

STRATEGIC MANAGEMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY USING SUFFICIENCY ECONOMIC PHILOSOPHY

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Abstract

The objective of this research is to study the opinions of the requirement in strategic management model of information and communication technology (ICT) in Thai public organizations using Sufficiency Economic Philosophy (SEP). The researcher use qualitative and quantitative methodology analyze questionnaires data that come from Thai public organizations samplings in 20 ministries.

The result of this research attained the way of strategic management of information and communication technology (ICT) using Sufficiency Economic Philosophy (SEP). The Chief Information Officer (CIO) and personal in Thai organizations have highly agreement with using Sufficiency Economic Philosophy for strategic management of information and communication technology. In separately evaluation of the executives' opinions, we found that they agree in self-immunity level, CIO and personal have medium level agreement. In moderated, reasonableness, knowledge condition and virtue condition, CIO and personal have highly level of agreement.

Keywords: *Strategic Management Information and Communication Technology, Sufficiency Economic Philosophy*

1. Introduction

The information and communication technology management in government office has manage the following: the cabinet's policy at 9th June, 2541, assigned the deputy permanent secretary, deputy director general or second head office as the Chief Information Officer [CIO] for performing in information and communication technology management. After that there had the 9th National Economic and Social Development Plan (NESDP) which installed the Sufficiency Economic Philosophy (SEP) to be the philosophy for leading the National Development (ND) to the last. And from the 10th National Economic and Social Development Plan it requires readiness preparing for changing in the future, for adaptation in globalization and creates immunity in every section by following the Sufficiency Economic Philosophy. By performing the organization management system with integration the knowledge from local intellect, fair sharing benefit with community, for creating self-immunity and creating balance country management and creating sufficiency quality life.

moderation way of life. There has information and communication technology management integrated with the Sufficiency Economic Philosophy for security and last, harmoniously with National Information Technology model scheme 2549-2553 that emphasize in government's information technology development.

Researcher gives precedence to strategic information and communication technology management using Sufficiency Economic Philosophy for holding and proceeding in every situation with perfect completeness.

2. Research Objectives

To study the opinions and agreement of the executives and the executives involved with requirement of strategic management model of information and communication technology in Thai government organizations based on Sufficiency Economic Philosophy.

3. Theories and Related Research

3.1 Government Administration theory

The Foyol's Administration Theory has emphasized the organization's duty and management with planning, organizing, leading controlling.[1] Max Weber's Government administration theory lay down the government administration, following Bureaucracy model in 5 themes, these are: Rules, Impersonality, Division of Labor, Hierarchical Structure and Authority. [2]

3.2 Strategic Management Theory

Strategic Management is a part of management which using strategy applied of leader's vision and supporting the rapid changing society.[3] By the way, there has the concept that the old management style could not make the organization's success, like in the past. The globalization executive must have to give precedent to the rapid changes that occurs and can sharply adapt for that. So Strategic Management is so important for new style executive which has main characteristics

3.2.1 *Strategic Management* is the specific vision, direction, procedure and objective of the organization's system, for the organization's clearing direction and goal.

- Strategic Management is the specification in method or way to perform the work and activity of the organization for reaching the direction and the objective that determined. The organization must have to analyze and evaluate in side and out side factors for finding the way that most appropriately perform among the changing of factors.

- Strategic of the plan and applying is the main duty of the organization's executive which comparing other duty that the executive's responsibility, the executive's ability for specific the way to operate. Strategic formulation and strategic implementation are main important duties and also influence to long term operation. Thus, this can say that good strategy and good implementation can use as good meter to the executive's management ability.

- Strategic Management and strategic decision frequently relate to or effect to the direction in organization's long term operation. Strategic decision might be lead to organization changes in many areas, such as looking for resource or main ability that necessary to make competitive advantage and strategic decision relate with operation in organization. Each level of operation could conform to and support organization strategy. Operated ability or performance will be caused for organization's successfulness or failure. Organization strategy does not only relate to external environment and internal factors but value, attitude, expectation of stakeholder effect to strategy. The stakeholder means , chief executive, society, government and officer. In business, strategic management attempts to have competitive advantage of the organization. Competitive advantage can occur from goods presentation and quality services in appropriate price. But in government, strategic management attempts to compete its potential or compare with other organizations to reach the expectation target.

3.2.2 *Difference between general management and strategic management*

- Strategic Management is different from other management. Strategic Management is a skill but different from other management in some point.

