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The Relationship between Professional Management and Philosophy of Sufficiency Economy Influencing Sustainable Development of Construction Industries in Thailand

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Abstract:

The purposes of this research are 1) to study the components of professional management of construction industry in Thailand, 2) to study the components of Philosophy of Sufficiency Economy of construction industry in Thailand, and 3) to present the model of the relationship between professional management and Philosophy of Sufficiency Economy influencing the sustainable development of construction industry in Thailand.

The researcher applied the quantitative research method in conducting this study; retrieved the secondary data by reviewing documents and related research; and collected the primary data from 300 samples with the questionnaire. The statistics used in this study are consisted of Frequency, Percentage, Mean, Standard Deviation, Pearson Correlation, and Stepwise Multiple Regression.

The results show that with regard to the components of professional management of construction industry in Thailand, the samples, in total, always practice the professional management; in particular, the human resources management has the highest mean, followed by the quality management, the good operating plan, the vision of the entrepreneur, and the financial management respectively. With regard to the components of Philosophy of Sufficiency Economy of construction industry in Thailand, the samples, in total, always practice Philosophy of Sufficiency Economy, in particular, self immunity has the highest mean, followed by reasonableness, moderation, knowledge condition, and integrity condition respectively.

The hypothesis results show that the components of professional management have an influence on the sustainable development with the statistical significance at the level of .01, which is relevant to the set hypothesis; by that the components of professional management in the aspect of the vision of entrepreneur (X_{11}), the financial management (X_{14}), and the quality management (X_{15}) can describe the variance of the sustainable development in total at 81.70%. The components of Philosophy of Sufficiency Economy have an influence on the sustainable development with the statistical significance at the level of .01, which is relevant to the set hypothesis; by that the components of Philosophy of Sufficiency Economy in the aspect of moderation (X_{21}), reasonableness (X_{22}), knowledge condition (X_{24}), and integrity condition (X_{25}) can describe the variance of the sustainable development in total at 62.80%. The relationship model between professional management and Philosophy of Sufficiency Economy has an influence on the sustainable development of construction in Thailand with the statistical significance at the level of .01, which is relevant to the set hypothesis; by that professional management and Philosophy of Sufficiency Economy can describe the variance of the sustainable development in total at 62.30%. The equation forecasting professional management and Philosophy of Sufficiency Economy influencing the sustainable development is $\hat{Y} = 1.019$ professional management (X_1) + .338 Philosophy of Sufficiency Economy (X_2); from the equation, it can be seen that professional management and Philosophy of Sufficiency Economy have an influence on the sustainable development in the same direction.

Keywords: Relationship, professional management, Philosophy of Sufficiency Economy, sustainable development, construction industry, Thailand

1. Introduction

The construction industry is an essential business sector of economic system in Thailand. There is the projection that the property and construction business occupy 20% of GDP of Thailand, which is two trillion Baht (Department of Industrial Promotion, 2012); it is also acceptable for its highly important role in economic and social development of the country. In addition to generate the employment and direct revenue from the industry, the construction industry is the physically basic factor supporting the development process and good life quality creation of people in country; this also connects the industry and a large amount of other business sectors (Deewong and Loengbutnak, 2013), for example, steel industry, construction materials business, and furniture industry.

From the situation forecast in 2015, eleven Thai industries that trend to grow in a good way are consisted of 1) Electronic components business, 2) Automotive parts business, 3) Food and beverage business, 4) Education services business, 5) Energy business, 6) Agriculture business, 7) Construction business, 8) Transportation and logistics business, 9) Tourism business, 10) Health care services business, and 11) Information technology business. Due to the reason that these kinds of business have high demand in marketing partners, have the role in connecting economic activities, stimulate the country economic, have the capability to compete in the world and regional market, and are also relevant to the world current. The construction business trends to grow in a good way because it has got a good opportunity of ASEAN Economic Community: AEC, that each country develop its infrastructure system, and the real estate development; while Thai public sector has invested in massive transportation system, which are consisted of electric train, and double-track railway (The Office of SMEs Promotion, 2014). It can be seen that there are many advantages in operating the construction business in the member countries of ASEAN. Thai entrepreneurs have high performance about engineering technique and expertise; especially Thai engineers are acceptable in the same or the better level as other countries. In addition, Thai labors are skillful in construction and systematic work, including that Thailand has strong construction-related industry, especially building materials industry. In the same time, the liberalization of construction business under the ASEAN Economy Community: AEC in 2015 permits to decrease the limitation for providing more convenience to professional labor mobility in the area of construction business, such as engineer and architect. This helps continually creating the business opportunity of Thai entrepreneurs from the performance and chance. The business operation in construction industry still lack the sources of knowledge to make the serious understanding about AEC in order to increase the competitiveness to compete with the international contractors both from Asia as Japan and China, and from Europe and America. Thus, in order to create the sustainable construction standard, both public sector and the entrepreneurs have to confederate, not only for specific group, to create and control the construction standard to be in the same level, for both small and large enterprises. The contractors should be also upgraded, so that the construction business has the explicit working direction and the strength to sustainably operate business.

