpha
Social Networks (SN)	3	0.892
Government Agency Support (GOV)	4	0.964
Perceived Environmental Uncertainty (PEU)	4	0.787
Shared Vision (SV)	4	0.924
Value based leadership (VBL)	4	0.918
Firm Adoption of PSE (PSE)	26	0.945
Moderation (M)	6	0.766
Reasonableness (R)	4	0.832
Self-Immunity (SI)	6	0.766
Knowledge (K)	4	0.886
Morality (Moral)	6	0.919
Firm Performance (FP)	13	0.93
Marketing Performance (MktP)	3	0.956
Finance Performance (FinP)	3	0.876
Social Performance (SP)	4	0.917
Environment Performance (EnvP)	3	0.919

4.5.3 Construct Validity

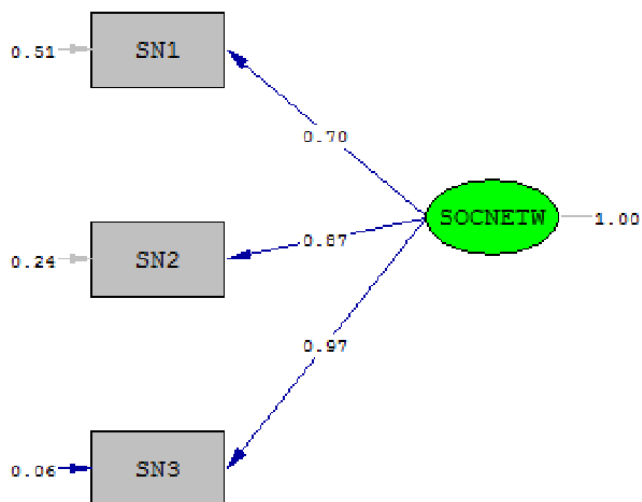
For testing validity of each construct, confirmatory factor analysis (CFA) was used for test the construct validity of 16 constructs of the exogenous and endogenous variables in the proposed model. Confirmatory factor analysis (CFA) used to examine how well the indicators are grouped into some specific constructs that a researcher specifies or hypothesizes (Jöreskog and Sorbom, 2007). The exogenous variables include social networks (SN), government agency support (GOV), perceived environmental uncertainty (PEU), shared vision (SV) and value based leadership (VBL). Endogenous variables include the level of firm adoption of PSE (PSE) and firm performance (FP). The sub-endogenous variables include moderation (Mod), reasonableness(R), self-immunity (SI), knowledge (K), Morality (Moral), marketing performance (Mktp), financial performance (FinP), social performance (SP) and environmental performance (EnvP). Several fit indices to evaluate the fit of the construct are proposed, for example, Chi square test (χ^2), Chi-square to degree of freedom ratio (χ^2/df), P-value, Root Mean Square Error of Approximation (RMSEA), Relative Fit Index (RFI) and Normed Fit Index (NFI). The findings of CFA in each construct are shown in the following.

4.5.3.1 Social Network Construct

The results of CFA of social network construct are shown in Figure 4.2. The goodness of fit indices suggests a good fit of the construct. Table 4.18 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.03$, $df=2$ $p=0.98372$). Chi-square to degree of freedom ratio is 0.03 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR (0.00057) and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated social networks construct. This, these fit indices demonstrate a good fit construct.

Figures 4.2

The Results of CFA of Social Network Construct



Chi-Square=0.03, df=2, P-value=0.98372, RMSEA=0.000

Table 4.19

Fit Indices and Criteria for CFA of Social Network Construct

Parameter	Valued	Criteria
Chi-square	0.03	
χ^2/df	0.03	≤ 2
p-value	0.98372	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.00057	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.19, the completely standardized loadings of each observed variable range from 0.70 (SN1) to 0.97 (SN3). The standardized loadings of each observed variable range from 0.55 (SN1) to 0.66 (SN3). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All completely standardized loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.49 (SN1) to 0.94 (SN3). Therefore, the results suggested that all observed variables of social network construct should be included in the structural model analysis.

Table 4.20
Factor Loading, Standard Error, t-value of Social Network Construct

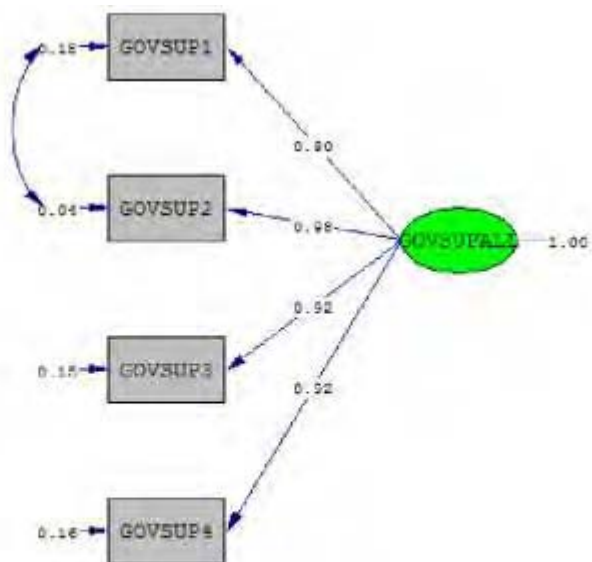
Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
SN1	0.70	0.55	0.03	20.94*	0.49
SN2	0.87	0.59	0.02	28.84*	0.76
SN3	0.97	0.66	0.02	33.96*	0.94
Chi-square= 0.03 df=2 p=0.98372 RMSEA=0.000*p<0.05					

4.5.3.2 Government Agency Support Construct

The findings of CFA of government agency support construct are shown in Figure 4.5. The government support model's goodness of fit is assessed. Table 4.20 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.28$, $df=1$, $p=0.59421$) and RMSEA is 0.000. Chi-square to degree of freedom ratio equal 0.28 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMSEA (0.000) and RMR (0.00090) are lower than 0.05. All of these values indicate a

good fit between the estimated government agency support construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.3
The Results of CFA of Government Agency Support Construct



Chi-Square=0.28, df=1, P-value=0.59421, RMSEA=0.000

Table 4.21
Fit Indices and Criteria for CFA of Government Support Construct

Parameter	Valued	Criteria
Chi-square	0.28	
χ^2/df	0.28	≤ 2
p-value	0.59421	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.00090	≤ 0.05
RMSEA	0.000	≤ 0.05

From table 4.21, the completely standardized loadings of each observed variable range from 0.90 (GOV1) to 0.98 (GOV2). The standardized loadings of each observed variable range from 0.88 (GOV1) to 0.94 (GOV2). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized loadings have a significant impact at a level of significance 0.01. R^2 ranges from 0.82 (GOV1) to 0.97(GOV2). Therefore, the results suggested that all observed variables of government agency support construct should be included in the structural model analysis.

Table 4.22
Factor Loading, Standard Error, t-value of
Government Agency Support Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
GOV1	0.90	0.88	0.03	30.61*	0.82
GOV2	0.98	0.94	0.03	35.48*	0.97
GOV3	0.92	0.89	0.03	32.08*	0.85
GOV4	0.92	0.92	0.03	31.71*	0.84
Chi-Square= 0.28 df=1 p= 0.59421 RMSEA= 0.000 *p<0.005					

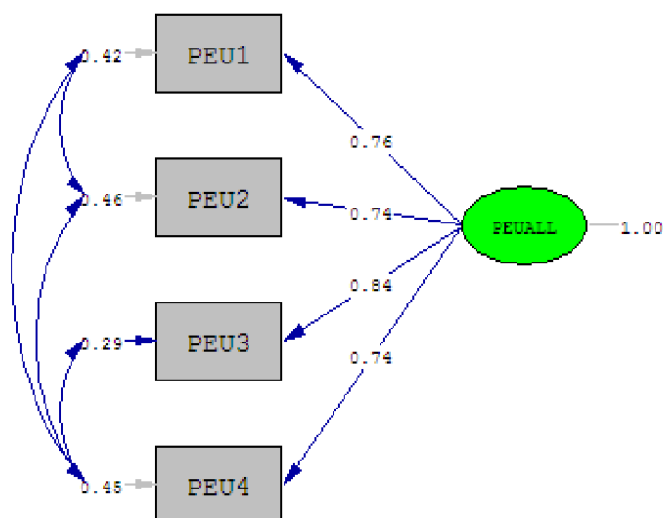
c) Perceived Environmental Uncertainty Construct

4.5.3.3 Perceived Environmental Uncertainty Construct

The findings of CFA of PEU construct are shown in Figure 4.6. The goodness of fit indices suggest a good fit of construct. Table 4.22 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.15$, $df=1$, $p=0.69567$). Chi-square to degree of freedom ratio equal (0.15:1) to 0.15 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMSEA (0.0010) and RMR (0.0019) are lower than 0.5. All of these values indicate a good fit between the estimated perceived environmental uncertainty construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.4

The Results of CFA of Perceived Environmental Uncertainty Construct



Chi-Square=0.15, df=1, P-value=0.69567, RMSEA=0.000

Table 4.23

Fit Indices and Criteria for CFA of PEU Construct

Parameter	Value	Criteria
Chi-square	0.15	
χ^2/df	0.15	≤ 2
p-value	0.69567	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0019	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.23, the completely standardized loading of each observed variable range from 0.74 (PEU2 and PEU4) to 0.84 (PEU3). The standardized loading of each observed variable range from 0.58 (PEU4) to 0.69 (PEU3). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.54 (PEU2) to 0.71 (PEU3). Therefore, the results suggested that all observed variables of perceived environmental uncertainty construct should be included in the structural model.

Table 4.24
Factor Loading, Standard Error, t-value, PEU Construct

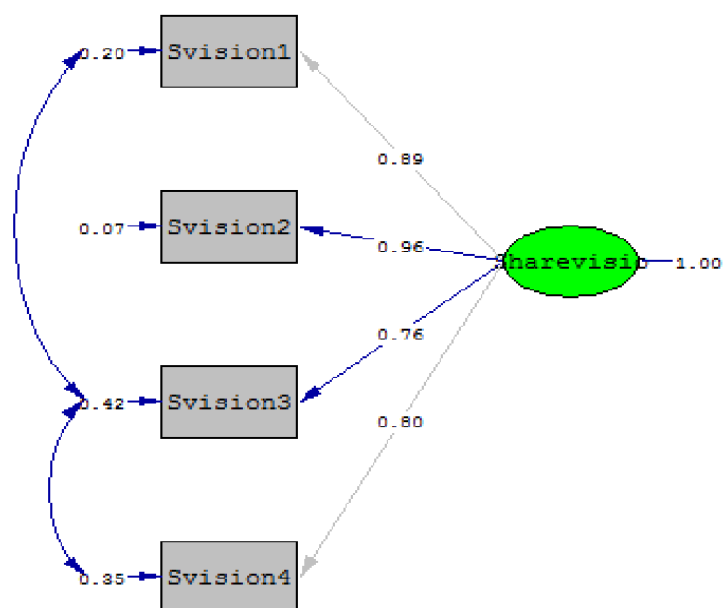
Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
PEU1	0.76	0.68	0.03	22.21*	0.58
PEU2	0.74	0.62	0.03	20.87*	0.54
PEU3	0.84	0.69	0.03	24.14*	0.71
PEU4	0.74	0.58	0.03	20.62*	0.55
Chi-square= 0.15 df=1 p=0.69567 RMSEA=0.000 *p<0.05					

4.5.3.4 Shared Vision Construct

The findings of CFA of shared vision construct are shown in Figure 4.5. The goodness of fit indices suggest a good fit of construct. Table 4.24 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.08, d.f.=1, p=0.77994$). Chi-square to degree of freedom ratio equals (0.03:1) to 0.03 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR (0.0023)

and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated shared vision construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.5
The Results of CFA of Shared Vision Construct



Chi-Square=0.08, df=1, P-value=0.77994, RMSEA=0.000

Table 4.25
Fit Indices and Criteria for CFA of Shared Vision Construct

Parameter	Valued	Criteria
Chi-square	0.08	
χ^2/df	0.08	≤ 2
p-value	0.77994	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0023	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.25, the completely standardized loading of each observed variable range from 0.76 (SV3) to 0.96 (SV2). The standardized loading of each observed variable range from 0.55 (SV3) to 0.68 (SV2). The standardized loading that lowers than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.58 (SV3) to 0.94(SV2). It can be concluded that all observed variables of shared vision construct should be included in the structural model analysis.

Table 4.26
Factor Loading, Standard Error, t-value of Shared Vision Construct

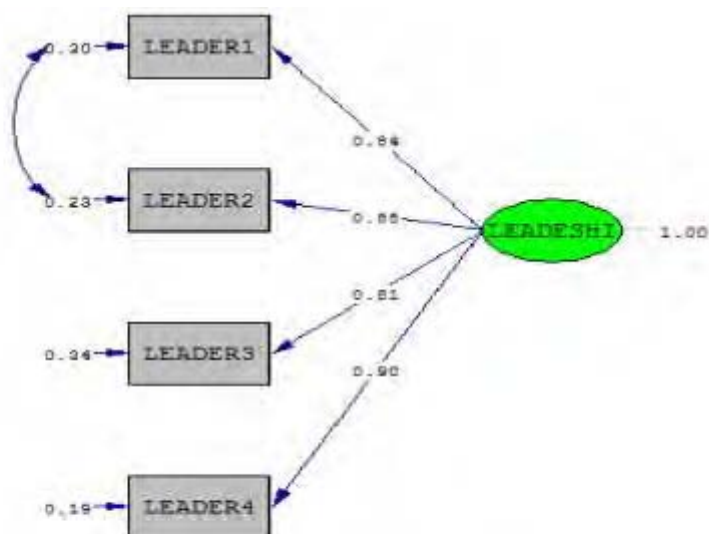
Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
SV1	0.89	0.64	--	--	0.80
SV2	0.96	0.68	0.03	41.20*	0.93
SV3	0.76	0.55	0.02	31.39*	0.58
SV4	0.80	0.64	--	--	0.65
Chi-square= 0.08 df=1 p=0.77994 RMSEA=0.000*p<0.05					

4.5.3.5 Value-Based Leadership Construct

The results of CFA of value-based leadership construct are shown in Figure 4.6. The goodness of fit indices suggest a good fit of the construct. Table 4.26 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.43$, $df=1$, $p=0.5138$). Chi-square to degree of freedom ratio (χ^2/df) equals 0.28:1 (0.28) which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000) and RFI (1.000) are above a cut off value (0.9). RMSEA (0.0010) and RMR (0.0010) are lower than 0.5. All of these values indicate a good fit between the estimated value-based leadership construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.6

The Results of CFA of Value-Based Leadership Construct



Chi-Square=0.43, df=1, P-value=0.51380, RMSEA=0.000

Table 4.27

Fit Indices and Criteria for CFA of Value-Based Leadership Construct

Parameter	Valued	Criteria
Chi-square	0.43	
χ^2/df	0.43	<2
p-value	0.5138	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0010	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.27, the completely standardized loading of each observed variable ranges from 0.81 (VBL3) to 0.90 (VBL4). The standardized loading of each observed variable ranges from 0.56 (VBL3) to 0.64 (VBL1). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.66 (VBL3) to 0.81 (VBL4). Therefore, the analysis suggested that all observed variables of value-based leadership construct should be included in the structural model.

Table 4.28

Factor Loading, Standard Error, t-value of Value Based Leadership Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
VBL1	0.84	0.64	0.02	26.18*	0.70
VBL2	0.88	0.60	0.02	28.30*	0.77
VBL3	0.81	0.56	0.02	25.42*	0.66
VBL4	0.90	0.61	0.02	29.60*	0.81
Chi-square= 0.43 df=1 p=0.5138 RMSEA=0.000 *p<0.05					

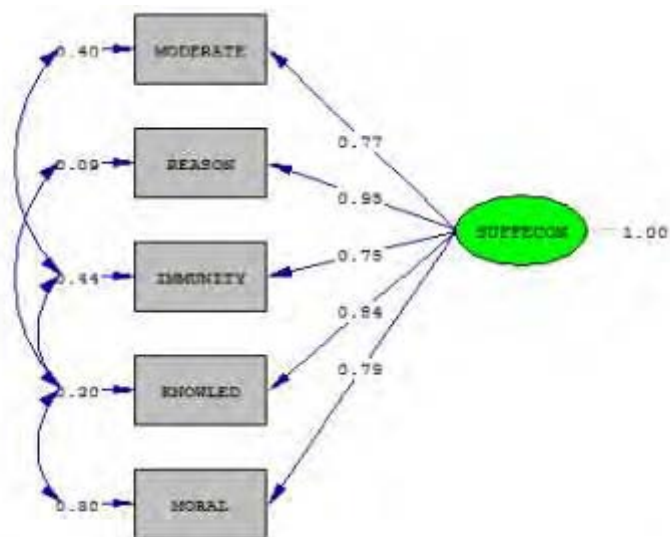
4.5.3.6 Philosophy of Sufficiency Economy (PSE) Construct

The results of CFA of level of firm adoption of Philosophy of Sufficiency Economy construct are shown in Figure 4.7. The goodness of fit indices suggests a good fit of construct. Table 4.28 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.48$, $df=1$ $p=0.48918$). Chi-square to degree of freedom ratio equal (0.48:1)0.48 which is lower than 2. Additionally, the value of other fit indices, GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.00) are above a cut off value (0.9). RMR (0.00095) and RMSEA (0.000) are

lower than 0.5. All of these values indicate a good fit between the estimated PSE construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.7

The Results of CFA of Philosophy of Sufficiency Economy Construct



Chi-Square=0.48, df=1, P-value=0.48918, RMSEA=0.000

Table 4.29
Fit Indices and Criteria for CFA of
Philosophy of Sufficiency Economy Construct

Parameter	Valued	Criteria
Chi-square	0.48	
χ^2/df	0.48	≤ 2
p-value	0.48918	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.00095	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.29, the completely standardized loading of each observed variable range from 0.75 (SI) to 0.95 (R). The standardized loading of each observed variable range from 0.47 (Mod) and (Moral) to 0.61 (K). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.56 (SI) to 0.91 (R). It can be concluded that all observed variables of PSE construct should be included in the structural model analysis.

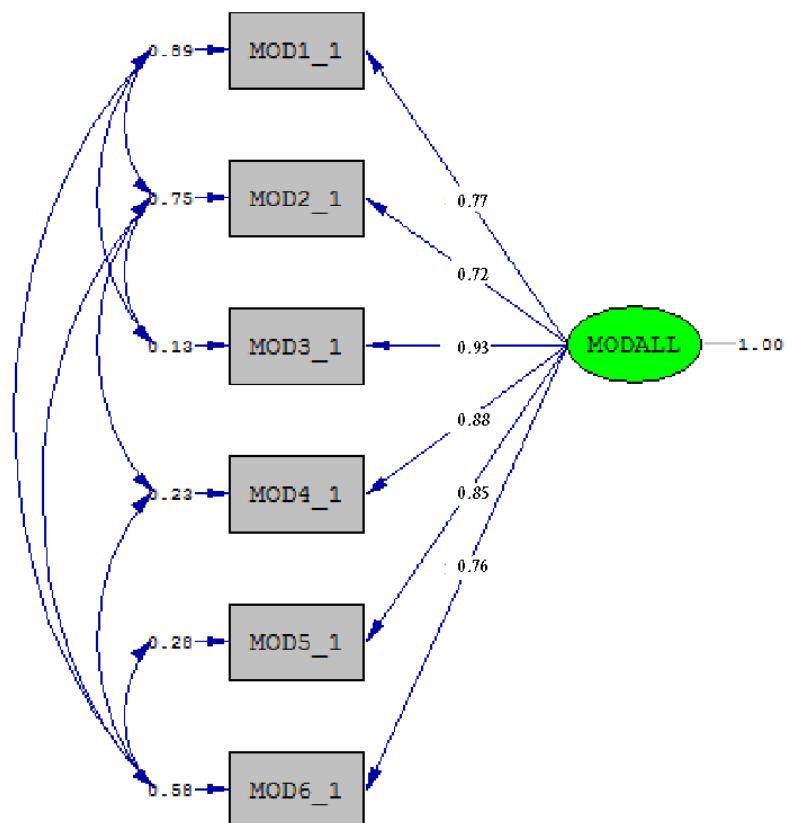
Table 4.30
Factor Loading, Standard Error, t-value of the PSE Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
Mod	0.77	0.47	0.02	23.32*	0.60
R	0.95	0.58	0.02	31.91*	0.91
SI	0.75	0.51	0.02	22.39*	0.56
K	0.84	0.61	0.02	24.30*	0.70
Moral	0.79	0.47	0.02	24.10*	0.62
Chi-square= 0.48 df=1 p=0.48918 RMSEA=0.000*p<0.05					

4.5.3.7 Moderation Construct

The results of CFA of moderation construct are shown in Figure 4.8. The goodness of fit indices suggest a good fit of construct. Table 4.30 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.12$, $df=1$, $p=0.73407$). Chi-square to degree of freedom ratio equal (0.12:1) to 0.12 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR(0.0015) and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated moderation construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.8
The Results of CFA of Moderation Construct



Chi-Square=0.12, df=1, P-value=0.73407, RMSEA=0.000

Table 4.31
Fit Indices and Criteria for CFA of Moderation Construct

Parameter	Valued	Criteria
Chi-square	0.12	
χ^2/df	0.12	≤ 2
p-value	0.73407	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0015	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.31, the completely standardized loading of each observed variable has ranged from 0.76 (M0D6) to 0.93 (MOD3). The standardized loading of each observed variable has ranged from 0.34 (M0D1) to 0.66 (MOD5). The standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.51 (MOD2) to 0.87(MOD3). It can be concluded that all observed variables of moderation construct should be included in the structural model analysis.

