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ชื่อเรื่อง ตัวแบบการศึกษาปัจจัยเชิงเหตุและผลของการนำหลักปรัชญาเศรษฐกิจพอเพียง
มาใช้กับองค์กรวิสาหกิจขนาดย่อมและขนาดกลาง
(The Model of the Antecedents and Consequences of The Philosophy
of Sufficiency Economy Upon SMEs)

Abstract

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. This research is the first systematic approach to develop a conceptual framework, 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 the performance of SMEs. A structural equation modeling was conducted to validate the proposed model and to test the hypotheses. This study 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.

Key Words: The Philosophy of Sufficiency Economy (PSE), Level of Firm Adoption, Firm Performance

Executive Summary:

The Model of the Antecedents and Consequences of The Philosophy of Sufficiency Economy Upon SMEs

1. Rationale

The philosophy of Sufficiency Economy (PSE) has been developed by His Majesty King Bhumibol of Thailand in 1974. It focuses on the 'middle' path as the principle for Thai people's behavior and way of life at all levels (NESDB, 2000).

In 1997, during the Asian economic crisis, firms which had adopted PSE recovered at a faster rate (UNDP, 2007). The 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).

At present, small and medium enterprises (SMEs) represent the majority of Thailand's firms. However, limited attention has been paid to what factors influence SME seeking higher levels of PSE adoption (Khunthongjan, 2009). Most academic articles about PSE employ qualitative analysis, especially case study analysis. Therefore, this research develops the first conceptual model of the SME adoption of PSE that have never been empirically tested before using structural equation modeling.

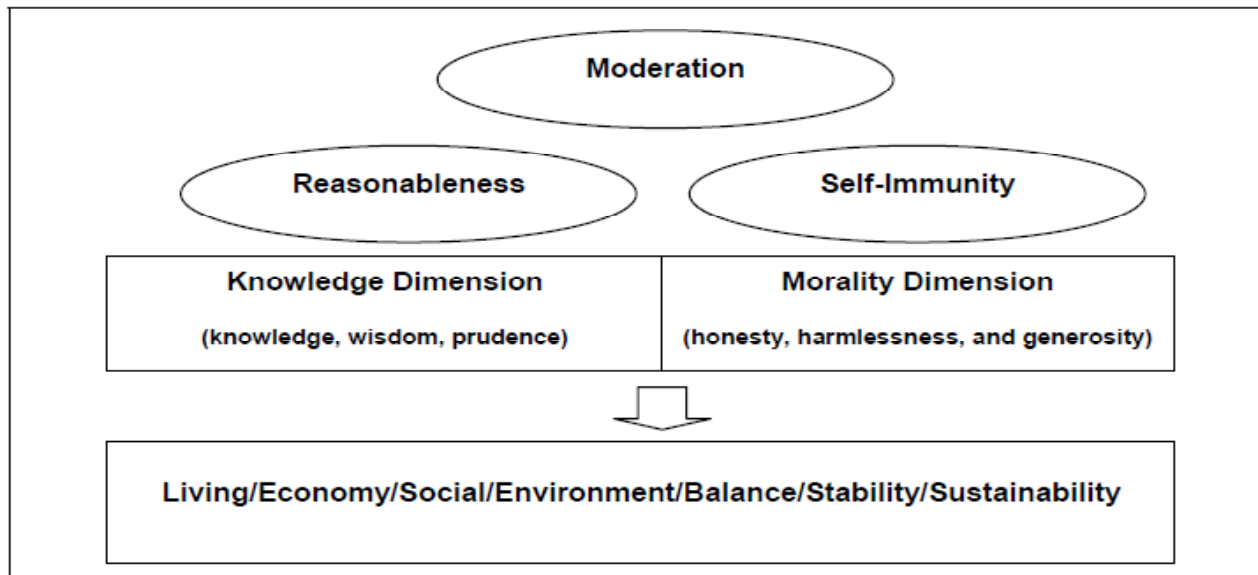
2. Literature Review

2.1 The Philosophy of Sufficiency Economy (PSE)

The PSE concept comprises three components and two underlying conditions (NESDB, 2004). Figure 1 illustrates the PSE framework.

Figure 1

The Concept of the Philosophy of Sufficiency Economy (PSE)



Source: The National Economic and Social Development Board of Thailand (NESDB), 2004

The three components of PSE are as follows.

- **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.
- **Reasonableness** refers to reasoning based on knowledge, experience, and clear objectives. Firms make decisions 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.
- **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.