In addition to the external environment which can be the opportunity and threat, nowadays it lacks the direction in continually developing the relevant Thai construction industry in spite of a large amount of the contractors and most of them are the small and medium enterprise which has many restrictions. The reason is about less working experience, a lack of technology approach, and the appropriate management. Moreover, Thai construction industry in the past still lacks the standard and reliability because there are not the explicit controlling rules or regulations in terms of the relevant enterprises, entrepreneurs and labors. These restrictions affect the contractor to set the good operational plan to support the fluctuation of construction components prices, the capability of management, planning, cost control and appropriate technology selection; all these are important for the entrepreneurs. Furthermore, the business about construction needs the connection between the principle contractors and the professional outsourcing in many aspects, for example, electric system, plumbing, public utility, structure and engine and instruments installation (Techakanon, 2009). The direction of good operation begins with the explicit operating plan with the concern about performance, capability, and readiness in operating mainly personal work in order to indicate the long-term goal. The good operation must come from good team, good personnel cooperatively creating quality work to be reliable for the customers and for strengthening the organization to have high capability to be able to provide various construction services. Thereby, it requires the good care, follow-up, and quality check of each work system. Moreover, the capability in well managing the cash flow is also important because a lack of enough capital leads to the risk in circulating the cash flow which can cause the problem in managing the construction structure (Tanumuttaya, 2008). Hence, that the effective management will affect the increase of productivity to the business needs the holistic management which merges all the works according to the set working process, such as when creating on piece of work needs the consideration about quality, environment, safety, in the same time since the preparation of man, instruments for the environmental safety, the work completion, and cleaning till the end of work (Wittayapanyanon, 1999). Therefore, this is the management or the method to generate the quality work that can better satisfy the customers' need and it is to effectively manage with the professional construction business, which are consisted of 1) the vision of the entrepreneur, 2) the good operating planning, 3) the human resources management, 4) the financial management, 5) the quality management, and 6) business ethics (Puttatecha, Yodthong, Chutikorntaweasin, 2014); it should be also concerned about the effective operation by applying the holistic management. Moreover, the business operation requires also the business growth, thus sustainable development nowadays, which mostly mentioned the environment along with the growth; it is not to sacrifice some parts of resources in business in order to retrieve the environmental friendliness, but to find the method to apply the eco-efficiency or the environmental concern to operate the business for creating the business growth (Yodprutikarn, 2010). The good business growth should base on the balance basis, the carefulness, and sustainable development. The sustainability can occur from the concern about environment, economy, and society, including relying on the responsibility to the stakeholders, environment, and country.

Sustainable development based on the balance of using Philosophy of Sufficiency Economy as the business direction according to the Royal Speech of His Majesty King Bhumibol Adulyadej who has emphasized the concept about Philosophy of Sufficiency

Economy. This Philosophy relies on the Middle Path and the carefulness, and is concerned about namely moderation, reasonableness and self-immunity, including using the knowledge with prudence, carefulness, and morality as the base for making decision and the action for supporting every levels of people, since the level of family, community, business, and country, to apply Philosophy of Sufficiency Economy as the life direction which will lead to the balance and sustainable development (Wiryaphiphat, 2009). His Majesty The King has given the direction of life to Thai people since before the economic crisis, and also emphasized the solution to be survived and to be able to stably and sustainably stand in the current of globalization and other changes. People can apply this direction to be the strategies in developing every sectors of country development which requires the careful consideration depending on each situation. The application of Philosophy of Sufficiency Economy as the concept in the organizational management in the aspects of budget management, investment, business planning, operation planning, risk management planning, research and development, knowledge management, including the good governance, the social responsibility, and business ethics. Concerning about the application of Philosophy of Sufficiency Economy in the level of businessman, business man can borrow for investment in order to generate the income and has to be able to repay. Including that businessman has to know himself, to have morality, loyalty, hard-working, tolerance, and social responsibility by developing the production efficiency, improving the product and quality to match the market's demand and the technological change. Businessman should also maintain the balance of the profit sharing among the stakeholders, which are consisted of officers, company, consumers, and society, for sustainably living together (Tanti-Vejkul, 2011); with 6 important practices; 1) immunization: to be careful, to consider the cause and effect of action by concerning about the long-term result and realizing the positive and negative risk from the environment; 2) low cost management: to manage with reason and discretion, to analyze the worthiness of investment, and to consider the related factors in the aspect of economy, society, and environment; 3) resource utilization: to use the resources and environment by concerning about sustainable development, to use everything to earn the highest profit with cleverness and the good managing system; 4) conservative financing and investment: to invest with reason, discretion, and self-awareness; 5) sustainable growth: to have stability and security; and 6) business stability: to be able to be active and passive, to be conscious to realize the change to know how to cope with it (Sue-lium, Suthisukhon, and Dam-me, 2007).