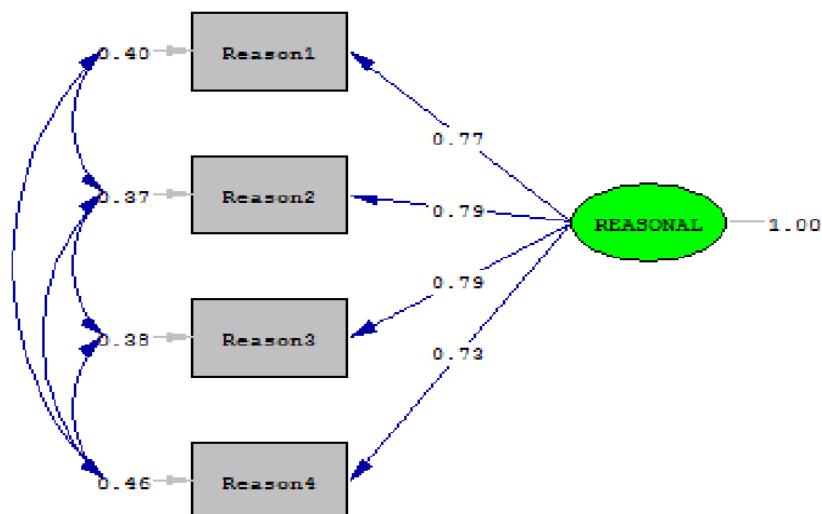
Table 4.32
Factor Loading, Standard Error, t-value of Moderation Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
MOD1	0.77	0.34	0.04	8.53*	0.59
MOD2	0.72	0.49	0.04	12.08*	0.51
MOD3	0.93	0.65	0.03	31.48*	0.87
MOD4	0.88	0.62	0.03	28.81*	0.77
MOD5	0.85	0.66	0.03	27.30*	0.72
MOD6	0.76	0.49	0.04	18.34*	0.83
Chi-square= 0.12 df= 1 p=0.73704 RMSEA=0.000, *p<0.05					

4.5.3.8 Reasonableness Construct

The findings of CFA of reasonableness construct are shown in Figure 4.9. The goodness of fit indices suggest a good fit of construct. Table 4.32 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.02$, $df=1$, $p=0.87474$). Chi-square to degree of freedom ratio equals (0.02:1) to 0.015 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR (0.00053) and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated reasonableness construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.9
The Results of CFA of Reasonableness



Chi-Square=0.02, df=1, P-value=0.87474, RMSEA=0.000

Table 4.33
Fit Indices and Criteria for CFA of Reasonableness

Parameter	Valued	Criteria
Chi-square	0.02	
χ^2/df	0.02	≤ 2
p-value	0.87474	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.00053	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.33, the completely standardized loading of each observed variable ranges from 0.73 (R4) to 0.79 (R2 and R3). The standardized loading of each observed variable ranges from 0.43 (R1) to 0.49 (R4). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.54 (R4) to 0.63(R2). It can be concluded that all observed variables of reasonableness construct should be included in the structural model analysis.

Table 4.34

Factor Loading, Standard Error, t-value of Reasonableness Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
R1	0.77	0.43	0.03	22.84*	0.60
R2	0.79	0.45	0.02	23.57*	0.63
R3	0.79	0.46	0.02	23.55*	0.62
R4	0.73	0.49	0.03	20.12*	0.54
Chi-square= 0.02 df=1 p=0.87474 RMSEA=0.000*p<0.05					

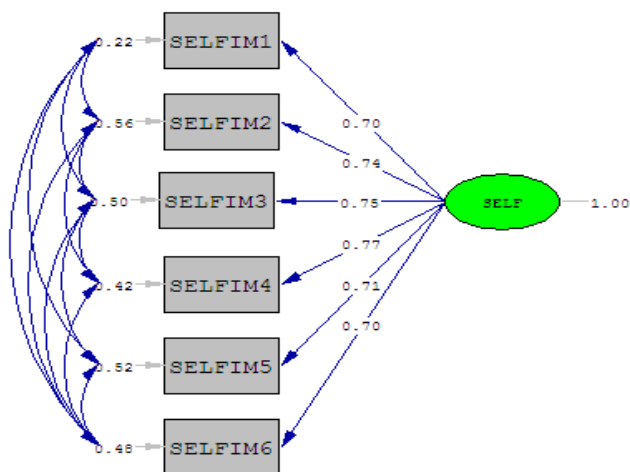
4.5.3.9 Self-Immunity Construct

The findings of CFA of self-immunity construct are shown in Figure 4.10. The goodness of fit indices suggests a good fit of construct. Table 4.34 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 4.83, df=3, p=0.18455$). Chi-square to degree of freedom ratio equal to (4.83:3) 1.61 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (0.98), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (0.98) are above a cut off value (0.9). RMR (0.013) and RMSEA (0.029) are lower than 0.5. All of these values indicate a good fit between

the estimated self-immunity construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.10

The Results of CFA of Self-Immunity Construct



Chi-Square=4.83, df=3, P-value=0.18455, RMSEA=0.029

Table 4.35
Fit Indices and Criteria for CFA of Self-Immunity Construct

Parameter	Valued	Criteria
Chi-square	4.83	
χ^2/df	1.61	≤ 2
p-value	0.18455	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	0.98	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	0.98	≥ 0.90
RMR	0.013	≤ 0.05
RMSEA	0.029	≤ 0.05

From Table 4.35, the completely standardized loading of each observed variable range from 0.70 (SI1, 6) to 0.75 (SI3). The standardized loading of each observed variable range from 0.58 (SI1) to 0.66 (SI6). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. R^2 ranges from 0.45 (SI4) to 0.56 (SI3). It can be concluded that all observed variables of self-immunity should be included in the further analysis.

Table 4.36
Factor Loading, Standard Error, t-value of Self-Immunity Construct

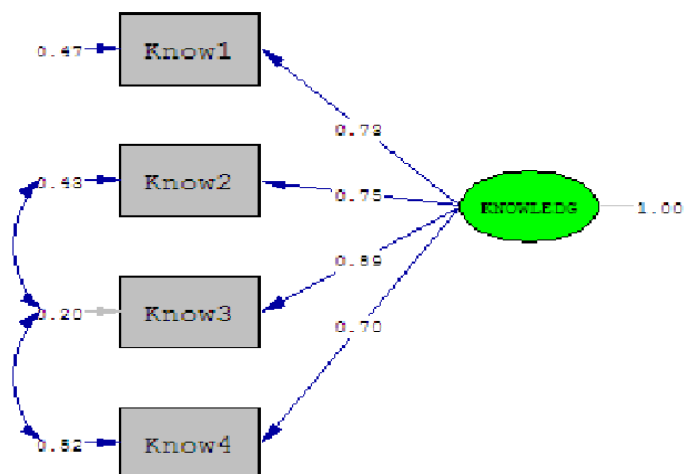
Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
SI1	0.70	0.58	0.02	18.79*	0.49
SI2	0.74	0.62	0.04	20.84*	0.54
SI3	0.75	0.65	0.04	20.83*	0.56
SI4	0.77	0.64	0.03	18.39*	0.45
SI5	0.71	0.59	0.04	19.83*	0.50
SI6	0.70	0.66	0.04	18.21*	0.49
Chi-square= 4.83 df=3 p=0.18455 RMSEA=0.029 *p<0.05					

4.5.3.10 Knowledge Construct

The findings of CFA of knowledge of Philosophy of Sufficiency Economy construct are shown in Figure 4.11. The goodness of fit indices suggests a good fit construct. Table 4.36 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.26, df=1, p=0.61070$). Chi-square to degree of freedom ratio equal (0.26:1) to 0.26 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR (0.0018) and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated knowledge construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.11

The Results of CFA of Knowledge Construct



Chi-Square=0.26, df=1, P-value=0.61070, RMSEA=0.000

Table 4.37

Fit Indices and Criteria for CFA of Knowledge

Parameter	Valued	Criteria
Chi-square	0.26	
χ^2/df	0.26	≤ 2
p-value	0.61070	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0018	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.37, the completely standardized loading of each observed variable range from 0.70 (K4) to 0.89 (K3). The standardized loading of each observed variable range from 0.58 (K4) to 0.72 (K3). A completely standardized loading

of 0.70 or above was considered to be included into the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. R^2 ranges from 0.48 (K4) to 0.80(K3). It can be concluded that all observed variables of knowledge construct should be included in the structural model analysis.

Table 4.38
Factor Loading, Standard Error, t-value of Knowledge Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
K1	0.73	0.67	0.03	20.84*	0.53
K2	0.75	0.62	0.03	19.87*	0.57
K3	0.89	0.72	0.03	29.96*	0.80
K4	0.70	0.58	0.04	18.14*	0.48
Chi-square= 0.26 df=1 p=0.61070 RMSEA=0.000 *p<0.05					

4.5.3.11 Moral Construct

The findings of CFA of moral of Philosophy of Sufficiency Economy construct are shown in Figure 4.12. The goodness of fit indices suggest a good fit of the construct. Table 4.38 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 3.37$, $df=5$, $p=0.64351$). Chi-square to degree of freedom ratio equals 0.26:1 (0.26) which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value(0.9). RMR (0.0029) and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated moral construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.12

The Results of CFA of Moral Construct

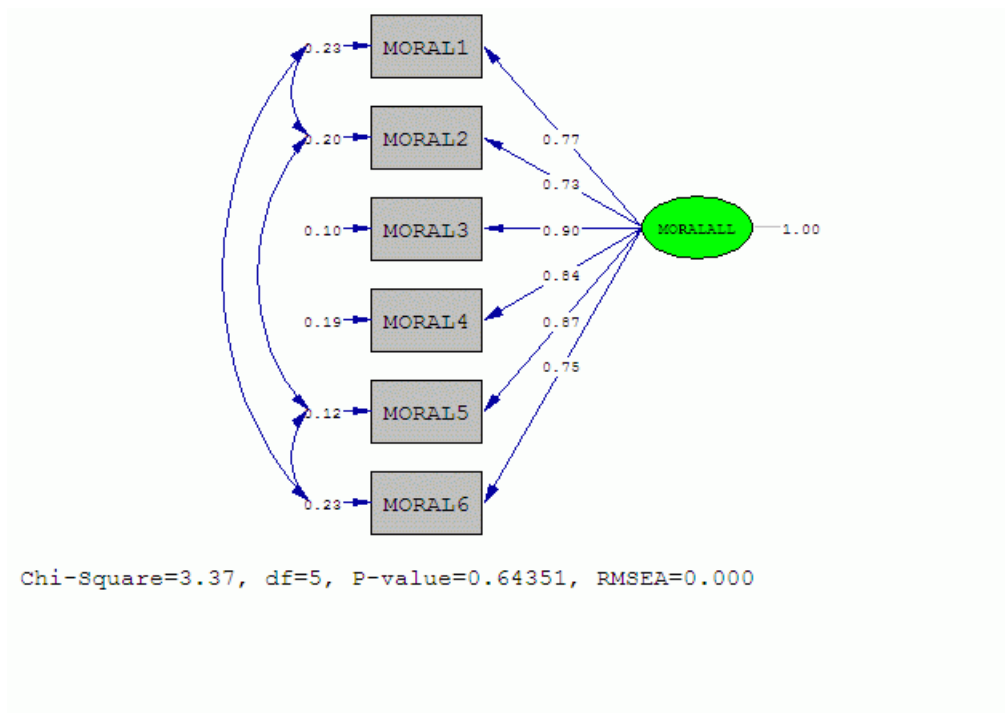


Table 4.39

Fit Indices and Criteria for CFA of Moral Construct

Parameter	Valued	Criteria
Chi-square	3.37	
χ^2/df	0.674	≤ 2
p-value	0.64351	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0029	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.39, the completely standardized loading of each observed variable range from 0.73(moral2) to 0.90 (moral3). The standardized loading of each observed variable range from 0.55(moral2) and (moral6) to 0.67 (moral3). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.45 (moral1) to 0.80 (moral3). It can be concluded that all observed variables of moral construct should be included in the structural model analysis.

Table 4.40
Factor Loading, Standard Error, t-value of Moral Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
Moral1	0.77	0.58	0.02	19.60*	0.45
Moral2	0.73	0.55	0.02	21.69*	0.53
Moral3	0.90	0.67	0.02	29.81*	0.80
Moral4	0.84	0.64	0.02	27.07*	0.71
Moral5	0.87	0.65	0.02	28.15*	0.75
Moral6	0.75	0.55	0.02	22.68*	0.57
Chi-square= 3.37 df=5 p=0.64351 RMSEA=0.029*p<0.05					

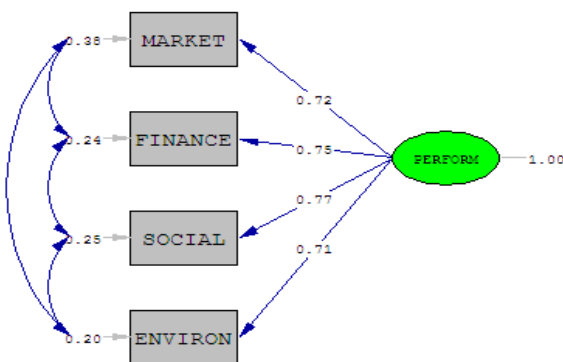
4.5.3.12 Firm Performance Construct

The findings of CFA of firm performance construct are shown in Figure 4.13. The goodness of fit indices suggests a good fit of construct. Table 4.40 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 3.23$, $df=2$ $p=0.19932$) Chi-square to degree of freedom ratio equal to (3.23:1) 1.615 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (0.99) are above a cut off value (0.9). RMR (0.0095)

and RMSEA (0.030) are lower than 0.5. All of these values indicate a good fit between the estimated firm performance construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.13

The Results of CFA of Firm Performance Construct



Chi-Square=3.23, df=2, P-value=0.19932, RMSEA=0.030

Table 4.41

Fit Indices and Criteria for CFA of Firm Performance Construct

Parameter	Valued	Criteria
Chi-square	3.23	
χ^2/df	1.615	≥ 2
p-value	0.19932	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	0.99	≥ 0.90
RMR	0.0095	≤ 0.05
RMSEA	0.030	≤ 0.05

From Table 4.41, the completely standardized loading of each observed variable range from 0.71 (EnvirP) to 0.77 (SP). The standardized loading of each observed variable range from 0.58 (EnvirP) to 0.60 (MktP) and (FinP). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.52 (FinP) to 0.67(MktP). It can be concluded that all observed variables of firm performance construct should be included in the structural model analysis.

Table 4.42
Factor Loading, Standard Error, t-value of Firm Performance Construct

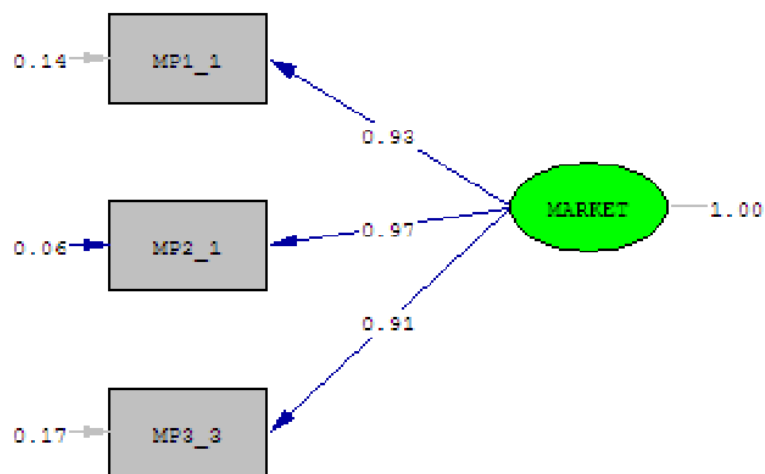
Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
MktP	0.72	0.60	0.03	19.79*	0.52
FinP	0.75	0.60	0.02	16.02*	0.59
SP	0.77	0.62	0.02	16.63*	0.65
EnvirP	0.71	0.58	0.02	19.43*	0.67
Chi-square= 3.23 df=2 p=0.19932 RMSEA=0.030 *p<0.05					

4.5.3.13 Marketing Performance Construct

The findings of CFA of marketing performance construct are shown in Figure 4.14. The goodness of fit indices suggest a good fit construct. Table 4.42 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.19$, $df=2$, $p=0.90969$). Chi-square to degree of freedom ratio equal (0.19:2) to 0.095 is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR (0.001) and RMSEA(0.000) are lower than 0.5. All of these values indicate a good fit between the estimated marketing performance construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.14

The Results of CFA of Marketing Performance Construct



Chi-Square=0.19, df=2, P-value=0.90969, RMSEA=0.000

Table 4.43

Fit Indices and Criteria for CFA of Marketing Performance Construct

Parameter	Valued	Criteria
Chi-square	0.19	
χ^2/df	0.095	≤ 2
p-value	0.90969	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0011	≤ 0.05
RMSEA	0.0000	≤ 0.05

From table 4.43, the completely standardized loading of each observed variable range from 0.91 (MP3) to 0.97 (MP2). The standardized loading of each observed variable range from 0.85(MP1) and (MP3) to 0.92 (MP2). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.83 (MP3) to 0.94 (MP2). It can be concluded that all observed variables of marketing performance construct should be included in the structural model analysis.

Table 4.44
Factor Loading, Standard Error, t-value of Market Performance Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
MP1	0.93	0.85	0.03	32.55*	0.86
MP2	0.97	0.92	0.03	35.12*	0.94
MP3	0.91	0.85	0.03	31.46*	0.83
Chi-square= 0.19 df=2 p=0.90969 RMSEA=0.000 *p<0.05					

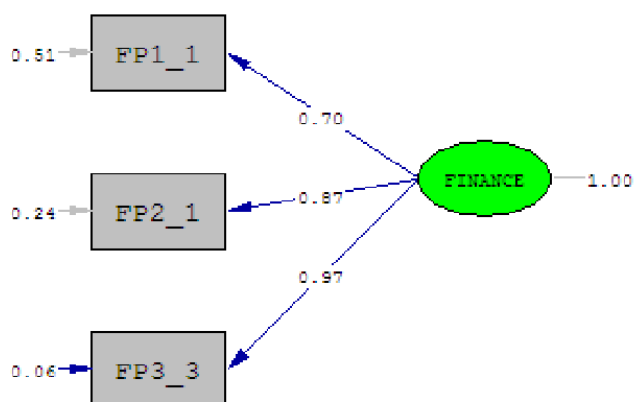
4.5.3.14 Financial Performance Construct

The findings of CFA of financial performance construct are shown in Figure 4.15. The goodness of fit indices suggests a good fit of construct. Table 4.44 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.03$, $df=2$, $p=0.98372$). The finding presents a good fit between the estimated model and the observed data. Chi-square to degree of freedom ratio equals to (0.03:2) 0.015 which is lower than 2. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR (0.00057)

and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated financial performance construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.15

The Results of CFA of Financial Performance Construct



Chi-Square=0.03, df=2, P-value=0.98372, RMSEA=0.000

Table 4.45
Fit Indices and Criteria for CFA of Financial Performance Construct

Parameter	Valued	Criteria
Chi-square	0.03	
χ^2/df	0.015	≤ 2
p-value	0.98372	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.00057	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.45, the completely standardized loading of each observed variable range from 0.70 (FP1) to 0.97 (FP3). The standardized loading of each observed variable range from 0.58 (FP1) to 0.66(FP3). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006). All standardized factor loadings have a significant impact at a level of significance 0.01. R^2 ranges from 0.49 (FP1) to 0.94(FP3). It can be concluded that all observed variables of financial performance construct should be included in the structural model analysis.