The two underlying conditions of PSE are as follows.

- **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.
- **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.

By practicing PSE, people would be able to achieve the goals of sustainability and harmony (Puntasen et al., 2003; Wattanasupachoke, 2009). This research adopts the Resourced-Based View, and Social Capital and Contingency theories as a framework.

2.2 Resourced-Based View Theory (RBV)

A firm is a unique bundle of resources, which provides it with competitive advantage against other firms (Barney, 1991; Peteraf, 1993). The RBV recognizes that a firm's human capital is among the most important and valuable resources for successful firm adoption (Barney, 1991; Hitt, 2000). Therefore, SMEs that have value-based leadership will successfully adopt PSE.

2.3 Contingency Theory

Contingency scholars have concluded that no “best” or universal strategy exists to match any one mix of environmental preferences (Burrell and Morgan, 1979; Lawrence and Lorsch, 1967). Under this approach, managers need to evaluate and understand the effect of contingency variables and choose the appropriate strategy under PSE in order to achieve the firm's goals (Yoopetch and Chirapanda, 2008).

2.4 Social Capital Theory

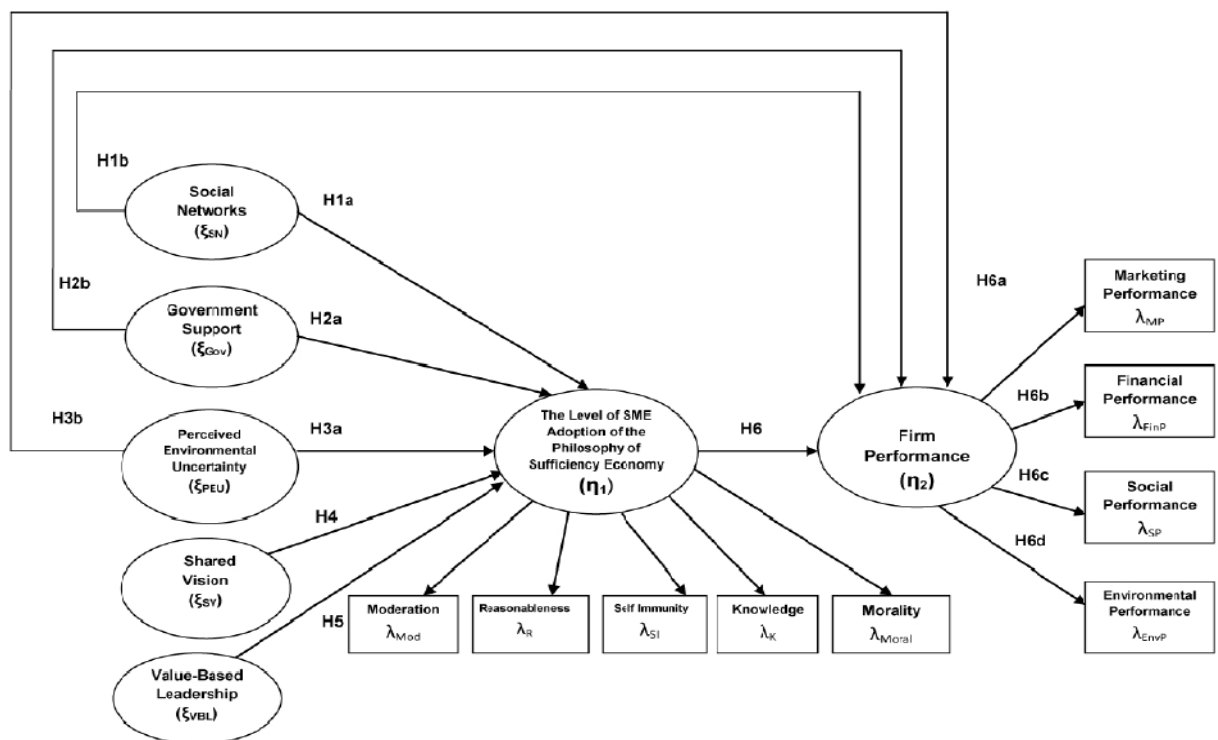
Social capital is defined as *“the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual, organization or social unit”* (Nahapiet and Ghoshal, 1998). Firms

that adopt PSE require shared vision, external social networks and government agencies' support to achieve a high or full level of PSE adoption.

3. Conceptual Model and Hypothesis

In this section, the proposed model is shown in Figure 2.