- The idea of general management often study and consider to the executive's role and duty in the procedure, there are Planning, Staffing, Organizing, Directing and Controlling, that the organization executive who formulate the strategy should have skills and talent same as the executive who manage

in general. Strategic Formulation is similar Planning, and strategic implementation using skills and talents in managing organization, Staffing, Directing and controlling like General Management. But the difference between Strategic Management and General Management is that strategic management has considerate and think over the External Factor such as External Environment, Rule, Law, Policy, Society, Population, Service Recipient, Culture, Technology. While General Management emphasizes in Internal Management. On the other hand Strategic Management stresses in organization competition for long term competitive advantage. Strategic Management alerts executive in realizing the changes trend of environment, leads to have new changes or limits and helps the executive create the concept for evaluating the good point, weak points, suitability and organization requirement in budget, And human resources and always improve and modify for strategic implementation and success in management.

- Strategic Management consider the requirement and the importance of the stakeholders- customer, conductor, partnerships, society etc. For Successful Management, executive has to learn that all his decisions will affect or influences the stakeholders. While General Management always think over only for his division, his related stakeholders, more than all stakeholders.

- Strategic Management stresses to reach the goal of the whole organization and many groups of stakeholders, customers, conductor, partnerships, society etc. The executive's decision influences affects the stakeholder.

- Strategic Management is mixed or integrated all duty in the organization. Normally, organization should have one specific expert skill, but it is not enough for competition. So it should have a core management which can mix or integrate all expert skill. Strategic Management builds up indication clearly directing and show how organization is doing and reaching their object. By integrating and using resource in the same direction, strategic implementation will respond to internal and external environment. The management process is in Figure 1 and Figure 2 [4], [5],[6]

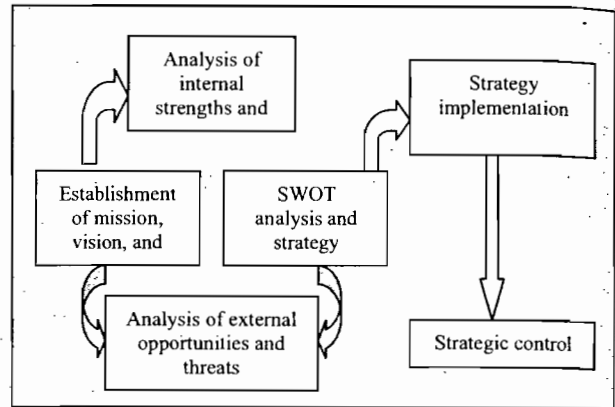


Fig.1 Strategic Management Process

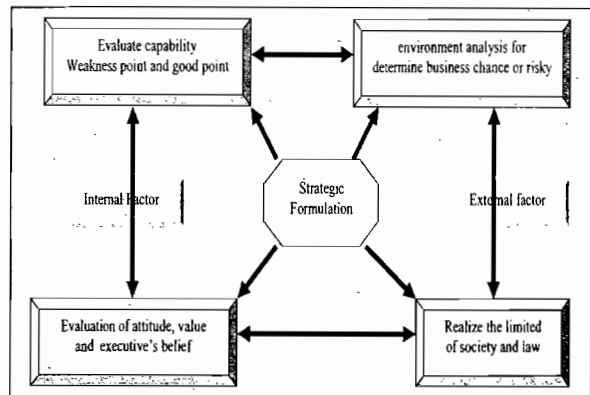


Fig.2 Strategic Formulation

3.3 Theory of ICT management in government office

In globalization era, hai government use and apply ICT in management and using, intranet and internet that direct to e-Government system. Almost government offices have their policy to intensively use ICT, such as National e-recording system. However, using ICT should have improve and develop in the way of Sufficiency Economic Philosophy in the point of developing modes, good governance management model, human rights management models and ICT organization leader developing model. [7]

3.4 Philosophy of the "Sufficiency Economy"

"Sufficiency Economy" is a philosophy that stresses the middle path as an overriding principle for appropriate conduct by the populace at all levels. This conduct applies to the level of the

families, communities, as well as the level of nation's development and administration, so as to modernize in line with the forces globalization. "Sufficiency" means moderation, reasonableness, and the need of self-immunity for sufficient protection from impact arising from internal and external changes. To achieve this, an application of knowledge with due consideration and prudence is essential. In particular great care is needed in the utilization of theories and methodologies for planning and implementation in every steps. At the same time, it is essential to strengthen the moral fiber of the nation, so that everyone, particularly public officials, academe, businessmen at all level, adheres first and foremost to the principles of honesty and integrity. In addition, a way of life based on patience, perseverance, diligence, wisdom and prudence is indispensable to create balance and be able to cope appropriately with critical challenges arising from extensive and rapid socioeconomic, environmental, and cultural changes in the world.[8], [9] Thus, it can write 3 chains 2 conditions in Figure 3