Table 4.46**Factor Loading, Standard Error, t-value of Financial Performance Construct**

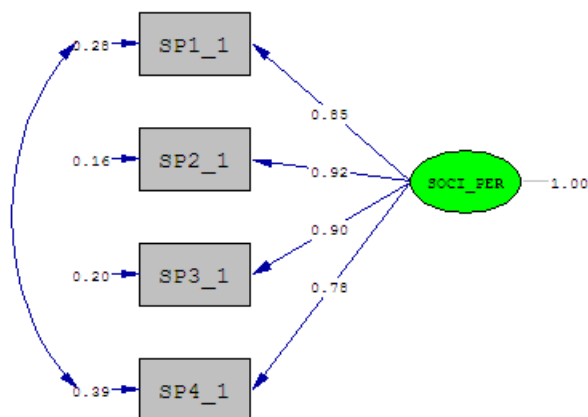
Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
FinP1	0.70	0.58	0.03	20.94*	0.49
FinP2	0.87	0.60	0.02	28.84*	0.76
FinP3	0.97	0.66	0.02	33.96*	0.94
Chi-square= 0.03 df=2 p=0.98372 RMSEA=0.000 *p<0.05					

4.5.3.15 Social Performance Construct

The results of CFA of social performance construct are shown in Figure 4.16. The goodness of fit indices suggests a good fit of construct. From Table 4.46, it reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 1.58$, $df=1$, $p=0.20828$). It can be implied that there is a goodness of fit between observed data and the estimated model. Chi-square to degree of freedom ratio equal 1.58 is lower than 2. The finding presents a good fit between the estimated model and the observed data. Additionally, the values of GFI (1.00), AGFI (0.99), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR(0.0021) and RMSEA (0.029) are lower than 0.5. All of these values indicate a good fit between the estimated social performance construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.16

The Results of CFA of Social Performance Construct



Chi-Square=1.58, df=1, P-value=0.20828, RMSEA=0.029

Table 4.47

Fit Indices and Criteria for CFA of Social Performance Construct

Parameter	Valued	Criteria
Chi-square	1.58	
χ^2/df	1.58	≤ 2
p-value	0.20828	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	0.99	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.0021	≤ 0.05
RMSEA	0.029	≤ 0.05

From Table 4.47, the completely standardized loading of each observed variable range from 0.78 (SP4) to 0.92 (SP2). The standardized loading of each observed variable range from 0.54(SP4) to 0.69 (SP3). The completely standardized loading that greater than 0.7 is considered to be included in the model (Hair et al., 2006).

All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.61 (SP4) to 0.84 (SP2). It can be concluded that all observed variables of social performance construct should be included in the structural model analysis.

Table 4.48

Factor Loading, Standard Error, t-value of Social Performance Construct

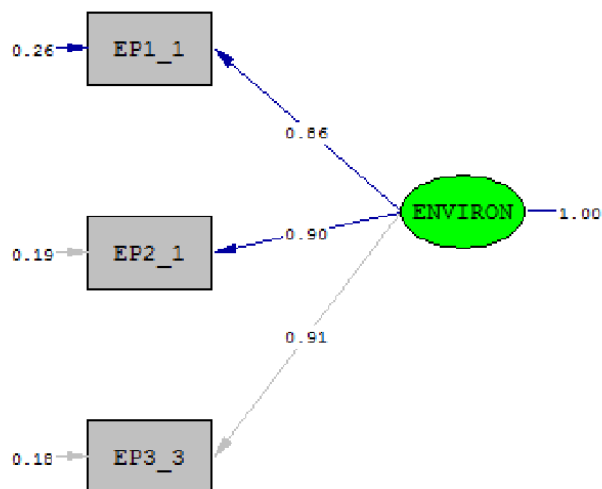
Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
SP1	0.85	0.65	0.02	27.36*	0.72
SP2	0.92	0.66	0.02	31.19*	0.84
SP3	0.90	0.69	0.02	30.02*	0.80
SP4	0.78	0.54	0.02	24.03*	0.61
Chi-square= 1.58 df=1 p=0.20828 RMSEA=0.029 *p<0.05					

4.5.3.16 Environmental Performance Construct

The results of CFA of environmental performance construct are shown in Figure 4.17. The goodness of fit indices suggests a good fit of construct. Table 4.48 reveals that chi-square test is not significantly different from zero at a level 0.05 ($\chi^2 = 0.21$, $df=2$, $p=0.89915$). Chi-square to degree of freedom ratio equal (0.21:2) 0.105 is lower than 2. The finding presents a good fit between the estimated model and the observed data. Additionally, the values of GFI (1.00), AGFI (1.00), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (1.000) are above a cut off value (0.9). RMR (0.00078) and RMSEA (0.000) are lower than 0.5. All of these values indicate a good fit between the estimated environmental performance construct and observed data. Thus, these fit indices demonstrate a good fit construct.

Figures 4.17

The Results of CFA of Environmental Performance Construct



Chi-Square=0.21, df=2, P-value=0.89915, RMSEA=0.000

Table 4.49

Fit Indices and Criteria for CFA of Environmental Performance Construct

Parameter	Valued	Criteria
Chi-square	0.21	
χ^2/df	0.105	≤ 2
p-value	0.89915	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	1.000	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	1.000	≥ 0.90
RMR	0.00078	≤ 0.05
RMSEA	0.000	≤ 0.05

From Table 4.49, the completely standardized loading of each observed variable range from 0.86 (EP1) to 0.91 (EP3). A completely standardized loading of 0.70 or above was considered to be of significance (Hair et al. ,2006). All standardized factor loadings have a significant impact at a level of significance 0.01. Composite reliability (CR) ranges from 0.86 (EP1) to 0.91(EP3). It can be concluded that all observed variables of environmental performance construct should be included in the structural model analysis.

Table 4.50
Factor Loading, Standard Error, t-value of
Environmental Performance Construct

Variables	Completely Standardized Loading	Standardized Loading	S.E.	T	Composite Reliability (CR)
EnvP1	0.86	0.57	0.03	33.26*	0.86
EnvP2	0.90	0.64	0.03	38.36*	0.90
EnvP3	0.91	0.64	--	--	0.91
Chi-square= 0.21 df=2 p=0.89915 RMSEA=0.000 *p<0.05					

Based on the result of confirmatory factor analysis of all 16 constructs, these construct show construct validity. The fit indices of each construct are above criteria. All completely standardized factor loadings are above 0.7 and have a significant impact at a level of significance 0.05. Therefore, the researcher will use all 16 constructs in the model of antecedences and consequences of the Philosophy of Sufficiency Economy to analyze the structural model in the next section.

4.6 Structural Model Assessment

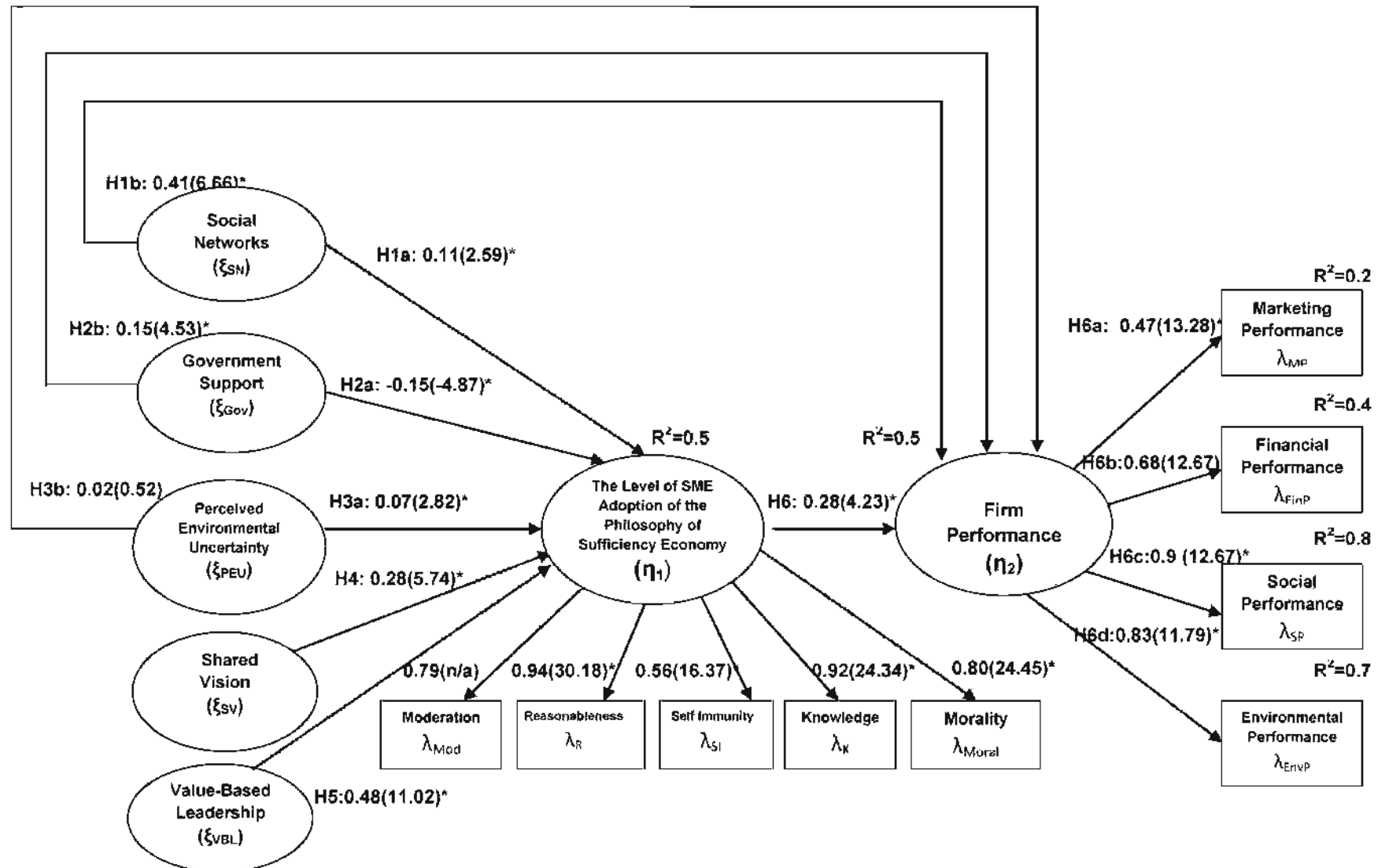
This section reports the results of the structural model of antecedents and consequences of the PSE upon SME. The structural model tests the direct effect of internal and external factors on the level of firm adoption of PSE. This study further examines the direct effect of external factors on firm performance. For consequences, this study tests the effect of the level of firm adoption of PSE on firm performance. Figure 4.18 graphically illustrates the results.

Based on the data analysis, the results show that goodness of fit indices support that the hypothesized model fits to the data. The criteria suggested by Joreskog and Sorbom (1989) and Hair et al. (2006) are applied here. Table 4.50 demonstrates the results of model fit assessment of firm adoption of PSE comparing with the cut off criteria. The result reveals that Chi-square of the proposed model is not significantly different from zero at a level 0.05 ($\chi^2 = 153.59$, $df = 141$, $p = 0.22127$). Chi-square to degree of freedom ratio equals 1.089 which is lower than 2. This can be interpreted that the null hypothesis that the observed and estimated covariance matrix is equal is not rejected at a level of significance 0.05. Additionally the values of GFI (1.00), AGFI (0.96), NFI (1.00), CFI (1.000), IFI (1.000), and RFI (0.99) are above a cut off value (0.9). RMSEA (0.011) and RMR (0.036) are lower than 0.5. Based on these results, the finding presents a good fit between the estimated model and the observed data. It can conclude that a model of antecedents and consequences of the PSE satisfactory fits to the data.

Table 4. 51

Fit Indices for Structural Model

Parameter	Valued	Criteria
Chi-square	153.59	
df	141	
χ^2/df	1.089	≤ 2
p-value	0.22127	≥ 0.05
GFI	1.000	≥ 0.90
AGFI	0.96	≥ 0.90
NFI	1.000	≥ 0.90
CFI	1.000	≥ 0.90
IFI	1.000	≥ 0.90
RFI	0.99	≥ 0.90
RMR	0.036	≤ 0.05
RMSEA	0.011	≤ 0.05



Note: number represents beta coefficient and t-value (in parentheses), n/a indicates a specific value, *p-value<0.05

Table 4.52

Results of the Structural Model:

Standardized Coefficient Estimates and t-Value of Proposed Model

Hypotheses	Constructs	Direct Effects		Indirect Effects		Total Effects	
		Std. Beta Coefficient	t-value	Std. Beta Coefficient	t-value	Std. Beta Coefficient	t-value
	Antecedents						
	External Factors						
H1a	SN → PSE	0.11	2.59*	-	-	0.11	2.59*
H2a	GOV → PSE	-0.15	-4.87*	-	-	-0.15	-4.87*
H3a	PEU → PSE	0.07	2.82*	-	-	0.07	2.82*
H1b	SN → FP	0.41	6.66*	0.03	2.29*	0.44	7.07*
H2b	GOV → FP	0.15	4.53*	-0.04	-3.16*	0.11	2.94*
H3b	PEU → FP	0.02	0.52	0.02	2.38*	0.03	1.11
	Internal Factors						
H4	SV → PSE	0.28	5.74*	-	-	0.28	5.74*
H5	VBL → PSE	0.48	11.02*	-	-	0.48	11.02*
	SV → FP	-	-	0.08	3.3*	0.08	3.3*
	VBL → FP	-	-	0.13	3.88*	0.13	3.88*
	Consequences						
H6	PSE → FP	0.28	4.23*	-	-	0.28	4.23*

Table 4.52 (Cont.)

Results of the Structural Model:

Standardized Coefficient Estimates and t-Value of Proposed Mode

Hypotheses	Constructs	Direct Effects		Indirect Effects		Total Effects	
		Std. Factor Loading	t-value	Std. Factor Loading	t-value	Std. Factor Loading	t-value
	PSE → MOD	0.79				0.79	
	PSE → R	0.94	30.18*	-	-	0.94	30.18*
	PSE → SI	0.56	16.37*	-	-	0.56	16.37*
	PSE → Moral	0.92	24.45*	-	-	0.92	24.45*
	PSE → K	0.80	24.34*	-	-	0.80	24.34*
	PSE → MPM	-	-	0.13	4.23*	0.13	4.23*
	PSE → FPM	-	-	0.19	4.24*	0.19	4.24*
	PSE → SPM	-	-	0.25	4.35*	0.25	4.35*
	PSE → EPM	-	-	0.23	4.27*	0.23	4.27*
H6a	FP → MktP	0.47	13.28*	-	-	0.47	13.28*
H6b	FP → FinP	0.68	12.67*	-	-	0.68	12.67*
H6c	FP → SP	0.90	12.67*	-	-	0.90	12.67*
H6d	FP → EnvP	0.83	11.79*	-	-	0.83	11.79*

4.7 Hypothesis Testing/Coefficient of Determination /Indirect Effects

This section reports the results of 13 hypotheses testing of the proposed model from the structural equation modeling analyses. Coefficient of determinations of endogenous variables and standardized indirect effects of the model of antecedents and consequences of the Philosophy of Sufficiency Economy are revealed.

4.7.1 Hypothesis Testing

After assessing fit of structural model is performed, hypotheses of the proposed model are tested. Standardized coefficient estimates and t-Value of proposed model are shown in Table 4.51. This part reports the results of 13 hypotheses of the model of antecedents and consequences of the Philosophy of Sufficiency Economy. The antecedents can be organized into two parts: external factors and internal factors. For the external factors, H1a,b to H3a,b are tested. For the internal factors H4 and H5 are tested. Lastly, for consequences, H6, H6a to H6d are tested. The 13 hypotheses of the proposed model are shown in Table 4.52.

Table 4.53
Summary of Hypothesis Testing of the Model of Antecedents and
Consequences of the PSE

Hypotheses	Proposed	Result
Antecedents		
H1a: Social networks have a positive influence on the level of firm adoption of the PSE in SMEs.	Positive Influence	Supported
H1b: Social networks have a positive influence on firm performance in SMEs.	Positive Influence	Supported
H2a: Government Agency support has a positive influence on the level of firm adoption of the PSE in SMEs.	Positive Influence	Supported
H2b: Government Agency support has a positive influence on firm performance in SMEs.	Positive Influence	Supported
H3a: Perceived Environmental Uncertainty (PEU) has a positive influence on the level of firm adoption of the PSE in SMEs.	Positive Influence	Supported
H3b: Perceived Environmental Uncertainty (PEU) has a positive influence on firm performance in SMEs.	Positive Influence	Not Supported
H4: Shared vision has a positive influence on the level of firm adoption of the PSE in SMEs.	Positive Influence	Supported
H5: Value-based leadership has a positive influence on the level of firm adoption of the PSE in SMEs.	Positive Influence	Supported
Consequences		
H6: The level of firm adoption of the PSE has a positive influence on firms performance in SMEs.	Positive Influence	Supported
H6a: The level of firm adoption of the PSE has a positive influence on firms' marketing performance in SMEs.	Positive Influence	Supported
H6b: The level of firm adoption of the PSE has a positive influence on firms' financial performance in SMEs.	Positive Influence	Supported
H6c: The level of firm adoption of the PSE has a positive influence on firms' social performance in SMEs.	Positive Influence	Supported
H6d: The level of firm adoption of the PSE has a positive influence on firms' environmental performance in SMEs.	Positive Influence	Supported

Hypothesis 1a proposes that social networks have a positive influence on the level of firm adoption of the PSE in SMEs. The standardized coefficient of the relationship between social networks and level of firm adoption of the PSE is significantly positive ($\beta_{SN} = 0.11$, $t\text{-value}=2.59$, $p\text{-value} < 0.05$). Thus, hypothesis 1a cannot be rejected.

Hypothesis 1b proposes that social networks (SN) have a positive influence on firm performance in SMEs. The coefficient of the relationship between SN and firm performance is statistically significantly ($\beta_{\text{SNtoFP}} = 0.41$, $t\text{-value} = 6.66$, $p\text{-value} < 0.05$). Thus, hypothesis 1b cannot be rejected. SN, through firm adoption of PSE, also has an indirect effect on firm performance ($\beta_{\text{SN}} = 0.03$, $t = 2.29$, $p\text{-value} < 0.05$). Therefore, the total effects of SN on firm performance are statistically significant at the significance level of 0.05 ($\beta_{\text{SNtoFP}} = 0.44$, $t\text{-value} = 7.07$, $p\text{-value} < 0.05$).

Hypothesis 2a proposes that government agency support (GOV) has a positive influence on the level of firm adoption of the PSE in SMEs. The standardized coefficient of the relationship between GOV and level of firm adoption of the PSE is significantly negative ($\beta_{\text{GOV}} = -0.15$, $t\text{-value} = -4.87$, $p\text{-value} < 0.05$). This result is contradicted with the proposed hypothesis.

Hypothesis 2b tests the positive direct effect of that government agency support on firm performance in SMEs. Result support hypothesis 2b. The standardized coefficient estimate of the relationship between GOV and firm performance is significantly ($\beta_{\text{GOVtoFP}} = 0.15$, $t\text{-value} = 4.53$, $p\text{-value} < 0.05$). Thus, hypothesis 2b cannot be rejected. GOV, through firm adoption of PSE, also has an indirect effect on firm performance ($\beta_{\text{GOV}} = -0.04$, $t = -3.16$, $p\text{-value} < 0.05$). Therefore, the total effects of GOV on firm performance are statistically significant at the significance level of 0.05 ($\beta_{\text{GOVtoFP}} = 0.11$, $t\text{-value} = 2.94$, $p\text{-value} < 0.05$).

Hypothesis 3a proposed that perceived environmental uncertainty has a positive influence on the level of firm adoption of the PSE in SMEs. The standardized coefficient of the relationship between perceived environmental uncertainty and level of firm adoption of the PSE is significantly positive ($\beta_{\text{PEU}} = 0.07$, $t\text{-value} = 2.82$, $p\text{-value} < 0.05$). Thus, hypothesis 3a cannot be rejected.

Hypothesis 3b proposes that perceived environmental uncertainty has a positive influence on firm performance in SMEs. Results do not support H3b. The standardized coefficient of the relationship between perceived environmental uncertainty and firm performance is not significant ($\beta_{PEUtoFP} = 0.02$, $t\text{-value} = 0.52$, $p\text{-value} > 0.05$). Thus, hypothesis 3b is rejected. PEU, through firm adoption of PSE, also has an indirect effect on firm performance ($\beta_{PEU} = 0.02$, $t = 2.38$, $p\text{-value} < 0.05$). Therefore, the total effects of PEU on firm performance are statistically significant at the significance level of 0.05 ($\beta_{PEUtoFP} = 0.03$, $t\text{-value} = 1.11$, $p\text{-value} < 0.05$).

Hypothesis 4 proposes that shared vision positively affect the level of firm adoption of the PSE in SMEs. Result support hypothesis 4. Shared vision has a significantly positive influence on the level of firm adoption of the PSE in SMEs ($\beta_{SV} = 0.28$, $t\text{-value} = 5.74$, $p\text{-value} < 0.05$). Thus, hypothesis 4 cannot be rejected.