Figure 2
The Proposed Model to be Tested



3.1 Social Networks

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). Prior studies proposed that social networks motivate firms to adopt PSE in their practices (Isarangkul na Ayudhya, 2008; Sasin, 2010). Besides, social networks affect firm performance (Hanna and Walsh, 2008; Osorio and Sacked, 2010). Therefore, the following hypothesis is offered.

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.

3.2 Government Agencies' Support

Government plays a significant role in supporting the PSE (Isarangkun and Pootrakool, 2008; Mongsawad, 2010). The previous and present government administrations have adopted the PSE as a guideline used in the nine and tenth National Economic and Social Development Plans (2007 – 2011) in Thailand (UNDP, 2007). Support from government leads to the higher levels of adoption of PSE by SMEs (NESDB, 2007). Moreover, prior studies suggested that government agencies' support affected firm performance (OECD, 2002; Park and Kim, 2010). Therefore, the following hypothesis is offered.

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

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

3.3 The Perceived Environmental Uncertainty (PEU)

PEU is defined as an individual's perceived inability to precisely foresee changes in the environment. It is the PEU, rather than the actual uncertainty in the environment that influences the decisions managers take (Dimitratos, Lioukas and Carter, 2004; Milliken, 1987). Prior studies suggested that PEU affected the adoption of PSE in firms (Sasin, 2010; Yodpetch and Chirapanda, 2008). Therefore, the following hypothesis is offered.

H3: Perceived Environmental Uncertainty (PEU) has a positive influence on the level of firm adoption of the PSE in SMEs.

3.4 Shared Vision

Tsai and Ghoshal (1998) state that shared vision represents the common goals and desires that members of a firm adopt or exchange. Shared vision creates a sense of direction so organizational members can adopt PSE (Kantabutra, 2005; Khunthonjan, 2009). The following hypothesis is offered.

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

3.5 Value-Based Leadership

Ethical or value-based leadership is one of the important factors for successful application of the sufficiency economy concept in Thailand (Kantabutra and Avergy, 2003; Sasin, 2010). Value-based leadership refers broadly to leadership based on moral principles such as social responsibility, integrity, and empowerment (Reilly and Ehlinger, 2007). Thus, the following hypothesis is offered:

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

3.6 Consequences of the Philosophy of Sufficiency Economy (PSE) in SMEs

Previous studies showed firms that adopt PSE will have a better performance (Kantabutra, 2006; Ruenrom, 2009; Wattanoparsri, 2006). It appears that the higher level of adoption of PSE, the better the SME performance. This research assesses firm performance in terms of marketing, finance, social, and environment performance. The hypothesis of firm performance under PSE is as follows.

H6: The level of firm adoption of the PSE will improve the firm performance in SMEs.

4. Research Methodology

Thai SMEs that have registered with the Ministry of Commerce in Thailand and are currently active were chosen as the target population. This research uses the definition of SMEs from the Ministry of Industry, Thailand; namely: (1) having less than 200 employees, 2) having fixed capital less than 200 million baht, (3) being owned by Thai citizens. This research employs a simple random sampling technique and uses data collected by mailing questionnaires to top management or owners of $n = 3000$ Thai SMEs. Follow-up via telephone was used to obtain a higher response rate. The measurements of the constructs in this research are based primarily on previously developed scales and exploratory studies including focus groups and in-depth interviews with experts in PSE. To ensure content

validity and reliability, the questionnaire was pretested with 30 Thai SMEs. The constructs were measured by means of seven-point Likert scales, ranging from 1 (strongly disagree) to 7 (strongly agree). Regarding controls, this research uses firm size and type of SME industry as control variables based on previous sufficiency economy studies (Khunthongjan, 2009; Lekuthai, 2007; Ruenrom, 2010). A structural equation model was developed to test these relationships. The structural model offers estimates of the hypothesized interrelationships among the variables (Hair et al., 2006; Jöreskog and Sörbom, 2007).

5. Results and Discussion

5.1 Reliability and Validity

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). For Content validity, 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). The items with IOC index higher than 0.5 are acceptable (Rovinelli and Hambleton, 1977). 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. To estimate reliability, reliability of all 16 constructs is tested by using Cronbach's alpha (α). All 16 constructs have reliability indices range from 0.787 to 0.964 which indicate high reliabilities of all constructs.