From these information, Thai construction industry can sustainably develop requires the factors of success from the professional management, the application of Philosophy of Sufficiency Economy for generating the balance, and the sustainability without the carelessness. Therefore, the researcher is interested in studying the causal relationship between professional management and Philosophy of Sufficiency Economy and sustainable development of construction industry in Thailand, in order to apply the knowledge from the research to develop the management of construction industry to be internally strong and to have self-dependence and the strong growth with stability and sustainability leading to the universality.

1.1. Purposes of Research

- i. To study the components of the professional management influencing sustainable development of construction industry in Thailand.
- ii. To study the components of Philosophy of Sufficiency Economy influencing sustainable development of construction industry in Thailand.
- iii. To present the relationship model between professional management and Philosophy of Sufficiency Economy influencing sustainable development of construction industry in Thailand.

1.2. Hypothesis of Research

- H01: The components of the professional management do not have an effect on sustainable development of construction industry in Thailand.
- H11: The components of the professional management have an effect on sustainable development of construction industry in Thailand.
- H02: The components of Philosophy of Sufficiency Economy do not have an effect on sustainable development of construction industry in Thailand.
- H12: The components of Philosophy of Sufficiency Economy have an effect on sustainable development of construction industry in Thailand.
- H03: The relationship model between professional management and Philosophy of Sufficiency Economy do not have an effect on sustainable development of construction industry in Thailand.
- H13: The relationship model between professional management and Philosophy of Sufficiency Economy has an effect on sustainable development of construction industry in Thailand.

2. Literature Surveys

2.1. Concept and Theory about Professional Management

Silpsuwan (2006) defined the qualification of professional management that working with knowledge and capability, good intention to create the best work. The vision of entrepreneur; Kettad (1997) presented nine characteristics of successful entrepreneurs; 1) to be smart: to be punctual, fair, and loyal to occupation and academic; 2) to be good: to have discipline, responsibility, and loyalty; 3) to be able to work with others: aiming at the goal and public workings; 4) to be brave; to be self-reliant, self-esteemed, to have ethical bravery; 5) to be tolerant to the critiques, obstacles, problems: to have good attempt; 6) to be able to manage with the basis from the

understanding on system, planning, ordering, and measuring; 7) to make a decision with good consideration; 8) to realize the social responsibility; and 9) to have enough success in order to create self-confidence. The good operating plan; Khantanapha (2001) described the definition of planning that it is about defining objectives and goals of the organization, which will lead to the strategy to reach to the goal and development, cooperation in operation respectively. Planning is to indicate the mission and purpose including the action to access the goal, the plan setting depending on order or chain of command. The human resources management; Ti-yao (2007) mentioned that human resources management is as a heart of organization management because the advance and the efficacy of the organization need the good system of human resources management. Thus the duty of human resources management is really broad; most are concerned about employment, wages, employee service, health and safety, personnel development, promotion, punishment, and relationship between employer and employee. The financial management; Preedawipart, Boonya-sophon, Rujiwich, and Yimwilai (2012) presented two main financial strategies; 1) cash flow management: it is important for survival of the organization, this is relevant to the concept of Sumethprasit (2011) that the importance of cash flow management in crisis time, including to strictly and continually maintain the financial discipline after the crisis and also to find the reserved capital sources in the emergent case. The quality management; Chankaew (2008) presented the application of quality management to the construction. This method really helps reducing the complexity in using the resources and time. The adoption of ISO standard system to be used in developing the organizational system will increase the competitiveness and lead to the international level, also stimulating personnel to work with efficacy, effectiveness, and sustainability. The application of ISO in construction management is consisted of six groups; Group 1: The documentation for declaring the quality system, Group 2: Budget management, Group 3: Quality management; the control of document and information in the large construction project may require the ISO system, Group 4: Communication management and Personnel management, Group 5: Procurement management, and Group 6: Risk management.

2.2. The Philosophy of Sufficiency Economy

The Philosophy of Sufficiency Economy points out the direction of living and behaving of every level of people: from the family level, community level, to the country level, in the dimension of country development and administration to be operated in the Middle path, especially the economic development to be up to the globalization time. The Philosophy of Sufficiency Economy focuses not only on man-made resources but also human resources and natural resources, including the cost which is a principle factor in the economic system nowadays. The operation of Sufficiency Economy policy, thus, does not neglect the success of cost, but suggest reasonably and well-balanced considering the importance of various resources. The importance is to be careful, not to seize advantage from others because, at last, individual as a part of society or economic system might get that impact (Thaipat Institute, 2012).