Hypothesis 5 proposed that value based leadership has a positive influence on the level of firm adoption of the PSE in SMEs. The standardized coefficient of the relationship between value based leadership and level of firm adoption of the PSE is significantly positive SMEs ($\beta_{VBL} = 0.48$, $t\text{-value} = 11.02$, $p\text{-value} < 0.05$). Thus, hypothesis 5 cannot be rejected.

Hypothesis 6 asserts that the level of firm adoption of the PSE has a positive influence on firm performance in SMEs. The standardized coefficient of the relationship between that the level of firm adoption of the PSE and firm performance is positively significant ($\beta_{FP} = 0.28$, $t\text{-value} = 4.23$, $p\text{-value} < 0.05$). Thus, hypothesis 6 cannot be rejected. Moreover, the result of the structural model testing supports a positive relationship between the level of firm adoption of PSE and five principle of PSE. Standardized factor loading of each 5 PSE principle variables include moderation(MOD), reasonableness(R), self-immunity(SI), knowledge(K) and morality(Moral) are positive at a significance level 0.05. The level of SME adoption of PSE has a positive relationship

with moderation ($\lambda_{\text{Mod}}=0.79$), reasonableness ($\lambda_{\text{R}}=0.94$, $t=30.18$, $p\text{-value} < 0.05$), self-immunity ($\lambda_{\text{SI}}=0.56$, $t=16.37$, $p\text{-value} < 0.05$), knowledge ($\lambda_{\text{k}}= 0.92$, $t=24.34$, $p\text{-value} < 0.05$) and morality ($\lambda_{\text{Moral}}=0.80$, $t=24.45$, $p\text{-value} < 0.05$) principles of the Philosophy of Sufficiency Economy.

Hypothesis 6a asserts that the level of firm adoption of the PSE has a positive influence on firms' marketing performance in SMEs. The standardized coefficient of the relationship between that the level of firm adoption of the PSE and firms' marketing performance is positively significantly ($\lambda_{\text{MktP}} =0.47$, $t=13.28$, $p\text{-value} < 0.05$). Thus, hypothesis 6a cannot be rejected.

Hypothesis 6b asserts that the level of firm adoption of the PSE has a positive influence on firms' financial performance in SMEs. The standardized coefficient of the relationship between the level of firm adoption of the PSE and firms' financial performance is positively significantly ($\lambda_{\text{FinP}} =0.68$, $t=12.67$, $p\text{-value} < 0.05$). Thus, hypothesis 6b cannot be rejected.

Hypothesis 6c asserts that the level of firm adoption of the PSE has a positive influence on firms' social performance in SMEs. The standardized coefficient of the relationship between the level of firm adoption of the PSE and firms' social performance is positively significantly ($\lambda_{\text{SP}} =0.90$, $t=11.79$, $p\text{-value} < 0.05$). Thus, hypothesis 6c cannot be rejected.

Hypothesis 6d asserts that the level of firm adoption of the PSE has a positive influence on firms' environmental performance in SMEs. The standardized coefficient of the relationship between the level of firm adoption of the PSE and firms' environmental performance is positively significantly ($\lambda_{\text{EnvP}} =0.83$, $t=13.28$, $p\text{-value} < 0.05$). Thus, hypothesis 6d cannot be rejected.

4.7.2 Coefficient of Determination (R^2)

This section reports the results of coefficient of determination (R^2) of endogenous variables. Coefficient of determination (R^2) is the measure of variance of endogenous construct explained by exogenous constructs (Hair et al., 2006). Table 4.53 reports the coefficient of determination (R^2) from the proposed model. For coefficient of determination of the firm adoption of the PSE framework, 54 percent of variance in firm adoption of the Philosophy of Sufficiency Economy construct is explained by the five exogenous constructs: SN, GOV, PEU, SV and VBL. Furthermore, 54 percent of firm performance is explained by the level of firm adoption of the Philosophy of Sufficiency Economy and three exogenous constructs: SN, GOV and PEU. Thus, five antecedences of the level of firm adoption of PSE explain the same portion of variance in firm performance. Moreover, 22% percent of marketing performance is explained by firm performance. 46% percent of marketing performance is explained by firm performance. In addition, firm performance explains 80 % of variance in social performance and 70% of variance in environmentalism performance respectively.

Table 4.54
Coefficient of Determination of PSE and Consequences of
Firm Adoption of PSE Framework

Construct	R^2
Firm Adoption of PSE	0.54
FP	0.54
MktP	0.22
FinP	0.46
SP	0.8
EnvP	0.7

4.8 Summary

In short, this section summarizes the result of hypothesis testing of the proposed model of antecedences and consequence of the Philosophy of Sufficiency Economy in SMEs. The positive influences of social networks (H1a) and PEU (H2a) on the level of firm adoption are also supported. However, the negative effect of government agency support (H2a) on the level of firm adoption of PSE is contradiction with the proposed hypotheses. Moreover, the positive influences of social networks (H1b) and government support (H2b) on the level of firm performance are supported, whereas, the positive influence of PEUM on firm performance is not supported (H3b). All positive effect of internal factors, shared vision (H5) and value-based leadership (H4), on the level of firm adoption of PSE are supported. The significant positive coefficients of consequences of the level of firm adoption of PSE further confirm H6, H6a to H6d. Therefore, firm performance (H6) and through marketing (H6a), financial performance (H6b), social performance (H6c) and environmental performance (H6d) are supported.

By analyzing data, result fully support the positive effect of internal factor on the level of firm adoption of PSE. However, there is the limited effect of external factor on firm adoption of PSE due to the negative effect of government agency support on PSE and the slightly effect of PEU on the level of firm adoption of PSE. The results indicate positive influence of social networks on the level of firm adoption of PSE. Regarding the direct link to firm performance, results suggest positive effect of social networks and government support on firm performance but not found the effect of PEU on firm performance. For the consequences, the result confirm a of PSE positive influence of firm adoption of PSE on firm performance.

This chapter presents the result of data analysis obtained from estimating the model of the antecedences and consequences of the PSE in SME in details. Normality test and descriptive statistics is analyzed to check the validity of observed variables. The reliability, content validity, construct validity and structural model are examined. The results show that the proposed model fits to the observed data. The result from the analysis, the finding of hypothesis testing are reported and summarized in this chapter.

Chapter 5

Conclusions, Discussion and Recommendations

This research is the first systematic approach to develop a conceptual framework, the first empirical test the effects of external and internal factors on the level of firm adoption of the Philosophy of Sufficiency Economy by SMEs. The current research also examines the association between the level of firm adoption of the PSE and firm performances which are marketing, financial, social and environmental performance. The outcomes of this research reveal that the proposed model fits to the observed data. This chapter provides conclusions, discussions, government implications, theoretical and managerial contributions. Finally, limitations and suggestions for future research are discussed.

5.1 Conclusions

The Philosophy of Sufficiency Economy (PSE) of His Majesty King Bhumibol of Thailand stresses the middle path as the principle for appropriate conduct by the populace at all levels: individual, family, community, and nation. PSE was introduced as a means toward more sustainable development to cope with critical challenges arising from changes occurring as a result of environment uncertainty (Avery, 2005). The objectives of this research are to develop a conceptual model of the antecedents (internal factors and external factors) and consequences of the adoption of the Philosophy of Sufficiency Economy (PSE) for SMEs in Thailand. For the proposed model, social networks (SN), government agency support (GOV), and perceived environmental uncertainty (PEU) act as external factors while value-based leadership (VBL) and shared vision (SV) act as internal factors influencing the level of firm adoption of the Philosophy of Sufficiency Economy (PSE) in SMEs.

This model contains antecedents, mediator and consequences. The antecedents are social networks (SN), government agency support (GOV), perceived environmental uncertainty (PEU), value-based leadership (VBL) and shared vision (SV). A mediator is the level of firm adoption of the Philosophy of Sufficiency Economy (PSE), and consequences are firm performances (FP) which are measured by marketing performance (MktP), financial performance (FinP), social performance (SP), and environmental performance (EnvP).

The researcher examines the antecedents that can best explain the level of firm adoption of the Philosophy of Sufficiency Economy (PSE) in small and medium-sized enterprises and also investigate the consequences of firm performance in term of marketing performance, financial performance, social performance and environmental performance.

The proposed model was developed based on the Philosophy of Sufficiency Economy (PSE) (Bhumibol, 1974) the Resource-Based View theory (Barney, 1991; Peteraf, 1993), Contingency theory (Burrell and Morgan, 1979; Lawrence and Lorsch, 1967), and Social Capital theory (Nahapiet and Ghoshal, 1998). The target population is Thai SMEs that have registered with the Ministry of Commerce in Thailand and are currently active. The sample size is 3,000 SMEs. This research employed a simple random sampling technique and data are collected by mailing questionnaires to top management or owners of SMEs. The totals of returned questionnaires are 703 firms and the response rate equals 23.43%. The scales in this research are based primarily on previously developed scales and the exploratory studies including focus groups and in-depth interview with expert in PSE. A structural equation model is utilized to analyze the data. The analysis is conducted using IBM SPSS Statistics 19 and LISREL 8.52. The outcomes from the hypotheses testing disclose many interesting points which are revealed in the discussion section.

This research controlled for variables that may affect the result of the measurement. Therefore, variables that are controlled are firm size and industry (Khunthongjan, 2009; Lekuthai, 2007; Ruenrom, 2009; Husted and Allen, 2006). This study examines mean differences among industry types including manufacturing, retailing and services. The result shows that all constructs have no mean differences among industry type. In the same way, this study examined mean differences for seven constructs by using firm size which are small and medium size firms. The result shows that all seven constructs have no mean differences for different firm size. Therefore, these variables are not included as control variables in the model.

For the results of the structural model fit assessment of firm adoption of PSE, Goodness of fit indices support that the proposed model fits to the data. These Fit indices demonstrate a good fit of the proposed model. It can conclude that a model of antecedents and consequences of the PSE achieve satisfactory fits to the data.

The results of this study can be concluded as follows.

The researcher examine which of external factors (social networks, government agency support, the perceived environmental uncertainty) and internal factors (shared vision, value-based leadership) has most important upon the level of firm adoption of the PSE in SMEs. The summary of the hypotheses testing show that external factors including social networks(SN), the perceived environmental uncertainty(PEU) and internal factors including shared vision(SV) and value-based leadership (VBL) positively significantly influence the level of firm adoption of the PSE in SMEs. For the association between the antecedences and the level of firm adoption of the PSE, the standardized coefficient of value- based leadership is the largest as 0.48, VBL is the most important factor influence the level of firm adoption of the PSE in SMEs ($\beta_{VBL}=0.48$, $t\text{-value}=11.02$, $p\text{-value} < 0.05$). Only government agency support (GOV) is the external factor

negatively significantly influencing the level of firm adoption of the Philosophy of the Sufficiency Economy in SMEs ($\beta_{GOV}=-0.15$, $t\text{-value}=-4.84$, $p\text{-value} < 0.05$).

This paper also studies the relationship between the external factors and the firm performance. It can be concluded from the findings that social networks (SN) and government agency support (GOV) have positive significantly influence upon firm performance of SMEs. Only, the perceived environmental uncertainty (PEU) has no direct effect on firm performance of SMEs. For the association between the external factor and firm performance, social networks are the most influential factor upon firm performance of SMEs in this model ($\beta_{SNtoFP}=0.41$, $t\text{-value}=6.66$, $p\text{-value} < 0.05$).

For the level of firm adoption of PSE, the findings reveal that level of SME adoption of PSE has a positive relationship with moderation, reasonableness, self-immunity, knowledge and morality principles of the Philosophy of Sufficiency Economy. The level of SME adoption of PSE has the strongest relationship with reasonableness principles of PSE ($\lambda_R=0.94$, $t=30.18$, $p\text{-value} < 0.05$).

The researcher also examines how the level of firm adoption of the PSE affects the firm performances. Firm performances include marketing performance, financial performance, social performance, and environmental performance. The results reveal that the level of firm adoption of the PSE has a significant impact upon firm performance in terms of marketing), financial, social and environmental performances of SMEs. The level of firm adoption of PSE has the most positive impact on firm performance in term of social performance ($\lambda_{SP}=0.83$, $t=11.79$, $p\text{-value} < 0.05$).

5.2 Discussions

The results of hypotheses testing and the estimated model reveal that social networks (SN), government agency support (GOV), the perceived environmental uncertainty (PEU), shared vision (SV) and value-based leadership (VBL) influence the level of firm adoption of the PSE according to proposed hypotheses. SN and government GOV have positive influences upon firm performance as hypotheses. It is found that the level of firm adoption of the PSE has some relationships upon firm performances in terms of marketing, financial, social, and environmental. These findings support the proposed hypotheses. The results from hypothesis testing reveal many interesting points that can be elaborated upon as follows.

5.2.1 Social Networks/Government Agency Support/Perceived Environmental Uncertainty

The result of the hypothesis testing (H1a) supports a positive effect of **social networks** on the level of firm adoption of the PSE (H1a: $\beta_{SN} = 0.11$, t-value = 2.59, p-value < 0.05) which is consistent with research findings of Israngkul and Pootrakool (2006), Mongsawad (2010) and Sasin (2010). Social networks can influence firms to adopt the PSE. A social network is a set of ties representing some relationship or lack of relationship among the actors (Brass et al., 1998). Social networks include the informal and formal connections at any step of the value chain such as those between customers, suppliers, and other stakeholders (Nahapiet and Ghoshal, 1998). If the other stakeholders apply the PSE, it follows that this behavior will influence other stakeholders to adopt the PSE. The benefit achieves from applying the PSE will influence and motivate other firm to adopt the PSE. Cooperation and network building activities among stakeholders will motivate firms to adopt the PSE into their practices (Tantivejkul, 2011).

In addition, the finding is consistent with previous literature that asserted that a firm's external networks contribute to its performance (Hanna and Walsh, 2008; Osorio and Sacked, 2010). There is positive relationship between social networks and firm performance as hypothesized (H1b: $\beta_{\text{SNtoFP}} = 0.41$, t-value = 6.66, p-value < 0.05).

Concerning the influence of the **government agency support** upon the level of firm adoption of the PSE, the result from the hypothesis testing (H2a) shows negative relationship between GOV and the PSE (H2a: $\beta_{\text{GOV}} = -0.15$, t-value = -4.87, p-value < 0.05). This explanation might be that the mechanism of the government agency itself that does not have solid and continuous approach to monitor the operations of government projects for SMEs. Another plausible explanation is that respondents rate low score in all 4 items of government agency items in the questionnaire. The results obtained from 703 firms show that most of respondents rate low to moderate score for all 4 questions of government agency support construct. Considering the means of all 14 constructs in the proposed model, means of all constructs range from 3.04 (GOV) to 4.21 (Morality). The mean of GOV is the lowest mean of all constructs in this study. The results show that most of SMEs believe that they do not receive any strong supports such as useful information, lacking source of fund to operate their businesses from government. Descriptive statistics of all 14 constructs are shown in Table 4.5. Consider the mean values of each government agency support items, the mean values range from 2.98 to 3.08. The data show that most respondents rate GOV rather low. The evidence illustrates that SMEs feel that government agencies do not provide necessary technologies for product and service development. Therefore, government agency support has the negative relationship with the level of firm adoption of the PSE.

Table 5.1
Descriptive Statistics of Government Agency Support Variables

Variables	N	Mean	S.D.	Minimum	Maximum
GOV Item1	703	3.03	0.97	1	5
GOV Item2	703	3.06	0.96	1	5
GOV Item3	703	2.98	0.96	1	5
GOV Item4	703	3.08	1	1	5
GOV Construct	703	3.04	0.93	1	5

For the linkage to firm performance, the **government agency support** has a positive and significant influence upon firm performance (H2b: $\beta_{\text{GOVtoFPf}} = 0.15$, t-value = 4.53, p-value < 0.05). The government understands the important role of SMEs in the economy and provides various supporting services and legal infrastructure for their development. Thai Governments have generally been encouraging of SME development by offering a choice of financing programs, and providing training and sources of funds to SMEs, amending the government policy for SMEs and giving tax benefits, consequently enhancing firm performance. This research provides evidence supporting Wu and Leung (2005), Hansen, Rand (2005), Zainol and Daud, (2011) that government agencies' support has a positive influence on firm performance of SMEs. If businesses aim toward sustainable competition in the long run, the government needs to adjust government policy formulation, and strictly monitor government assistance programs for SMEs that is rely on the Philosophy of Sufficiency Economy.

For the **perceived environmental uncertainty**, as the hypothesis predicts, the results agree with Ruenrom (2009), and Yodpetch and Chirapanda(2008) that the perceived environmental uncertainty has a positive influence on the level of firm adoption of the PSE in SMEs. The result supports a positive relationship (H3a). However, the magnitude and direction of the estimated relationship in this model are

quite small (H3a: $\beta_{PEU} = 0.07$, $t\text{-value} = 2.82$, $p\text{-value} < 0.05$). Thus, if SMEs have an inability to precisely foresee changes in the environmental market or look to minimize negative consequences of environmental uncertainty problems, SMEs' perceptions will slightly influence SMEs to a higher level of firm adoption of the Philosophy of Sufficiency Economy.

However, previous literature found a mixed result in terms of the perceived environmental uncertainty on firm performance: a positive influence, a negative influence, and no relationship have been found. This research found no relationship between the perceived environmental uncertainty and firm performance (H3b: $\beta_{PEU\text{to}FPf} = 0.02$, $t\text{-value} = 0.52$, $p\text{-value} > 0.05$). This result is consistent with Carmeli and Tishler (2006) and Seaman and William. The plausible explanation might be that top management or owners will take actions and formulate firm strategy based on perceptions of the amount and type of uncertainty within the environment. It is expected that the perceived inability to precisely foresee changes in the environment influences managerial action. Perceived environmental uncertainty does not directly influence firm performance but influences top management to take actions or strategy which in turn enhances firm performance (Vanevenhoven, 2008). If SMEs' top management do not foresee changes taking place in the environment, or misinterpret the environment's uncertainties, they may take wrong actions or strategies that result in poor firm performance.

5.2.2 Shared Vision and Value-Based Leadership

Shared vision represents the common goals and desires that members of a firm adopt or exchange (Tsai and Ghoshal, 1998). The coefficient estimate of the positive effect of shared vision is significantly positive (H4: $\beta_{SV} = 0.28$, $t\text{-value} = 5.74$, $p\text{-value} < 0.05$). Therefore, shared vision creates a sense of direction so organizational members can adopt the PSE (Kantabutra, 2005; Khunthonjan, 2009). When managers or owners truly share a vision of the Philosophy of

Sufficiency Economy, this provides a guideline for staff in the company when emerging initiatives and provides unity to adopt the PSE.

For **value-based leadership** (H5), the current research supports a positive influence on the level of firm adoption of the Philosophy of Sufficiency Economy (H5: $\beta_{VBL} = 0.48$, $t\text{-value} = 11.02$, $p\text{-value} < 0.05$). This finding consistent with evidence found in Kantabutra and Avergy (2003) and Sasin (2010) regarding the important factors for successful application of the sufficiency economy concept in Thailand. The result shows that value-based leadership based on moral principles such as social responsibility, integrity, and empowerment (Reilly and Ehlinger, 2007) is the most important factor influencing firms to adopt the Philosophy of Sufficiency Economy.

5.2.3 The Level of Firm adoption of PSE

For **the level of firm adoption of the PSE** construct, these findings are consistent with the PSE framework that the PSE is composed of (1) moderation, (2) reasonableness, (3) self-immunity, (4) knowledge and (5) morality. The results of the SEM support a positive relationship between the level of firm adoption of PSE and all five principles of PSE. Factor loadings of all five PSE principle variables range from 0.56 (MktP) to 0.94 (SP). It can be concluded that level of SME adoption of the PSE has a positive relationship with moderation ($\lambda_{Mod}=0.79$), reasonableness ($\lambda_R=0.94$), self-immunity ($\lambda_{SI}=0.56$), knowledge ($\lambda_k= 0.92$) and morality ($\lambda_{Moral}=0.80$). A factor loading of reasonableness is 0.94. Therefore, the level of SME adoption of PSE has the strongest relationship with reasonableness of PSE.