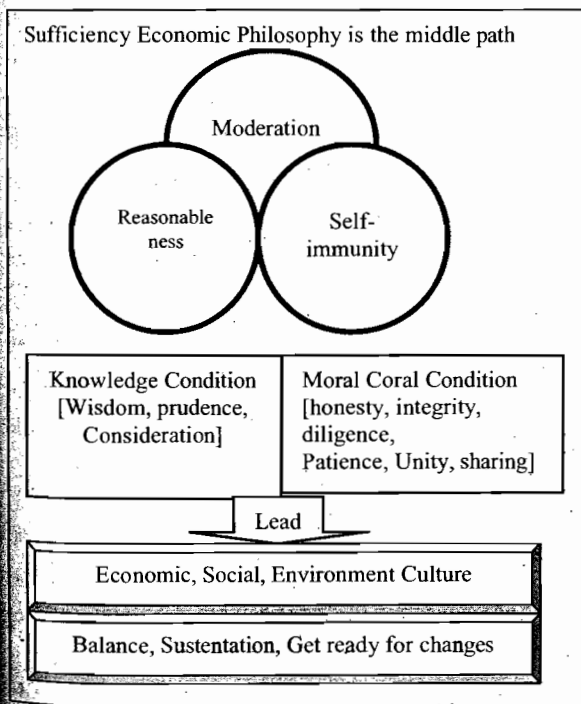


Fig.3 Sufficiency Economic Philosophy (SEP) Model

3.5 Sufficiency Economic Philosophy with ICT

Applying Sufficiency Economic Philosophy with choosing appropriate ICT is bought inexpensive technology but technically correct, appropriate production with management capacity, not more greedy, and have not take short term profit, honesty and integrity, have not take advantage from consumer and labor, focus on local market responding, stress in using economical and efficiency resource, should have harmonize modern technology and local intellect. Choosing appropriate and correspond technology with Thai capacity and Thai labor, not using high technology. As if it uses modern technology, it should create knowledge procedure for using efficiency technology and base on Thai intellect for strength and sustentation. Therefore, it should adjust management formulation to whole type, produce management system that reinforce all development with supporting for balance and sustentation. [10], [11]

3.6 Principle of ICT Strategic Management

Concept about management information technology policy and strategy. The concept management information technology is to accept general persons because of, the administration that wants output and outcome, by no interest process. The Strategic Management of Information and Communication Technology success compose with result based management, Strategic Planning, Analysis , Balance Scorecard, Strategy Map, Critical Success Factor, Cause and Effect Relationship Key Performance Indicator, and Total Quality Assurance etc. [8], [12] , [13] show in Figure 4

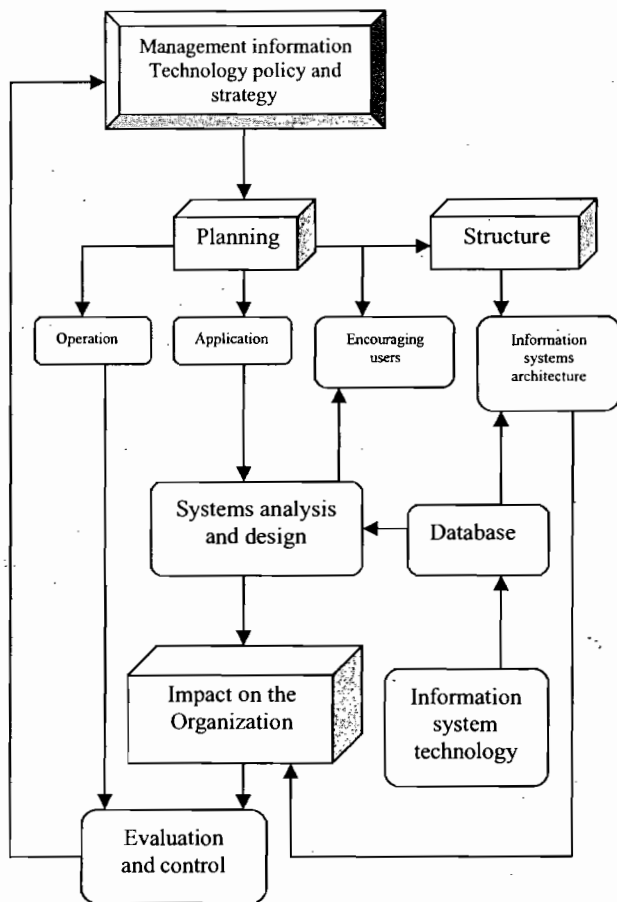


Fig.4 Principle of ICT Strategic Management

Source: Rawas sangsuriyong can appreciate the data source form: <http://go.to/rewat>

3.7 ICT Strategic Management using Sufficiency Economic Philosophy

Applied Sufficiency Economic Philosophy with technology development should be integrated new technology and local intellect for industry, corresponding with population's demand, follow the frame 3 chain 2condition as follows,

- Moderation or the middle path, stresses in not to quick or not to slow in working and living. Having sufficient, living with their own status, according to their economic capacity, not living with materialism, have freedom, lead to their security and self-reliance. Sufficiency software development is integrated using commercial software and open source software.