Thaipat Institute (2012) presented the concept about Philosophy of Sufficiency Economy and business operation; The moderation means the appropriateness of operation in the aspect of size, which is neither too small nor too big, but it is compatible to competency and environment; in the aspect of timing, which is neither too fast nor too slow, but it is orderly progressing without causing any vexation. The business should operate the production or service in the moderate level in order that the business does not risk or lack self-immunity. The reasonableness is about the relationship management of various viewpoint happened in the business; in the aspect of shareholder, finance, product, internal process, employee, and other support system, which would lead to the growth of business, which can be compared as the basic level of business operation according to Philosophy Sufficiency Economy, while the reasonableness between business and other organization can be compared as the advance level of business operation according to Philosophy Sufficiency Economy (Thaipat Institute, 2012). The self-immunity creation can be divided into two cases: 1) self-immunity from internal business, and 2) self-immunity from external business. The result of these actions will return to support the business in the future; this is the approach to create self-immunity from external business (Thaipat Institute, 2012). The knowledge condition in the Philosophy of Sufficiency Economy is the cause of “growth” in business, which is consisted of the attainment of fact, the conscience or the realization, and the wisdom to correctly consider with reason. The application of knowledge condition of the Philosophy of Sufficiency Economy in business does not limited only about knowledge in the economic dimension, but also in the dimension of society, environment, and culture of local people (Thaipat Institute, 2012). The most referred principle of morality is good governance in business or corporate governance, which is the basic principle aiming at the organization to create “goodness” as the base of corporate sustainability in addition to “smartness” of business management. Another important issue is corporate social responsibility: CSR, which aims to create “self-immunity” in operating business with the conscience of social responsibility as good corporate citizen. Therefore, if combining good governance with CSR for operating business, it will be corporate sufficiency that covers the Economy Sufficiency in both basic and advanced level, and has the balance of development for both growth and sustainability (Thaipat Institute, 2012).

2.3. Concept and Theory about Sustainable Development

Aras and Crowther (2009) presented that the sustainable development of organization is the attempt of organization to improve the welfare of people and society; which is relevant to the concept of Baumgartner and Ebner (2010) that the sustainable development of organization is generally as a part of development, and it can see the transmission of thought about sustainable development all over the world. Nowadays, the organization is the most essential element of business and the society; this will change the development from the traditional one to the sustainable development.

Elkington (1994) presented the concept that the sustainable development would recognize the dimensions of economy, society and environment, which all are connected and can be compared with sustainable operation in the organizational level with the viewpoint of Triple Bottom Line or Profit – People – Planet. The sustainable development of organization can be divided into three principles; Economic, Environment, and Social. The sustainable development of organization is the transmission of concept about sustainable

development of the world to the business context (Baumgartner and Ebner, 2010). The dimension of economy: Baumgartner and Ebner (2010) said that the dimension of economy in the context of sustainable development of organization should strengthen the organization to be self-dependent, and to stably grow. The sustainable development of business is the capability of business in creating profit for surviving and in creating advantage to economic system both in local and national level. The sustainable business has to consider the economic impact of business on community in order to create value and action which are important to economic sustainability (Landrum & Edwards, 2009). The dimension of environment: its importance is the environmental friendly development; which 1) the organization has to consider the potentiality of the world, and 2) the organization has to preserve the natural environment for the next generation. The important key of environmental development of organization is the operation under the capability of ecosystem; by 1) reduce environmental pollution, 2) reduce the use of resources, and 3) increase the efficacy of ecological footprint of organization (Lindgreen et al., 2009). The dimension of society: it is about the organizational management in improving the disparity in society, including life quality and the relationship between the stakeholders (Lindgreen et al., 2009). The objective of social development is to set the policy which has the positive influence on the relationship both in present time and in the future with stakeholders in developing society. The organization should pay attention especially to the impact from social operation, such as to reduce illness, to develop knowledge and to increase the employment rate (Lindgreen et al., 2009).

2.4. An Overview of the Construction Industry of Thailand

Kasikorn Research Center (2014) said that the actuation of public sector's investment policy in the second half of the year 2014 is increasingly progressed. The public sector prioritizes more the development of infrastructure for supporting the competitiveness of trading and investment of Thailand, and for driving on the activities of Thai economy to continually grow, including supporting the ASEAN Economic Community: AEC in 2015. Thereby, the infrastructure system about transportation in the immediate term must be done in 2014 – 2015. In addition, Kasikorn Research Center (2015) pointed out that an overview of infrastructure construction of public sector in the first half of the year 2015 is mostly involved in continual projects; both large-scaled and small-scaled projects which the remaining budget amount will be disbursed within the first half of the year 2015.

Aree-kul (2015), as the president of Thai Contractors Association, said that the trend of construction of both public and private sectors is increasingly better because of the modern construction technology, this helps increasing the capacity of the machine and reducing production cost; which satisfies the demand of consumers that changes fast as can be seen nowadays.

Thai Chamber of Commerce (2015) said about the development strategies of construction and property business which its goals are the value of construction contract in foreign countries at the amount of 30,000 million Baht in 2017. The value of foreign direct investment (FDI) increases 7.5% per year, and Thai people are 100% the owner of the residence in 2020. Thai Chamber of Commerce, thus, formulates these four development strategies; 1) To increase the competitiveness of the construction entrepreneur and property developer for creating the opportunity to access both domestic and foreign market, and the confidence to the project owner in selecting the services. 2) To develop the labor performance to be relevant to the demand of business sector, so that the personnel have quality and facilitate the business operation by developing both quantitative and qualitative aspect. 3) To improve the regulation to expand the opportunity of both builder and customer in expanding the market, and creating the income to the business. 4) To develop and to improve the infrastructure system for being the base in propelling the economic and social sector nowadays and in the future by creating the economic cooperation.