5.2.4 Firm Performance

This research assesses the **firm performance** in terms of marketing, financial, social and environmental performance. As the hypothesis predicts, the empirical results of this research find that implementing the PSE has a positive influence on firm performance ($\beta_{FP} = 0.28$, $t\text{-value} = 4.23$, $p\text{-value} < 0.05$ marketing performance ($\lambda_{MktP} = 0.47$, $t = 13.28$, $p\text{-value} < 0.05$), financial performance ($\lambda_{FinP} = 0.68$, $t = 13.28$, $p\text{-value} < 0.05$), social performance ($\lambda_{SP} = 0.90$, $t = 12.67$, $p\text{-value} < 0.05$), and environmental performances ($\lambda_{EnvP} = 0.83$, $t = 11.79$, $p\text{-value} < 0.05$) of SMEs. Even though evidences illustrated an unclear relationship of adoption of the Philosophy of Sufficiency Economy in business practices to financial performance and marketing performance (Reunrom, 2010). This research supports the positive significant relationship that the level of firm adoption of the PSE has a positive influence firms' financial performance in SMEs, especially profitability, debt repayment ability and debt-to-equity ratio. Therefore, the evidence encourages firm to implement the PSE which leads firms to benefit from the firm performance. Among the four firm performance variables, factor loading of each variable are 0.47(marketing performance), 0.68 (financial performance), 0.9(social performance) and 0.83(environmental performance). Since the factor loading of social performance is 0.9, therefore the level of firm adoption of PSE has the most positive influence on firms' social performance.

By and large, the empirical results of the study show that the level of firm adoption of the PSE can be attribute by both internal and external factors especially social networking (SN). Value-based leadership (VBL) is a key success factor in firm adoption of the PSE. SMEs require leadership based on moral principles. The PSE should be adopted as the guideline for business development. These findings are consistent with Khunthonjan (2009) suggests that leaders of firms should share and disseminate visions. Network building activities among stakeholders could stimulate firms to take on the PSE for their business practices (Tantivejkul, 2011). This current research successfully demonstrates the associations between the level of firm adoption of the PSE and firm

performance. Moreover, this study provides evidence that adopting the PSE could enhance SMEs' marketing, finance, social, and environmental performance.

5.3 Government Implications

The results from the executive interviews related to SMEs find some interesting issues. Past and current government policies and projects have been formulated to embrace the PSE especially for SMEs (Office of SMEs Promotion, 2009). Some suggestions of government projects that assist Thai SMEs such as the One Tambon One Product program, Thailand's one Million Baht One Village Fund program, SME bank policy and Training and Consulting program for SMEs are discussed.

- One Tambon One Product Program

One Tambon One Product program gets great supports from Office of Small and Medium Enterprises Promotion and the SME Bank (Office of SMEs Promotion, 2009). Thaksin government implemented the OTOP program to generate income for poor people, provide new business opportunities, preserve local knowledge, and enable villagers to be self-reliant (Natsuda et al. 2011).

This program was established very quickly, thus both OTOP producers and even government agencies did not fully understand and had a clear idea about how the program was supposed to operate. However, it was the government mandate that all government agencies must follow. Even today, many OTOP producers are not very certain about the end results of the program (Duangnet, 2011).

Most villagers who participated in the OTOP program still lacked knowledge, skills, and understanding of the program (Natsuda et al., 2011, Wattanakuljarus, 2008). Thai government still has to sufficiently provide information and infrastructure for those SMEs owners. The objective of the government training for the OTOP Program is the shortcut to provide assistances to SMEs owners. But there are so many factors involved to achieve the level of expectation. What happens is the excessive of similar products with no differentiation. There is no stricter control to monitor the production of similar goods that flood into the markets to keep up with the moderation and reasonableness principle in the PSE.

In addition, one of the objectives of OTOP is to enable villagers to be self-reliant. In practice, OTOP focuses is more on hard selling their products to the markets. OTOP producers could face some struggles to gain brand loyalty because the problems of product quality and design. Thai government agencies must help them learn more about business administration and all the supply chain. So far, the continuous improvement of OTOP is a must for the success of the program. Government agencies need better and more right approach to help them pursue their businesses effectively.

- Thailand's One Million Baht One Village Fund Program

Thailand's One Million Baht One Village Fund Program is generally known as the Village Fund program. It was one of the biggest micro-lending programs implemented by the Thai Rak Thai government. The Village Fund program aims to provide funds to generate credit access for people who have financial troubles with low-interest rate loans.

The economic expectations of this government project are income distribution, economic growth, and poverty reduction. However, some negative effects could occur and have offset the positive effects of the program. The Village Fund Program did not have strict guidelines on how to distribute loans to each village. As a consequence, it causes a number of problems such as an increased number of loans, increased household debts, and the misuse of loans borrowers received (Duangnet, 2011). Also some misuse of money received from the program and the lack of disciplines might not make the real accomplishment for the rural people in the areas.

Villages still end up with debts. This discourages individuals and SMEs behavior being not consistent with the PSE especially the morality and moderation principles. The Village Fund Program may help increase short-term consumption, but in the long run, people might not get rid of their debts and poverty.

- Training and Consulting Program for SMEs

In order to develop SMEs towards a knowledge-based economy, Thai government has allocated money to provide training for SMEs and established training and consulting centers for SMEs such the incubation center and the center of mentors and consultants, as well as the SMEs Center. However, it appears that government could not properly provide effective training programs that develops proper specialized skills and knowledge that are useful for their businesses. For sufficiency economy concept, firms must understand and have good knowledge of demands in the market and consumer behavior.

In order to improve the effectiveness of training programs, both government agencies and participants must work together to address the problems to design the right training programs for SMEs. Otherwise, the budget used to assist SMEs in term of the training program could be very ineffective. More importantly, people would not gain the benefits of the training program.

The above explanation attempts to point out the negative effect of government assistance programs for SMEs upon the adoption of the PSE. However, these government support programs could be more successful and achieve the economic development if they are implemented with a more concrete, systematic, integrity, transparency and fairly. Therefore, the result of this study helps governments realize factors influence SME adoption of PSE, the negative impacts resulting from government supporting SMEs and plausible explanations from this study. This will help governments in formulating and reorganizing the program of government assistance to SME and also implementing the program with a more concrete and systematic structure to support SMEs to achieve a higher level of PSE adoption.

5.4 Theoretical Contribution

This research is the first systematic approach to develop a conceptual framework for SMEs adoption of the PSE. The empirical data from 703 SMEs are collected to test the antecedents, mediator, and consequences of the PSE for SMEs by using structural equation modeling. The antecedents of SME adoption of the PSE are social networks (SN), perceived environmental uncertainty (PEU), government agency support (GOV), shared vision (SV), and valued-based leadership (VBL). The endogenous variable is firm performances which consist of marketing, financial, environmental, social and environmental performances.

The study investigates the impacts of external factors that are social networks, government agency support, and perceived environmental uncertainty and internal factors that are value based leadership and shared vision. These factors have never been empirically tested before on the level of SME adoption of the PSE. The empirical results reveal the positive influence of social networks (SN), perceived environmental uncertainty (PEU), shared vision (SV), and valued-based leadership (VBL) upon SME adoption of PSE. Only one variable is found to have negative influence on SMEs adoption of PSE which is government agency support (GOV).

Furthermore, this study examines the direct relationship between external factors and firm performances. It finds supportive evidences for the positive influences of social networks and government agency support on SME performances.

Based from the empirical evidences, the concept of the PSE is strongly supported in this study. The PSE consists of five principles which are moderation, reasonableness, self-immunity, knowledge and morality (Sufficiency Economy Working Group, 2003). This study supports the notion that PSE can be apply not only in agriculture, but the Philosophy of Sufficiency Economy framework can also be applied for individuals, families, the community, and at the national level (NESDB, 2004). This research finds supportive evidences for a positive relationship between the level of firm adoption of the PSE and all five principles of the PSE. The empirical results of this study provide strong support that applying the PSE into business practices are compose of five principles of the PSE. Moreover, reasonableness has the strongest positive relationship with the level of firm adoption of the PSE. The result show that the more firm making decisions based on knowledge and creating a business plan based on rationality and clear objectives, the higher the level of firm applying the Philosophy of Sufficiency Economy into business practice.

The researcher extends the existing literature on firm adoption of the PSE by examining the consequences of the PSE which has never been empirically tested before. The relationship between firm adoption of the PSE and firm performances is successfully revealed in this research. The findings provide supports for the notion that the adoption of the PSE will enhance SME performances in terms of marketing, financial, social, and environmental performance. These findings are very beneficial for SMEs since the results show that sufficiency economy concept will lead toward the goal of business sustainability in the long run.

By and large, this research enhances the frontier of knowledge of the PSE since the proposed model reveals the fit to the observed data and the effects of both external and internal factors on the firm adoption of the PSE which is a very important finding. This research also supports that the Resource-Based View Theory, and Social Capital Theory and Contingency Theory that are used to explain the effects of factors on the Philosophy of Sufficiency Economy framework.

- From the RBV perspective, a firm is a unique bundle of resources. The RBV recognizes that a firm's human capital is among the most important and valuable resources for successful firm (Barney, 1991; Hitt, 2000). The empirical results of this study provide strong supports for the notion that internal resources, especially value-based leadership, is the most important factor that influences SME adoption of the PSE. SMEs that would like to apply the PSE into business practices must focus on the value-based leadership factor. SMEs should continuously invest their resources to internal factors especially leadership so that they can achieve to the higher level of PSE adoption and consequently improving their firm's performances in the long run.

- The results also support the Contingency Theory. The empirical results reveal that perceived environmental uncertainty (PEU) has a positive relationship with firm adoption of the PSE but it has no direct influence on firm performance. Based on the results, managers need to evaluate and understand the effect of environmental uncertainty which will help them choose the appropriate strategy in order to cope with the environmental uncertainty. Previous literature found a mixed result of PEU on firm performance (Carmeli and Tishler, 2006; West and Drnevich, 2010; William and Seaman, 2005). This research finds that PEU has no direct relationship with firm performance. A possible explanation may be that it is rather difficult to precisely foresee those changes in the environment that leads to some managerial actions.
- From a social capital perspective (Nahapiet and Ghoshal, 1998), this theory explains that resources derived from the network of relationships influences SME adoption of the PSE. This study investigates shared vision as an internal factor and social networks and government agency support as external factors influencing the firm adoption of PSE. The results confirm the Social Capital Theory that shared vision and social networks have positive influence but government agency support has a negative influence on SME adoption of PSE.

5.5 Managerial Contribution

Results of this study provide a guideline and benefits for SMEs and practitioners as follows.

This study provides a better understanding for public and private sectors about the SMEs adoption of the PSE. Many SME entrepreneurs misunderstand the applications of this philosophy in their business practices (Ruenrom, 2009; Wattanasupachoke, 2009). The estimated model could guide SMEs to recognize the impacts of internal and external

factors influencing SME adoption of the PSE. Since SMEs have limited resources, SMEs can utilize their resources more efficiently by formulating marketing strategy on factors that influence SME adoption of PSE. Those factors are social networks (SN), government agency support (GOV), perceived environmental uncertainty (PEU), shared vision (SV), and valued-based leadership (VBL).

The research evidences that value-based leadership, social networks, shared vision are three important factors influence firm adoption of the PSE. Value-based leadership is the most important factor for higher level of firm adoption of PSE. In order to success adoption of the PSE, firm must realize the importance of the value-based leadership. Value-based leader will influence staffs and colleagues to apply the PSE and value-based leadership influenced the nature of corporate culture, that is, the ways organizations conduct their business, treat employees, or deal with customers and suppliers that conform with the PSE, which consequently affects the financial, marketing social and environmental performance of companies. VBL should give correct guidelines for the team members for adopting the PSE into daily works. Therefore, vision and knowledge related to the PSE in business practices must be shared and agreed across departments so that employees understand and accept importance of the PSE and appropriately apply the PSE in to their business.

Social networks can increase the extent of adoption of the PSE. Cooperation and network building activities among stakeholders will encourage firms to apply the PSE into their business practices. Firms can gain benefit from networking relationships with community leaders and firm-specific managerial experience in applying the PSE. Therefore, firms need to coordinate, disseminate and building the PSE activities among stakeholders to promote and gain knowledge of the PSE. Social networks can influence and motivate other firms in applying the PSE due to the findings of this research.

Moreover, the empirical findings verify that adopting the Philosophy of Sufficiency Economy can enhance SMEs' performances in terms of marketing, financial, social, and environment. Most importantly, these empirical findings provide evidences that applying the PSE into business practices can enhance SMEs' performances especially social performance. Managers and government agencies can gain benefits from this research. More training courses in PSE for business entrepreneurs and managers should be conducted continuously, in particular about the significant factors from the research and reasonableness. Better knowledge and understanding of factors involved in a higher level of PSE adoption can help SME to enhance their firm performance which is the ultimate goal of business operations. This is extremely valuable for SMEs to operate business in line with the Philosophy of Sufficiency Economy that would help firms enhance their performances. I will describe in details as follows.

- Marketing Performance Firm adopting the Philosophy of Sufficiency Economy will improve the marketing performance. By adopting the PSE, firm will create marketing strategy based on knowledge and rationality. Firms are willing to listening customer feedback and develop marketing research and innovation to meet customer demand. Moreover, SMEs can apply the Philosophy of Sufficiency Economy to building a business brand by build a brand reasonably, with self-sufficiency and self-immunity that lead to a brand sustainability. Therefore, the empirical results show that the more SME adopt the PSE, number of customers, sale volume and sale growth will be enhanced. Thus, SMEs should formulate marketing strategy corresponding to the PSE in order to achieve a higher level of PSE adoption.

- Financial Performance The empirical results show that adopting the PSE leads to improve financial performance. Firm appropriately manage resources and finances. By applying the PSE into business practices, SMEs run business by maintains a balance between long term and short term goals. SMEs formulate risk management plan to cope with unpredictable situations. They also run business in their area of expertise

and not expanding into fields in which they lack experience. Therefore, by applying the PSE, firm will have a better financial results in term of profitability, debt repayment ability and working capital.

- Social Performance Long-term success of SMEs depends not only financial profit. SMEs understand and concern all direct impact on all stakeholders. Firm adopting the PSE are concerned for the health, safety, of the staffs and the community. Firms also provide fair remuneration and welfare benefits to employees. As a consequence, employees will devote to work for the organization and willing to help and improve company performances. Moreover, firms also sell products/services to customers with good quality and reasonable prices. Therefore, by applying the PSE into business practices, it will enhance firms' social performances in term of quality of work-related health problems, working environment for staffs and relationship with the community. The results demonstrate that by adopting PSE, it will benefit not only SMEs but also for the community and society as a whole.

- Environmental Performance Environmental protection is an important factor in any SMEs' missions operating in a responsible manner. With moderation and morality, SMEs will operate businesses through appropriate use of resources such as saving energy and raw materials. Many SMEs that apply the PSE into business practices are concerned for the health, safety, and environment of the organization and the community. Firms invest in technology reducing air pollution and electricity consumption from their manufacturing business and commitment to promote recycling of paper and garbage. The environmental concerns of SMEs would lead to the better firms' environmental performance such as reduced garbage, air pollution and electricity consumption. Therefore, it is very valuable for SMEs to comprehend and fully apply the PSE into business practices.

Lastly, SMEs and some institutions such as universities, government agencies should sponsor and support more researches in the adoption of Sufficiency Economy in businesses in order to encourage them in applying the PSE in their businesses successfully. Government agencies support should encourage firms to apply the PSE into business practices, in particular reasonableness principle to achieve a higher level of PSE adoption. With reasonableness, SMEs make decisions based on knowledge, self-immunity, experience, and clear understanding. At the same time, adding knowledge and corporate governance will facilitate firm awareness of society. Therefore, the Philosophy of Sufficiency Economy (PSE) will be an approach that lead firm moving toward business sustainability.

5.6 Limitations

Although there are a number of significant findings, this study has a few limitations that should be addressed. First, at present, SMEs represent the majority of Thailand's firms. SMEs had 2,896,106 enterprises and the total number of Thai enterprises was 2,900,759 in 2009. Small enterprises had the highest proportion of all enterprises at 99.84 percent (Office of Small and Medium Enterprise Promotion, 2009). The sample size in this study is 703 firms and the response rate. All firms' respondents are from 6 regions of Thailand, 198 firms are from central part, 116 firms are from northeastern part, 112 firms are from northern part, 102 firms are from southeastern part, 95 firms are from eastern part and 80 firms are from western part. Thus, 703 respondents represent a relatively small sample size compared with the total populations of SMEs in Thailand.

Secondly, the sample is limited to SMEs in Thailand. The findings on PSE in SMEs cannot be generalized to large corporations. Therefore, the researcher advises caution before generalizing the results of this study.

5.7 Suggestions for Future Research

The model of the antecedences and consequences of the PSE in SMES contributes to the literature and provides guidelines to managers and government to appreciate and to appropriately apply the PSE especially in the business and marketing contexts. However, there has been a very limited study of the adoptions of the PSE in marketing perspective. Future research may further examine a number of dimensions and factors for successful adoption. The results of this study reveal that value-based leadership, shared vision, government agency support, perceived environmental uncertainty and social networks among firms and stakeholders are important and are valuable resources for successful firm adoption of the PSE framework. An internal social network among executive and staffs has been unobserved in this study. Therefore, the researcher suggests further research developing a conceptual framework by adding the social networks among executives and staffs construct in the model.

This research has been conducted only on Thai small and medium-sized enterprises (SMEs). Therefore, the generalizability of the model of the antecedences and consequences of the Philosophy of the Sufficiency Economy may be limited. Future research can be extended to large firms in Thailand in order to enhance better knowledge and understanding of the PSE.

The survey is conducted with firms located in Thailand. It would be more interesting to conduct comparative studies across countries especially in ASEAN countries or Puthan. Future research may examine the model of the antecedents and consequences of the Philosophy of the Sufficiency Economy in ASEAN countries so that the study can increase generalizability of the findings.

“Corporate Sustainable Development” emphasizes a long-term time scale and involves three dimensions: economic (finance and marketing), social, and environmental performances (Dyllick and Hockerts, 2002). The current research successfully demonstrates the positive associations between PSE and firm performance in terms of marketing, financial, social and environmental performances at a point in time. Future study might employ a longitudinal study which will help understand the impact of PSE on performances over time. The longitudinal analysis will provide evidence to confirm that PSE as an approach to corporate sustainability.

5.8 Summary

This research is a valuable contribution to the country. This study is the first comprehensive systematic model for firm adoption of the PSE, the first empirical test of the antecedents that help firms seeking higher levels of PSE adoption, and then examine the consequences of these antecedents for SMEs performances. The empirical results of the model of antecedents and consequences of PSE will help SMEs increase the understanding of King Bhumibol 's Sufficiency Economy Philosophy as means for sustainable development. Moreover, adopting the Philosophy of Sufficiency Economy can enhance SMEs' performance in the area of marketing, financial, social, and environmental performances. There is significant performance for SMEs that operate their business in line with the PSE. This is certainly valuable for SMEs to invest and operate business in line with the Philosophy of Sufficiency Economy. Though there might have some unanswered questions for some entrepreneurs but the result of this research should encourage those SMEs owner to be conscious that firm sustainability should be the ultimate goal when doing business, the PSE which has been known among Thai businessmen at least in the last decade should be strongly considered as a means to an end for the firm performance both in a short run and long run.

This chapter contains conclusions, discussions, and recommendations. The outcome from the analysis and the finding of hypothesis testing are discussed and conclusions drawn in this chapter. The theoretical and managerial contributions which can be acquired from the proposed model are discussed in detail. Finally, the limitations and future research suggestions are clearly stated.