For construct Validity, **confirmatory factor analysis(CFA)** was performed to validate all of the constructs under investigation. Overall, the analysis indicated a good fit of the measurement model 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). Based on the result of confirmatory factor analysis of all 16 constructs, these construct show construct validity. 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 ($\chi^2/df.$), 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. 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

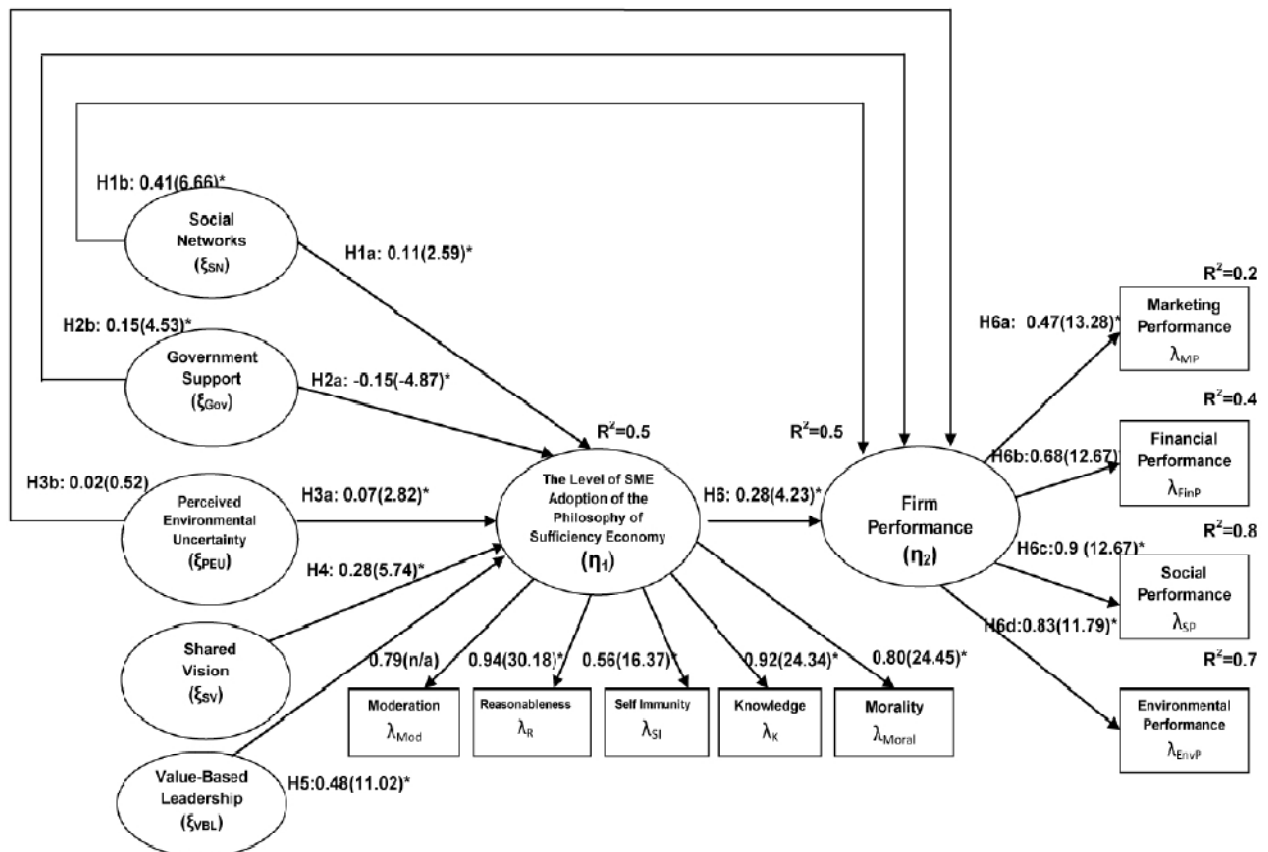
5.2 Structural Model Assessment

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. The results of the structural model are presented in Figure 3 .

Overall Model Fit.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.

Figure 3
The Result of Structural Model



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

Testing of the hypotheses. As Table 1 illustrates standardized coefficient estimates and t-Value of the result of proposed model, the results provide significant support formost of the hypothesized relationships.

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-value=2.59,p-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 ($\beta_{SNtoFP} = 0.41$, $t\text{-value} = 6.66$, $p\text{-value} < 0.05$). Thus, hypothesis 1b cannot be rejected. SN, through firm adoption of PSE, also has an indirect effect on firm performance ($\beta_{SN} = 0.03$, $t = 2.29$, $p\text{-value} < 0.05$). Therefore, the total effects of SN on firm performance are statistically significant at the significance level of 0.05 ($\beta_{SNtoFP} = 0.44$, $t\text{-value} = 7.07$, $p\text{-value} < 0.05$).