3. Research Methodology

The researcher used the quantitative research in conducting this study, retrieved the secondary data by reviewing concept and theory from the documents and related research, and collected the primary data by distributing the questionnaires which had details covering components of professional management, components of Philosophy of Sufficiency Economy, and the sustainability of construction industry in Thailand. The questionnaire was considered and improved, then passed through the try-out process with a sample group of 30 persons to finding the reliability level with the method of Alpha Coefficient of Cronbach, whose reliability coefficient is .895. This demonstrated that this questionnaire was reliable and could be really used in collecting data. The samples of this research are the registered entrepreneurs of construction industry in Thailand (Thai Contractors Association, 2015). The researcher used the Simple Random Sampling to indicate 382 samples, and 300 of them returned the questionnaires, which is 78.53%. The statistics used in this research are Frequency, Percentage, Mean, Standard Deviation, Pearson Correlation, and Stepwise Multiple Regression Analysis. The period of this study was from April to July 2015 (4 months).

4. Research Results

4.1. The Analysis of Demographic Profiles

With regard to the demographic profiles of all 300 informants, the results show that 72% are male and 28% are female. 36% are aged between 51 – 60 years old. 61% graduated the Bachelor Degree. 38% have operated the business for 16 – 20 years respectively.

4.2. The Analysis of the Components of Professional Management

With regard to the components of professional management, the results show that the informants, in total, always practice the professional management ($\bar{X} = 4.62$, S.D. = 0.056). In particular, the human resources management has the highest mean ($\bar{X} = 4.74$, S.D. = 0.064), followed by the quality management ($\bar{X} = 4.678$, S.D. = 0.219), the good operating plan ($\bar{X} = 4.63$, S.D. = 0.225), the vision of the entrepreneur ($\bar{X} = 4.57$, S.D. = 0.198), and the financial management ($\bar{X} = 4.48$, S.D. = 0.165) respectively (see table 1).

The Components of Professional Management	\bar{X}	S.D.	Translation	Ranking
1. The vision of the entrepreneur (X_{11})	4.57	.198	Always	4
2. The good operating plan (X_{12})	4.63	.225	Always	3
3. The human resources management (X_{13})	4.74	.064	Always	1
4. The financial management (X_{14})	4.48	.165	Always	5
5. The quality management (X_{15})	4.67	.219	Always	2
Professional management (X_1)	4.62	.056	Always	

Table 1: Mean and standard deviation of the components of professional management

4.3. The Analysis of the Components of Philosophy of Sufficiency Economy

With regard to the components of Philosophy of Sufficiency Economy, the results show that the informants, in total, always practice Philosophy of Sufficiency Economy (\bar{X} = 4.40, S.D. = 0.128). In particular, self-immunity has the highest mean (\bar{X} = 4.62, S.D. = 0.139), followed by reasonableness (\bar{X} = 4.54, S.D. = 0.379), moderation (\bar{X} = 4.32, S.D. = 0.113), knowledge condition (\bar{X} = 4.30, S.D. = 0.225), and integrity condition (\bar{X} = 4.25, S.D. = 0.170) respectively (see table 2).

The Components of Philosophy of Sufficiency Economy	\bar{X}	S.D.	Translation	Ranking
1. Moderation (X_{21})	4.32	.113	Always	3
2. Reasonableness (X_{22})	4.54	.379	Always	2
3. Self-immunity (X_{23})	4.62	.139	Always	1
4. Knowledge condition (X_{24})	4.30	.225	Always	4
5. Integrity condition (X_{25})	4.25	.170	Always	5
Philosophy of Sufficiency Economy (X_2)	4.40	.128	Always	

Table 2: Mean and standard deviation of the components of Philosophy of Sufficiency Economy

4.4. The Analysis of the Relationship of Sustainable Development of Construction Industry in Thailand

With regard to the relationship between professional management, Philosophy of Sufficiency Economy, and sustainable development of construction industry in Thailand, the results show that the informants very strongly agree with this relationship (\bar{X} = 4.66, S.D. = 0.395). In particular, the relationship between Philosophy of Sufficiency Economy influencing sustainable development of construction industry in Thailand (\bar{X} = 4.44, S.D. = 0.830), followed by the relationship between professional management influencing sustainable development of construction industry in Thailand (\bar{X} = 4.21, S.D. = 0.882) respectively (see table 3).