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APPENDICES

Appendix A. Letter of Requesting Information



9 มิถุนายน 2554

เรื่อง ขอลงความอนุเคราะห์ในการตอบแบบสอบถาม
เรียน ผู้ประกอบการธุรกิจ/ท่านผู้บริหารที่นับถือ
สิ่งที่ส่งมาด้วย แบบสอบถามและซองจดหมาย

ดิฉัน นางสาวศศิธร มหาคุณาจิระกุล ปัจจุบันเป็นนิสิตในหลักสูตรปริญญาเอก สาขาวิชาการตลาด จุฬาลงกรณ์มหาวิทยาลัย กำลังทำวิทยานิพนธ์ปริญญาเอกเรื่อง “ตัวแบบการศึกษาปัจจัยเชิงเหตุและผลของการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้กับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง” (The Model of the Antecedents and Consequences of the Philosophy of Sufficiency Economy upon SMEs) โดยมีรองศาสตราจารย์ ดร. กุณฑลรัตน์ รัตน์รมย์ ภาควิชาการตลาด คณะพาณิชยศาสตร์และการบัญชี จุฬาลงกรณ์มหาวิทยาลัย เป็นอาจารย์ที่ปรึกษาวิทยานิพนธ์

งานวิจัยของดิฉันเรื่องนี้มีวัตถุประสงค์เพื่อศึกษาการนำปรัชญาเศรษฐกิจพอเพียงไปประยุกต์ใช้ในการดำเนินธุรกิจ และวัดผลการดำเนินงานด้านการตลาด การเงิน สังคมและสิ่งแวดล้อมของบริษัท ผลของงานวิจัยเรื่องนี้จะประโยชน์เพื่อให้เกิดความรู้ความเข้าใจในการนำปรัชญาเศรษฐกิจพอเพียงไปใช้ในธุรกิจ SMEs ให้สามารถสร้างความยั่งยืนให้แก่ธุรกิจและสังคมไทยต่อไปในอนาคต

เนื่องจากองค์กรธุรกิจของท่านมีคุณสมบัติเหมาะสมจึงได้รับคัดเลือกให้เป็นธุรกิจตัวอย่างของงานวิจัย ดิฉันจึงใคร่ขอลงความอนุเคราะห์ท่านผู้บริหาร เพื่อโปรดให้ความอนุเคราะห์ในการตอบแบบสอบถามที่แนบมาพร้อมนี้ ทั้งนี้ ข้อมูลที่ท่านได้ให้ความอนุเคราะห์ในแบบสอบถาม ดิฉันจะใช้เพื่อการศึกษาในเรื่องนี้เท่านั้นและจะจัดเก็บรักษาข้อมูลของบริษัทของท่านไว้เป็นความลับ และเพื่อเป็นการขอบพระคุณที่ท่านกรุณาสละเวลาในการตอบแบบสอบถาม ดิฉันจะจัดส่งผลสรุปสำหรับผู้บริหารมายังท่านเมื่องานวิจัยชิ้นนี้แล้วเสร็จสมบูรณ์ เพื่อท่านจะได้นำไปใช้ประโยชน์ในธุรกิจของท่านต่อไป

ดิฉันหวังเป็นอย่างยิ่งว่าท่านจะกรุณาให้ความอนุเคราะห์ในการตอบแบบสอบถามชุดนี้และขอความกรุณาท่านส่งกลับคืนมายังดิฉันด้วยซองจดหมายที่ชำระค่าไปรษณีย์เรียบร้อยแล้ว ภายในวันที่ 31 กรกฎาคม 2554 จะเป็นพระคุณอย่างยิ่ง อนึ่งหากท่านมีข้อสงสัยประการใดในแบบสอบถามชุดนี้ ขอความกรุณาสอบถามได้ที่ดิฉัน ที่เบอร์โทรศัพท์ 089-1763999 หรือ E-mail: sasimaha@gmail.com ดิฉันขอขอบพระคุณท่านเป็นอย่างสูงมา ณ โอกาสนี้

(รองศาสตราจารย์ ดร. กุณฑลรัตน์ รัตน์รมย์)
อาจารย์ที่ปรึกษาวิทยานิพนธ์ ภาควิชาการตลาด
คณะพาณิชยศาสตร์และการบัญชี
จุฬาลงกรณ์มหาวิทยาลัย

ขอแสดงความนับถืออย่างสูง

(นางสาวศศิธร มหาคุณาจิระกุล)
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คณะพาณิชยศาสตร์และการบัญชี
จุฬาลงกรณ์มหาวิทยาลัย

Appendix B. Questionnaire (Thai Version)

แบบสอบถามท่านผู้ประกอบการ/ผู้บริหาร
เรื่อง "ตัวแบบการศึกษาปัจจัยเชิงเหตุและผลของการนำหลักปรัชญาเศรษฐกิจพอเพียง
มาใช้กับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง"

ข้อแนะนำในการตอบแบบสอบถาม

1.แบบสอบถามฉบับนี้ประกอบด้วยคำถามทั้งหมด 6 ส่วน แบ่งเป็น

ตอนที่ 1 ข้อมูลของผู้ตอบแบบสอบถาม

ตอนที่ 2 ข้อมูลทั่วไปของบริษัท

ตอนที่ 3 ระดับการนำหลักปรัชญาเศรษฐกิจพอเพียงมาประยุกต์ใช้ในการดำเนินธุรกิจ

ตอนที่ 4 ทักษะจิตของท่านที่มีต่อปัจจัยภายในและปัจจัยภายนอกในการดำเนินธุรกิจ

ตอนที่ 5 ผลประกอบการของบริษัท

ตอนที่ 6 การรับรู้และการนำหลักปรัชญาเศรษฐกิจพอเพียงมาประยุกต์ใช้ในการทำธุรกิจ

2. หากมีคำถามข้อใดที่ท่านไม่ทราบคำตอบแน่นอน ขอความกรุณาใช้วิธีการประมาณ โดยอยู่บนพื้นฐานของข้อเท็จจริงให้มากที่สุด

ส่วนที่ 1 ข้อมูลของผู้ตอบแบบสอบถาม โปรดทำเครื่องหมาย ลงในช่อง หรือกรอกข้อมูลที่ตรงกับธุรกิจของท่านมากที่สุด

1. ตำแหน่งในบริษัทของท่าน.....

2. ระดับการศึกษา ต่ำกว่าปริญญาตรี ปริญญาตรี สูงกว่าปริญญาตรี

3. ท่านทำงานในกิจการนี้มาเป็นระยะเวลา ปี

ส่วนที่ 2 ข้อมูลทั่วไปของบริษัท (หมายเหตุข้อ 1 และ 2 ใช้สำหรับการจัดส่งรายงานผลสรุปการทำวิจัย)

1. ชื่อบริษัท.....

2. สถานที่ตั้งของบริษัท.....

โทรศัพท์..... โทรสาร..... E-mail Address:.....

3. ธุรกิจที่ท่านทำอยู่เกี่ยวกับ.....

4. จำนวนพนักงานของบริษัททั้งหมดเท่าใด?

น้อยกว่า 10 คน 10-50 คน 51-100 คน 101-250 คน

5. ธุรกิจของท่านก่อตั้งมานานเท่าใด?

น้อยกว่า 3 ปี 3-5 ปี 6-10 ปี 11-15 ปี มากกว่า 15 ปี

6. ธุรกิจมีรายได้เฉลี่ยต่อปีประมาณเท่าใด?

น้อยกว่า 5 ล้านบาท มากกว่า 5 ล้านบาท แต่ไม่เกิน 10 ล้านบาท มากกว่า 10 ล้านบาท แต่ไม่เกิน 50 ล้านบาท

มากกว่า 50 ล้านบาท แต่ไม่เกิน 100 ล้านบาท มากกว่า 100 ล้านบาท แต่ไม่เกิน 400 ล้านบาท มากกว่า 400 ล้านบาท

ส่วนที่ 3 การดำเนินงานของธุรกิจ

คำชี้แจง โปรดทำเครื่องหมาย ✓ ลงในช่องความคิดเห็นตรงตามข้อเท็จจริงในการดำเนินงานของท่านที่สุด

ข้อความ	ทำน้อย มาก	ทำน้อย	ทำปาน กลาง	ทำมาก	ทำมาก ที่สุด	ไม่ได้ ทำเลย	ไม่ทราบ ว่าทำหรือ ไม่ได้ทำ
	1	2	3	4	5		
1. บริษัทดำเนินธุรกิจที่มีความถนัด (เช่น มีความชำนาญ ด้านอาหารก็เปิดร้านอาหาร เป็นต้น)							
2. บริษัทดำเนินธุรกิจไม่ตั้งเป้าเกินขีดความสามารถ ของกิจการ							
3. บริษัทดำเนินงานโดยมีสภาพคล่องพอสมควร							
4. บริษัทมีการวางแผนการเงินที่เหมาะสม							
5. บริษัทมีการใช้อุปกรณ์และวัตถุดิบที่จำเป็นต่อการทำงานอย่างพอเพียง							
6. บริษัทมีจำนวนพนักงานที่เหมาะสม							
7. บริษัทสามารถตัดสินใจในการดำเนินธุรกิจได้ทันต่อเหตุการณ์							
8. บริษัทตัดสินใจทางธุรกิจ โดยมีข้อมูลประกอบการพิจารณา							
9. บริษัทตัดสินใจทางธุรกิจโดยคำนึงถึงผู้มีส่วนได้ส่วนเสียกับบริษัท เช่น ลูกค้า ผู้จัดจำหน่ายหรือชุมชน เป็นต้น							
10. บริษัทมีการวางแผนในการดำเนินธุรกิจ							
11. บริษัทพร้อมที่จะปรับตัวเพื่อให้กิจการสามารถดำเนินการต่อไปได้							
12. บริษัทพยายามหลีกเลี่ยงการพึ่งพาผู้ผลิตสินค้าและวัตถุดิบหรือผู้ซื้อเพียงรายเดียว							
13. บริษัทมีการประเมินความเสี่ยงทางธุรกิจ โดยเฉพาะ ความเสี่ยงทางด้านการเงิน(เช่นบริษัทมีหนี้สินมาก , ลูกค้านักฉ้อโกง เป็นต้น)							
14. บริษัทมีการแสวงหาช่องทางการตลาดใหม่							
15. บริษัทพยายามแสวงหาวัตถุดิบอื่นทดแทนวัตถุดิบเดิม							
16. บริษัทใช้เงินลงทุนที่เหมาะสมไม่กู้เงินทำธุรกิจมากจนเกินความสามารถในการชำระหนี้							
17. บริษัทค้นหาข้อมูลที่ทันต่อเหตุการณ์ในการดำเนินงานทางธุรกิจ							
18. บริษัทมีความรู้และเข้าใจในธุรกิจที่ตนเองทำ							
19. บริษัทมีการจัดเก็บข้อมูลอย่างเป็นระบบเพื่อให้ง่ายต่อการใช้งาน							
20. บริษัทมีการฝึกอบรมพนักงานเพื่อพัฒนาความรู้ที่เป็นประโยชน์ต่อการทำงาน							
21. บริษัทมีความซื่อสัตย์ในการดำเนินธุรกิจ							
22. บริษัทไม่เอาเปรียบผู้บริโภค							

ข้อความ	ทำน้อย มาก	ทำน้อย	ทำปาน กลาง	ทำมาก	ทำมาก ที่สุด	ไม่ได้ ทำเลย	ไม่ทราบ ว่าทำหรือ ไม่ได้ทำ
	1	2	3	4	5	0	
23. บริษัทมีการปฏิบัติที่ดีต่อผู้เกี่ยวข้องทั้งทางตรง และทางอ้อม เช่น คู่ค้า ผู้ถือหุ้น พนักงาน ลูกจ้าง ชุมชน และสังคม							
24. บริษัทจ่ายค่าตอบแทนพนักงานหรือลูกจ้างอย่าง เหมาะสมและตรงเวลา							
25. บริษัทมีความรับผิดชอบต่อสังคมโดยถือเป็น นโยบายหรือหลักการในการดำเนินธุรกิจ							
26. บริษัทขายสินค้าและบริการในราคาที่เหมาะสม กับคุณภาพ							

ส่วนที่ 4 ทศนคติของท่านที่มีต่อปัจจัยภายในและปัจจัยภายนอกในการดำเนินธุรกิจ

ค่าชี้แจง โปรดทำเครื่องหมาย ✓ ลงในช่องทางขวามือที่ตรงตามข้อเท็จจริงในการดำเนินงานของท่านที่สุด

ข้อความ	ไม่เห็น ด้วย อย่างยิ่ง	ไม่เห็น ด้วย	เฉยๆ	เห็นด้วย	เห็นด้วย อย่างยิ่ง
	1	2	3	4	5
4.1 วิสัยทัศน์ของผู้บริหารบริษัท					
1. มีวิสัยทัศน์ที่เกี่ยวกับการประยุกต์ปรัชญาเศรษฐกิจพอเพียงในการดำเนินธุรกิจ					
2. ได้เผยแพร่วิสัยทัศน์ของบริษัทให้พนักงานองค์กรได้รับทราบเกี่ยวกับการประยุกต์ ปรัชญาเศรษฐกิจพอเพียง					
3. พนักงานเห็นด้วยกับวิสัยทัศน์ที่เกี่ยวกับการประยุกต์ปรัชญาเศรษฐกิจพอเพียง					
4. พนักงานรับทราบวิสัยทัศน์ของผู้บริหารที่เกี่ยวกับการประยุกต์ปรัชญาเศรษฐกิจ พอเพียง					
4.2 ผู้นำในบริษัท					
1. เป็นผู้มีคุณธรรมและมีความซื่อสัตย์					
2. ให้ความช่วยเหลือและเอาใจใส่ลูกน้องในการปฏิบัติงาน					
3. มีความสามารถในการสื่อสารกับบุคคลอื่นรอบข้าง					
4. รับฟังความคิดเห็นจากพนักงาน					
4.3 การสนับสนุนจากรัฐบาล					
1. ภาครัฐให้ข้อมูลที่เป็นประโยชน์ในการดำเนินธุรกิจกับSMEs					
2. ภาครัฐมีแหล่งเงินทุนให้กับ SMEs เช่น ธนาคารSMEs เป็นต้น					
3. ภาครัฐสนับสนุนในด้านเทคโนโลยีที่จำเป็นต่อการพัฒนาสินค้าและบริการให้กับSMEs					
4. ภาครัฐได้ให้การช่วยเหลือทางด้านภาษีกับSMEs					
4.4 สถานการณ์ของสภาพแวดล้อมภายนอก					
1. มีคู่แข่งทั้งหน้าเก่าและหน้าใหม่จำนวนมาก					
2. การประเมินการเปลี่ยนแปลงราคาของสินค้าหรือบริการในตลาดทำได้ยาก					
3. ความต้องการซื้อสินค้าหรือบริการของลูกค้าไม่แน่นอน					
4. เทคโนโลยีในอุตสาหกรรมที่บริษัทดำเนินงานอยู่มีการเปลี่ยนแปลงอย่างรวดเร็ว					
4.5 ความสัมพันธ์ระหว่างบริษัทกับบุคคลภายนอก					
1. บริษัทมีความสัมพันธ์ดีกับลูกค้า					
2. บริษัทมีความเป็นมิตรกับผู้จัดหาปัจจัยการผลิตให้แก่บริษัท					
3. บริษัทให้ความร่วมมือกับชุมชน/เพื่อนบ้านถ้าได้รับการขอร้อง					

ส่วนที่ 5 ผลประกอบการของบริษัท

คำชี้แจง โปรดทำเครื่องหมาย ✓ ลงในช่องทางขวามือที่ตรงตามข้อเท็จจริงในการดำเนินงานของท่านที่สุด

ข้อความ	แย่ที่สุด	แย่	ปานกลาง	ดี	ดีที่สุด	ไม่เปลี่ยนแปลงใดๆ	ไม่ทราบว่ามี การเปลี่ยนแปลงหรือไม่
	1	2	3	4	5		
5. ในรอบ 1-2 ปีที่ผ่านมาผลประกอบการโดยรวมของบริษัทอยู่ในระดับใด?							
5.1 ด้านการตลาด							
1. ยอดขายรวม							
2. อัตราการเจริญเติบโตของยอดขาย							
3. จำนวนลูกค้าที่เพิ่มขึ้น							
5.2 ด้านการเงิน							
1. กำไร							
2. ความสามารถในการชำระหนี้							
3. เงินทุนหมุนเวียนในการทำธุรกิจ							
5.3 ด้านพนักงานและสังคม							
1. สุขภาพอนามัยของพนักงานในบริษัท							
2. คุณภาพชีวิตของพนักงาน							
3. สภาพแวดล้อมในการทำงานของพนักงาน							
4. ความสัมพันธ์กับชุมชนใกล้เคียง							
5.4 ด้านการใช้ทรัพยากรพลังงานและสิ่งแวดล้อม							
1. การจัดการขยะ							
2. การลดมลพิษในโรงงาน/บริษัท							
3. การลดการใช้พลังงานไฟฟ้า							

ส่วนที่ 6 การรับรู้และการนำหลักปรัชญาเศรษฐกิจพอเพียงไปประยุกต์

คำชี้แจง โปรดทำเครื่องหมาย ✓ หน้าข้อความ

1. ท่านเคยทราบหรือเคยอ่านเรื่องราวเกี่ยวกับปรัชญาเศรษฐกิจพอเพียงหรือไม่? [] ไม่เคย [] เคย
2. ท่านมีความเข้าใจในหลักปรัชญาเศรษฐกิจพอเพียงมากน้อยเพียงใด? [] ไม่เข้าใจ [] น้อยที่สุด [] น้อย [] ปานกลาง [] มาก [] มากที่สุด
3. ท่านคิดว่าธุรกิจทั้งหลายควรนำปรัชญาเศรษฐกิจพอเพียงไปประยุกต์หรือไม่? [] ไม่ควร [] ควร
4. ท่านคิดว่ากิจการของท่านได้นำปรัชญาเศรษฐกิจพอเพียงมาใช้หรือไม่? [] ไม่ได้ใช้ [] น้อยที่สุด [] น้อย [] ปานกลาง [] ปานกลาง [] มากที่สุด

Appendix C. Questionnaire (English Version)

QUESTIONNAIRE

The Model of the Antecedents and Consequences of the Philosophy of Sufficiency Economy upon SME

Purpose of the Study

This questionnaire attempts to understand the SME adoption of the Philosophy of Sufficiency Economy and subsequent impact upon marketing, financial, social and environmental performance. Your response will help develop a better understanding of this phenomenon and guideline to encourage and facilitate firm to adopt the Philosophy of Sufficiency Economy into business practice.

(THIS INFORMATION WILL BE KEPT STRICTLY CONFIDENTIAL)

Please kindly return the completed questionnaire in the envelope provided or fax to (02)5898761 before 30 /5/2011.

We are pleased to provide you the copy of executive summary, please kindly attach your business card with the return questionnaire.

Part 1: Respondent's Information

1. Your position _____
2. Your Education Level [] Below Bachelor's degree [] Bachelor's degree
[] Above Bachelor's degree
3. Year of experiences in working with this company _____

Part 2: Company's Information

1. Company name _____
2. Address _____ Tel. _____
Fax _____ E-mail Address _____
3. Your company business type _____
4. How many employees does your company have?
[] Less than 10 employees [] 10-50 Employees
[] 51-100 Employees [] 101-250 Employees
5. How long has your company been established?
[] Less than 3 years [] 3-5 years [] 6-10 years
[] 11-15 years [] More than 15 years
6. What is company average total revenue?
[] less than 5 million baht [] 5-10 million baht [] 10-50 million baht
[] 50-100 million baht [] 100-400 million baht [] more than 400 million baht

Part 3: Business Operation

Please indicate your opinion in the scale given below.

Statement	A little	Some what	Moderately	To a Great Extent	To a Very Great Extent	Not At All	N /A
	1	2	3	4	5		
1. Firm operates business in area of expertise. (For example, an expert cooking will open a restaurant).							
2. Firm operates business by not setting goals beyond firm's ability.							
3. Firm has appropriate liquidity.							
4. Firm has an appropriate financial plan.							
5. Firm has makes appropriate use of instruments and raw materials for operating business.							
6. Firm has an appropriate number of employees.							
7. Firm makes decisions in a timely manner.							
8. Firm makes decisions with all information provided.							
9. Firm makes decisions taking into account benefits to shareholders, such as customers, suppliers or the community.							
10. Firm has a business plan for operating its business.							
11. Firm can adapt to change in order to survive in the market.							
12. Firm tries to avoid overdependence on a single supplier / buyer.							
13. Firm carefully monitors and continuously evaluates all business risks especially financial risk. For example, if the firm has a high debt or that customer may default on debt.							
14. Firm searches for new marketing channels.							
15. Firm searches for alternative materials to substitute for original material.							

Statement	A little	Some what	Moderately	To a Great Extent	To a Very Great Extent	Not At All	N /A
	1	2	3	4	5	0	
16. Firm manages capital appropriately. For example, firm does not borrow money beyond debt capacity.							
17. Firm searches for up-to-date information when operating its business.							
18. Firm understands and has a thorough knowledge of its own business.							
19. Firm collects data systematically that is easy to use within firms.							
20. Firm provides staff training to develop knowledge useful for the job.							
21. Firm operates business with honesty.							
22. Firm does not to take advantage of consumers.							
23. Firm has followed good practice both direct and indirect with relevant people such as business partners, shareholders, employees, hirelings, the community and society.							
24. Firm provides fair and on-time remuneration to employees or hirelings.							
25. Firm implements corporate social responsibility as a policy or principle of the firm.							
26. Firm provides products and services are good quality at reasonable price.							

Part 4: Attitude

Please indicate your degree of agreement or disagreement in the scale given below.

Statement	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
	1	2	3	4	5
4.1 Shared visions of top management					
1. Firm has a vision related to the Philosophy of Sufficiency Economy.					
2. Firm disseminates information about the Philosophy of Sufficiency Economy.					
3. Everybody in the firm agrees with the vision related to the Philosophy of Sufficiency Economy.					
4. The Philosophy of Sufficiency Economy is well-known to everybody working here.					
4.2 Leadership within your company					
1. Leadership would be virtue and honest.					
2. Leadership shows concerns and helpful with subordinates in operation.					
3. Having ability to communicate to others.					
4. Listening to staffs' opinion.					
4.3 Government Agency Support					
1. Government agencies provide useful information in operation business to SMEs.					
2. Government agencies provide sources of fund to SMEs such as the SMEs bank.					
3. Government agencies provide necessary technologies for product and service development to SMEs.					
4. Government agencies provide tax benefits to SMEs.					
4.4 Perceived Environmental Uncertainty					
1. The competitive intensity has been very high and uncertain.					
2. It is difficult to monitor price changes for products or services in the market.					
3. The demand for the products or services from customers is unpredictable.					
4. Technology in the industry changes rapidly.					