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 ($\beta_{GOV} = -0.15$, $t\text{-value} = -4.87$, $p\text{-value} < 0.05$). 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 ($\beta_{GOVtoFP} = 0.15$, $t\text{-value} = 4.53$, $p\text{-value} < 0.05$). Thus, hypothesis 2b cannot be rejected. GOV, through firm adoption of PSE, also has an indirect effect on firm performance ($\beta_{GOV} = -0.04$, $t = -3.16$, $p\text{-value} < 0.05$). Therefore, the total effects of GOV on firm performance are statistically significant at the significance level of 0.05 ($\beta_{GOVtoFP} = 0.11$, $t\text{-value} = 2.94$, $p\text{-value} < 0.05$).

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 ($\beta_{PEU} = 0.07$, $t\text{-value} = 2.82$, $p\text{-value} < 0.05$). 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 significantly ($\beta_{PEUtoFP} = 0.02$, $t\text{-value} = 0.52$, $p\text{-value} > 0.05$). 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 significantly ($\beta_{FP} = 0.28$, $t\text{-value} = 4.23$, $p\text{-value} < 0.05$). 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 ($\lambda_{Mod} = 0.79$), reasonableness ($\lambda_R = 0.94$, $t = 30.18$, $p\text{-value} < 0.05$), self-immunity ($\lambda_{SI} = 0.56$, $t = 16.37$, $p\text{-value} < 0.05$), knowledge ($\lambda_K = 0.92$, $t = 24.34$, $p\text{-value} < 0.05$) and morality ($\lambda_{Moral} = 0.80$, $t = 24.45$, $p\text{-value} < 0.05$) 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 ($\beta_{MktP} = 0.47$, $t = 13.28$, $p\text{-value} < 0.05$). 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 ($\beta_{\text{FinP}} = 0.68$, $t = 12.67$, $p\text{-value} < 0.05$). 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 ($\beta_{\text{SP}} = 0.90$, $t = 11.79$, $p\text{-value} < 0.05$). 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 ($\beta_{\text{EnvP}} = 0.83$, $t = 13.28$, $p\text{-value} < 0.05$). Thus, hypothesis 6d cannot be rejected.

Table 1
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 1 (Cont.)

Results of the Structural Model:

Standardized Coefficient Estimates and t-Value of Proposed Model

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*

6. Discussion

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 ($\beta_{\text{SNtoFP}}=0.41$, $t\text{-value}=6.66$, $p\text{-value} < 0.05$).

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 ($\lambda_{\text{SP}}=0.83$, $t=11.79$, $p\text{-value} < 0.05$).

7. 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.

8. Theoretical Contribution

This research is the first systematic approach to developing a conceptual framework for the adoption of the PSE by Thai SMEs. Empirical data from 703 SMEs were collected to test the antecedents, mediator, and consequences of the adoption of the PSE by 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 values-based leadership (VBL). The endogenous variable is firm performance which consists of marketing, financial, environmental, social, and environmental performances.

The study investigates the impacts of external factors: social networks, government agency support, and perceived environmental uncertainty, and internal factors: value based leadership and shared vision. These factors have never been empirically tested before with respect to 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 values-based leadership (VBL) upon SME adoption of the PSE. Only one variable was found to have a negative influence on SMEs adoption of PSE, namely government agency support (GOV).

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

Based on the empirical evidence, 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. This study supports the notion that the PSE can be applied not only in agriculture, but the Philosophy of Sufficiency Economy can also be applied for individuals, families, the community, and at the national level (NESDB, 2004). This research finds supportive evidence 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 for applying the five principles of the PSE in business practices. Moreover, reasonableness has the strongest positive relationship with the level of firm adoption of the PSE. The result shows that the more firms make decisions based on knowledge and create business plans based on rationality and clear objectives, the higher the level of firm application of the Philosophy of Sufficiency Economy in business practices.

The researcher extends the existing literature on firm adoption of the PSE by examining the consequences of adoption of the PSE which have never been empirically tested before. The relationship between firm adoption of the PSE and firm performance is successfully revealed in this research. The findings provide support for the notion that adoption of the PSE will enhance SME performance in terms of marketing, financial, social, and environmental performance. These findings are very beneficial for SMEs since the results show that adoption of the PSE can 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 a fit to the observed data and reveals 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 the Resourced-Based View Theory, Social Capital Theory, and Contingency Theory that are used to explain the effects of factors on the Philosophy of Sufficiency Economy.