The relationship of sustainable development	\bar{X}	S.D.	Translation	Ranking
1. The relationship between professional management influencing sustainable development (Y_1)	4.21	.882	very strongly agree	2
2. The relationship between Philosophy of Sufficiency Economy influencing sustainable development (Y_2)	4.44	.830	very strongly agree	1
The relationship of sustainable development (Y)	4.66	.395	very strongly agree	

Table 3 Mean and standard deviation of the relationship of sustainable development

4.5. The Correlation Analysis between the Components of Professional Management, Philosophy of Sufficiency Economy, And Sustainable Development of Construction Industry in Thailand

With regard to the correlation analysis between the components of professional management, Philosophy of Sufficiency Economy, and sustainable development, the results show that the components of professional management, Philosophy of Sufficiency Economy, and sustainable development have the relationship with the statistical significance at the level of .01; by that the correlation is between .649 - .843. The highest correlation is the relationship between professional management (X_1), and sustainable development (Y) (see table 4).

Variables	X_1	X_2	Y
X_1	1	.104	.843**
X_2		1	.649**
Y			1

Table 4: The correlation analysis between the components of professional management, Philosophy of Sufficiency Economy, and sustainable development
** with the statistical significance at the level of .01

4.6. The Hypothesis Analysis

4.6.1. The Multiple Regression Analysis of Professional Management Influencing Sustainable Development of Construction Industry in Thailand

With regard to the multiple regression analysis by the Stepwise method, the result show that the components of professional management have an influence on sustainable development with the statistical significance at the level of .01 ($F = 477.363$, and $p = .000$); by that the components of professional management in the aspect of the vision of the entrepreneur (X_{11}), the financial management (X_{14}), and the quality management (X_{15}), can describe the variation of sustainable development at 81.70% (Adjust $R^2 = .817$), the rest 18.30% are the results of other variables which are not considered (see table 5). The equation is as followed;

$$\hat{Y}_1 = 1.455 \text{ The vision of the entrepreneur } (X_{11}) + .682 \text{ The financial management } (X_{14}) + .562 \text{ The quality management } (X_{15})$$

From this equation, the components of professional management in the aspect of the vision of the entrepreneur, the financial management, and the quality management have an influence on sustainable development of construction industry in Thailand in the same direction.

Variables	Sustainable development				p
	b	SE	β	t	
Constant	26.094	.957		27.280**	.000
The vision of entrepreneurs (X_{11})	6.488	.216	1.455	30.047**	.000
The financial management (X_{14})	2.996	.155	.562	19.340**	.000
The quality management (X_{15})	2.737	.187	.682	14.656**	.000
$R^2 =$	.819			$F =$	447.363**
Adjust $R^2 =$	.817	SE =	.377	p =	.000

Table 5 The important weight of the variables of professional management influencing sustainable development of construction industry in Thailand
** with the statistical significance at the level of .01

4.6.2. The Multiple Regression Analysis of Philosophy of Sufficiency Economy Influencing Sustainable Development of Construction Industry in Thailand

With regard to the multiple regression analysis by the Stepwise method, the result show that the components of Philosophy of Sufficiency Economy have an influence on sustainable development with the statistical significance at the level of .01 ($F = 127.099$, and $p = .000$); by that the components of Philosophy of Sufficiency Economy in the aspect of moderation (X_{21}), reasonableness (X_{22}), knowledge condition (X_{24}), and integrity condition (X_{25}) can describe the variation of sustainable development at 62.80% (Adjust $R^2 = .628$), the rest 37.20% are the results of other variables which are not considered (see table 6). The equation is as followed;

$$\hat{Y}_2 = 1.173 \text{ Moderation } (X_{21}) + 1.037 \text{ Reasonableness } (X_{22}) + .069 \text{ Knowledge condition } (X_{24}) + .067 \text{ Integrity condition } (X_{25})$$

From this equation, the components of Philosophy of Sufficiency Economy in the aspect of moderation, reasonableness, knowledge condition, and integrity condition have an influence on sustainable development of construction industry in Thailand in the same direction.

Variables	Sustainable development				p
	b	SE	β	t	
Constant	24.912	3.142		7.929**	.000
Moderation (X_{21})	8.601	1.094	1.173	7.864**	.000
Reasonableness (X_{22})	2.272	.257	1.037	8.843**	.000
Knowledge condition (X_{24})	.255	.332	.069	.769**	.002
Integrity condition (X_{25})	.329	.245	.067	1.346**	.003
$R^2 =$	.633			$F =$	127.099**
Adjust $R^2 =$	.628	SE =	.506	p =	.000

Table 6 The important weight of the variables of Philosophy of Sufficiency Economy influencing sustainable development of construction industry in Thailand
** with the statistical significance at the level of .01

4.6.3 The Multiple Regression Analysis of Professional Management, Philosophy of Sufficiency Economy, Influencing Sustainable Development of Construction Industry in Thailand

With regard to the multiple regression analysis by the Stepwise method, the result show that professional management, Philosophy of Sufficiency Economy have an influence on sustainable development with the statistical significance at the level of .01 ($F = 247.978$, and $p\text{-value} = .000$). The professional management and Philosophy of Sufficiency Economy can describe the variation of sustainable

development at 62.30% (Adjust $R^2 = .623$), the rest 37.70% are the results of other variables which are not considered (see table 7). The equation is as followed;

$$\hat{Y} = 1.019 \text{ Professional management } (X_1) + .338 \text{ Philosophy of Sufficiency Economy } (X_2)$$

From this equation, professional management and Philosophy of Sufficiency Economy have an influence on sustainable development of construction industry in Thailand in the same direction.