Statement	Never	Almost	Sometimes	Fairly Often	Very Often
4.5 The relationship with outsiders.	1	2	3	4	5
1. Firm has good relationship with customers.					
2. Firm has good association with its supplier.					
3. Firm provides support to community/neighbor requests.					

Part 5: SMEs Performance

Please indicate your opinion in the scale given below.

Statement	Far Below Expectation	Below Expectation	Acceptable	Above Expectation	Far Above Expectation	Not Applicable Information to From a Judgment
	1	2	3	4	5	6
5. How would you rate your performance in each category within 1-2 years?						
5.1 Marketing						
1. Sales Volume						
2. Sales Growth						
3. The number of customer increase						
5.2 Finance						
1. Profitability						
2. Debt Repayment Ability						
3. Working Capital						
5.3 Social and Community						
1. Work-related health problems.						
2. Quality of work life for Employees.						
3. Working environment for employees						
4. Relationship with the community and willingness to cooperate the community.						
5.4 Local Resources and Environmental Management						
1. Reduced garbage						
2. Reduced air pollution in factory/firm						
3. Reduced electricity consumption						

Part 6: Perception and Application of the Philosophy of Sufficiency Economy

1. Do you know about the Philosophy of Sufficiency Economy?
 Yes No

2. Do you understand the Philosophy of Sufficiency Economy?
 Not At all Least Less Moderate
 Very Extremely

3. Do you think companies should adopt the Philosophy of Sufficiency Economy in the future?
 Should Adopt Should Not Adopt

4. Do you think your company adopts the Philosophy of Sufficiency Economy?
 Not At all Least Less
 Moderate Very Extremely

Appendix D. Letter of Requesting an Interview



10 พฤษภาคม 2554

เรื่อง ขอบความอนุเคราะห์ให้นิติตีตเข้าสัมภาษณ์

กราบเรียน คร. สุเมธ ตันติเวชกุล

เลขาธิการมูลนิธิชัยพัฒนา

สิ่งที่ส่งมาด้วย 1) ประวัติการศึกษาและประวัติการทำงาน

2) ประเด็นสัมภาษณ์

ดิฉัน นางสาวศศิธร มหาอุณาภิระกุล นิสิตหลักสูตรปริญญาเอกร่วมสาขาบริหารธุรกิจ ซึ่งเป็นโครงการความร่วมมือผลิตบัณฑิตระดับปริญญาเอกระหว่างจุฬาลงกรณ์มหาวิทยาลัย มหาวิทยาลัยธรรมศาสตร์ และสถาบันบัณฑิตพัฒนบริหารศาสตร์ (JDBA) กำลังทำวิทยานิพนธ์ปริญญาเอกเรื่อง “ตัวแบบการศึกษาปัจจัยเชิงเหตุและผลของการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้กับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง” (The Model of the Antecedents and Consequences of the Philosophy of Sufficiency Economy Upon SMEs).

งานวิจัยเรื่องนี้มีวัตถุประสงค์เพื่อศึกษาการนำปรัชญาเศรษฐกิจพอเพียงไปประยุกต์ใช้ในการดำเนินธุรกิจ และวัดผลการดำเนินงานด้านการตลาด การเงิน สังคมและสิ่งแวดล้อมของบริษัท ผลของงานวิจัยเรื่องนี้จะป็นประโยชน์เพื่อให้เกิดความรู้ความเข้าใจในการนำปรัชญาเศรษฐกิจพอเพียงไปใช้ในธุรกิจSMEs ให้สามารถสร้างความยั่งยืนให้แก่ธุรกิจและสังคมไทยต่อไปในอนาคต

เนื่องจากท่านคร. สุเมธ ตันติเวชกุล เป็นผู้ที่มีความรู้และความเข้าใจในปรัชญาเศรษฐกิจพอเพียงตามแนวพระราชดำริอย่างลึกซึ้ง สามารถประสานจัดการให้โครงการต่างๆที่เกี่ยวข้องกับปรัชญาเศรษฐกิจพอเพียง ซึ่งมีประโยชน์มหาศาลแก่ประเทศไทยให้สำเร็จลุล่วงน้านับประการ ดิฉันจึงใคร่ขอความอนุเคราะห์จากท่านเพื่อโปรดให้เข้าสัมภาษณ์ เกี่ยวกับการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้กับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง (SMEs) ในวันและเวลาใดก็ได้ตามที่ท่านจะสะดวก โดยดิฉันจะขอมาพบท่านเพื่อทำการสัมภาษณ์เป็นเวลาประมาณ 1 ชั่วโมง ความคิดเห็นและข้อเสนอแนะของท่านจะมีคุณค่าและมีความสำคัญเป็นประโยชน์อย่างยิ่งในการทำวิทยานิพนธ์เรื่องนี้



คิดค้นหวังเป็นอย่างยิ่งว่าท่านจะกรุณาให้ความอนุเคราะห์ระยะเวลาในการให้สัมภาษณ์เกี่ยวกับการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้ในองค์กรธุรกิจเพื่อประโยชน์ต่อการเผยแพร่ให้องค์กรธุรกิจ SMEs ซึ่งเป็นผู้ประกอบการส่วนใหญ่ของประเทศสามารถนำมาประยุกต์ใช้ในองค์กรธุรกิจอย่างถูกต้องและเหมาะสม อันจะนำพาให้ประเทศชาติของเราดำรงยืนยงอยู่ด้วยความร่มเย็นเป็นสุข

จึงเรียนมาเพื่อโปรดพิจารณาและขอกราบขอบพระคุณท่านเป็นอย่างสูงมา ณ โอกาสนี้

ด้วยความเคารพอย่างสูง

(นางสาว ศศิธร มหาจุณาชีระกุล)

นิสิตในหลักสูตรปริญญาเอก ภาควิชาการตลาด

คณะพาณิชยศาสตร์และการบัญชี

จุฬาลงกรณ์มหาวิทยาลัย

(รองศาสตราจารย์ ดร. นุชทฤิ รุีมรมย์)

อาจารย์ที่ปรึกษาคุณุฎินิพนธ์

คณะพาณิชยศาสตร์และการบัญชี

จุฬาลงกรณ์มหาวิทยาลัย



ประเด็นสัมภาษณ์

- 1.ความคิดเห็นของท่านต่อการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้กับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง(SMEs) ในประเทศไทยในปัจจุบันและในอนาคต
- 2.ปัจจัยที่มีอิทธิพลต่อการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้ให้ประสบความสำเร็จกับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง (SMEs)
3. แนวทางการประเมินผลสำเร็จขององค์กรวิสาหกิจขนาดย่อมและขนาดกลาง(SMEs) ต่อการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้ในการดำเนินธุรกิจ
4. แนวทางของรัฐบาลที่ควรส่งเสริมให้้องค์กรวิสาหกิจขนาดย่อมและขนาดกลาง(SMEs)นำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้ในการดำเนินธุรกิจ
- 5.ปัญหา/อุปสรรคต่อการนำหลักปรัชญาเศรษฐกิจพอเพียงมาใช้ในการดำเนินธุรกิจกับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง(SMEs)

Appendix E. Focus Group Questions

วัตถุประสงค์ในการสัมภาษณ์กลุ่มที่ 1 (Focus Group)

- 1) เพื่อทราบความคิดเห็นของผู้ประกอบการวิสาหกิจขนาดกลางและขนาดย่อม (SMEs) เกี่ยวกับการประยุกต์ใช้หลักปรัชญาเศรษฐกิจพอเพียงทางธุรกิจ และนำไปความคิดเห็นไปปรับปรุงแบบสอบถามเพื่อให้ได้แบบสอบถามที่เฉพาะเจาะจงตามเป้าหมายของการวิจัย เหมาะสมกับกลุ่มตัวอย่าง
- 2) เพื่อปรับและแก้ไขคำศัพท์และคำถามในแบบสอบถามบางข้อ ให้เป็นถ้อยคำที่เข้าใจง่าย ความหมายชัดเจน และเลือกใช้ภาษาที่เหมาะสมกับกลุ่มผู้ตอบแบบสอบถามซึ่งเป็นผู้ประกอบการวิสาหกิจขนาดกลางและขนาดย่อม เพื่อให้แบบสอบถามมีความสมบูรณ์และผู้ตอบเข้าใจได้ตรงประเด็นตามที่ผู้วิจัยต้องการถาม

แนะนำตัว

สวัสดีค่ะ ดิฉันชื่อ ศศิธร เรียกเล่นก็ได้นะคะ ดิฉัน กำลังทำวิจัยเรื่องหลักปรัชญาเศรษฐกิจพอเพียงทางธุรกิจค่ะ คำถามและคำตอบในวันนี้ไม่มีผิดหรือถูกนะคะ และขออนุญาตทุกท่านอัดเทปเพื่อประโยชน์ทางวิชาการเท่านั้นนะคะและจะไม่นำไปเผยแพร่ค่ะ

เล็งขออนุญาตให้พี่น้องๆแนะนำตัวนะคะ ว่า ชื่ออะไร และ ทำงานบริษัทอะไรคะ ตำแหน่งอะไรคะ เป็นบริษัทที่เกี่ยวข้องกับอะไรคะ จบด้านไหนกันคะ (ระดับการศึกษา) แล้วอายุประมาณเท่าไรคะ เพื่อที่เราจะได้รู้จักกันมากขึ้นนะคะ ?

คำถาม

1. ถามเรื่องหลักปรัชญาเศรษฐกิจพอเพียง

พวกเราเคยได้ยินคำว่าหลักปรัชญาเศรษฐกิจพอเพียงไหมคะ ? แล้วในความคิดของคุณๆคิดว่า ปรัชญาเศรษฐกิจพอเพียงที่สามารถนำมาประยุกต์ในการดำเนินธุรกิจคืออะไรคะ?

2. ถามเรื่องการเดินทางสายกลางในการทำธุรกิจ

ถ้าพูดถึงการเดินทางสายกลางในการทำธุรกิจ พวกเราหมายถึงอะไรคะ ช่วยลองยกตัวอย่างได้ไหมคะ?

3. **ถามเรื่องความมีภูมิคุ้มกันต้านทานในการดำเนินธุรกิจ**

พวกเราคิดว่าความมีภูมิคุ้มกันต้านทานทางธุรกิจคืออะไรคะ ? ช่วยลองยกตัวอย่างได้ไหมคะ?

4. **ถามเรื่องการมีความรู้ในการดำเนินธุรกิจ**

แล้วพวกเราคิดว่าความรู้ในทางธุรกิจตามหลักปรัชญาเศรษฐกิจพอเพียงหมายถึงอะไรคะ เช่นอะไรบ้างคะ ?

5. **ถามเรื่องคุณธรรมในการดำเนินธุรกิจ**

พวกเราคิดว่าคุณธรรมในทางธุรกิจคืออะไรคะ ต้องดำเนินธุรกิจอย่างไรถึงเรียกว่ามีคุณธรรมคะ ?

6. **ถามคำศัพท์คำว่า “สภาพคล่อง” (บริษัทของท่านดำเนินงานโดยมีสภาพคล่องพอสมควร)**

คุณคิดว่าสภาพคล่องในการดำเนินธุรกิจคืออะไรหรือคะ ?

7. **ถามคำศัพท์คำว่า “ความรับผิดชอบต่อสังคม” (บริษัทของท่านมีความรับผิดชอบต่อสังคมโดยถือเป็นนโยบายในการดำเนินธุรกิจของบริษัท)**

พวกเราเข้าใจว่าความรับผิดชอบต่อสังคมหมายถึงอะไรคะ? เช่นอะไรบ้างคะ?

8. **ถามคำศัพท์คำว่า “การใช้ทรัพยากรอย่างมีประสิทธิภาพ” (บริษัทของท่านมีการใช้ทรัพยากรอย่างมีประสิทธิภาพ)**

พวกเราเข้าใจว่าการใช้ทรัพยากรอย่างมีประสิทธิภาพหมายถึงอะไรคะ? เช่นอะไรบ้างคะ?

9. **ถามคำศัพท์คำว่า “ผู้มีส่วนได้เสียกับบริษัท” (บริษัทของท่านตัดสินใจทางธุรกิจโดยคำนึงถึงผลประโยชน์ของผู้มีส่วนได้เสียกับบริษัททุกฝ่าย)**

พวกเราคิดว่าถ้าพูดถึงคำว่า ผู้มีส่วนได้เสียกับบริษัท ท่านจะหมายถึงอะไรคะ ช่วยลองยกตัวอย่างคิดว่าหมายถึงใคร บ้างคะ?

10. ถ้ามคำศัพท์คำว่า **“โครงสร้างทางการเงิน”** (บริษัทของท่านมีโครงสร้างทางการเงินที่เหมาะสม)

ทุกวันนี้บ้างที่เราเอาเงินตัวเองลงทุนทำการค้าบ้าง บ้างที่กู้มาทำการค้าบ้าง เงินทุนทั้งหมดที่มาทำธุรกิจได้มาจาก ไหนบ้างคะ? การที่เอาเงินมาลงทุนหลายๆ ทางพวกเราเรียกอะไรหรือคะ?

11. ถ้ามคำศัพท์คำว่า **“ความเสี่ยงทางการเงิน”** (บริษัทของท่านมีการประเมินความเสี่ยงทางธุรกิจ โดยเฉพาะความเสี่ยงทางการเงิน)

ถ้าพูดถึงความเสี่ยงทางการเงินพวกเราจะนึกถึงอะไรบ้างคะ ?

Appendix F. Summary of Focus Group with SMEs in Thailand

Summary of Focus Group with SMEs in Thailand

The purpose of these focus group interviews was to gain insight into the understanding of SMEs in applying the Philosophy of Sufficiency Economy in the business sector and to use the insight gained make ambiguous or difficult words in the questionnaire more simple and suitable for SME respondents to understand. There were 18 participants in the three focus groups, 10 females and 8 males. They ranged in age from 28 to 59 years old. All focus group participants were currently owners or top management in SMEs in Thailand. Focus groups were conducted in the Thai language. The focus groups were audio and video taped and lasted approximately 75 minutes. Discussion guides and summary of the focus group results are included in an appendix.

The following questions provided the basis for the focus group discussion:

- Have you ever heard the phrase PSE? Do you know how PSE is applied in business?
- If we talk about a moderate path in doing business, do you know what it means? Can you give an example?
- Do you know what the term “self-immunity in business” means? Can you give an example?
- Do you know what the term “knowledge for operating business” in the Philosophy of Sufficiency Economy means?
- What does the term “moral” in business means? How?
- Do you know what the term “liquidity” in operating a business means?
- Do you know what “corporate social responsibility” means? Can you give an example ?
- Do you know what “resource efficiency” means?
- Do you know what “stakeholders” means?
- Do you know what “corporate financial structure” means? Can you give an example?

- If we talk about “financial risk”, what do you think about?

Key Points from Focus Group Discussion

- 1) Question regarding understanding of the phrase “the Philosophy of Sufficiency Economy” in business.

The focus group participants understood how to apply the Philosophy of Sufficiency Economy (PSE) to business. Most of them had a positive attitude toward applying the PSE. They thought that PSE represented a balanced way of living, the idea of a middle path of doing things, and corporate social responsibility. It also meant not overspending, not being stingy, and risk diversification. They would not overinvest nor expand areas in which their firms had no experience. However, one participant from the real estate field believed that adopting the PSE was good but she did not want to promote PSE as part of her firm’s marketing campaigns because she was afraid that customers would not buy her houses. However, she adopted PSE in her internal business operations and her daily life.

- 2) Understanding of the term “moderate practice in operating business”

SME focus group participants considered moderate practice as not doing business beyond their firms’ resources and capacity. First, they will estimate their own ability, strength, and resources. SMEs operate by trying to balance the need of business partners, employees, and customers. One participant, the owner of an advertising company gave the example of her firm would not do things beyond their capability. She said she would not organize more than 2 events at the same time because she has limited staff and working capital. Over the last two years, she accepted and ran many events on the same days. Consequently, she could not control the quality of work, and there were lots of complaints. The most important thing is that she was not happy and her health was getting worse. Most participants agreed that by adopting the PSE,

money and profit became not the most important things in their life. They ran their businesses based on morality and gained satisfactory profit.

3) Understanding of the term “reasonableness in operating business”

The focus group participants recognized reasonableness as making decisions in business based on all relevant information and experience. SMEs must clearly understand an issue before making decisions. They must have appropriate decision making to select the right technology and equipment to produce the product. They make decisions based on all stakeholders' benefits.

4) Understanding of the term “knowledge in operating business”

The focus group participants identified knowledge as understanding and having skills in their own businesses. In running a business, the owner must know the strengths and weaknesses. They must update themselves and search for information about markets, new innovations, customer preferences, and competitors.

5) Understanding of the term “self-immunity in operating business”

The focus group participants identified self-immunity as preparation or the ability of firms to protect themselves against all risks or any uncertainty, particularly business risks, especially financial risk. SMEs try not to borrow money and acknowledge the advantage of saving. Unnecessary debt will be avoided. If any difficulty occurs, they are prepared to respond and solve all problems rapidly. More participants said that, by adopting PSE, they wouldn't underestimate any unpredictable situation, since they would have risk management plans. Even though some SMEs do not have risk management plans or contingency plans as manuals, they are concerned and well-prepare about problems from the past for example, finding alternative source of funds, hiring temporary staff and retaining customers. One participant from the real

estate field believed that the economic crisis in 1997 was not the first, nor will the last, that Thai people will face. Therefore, SME owners should be careful and plan for volatile situations.

6) Understanding of the term “moral responsibility to run a successful business”.

The focus group participants thought morality in business means not taking advantage of consumers, being helpful, being concerned about all stakeholders, and being honest in operating their business. SMEs should sell and produce good quality products and should not over-price. One owner of a carton factor said that she was concerned about the sound of her firm’s machines affecting nearby houses. Therefore, she reconstructed her factory to be soundproof. The owner of a fruit store said she was concerned for customer health. Therefore, she uses only good quality sugar to make fruit compote. Even though the price of sugar has increased sharply, she will not increase the price of fruit compote. As long as she satisfied with the profit, she will not change the quality of sugar.

7) Understanding of the term “liquidity”

Most participants said they understood and could explain this word correctly and in the same way. One owner of a paper box factory said that liquidity is the ability of an asset to be converted into cash quickly. Therefore, this term has not been changed. The sentence in Item 3 will be, “Firm has appropriate liquidity”.

8) Understanding of the term “capital structure”

Some participants did not clearly understand and could not explain this term correctly. One of the participants that owns a fruit shop could say anything about this term. However, after explain this term was explained, everyone understood it clearly. Participants also suggested terms that they could easily understand instead of “capital structure”. Therefore, this term has

been replaced with the term financial plan. The sentence for Item 4 will be, “Firm has an appropriate financial plan”.

9) Understanding of the term “resource efficiency”

As for Item 4 (capital structure), some SMEs participants didn't understand this word clearly. One of the participants thought that resources meant only natural resources; she thought that land was resource but a machine was not a resource. . However, after an explanation for this term was provided, everyone understood it clearly. Participants also recommend the appropriate terms that they could easily understand to replace it in the questionnaire. Therefore, this term has been changed for Item 5. It now reads, *“Firm makes appropriate use of instruments and raw materials”*.

10) Understanding of the term “stakeholders”

All participants could explain this word correctly. They said this term related to people such as customers, suppliers, creditors, and employees who affect or can be affected by a firm's actions. Therefore, this term has not been changed. The question for Item 9 will be, “Firm takes the benefits of stakeholders, such as customers, suppliers, or the community, into consideration when making decisions”..

11) Understanding of the term “business risk”

All participants could explain and give examples of this word properly. Being aware of business risk is one of the reasons that many participants adopt PSE into business practices. They said that their businesses also had several risks. For example, fluctuation of currency exchange rates, customer demand uncertainty, volatility in the technology market and etc. Therefore, this term has not been changed. The question for Item 13 will be, “Firm carefully

monitors and continuously evaluates all business' risks, especially financial risk for example, firm has a high debt, or customers may default on debt.

12) Understanding of the term “financial risk”

All focus group participants knew and were aware of financial risk. They thought that this was the most important business risk that they were concerned with and prepared to respond to. Therefore, this term has not been changed. The question for item 13 will be, “Firm carefully monitors and continuously evaluates all business' risks, especially financial risk for example, firm has a high debt, or customers may default on debt.

13) Understanding of the term “corporate social responsibility (CSR)”

SMEs focus group participants understood and could accurately interpret the meaning of these words. Overall, they thought that CSR is about how firms operate their business to produce an overall positive impact on society. Many focus group participants had been charity volunteers and been involved in community projects. Therefore, the words in the questionnaire are suitable and for SME respondents. The question in Item 25 will be, “Firm implements corporate social responsibility as a policy or principle of the firm”.