- 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 a successful firm (Barney, 1991; Hitt, 2000). The empirical results of this study provide strong supports for the notion that internal resources, especially values-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 values-based leadership factor. SMEs should

continuously invest their resources into internal factors, especially leadership, so that they can achieve a higher level of PSE adoption and consequently improve their performance in the long run.

- The results also support 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 environmental uncertainty. Previous literature found mixed results of in terms of the effect of PEU on firm performance (Carmeli and Tishler, 2006; 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 lead to some managerial actions.

- From a social capital perspective (Nahapiet and Ghoshal, 1998), this theory explains that resources derived from the network of relationships influence 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 Social Capital Theory in that shared vision and social networks have a positive influence but government agency support has a negative influence on SME adoption of the PSE.

9. Managerial Contribution

The results of this study provide guidelines and benefits for SMEs and practitioners as follows.

This study provides a better understanding for the public and private sectors about SME adoption of the PSE. Many SME entrepreneurs misunderstand the application 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 based 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 shows that values-based leadership, social networks, and shared vision are three important factors influence firm adoption of the PSE. Values-based leadership is the most important factor for a higher level of firm adoption of PSE. In order to successfully adopt the PSE, firms must realize the importance of values-based leadership. A values-based leader will influence staff and colleagues to apply the PSE and values-based leadership influences the nature of corporate culture, that is, the way 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 team members adopting the PSE into daily work. Therefore, vision and knowledge related to the PSE in business practices must be shared and agreed across departments so that employees understand and accept the importance of the PSE and appropriately apply the PSE in 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 according 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 environmental performance. Most importantly, these empirical findings provide evidence that applying the PSE into business practices can enhance SMEs' performance especially social performance. Managers and government agencies can gain benefits from this research. More training courses in the 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 SMEs to enhance their firm performance which is the ultimate goal of business operations. It is extremely valuable for SMEs to operate business in line with the Philosophy of Sufficiency Economy, which would help firms enhance their performance. This is described in detail as follows.

- Marketing Performance. Firms adopting the Philosophy of Sufficiency Economy will improve their marketing performance. By adopting the PSE, firms will create marketing strategies based on knowledge and rationality. Firms are willing to listen to 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 leads to brand sustainability. Therefore, the empirical results show that the more SMEs adopt the PSE, the more the number of customers, sales volume, and sales 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 improved financial performance. Firm appropriately manage resources and finances. By applying the PSE into business practices, SMEs run business by maintaining a balance between long-term and short-term goals. SMEs formulate risk management plans to cope with unpredictable situations. They also run business in their areas of expertise and not expand into fields in which they lack experience. Therefore, by applying the PSE, firms will have better financial results in term of profitability, debt repayment ability, and working capital.

- Social Performance. Long-term success of SMEs depends not only on financial profit. SMEs understand and are concerned with all direct impacts on all stakeholders. Firms adopting the PSE are concerned for the health and safety, of staff and the community. Firms also provide fair remuneration and welfare benefits to employees. As a consequence, employees will be devoted to working for the organization and be willing to help and improve company performance. Moreover, firms also sell products/services to customers with good quality and reasonable prices. Therefore, applying the PSE into business practices will enhance firms' social performance in term of quality of work-related health problems, working

environment for staff, and relationship with the community. The results demonstrate that adopting the PSE will benefit not only SMEs but also the community and society as a whole.

- Environmental Performance. Environmental protection is an important factor for any SME 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 have a commitment to promote recycling of paper and garbage. The environmental concerns of SMEs would lead to the better environmental performance such as reduced garbage, less air pollution, and lower 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 and government agencies should sponsor and support more research into the adoption of Sufficiency Economy in businesses in order to encourage them to applying the PSE in their businesses successfully. Government agency support should encourage firms to apply the PSE into business practices, in particular the 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 leads firm toward business sustainability.

10. Limitations and Future Studies

The sample size is considered small compared with the total populations of SMEs in Thailand. Future research could be extended to 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 (financé and marketing), social, and environmental performances (Dyllick and Hockerts, 2002). Finally, 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.

11. Conclusion

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 an examination of 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 (PSE) can enhance SMEs' performance in the areas of marketing, financial, social, and environmental performance. There is significant performance improvement for SMEs that operate their businesses in line with the PSE. It is certainly valuable for SMEs to invest and operate their businesses in line with the PSE. Though there might be some unanswered questions for some entrepreneurs, the results of this research should encourage SME owners 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 for the last decade, should be strongly considered as a means to an end for firm performance both in the short run and long run.

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