Variables	Sustainable development				p
	b	SE	β	t	
Constant	3.446	.078		44.349 ^{***}	.000
Professional management (X_1)	.456	.025	1.019	18.448 ^{***}	.000
Philosophy of Sufficiency Economy(X_2)	.161	.026	.338	6.115 ^{***}	.000
$R^2 =$	.625			F =	247.978 ^{***}
Adjust $R^2 =$	.623	SE =	.242	p =	.000

Table 7: The important weight of the variables of professional management and Philosophy of Sufficiency Economy influencing sustainable development of construction industry in Thailand

^{**} with the statistical significance at the level of .01

5. Conclusion and Discussion

The research results show that the components of professional management and Philosophy of Sufficiency Economy have the relationship with sustainable development with the statistical significance at the level of .01; by that the components of professional management have the highest relationship with sustainable development, which is relevant to the hypothesis testing result that the components of professional management and Philosophy of Sufficiency Economy have an influence on sustainable development of construction industry in Thailand with the statistical significance at the level of .01. The researcher, thus, presented the relationship model as $\hat{Y} = 1.019 \text{ Professional management } (X_1) + .338 \text{ Philosophy of Sufficiency Economy } (X_2)$; by that the components of professional management can predict the sustainable development at 81.70%, while the components of Philosophy of Sufficiency can predict the sustainable development at 62.80%.

The first components of professional management influencing the sustainable development of construction industry in Thailand is the vision of the entrepreneur: viewing the opportunity / threat and future of business, having the preparation, support, and courage to make decision when the change occurs, viewing the opportunity as the factors continually contributing to the business, and viewing the business with understanding, sometime to sacrifice something in order to get something; this is relevant to the concept of Pahe (2000) who presented the characteristics of professional executives that they must continually look at the future and be always ready to change, to have vision to indicate the managing strategies which are correct and appropriate to the changing situation, and to analyze the situation to appropriately formulate the strategic plan and action plan to achieve the goal and policy and to make a decision with good judgment in both wide and deep dimension (Kettad, 1997). They should also direct forward to create, to resolve, to lead, to seriously create workings of management and resolution, also to be optimistic (Charoenphantuwong, 1997).

Secondly, the entrepreneur should have quality management: means to have the policy about creating work and work quality to strictly reach the standard of each kind of work, to control the primary quality which is about quality materials and human resources, and to guarantee the work quality with the responsibility to every periods of working; which is relevant to the concept of Chankaew (2008) who presented the application of quality management to the construction. This method really helps reducing the complexity in using the resources and time. The adoption of ISO standard system to be used in developing the organizational system will increase the competitiveness and lead to the international level, also stimulating personnel to work with efficacy, effectiveness, and sustainability. An important restriction of quality system is to control and to record the quality, which requires the handbook of quality, operation, and other supported documents. The importance of applying ISO system for creating the quality of project is the understanding about the customer's agreement and specification of construction plan control at the office and the work site, which is verified and tested as defined in the regulations, also evaluated for the improvement. The overall project plan should be always updated by comparing the real advance to the plan to obtain the fact and the real status of the project. This is also relevant to the study of Poolsong (2008, as cited in Lumnoi, 2012) about the factors influencing timing, expense, and quality of building construction. The results show that the quality control is the process of testing verifying and improving for the good construction result as indicated in the construction plan and contract under the budget and time.

Thirdly, the entrepreneur should have the financial management principle, which means to be concerned about managing the current and liquidity as important, and to prioritize the creation of standard account system in order to strengthen the business. This is relevant to the concept of Wanasuwanich (2009) who presented about the good cash-flow management that it is necessary to manage the cash flow or the assets that can be quickly changed to be cash in the level that is enough for the demand of business; in the same time, the surplus of cash flow can be used in creating the return rate under the acceptable level of risk. 2) To manage cost to be less than the competitors for increasing the profit and for preventing the overabundant of supply from the new-born competitors, including the cost management of finance and land purchase which are the strategy for success of property business for long time, or even the development of materials or technique of construction with the lower cost but still maintain the standard quality level.