Appendix G. Check for Bias in Cover Letter

Check for Bias in Cover Letter

The data collection implement for this research was a questionnaire with a cover letter stating the title of the research. Some people might feel that this topic might be sensitive to social desirability bias. Respondents might be afraid to answer truthfully. To make sure that respondents did not have social desirability issues, the researcher has been randomly contacted 30 SMEs that had already completed the first mailing questionnaire with the cover letter that explicitly stated the title of the research, “The Model of the Antecedents and Consequences of the Philosophy of Sufficiency Economy”. The Researcher also randomly contacted 30 new SMEs that had never seen this questionnaire or the objective of the research before. The researcher asked 30 SMEs who had previously responded and the 30 new SMEs to complete the questionnaire with a new cover letter that did not state the purpose of this research and did not contain the words Philosophy of Sufficiency Economy. Later on, the researcher also asked the 30 new SMEs to complete the questionnaire with the previous cover letter that stated the title of the research. The responses were then divided into 4 groups, each from 30 SMEs. one-way analysis of variance (one-way ANOVA) was used to test for differences among the four groups in answering the questionnaire to make sure that there was no display of bias in responses to questionnaires with cover letters that explicitly stated the title of the research compared to responses to questionnaires with cover letters that implicitly described the research. Check for bias in cover letter is shown in Table G.1.

Table G.1
Check for Bias in Cover Letter

Group A (N=30)	Group B (N=30)	Group C (N=30)	Group D (N=30)
Previous SMEs Questionnaire with Explicit Cover letter	Previous SMES Questionnaire with Implicit Cover letter	New SMEs Questionnaire with Explicit Cover letter	New SMEs Questionnaire with Implicit Cover letter

Table G.2 presents the results of testing the impact of cover letter bias on the firm adoption of PSE construct and five constructs of the Philosophy of Sufficient Economy constructs including moderation, reasonableness, self-immunity, moral and knowledge constructs. One-way ANOVA was used to test mean differences among the four groups in answering the questionnaire to make sure that there was no display of bias in responses to questionnaires with cover letters that explicitly stated the title of the research compared to responses to questionnaires with cover letters that implicitly described the research. A basic assumption of one-way ANOVA states that variances must be equal across groups. Thus, Levene 's test is used to assess as a preliminary step to testing for the equality of variances across groups (Hair et al., 2006). The result of Levene 's test shows that the firm adoption of PSE construct and 5 principles of PSE constructs including moderation, reasonableness, self-immunity, moral and knowledge constructs have equal variances across groups at a level of significance 0.05. Thus, F-test in one-way analysis of variance is used to assess the mean effects.

Table G.2
Mean Differences Among Four Groups

Constructs	Levene 's Test (p-value)	F	Sig.
The Level of Firm Adoption of PSE	0.549	0.738	0.531
Moderation	0.186	0.654	0.582
Reasonableness	0.458	0.977	0.406
Self Immunity	0.863	0.670	0.572
Knowledge	0.632	0.289	0.834
Moral	0.682	0.72	0.542

After performing the F-test, the results of analysis show that firm adoption of PSE construct and 5 components of Philosophy of Sufficient Economy constructs including moderation, reasonableness, self-immunity, moral and knowledge constructs have no differences in means among four groups at a level of significance 0.05. Therefore, it can be concluded from the analysis that implicit or explicit PSE wording in the cover letter accompanying the questionnaire does not have an impact upon the analysis of the proposed model.

Appendix H. The Effects of Respondent Profiles on
the Level of Firm Adoption of the PSE

The Effects of Firms' Profiles on the Level of Firm Adoption of the PSE

This section presents the results of testing the influence of firms' profiles include respondent's education, firm's age, firm's income and firm's region on the level of firm adoption of Philosophy of Sufficient Economy constructs. If the findings do not reveal a significant difference of mean of all variables, then these factors do not have an impact upon the analysis of Philosophy of Sufficient Economy constructs. A basic assumption of one-way ANOVA states that variances must be equal across groups. Thus, Levene 's test is used to assess as a preliminary step to testing for the equality of variances across groups (Hair et al., 2006).

Table H.1 presents the results of testing the mean differences among respondent's education by using the analysis of variance. Respondent's education is divided into three groups: below bachelor's degree, bachelor's degree, and above bachelor's degree. The result of Levene 's test shows that respondents education construct has equal variances across groups at a level of significance 0.05($p=0.776$). Thus, F-test in one-way analysis of variance is used to assess the mean effects.

After performing the F-test, the results of analysis show that firm adoption of PSE does not have mean differences among the respondent's education at a level of significance of 0.05($p=0.863$). Therefore, respondent's education does not have an impact upon firm adoption of PSE.

Table H.1
Mean Differences among Respondent's Education

	Leven's test(p-value)	F	p-value
Respondent's Education	0.776	.147	.863

Table H.2 presents the results of testing the mean differences among firm's age, by using the analysis of variance. The firm's age is divided into five groups: 1- 4 years, 5-9 years, 10-14 years, and 15 years and up. The result of Levene 's test shows that firm's age construct has equal variances across groups at a level of significance 0.05($p=0.986$). Thus, F-test in one-way analysis of variance is used to assess the mean effects.

After performing the F-test, the results of analysis show that firm adoption of PSE has no differences in means among the firm's age at a level of significance of 0.05 ($p=0.540$). Therefore, it can be concluded that firm's age does not have an impact on firm adoption of PSE.

Table H.2
Mean Differences among Firm Age

	Leven's test(p-value)	F	p-value
Firm's Age	0.986	.778	.540

Table H.3 presents the results of testing the mean differences among firm's income, by using the analysis of variance. Firm's income is divided into six groups: less than 5 million baht, 5-10 million baht, 10-50 million baht, 50-100 million baht, 100-400 million baht, and more than 400 million baht. The result of Levene 's test shows that firm's income construct has equal variances across groups at a level of significance 0.05($p=0.899$). Thus, F-test in one-way analysis of variance is used to assess the mean effects.

After performing the F-test, the results of analysis show that firm adoption of PSE has no differences in means among firm's income at a level of significance of 0.05($p=0.226$). Therefore, it can be concluded firm's income does not have an impact on firm adoption of PSE.

Table H.3
Mean Differences Among Firm's Income

	Leven's test (p-value)	F	p-value
Firm's Income	0.899	1.390	.226

Table H.4 presents the results of testing the mean differences among firm's region, by using the analysis of variance. Firm's region is divided into six parts: Northern, Northeastern, Southern, Central, Eastern, and Western Thailand. The result of Levene's test shows that firm's region construct has equal variances across groups at a level of significance 0.05($p=0.357$). Thus, F-test in one-way analysis of variance is used to assess the mean effects.

After performing the F-test, the results of analysis show that firm adoption of PSE has no differences in means among firm's region at a level of significance of 0.05 ($p=0.899$). Therefore, it can be concluded that firm's region does not have an impact on firm adoption of PSE.

Table H.4
Mean Differences among Firm's Region

	Leven's test(p-value)	F	p-value
Firm's Region	0.357	.323	.899

Therefore, it can be concluded from the analysis that respondent's education, firm age, firm's income and firm's region do not have an impact upon the analysis of the level of firm adoption of Philosophy of Sufficient Economy constructs.

Appendix I. Construct Validity of Firm Performance Construct

Construct Validity of Firm Performance Construct

Firm performance can be measured with four performance sub-constructs (marketing, finance, social, and environment performance) and with three performances sub-constructs (economic, social, and environment performance). This is because economic performance of firms can be classified into marketing performance and financial performance (JCI, 2005). To clearly measure marketing performance, some studies assesses the economic performance of firms in terms of marketing performance and financial performance.

In this section, this research will further analyses the firm performance construct by comparing firm performance construct between all four performances sub-constructs (marketing, finance, social, and environment performance) and all three performances sub-constructs (economic, social, and environment performance) to find the best firm performance construct for the model of antecedents and consequences of adoption of the Philosophy of Sufficiency Economy upon SMEs.

1) Firm Performance of Three Sub-Constructs

Table I.1 presents estimates of validity of three firm performance sub-constructs. Firm performance comprises economic performance (marketing performance and financial performance), social performance, and environmental performance. The three first-order constructs were measured by 13 indicators: 6 indicators measure economic performance (3 market performance indicators and 3 financial performance indicators), 4 indicators measure social performance, and 3 indicators measure environmental performance. All 13 indicators are used to estimate firm performance construct validity. Figures I.2 graphically present the second order analysis of firm performance of three sub-constructs.

To assess construct validity, fit indices are criteria to determine how good is the fit between indicators and latent variables of a researcher's estimated model and observed data (Weston and Gore, 2006). In this study, the p-value is higher than 0.05. Chi-square to degree of freedom ratio equals 34.41:25 (1.377) which is

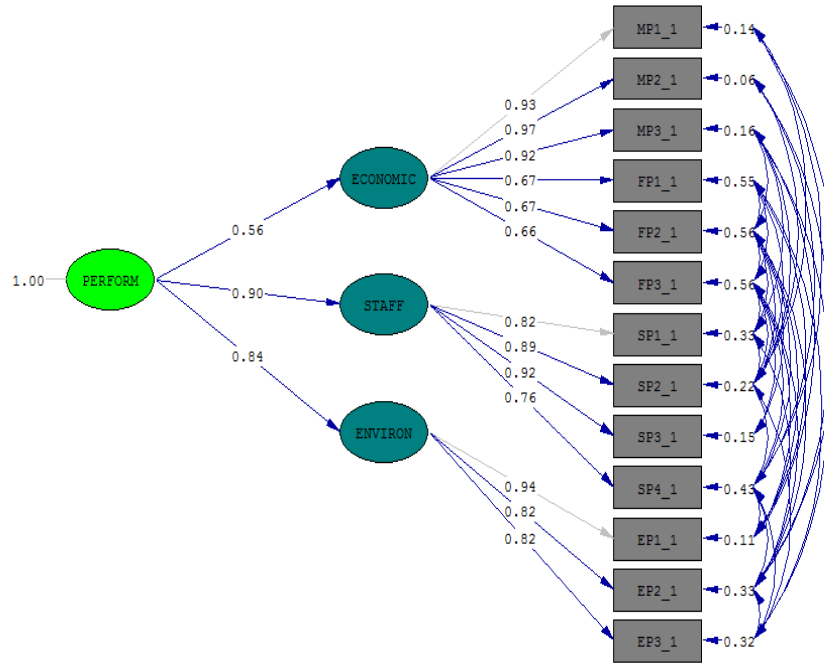
lower than 2. Moreover, Root Mean Square Error of Approximation (RMSEA), 0.023, and RMR, 0.0071, are well below the acceptable level. Incremental Fit Index (IFI), Normed Fit Index (NFI), and Comparative Fit Index (CFI) are statistics ranging from 0 to 1, where 1 indicates a perfect fit model. In this study, Adjusted Goodness of Fit Index (AGFI=0.97) is almost equal to 1. Incremental Fit Index (IFI=1), Normed Fit Index (NFI=1), and Comparative Fit Index (CFI=1) in this study are equal to 1, indicating a perfect fit model. Thus, these fit indices demonstrate a good fit between the estimated firm performance construct and observed data.

After assessing the model fit, reliability and construct validity are assessed. Construct validity was evaluated by factor loading and construct reliability (Hair et al., 2006). All standardized factor loadings (FL) have a significant impact at a level of significance of 0.05. Factor Loadings of 13 items of the three first-order constructs, except 3 items of economic performance, are higher than 0.7. Finally, the preferred construct reliability estimate should be higher than 0.7 (Hair et al., 2006). Construct Reliability (ρ_c) of variables: economic performance (0.88), social performance (0.911), and environmental performance (0.921) meet the criteria value. Therefore, the estimates of factor loading, extracted variance, and construct reliability support the construct validity of all three first-order constructs.

Finally, firm performance of three sub-constructs, the second-order construct, was assessed. Among three indicators of firm performance, factor loading of economic performance (0.56) is lower than 0.7 while factor loading of social performance (0.90) and environmental performance (0.84) are well above the acceptable level, 0.70. Construct reliability of firm performance (0.818) meets the criteria value, 0.70 (Hair et al., 2006). Therefore, the construct validity of the firm performance of three-sub constructs is satisfactory.

Figures I.1

The Second Order of Firm Performance of Three Sub-Constructs



Chi-Square=34.41, df=25, P-value=0.09950, RMSEA=0.023

2) Firm Performance of Four Sub-Constructs

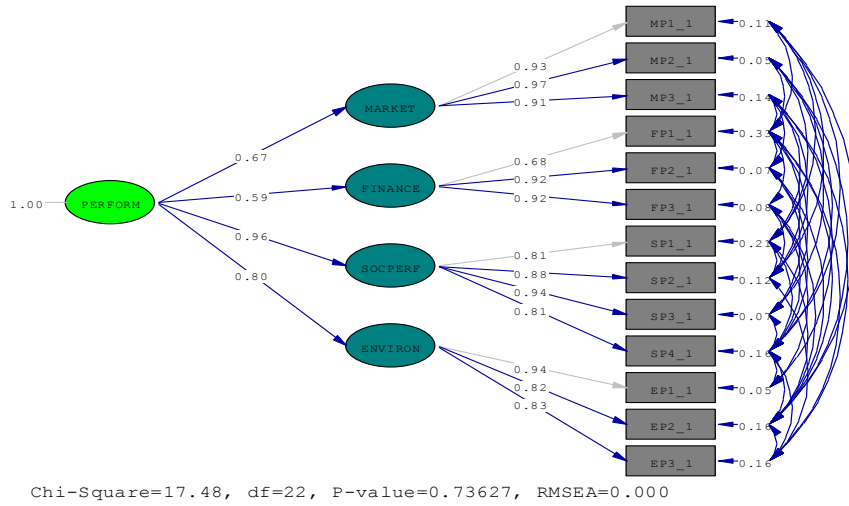
Table I.2 presents estimates of validity of firm performance of four sub-constructs. Firm performance comprises marketing performance, financial performance, social performance, and environmental performance. The four first-order constructs were measured by 13 indicators: 3 indicators measure marketing performance, 3 indicators measure financial performance, 4 indicators measure social performance, and 3 indicators measure environmental performance. All 13 indicators are used to estimate validity of firm performance of four sub-constructs. Figures I.2 graphically presents the second order analysis of firm performance of four-sub-constructs.

The sample's statistical significance of chi-square is higher than 0.05 (p-value = 0.73627), Chi-square to degree of freedom ratio equals 17.48:22 (0.7945) which is lower than 2. Moreover, Root Mean Square Error of Approximation (RMSEA = 0.000) and RMR (0.0062) are well below the acceptable level. In this study, Adjusted Goodness of Fit Index (AGFI = 0.98), Goodness-of-fit statistic (GFI=1), Normed Fit Index (NFI = 1.00) and Comparative Fit Index(CFI=1) are almost equal to 1. The goodness of fit indices indicate that firm performance of the four constructs fits the data very well.

Construct validity was evaluated by factor loading and construct reliability (Hair et al., 2006). All standardized factor loadings (FL) have a significant impact at a level of significance of 0.05. Hair et al. (2006) stated that factor loading of observed variables should be higher than 0.5, preferably greater than 0.7. Factor Loadings of 12 indicators out of 13 indicators of the four first-order constructs are higher than 0.7. Only one factor loading of financial performance indicators (0.68) is slightly below 0.7. Finally, Construct Reliability (ρ_c) of variables: marketing performance (0.956), financial performance (0.961), social performance (0.920), and environmental performance (0.90), meet the criteria value. Therefore, the estimates of factor loading and construct reliability support the construct validity of all four first-order constructs.

Finally, firm performance of four sub-constructs, the second-order construct, was assessed. Among the four indicators of firm performance, factor loading of marketing performance (0.67) and financial performance (0.59) are lower than 0.7 while factor loading of social performance (0.96) and environmental performance (0.80) are well above the satisfaction level, 0.70 (Hair et al., 2006). Still, factor loading of all four performances indicators are higher than 0.5. Construct reliability of firm performance (0.826) is also well above the criteria value, 0.70 (Hair et al., 2006). Therefore, the construct validity of the firm performance of four sub-constructs is satisfactory.

Figures I.2
The Second Order of Firm Performance of Four Sub-Constructs



3) A Comparison of Firm Performance Constructs

This research employs firm performance of four sub-constructs instead of firm performance of three sub-constructs to be incorporated into in the model of antecedents and consequences of the adoption of the Philosophy of Sufficiency Economy by SMEs. The reason for employment of the firm performance of four sub-constructs can be explained as follows.

Firstly, comparing the goodness of fit indices of the two estimated firm performance constructs, firm performance of the four sub-constructs has a Chi-square to degree of freedom ratio of 17.48:22 (0.748) which is better than firm performance of three sub-constructs where Chi-square to degree of freedom ratio equals 38.07:26 (1.464). Moreover, RMESA (0.000) and RMR (0.0062) of firm performance of four sub-constructs are better than that of firm performance of three sub-constructs where RMESA is 0.026 and RMR is 0.0071. Therefore, based on the model fit criteria, firm performance of four sub- constructs is better than firm performance of three sub-constructs. Fit indices of firm performance of four sub-constructs versus firm performance of three sub-constructs are shown in table I.3

Table I.3
Fit Indices of Firm Performance
Of Four Sub-Constructs versus Firm Performance
Three Sub-Constructs

Parameter	Firm Performance of Four Sub Constructs	Firm Performance of Three Sub Constructs	Criteria
Chi-square/DF	0.748	1.464	≤ 2
p-value	0.73	0.0995	≥ 0.05
AGFI	0.98	0.97	≥ 0.90
RMR	0.0062	0.0071	≤ 0.05
RMSEA	0	0.026	≤ 0.05

Secondly, consider the first -order loading, only one factor loading of financial performance indicators for firm performance of four sub-constructs has factor loadings slightly below 0.7 (FL of $F_{in1}=0.68$). However, three factor loading of economic performance indicators for firm performance of three sub-constructs are lower than 0.7. Factor loading and construct reliability of marketing, financial and economic performance are shown in table I.3.

Consider the second -order loading, firm performance of four sub-construct has factor loading of marketing performance equal to 0.67 and factor loading of financial performance equal to 0.59. However, firm performance of three sub-construct has factor loading of economic performance equal to 0.56. It shows that when combining marketing indicators and financial performance indicators together; the factor loading of economic performance is lessened to 0.56. This means when combining marketing and financial performance, it will weaken the validity of firm performance construct. Moreover, comparing construct reliability (ρ_c) of firm performance of four sub-constructs variables with construct reliability of three sub-constructs, construct reliability of market performance (0.956) and financial performance (0.961) is better than construct reliability of economic performance (0.888). Therefore, based on the factor loading and construct reliability, firm performance of four sub-construct is suitable than firm performance of three sub-constructs for this analysis.

Table I.4
Factor Loading and Construct Reliability of Marketing,
Financial and Economic Performance

Constructs	Indicator	First-Order Loading	Second-Order Loading	Construct Reliability
Firm Performance of Four Sub Constructs				
MktP	MktP1	0.93	0.67	0.956
	MktP2	0.97		
	MktP3	0.91		
FinP	FinP1	0.68	0.59	0.961
	FinP2	0.92		
	FinP3	0.9		
Firm Performance of Three Sub Constructs				
EcoP	MktP1	0.93	0.56	0.888
	MktP2	0.97		
	MktP3	0.92		
	FinP1	0.67		
	FinP2	0.67		
	FinP3	0.66		

Finally, when the proposed model does not fit the data, we can consider model modifications (Jöreskog and Sörbom, 2006). The proposed model of the antecedents and consequences of the firm adoption of PSE requires modification in order to improve the model fit. Modifications to the model can be suggested by the residuals obtained in the original run with modification indices (Jöreskog and Sörbom, 2006). In this study firm performance of four sub-constructs was adjusted 25 times whereas firm performance of three sub-constructs was adjusted 45 times in order to find a well-fitting model. In this study, firm performance of four sub-constructs required fewer adjustments to the model than firm performance of three sub-constructs and the modifications actually resulted in a better model. Therefore, results of this study verify that the firm performance of four sub-constructs is more suitable to be incorporated into the proposed model of firm adoption of PSE than firm performance of three sub-constructs.

Biography

Sasithorn Mahakunajirakul is a Bangkok native, born in November, 1979. She earned her first degree majoring in Banking and Finance from the Faculty of Commerce and Accountancy, Chulalongkorn University and a Master of Science majoring in Electronic Business Management, from the University of Warwick, England. After earning her Master degree, she started working in marketing and sales department at PepsiCo International in Thailand. Currently, she worked in the construction and real estate development field as Executive Director at Thai Maruki Co., Ltd.