The components of Philosophy of Sufficiency Economy influencing sustainable development of construction industry in Thailand are consisted of moderation, reasonableness, knowledge condition, and integrity condition. The first rank runs to moderation, which

means to cultivate the employees to worthily use the resources, to create enough revenue and profit to the expense without encroaching the consumers or violating the law, the operation should consider the long-term stability and sustainability, and to operate the business with the concern about sharing to employees, customers, and society. Then, it is reasonableness, which means the operation should orderly plan and permits everyone to participate in being responsibility, all employers, employees, and customers, to operate following the laws, rules, and job ethics, and to realize the responsibility to the stakeholders with willingness. Next, knowledge condition is to support every level of employees to be always eagle to learn new knowledge, to support to use knowledge, technology, and innovation to generate the benefit to all stakeholders, to permit to transmit the experience and professional skills between the employees in order to develop the working quality. The last is integrity condition, which is to cultivate the consciousness of working with diligence, tolerance, loyalty, honesty, and volunteerism to every levels of employees, to operate the activities which show the generosity to the stakeholders for being the good role model to the society, to operate following the direction of responsibility to society and environment with equality and regularity, and to support the activities that create the cooperative connection to develop the safety of employees, community, society, and environment. This is relevant to the concept of Thaipat Institute (2012) which presented that the moderation is the appropriateness of operation in the aspect of size, which is neither too small nor too big, but it is compatible to competency and environment; in the aspect of timing, which is neither too fast nor too slow, but it is orderly progressing without causing any vexation. The business should operate the production or service in the moderate level in order that the business does not risk or lack self-immunity. The reasonableness means to consider operating anything with prudence, neutrality, and concern about reason and other factors, in order that the operation can continue effectively without encroaching to ourselves and others. The reasonableness is about the consideration to operate activities with carefulness and neutrality, by concerning about cause and surrounding factors so that the operation can correctly continue, which leads to effectiveness, benefit, and happiness without encroaching the organization and others. The reasonableness is also about the relationship management of various viewpoints happened in the business; in the aspect of shareholder, finance, product, internal process, employee, and other support system, which would lead to the growth of business. This is also relevant to the concept of Tanti-vejkul (2011) about knowledge condition that the business should seek for and develop the new knowledge or academic along with the practice following the social responsibility, to apply the academic, knowledge, and technology in analyzing the real condition of business in the aspect of business, economy, area, society, culture and lifestyle of stakeholder, and the environment connectedly in order to satisfy the demand of important personnel, community, and society. The business should also find the new solution for solving the mistake in the past for laying the foundation in developing human resources to have quality and to pass the learning process, such as transmission of knowledge, experiences, and skills for increasing the knowledge and understanding in boarder area and for expanding the results endlessly. The integrity condition is that the businessman is able to borrow for investment in order to generate the income and has to be able to repay. Including that businessman has to know himself, to have morality, loyalty, hard-working, tolerance, and social responsibility by developing the production efficiency, improving the product and quality to match the market's demand and the technological change. Businessman should also maintain the balance of the profit sharing among the stakeholders, which are consisted of officers, company, consumers, and society, for sustainably living together (Tanti-Vejkul, 2011). This is also relevant to the study of Chansom (2012) about business and Philosophy of Sufficiency Economy that business administration is nowadays facing severe risk factors both internal and external enterprises. The new paradigms of "sustainable business" or corporate sustainability focuses and emphasizes the modern enterprise management due to the reason that corporate sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks from economic, environmental and social development. The Philosophy of Sufficiency Economy could be a critical thought for making decision on processes in a business in order that it leads to a balanced and sustainable business. Because of three principles of "moderation," "reasonableness," and "self-immunity" with two vital conditions: "knowledge" and "ethics", the Philosophy of Sufficiency Economy ensures that the business will concern and make good decisions with regard to business and other stakeholders together. The business with Philosophy of Sufficiency Economy will seek for long-term sustainability, not just only the short-term results. To implement Philosophy of Sufficiency Economy, the management team, the board of executives, and the shareholders have to shift their paradigms in the same manner so that they will recognize and drive the business practices in the direction of "sustainable business" in the end. In addition, it is relevant to the concept of Thongpakdee (2007) that moderation is to be on the middle path, to be self-reliant with neither too much nor too little action, but can help to do anything with full capacity without encroaching anyone; the reasonableness means to make decision on behavior with moderation in many dimensions, to have conscience to think of long-term issue, to have appropriate goal and method, and knowledge in operation, to consider the cause, factors, and other relevant information, and to also realize the impact. The knowledge condition is to know round about relevant academic for using as the basic benefit in behaving with sufficiency. The integrity condition has two dimensions: mind/wisdom, and behavior; the dimension of mind and wisdom focuses on the knowledge with morality, while the dimension of behavior emphasizes the lifestyle, focusing on tolerance, perseverance, intelligence, and prudence.

6. Recommendations

- a. The research results should be transmitted to the personnel in the organization so that they realize the importance of professional management and Philosophy of Sufficiency Economy influencing the sustainable development of organization.
- b. The research results should be extended in sharing the knowledge and in making understand to the entrepreneurs in the supply chain of construction industry so that they can realize the professional management of construction industry; which should be consisted of the vision of the entrepreneur, the quality management, and the financial management; including with the application of Philosophy of Sufficiency Economy in construction industry, which is consisted of moderation, reasonableness, and integrity condition.

- c. There should be the comparison study of each region in order to obtain the appropriate direction for the sustainable development of the local entrepreneurs in construction industry.
- d. There should be the study about other components influencing the sustainable development of construction industry in Thailand depending on the size of the business.
- e. There should be the study the connection between the context of industry and Philosophy of Sufficiency Economy, which leads to the more effective application direction.

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