- Reasonableness Choosing software should be consider for saving, quality, benefit, good point or weak point of that

software. For beginner, it is difficult to develop own software, participate with open source community.

- Self-immunity All dynamic dimension form rapid change, it should get ready for the effect that might be occur, doing sufficiency is not think over the event and result in the future, limited with data, and can create self-immunity, which can deal with all situation. [14], [15], [16]

- Knowledge condition From modern management principle, trader must have be intelligent, good business skills, have information knowledge in deep, wide, good point or weak points of their businesses. Software development needs knowledge condition, not only technique but also social knowledge. Such as supporting media producing in community learning center or apply software capability with Thai intellect.

- Moral condition Moral and goodness, in term of modern management, traders should have responsibility in their profession. Not getting benefit from illegal, doing exploit or in trouble, not to cheat or take advantage from consumer and people in society, that can be damage for life, property and their businesses. Choosing software with morality is generosity, sharing knowledge in using open source software, for whole development, in personal, organization and country with unity.

- Balance and sustention There are many developing directions for balance and sustention of technology development. In this case, showing the example of open source development which do not seriously use. Open source software which accompany developed under F/OSS and Sufficiency Economic Philosophy, is the software that appropriate with Thai people and it can use longer than commercial software. [17], [18], [19], [20]

3.8 Research Hypotheses

Executives and personal in Thai organizations have high level of opinion and agreement in strategic ICT management requirements.

3.9 Research Conceptual Framework

In figure 2 Explain that researcher desires to study the executive and executant's requirement opinion about Strategic management of ICT using Sufficiency Economic Philosophy,

samples come from 20 ministry. After that take the evaluated results to develop the model of Strategic management of ICT using SEP.

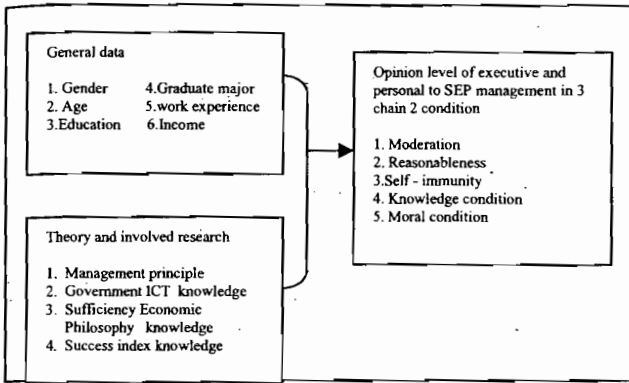


Fig.5 Research Conceptual Framework

4. Research Method

The research methodologies were both qualitative and quantitative research. The population are 20 ministries in Thailand. The sampling group were divided into two groups as follows: 1) Computer Specialist ICT users 2) ICT users.

4.1 Research Format

As mention, we use both qualitative and quantitative research.

1. The qualitative is represented by content analysis from documents and interview CIO.
2. The quantitative is represented by data collected in analyzing questionnaires.

4.2 Population and Sample

The population is the person who involve with government ICT management 20 state sector, Bangkok location. Divide in 2 groups, executive ICT management and director of ICT center, computer technician and computer user.

4.3 Research Tool

Researcher designs the questionnaire of opinion level of personal concerning to government ICT management and using SEP, and find out the quality following research methodology.

4.4 Collecting Data

Qualitative Methodology using analysis and synthesis the content from documentary and interview CIO and Quantitative to collect data, with questionnaire was used as a tool for collecting the data, the sampling group 1 and 2 amount 140 questionnaire. And researcher can collecting from To built up the questionnaire, quantitative data from group 1 amount 13 questionnaire and group 2 amount 109 questionnaire count amount all 122 questionnaire.

4.5 Data Analysis

Data analysis divided to in 2 parts, one is Qualitative data, use content analysis to analyze CIO' interview, and the other one is Quantitative data that come from questionnaires analyzed with package program for statistic mean, standard deviation, and t-test.

5. Research Result

After review literature and involved research and studying the opinion of requirement in Strategic management of ICT using SEP. From analysis and synthesis content and collect data, the result is

5.1 Personal character who give their opinion show in Table 1

Table 1 : Show personal characteristics

Personal characteristics		Number	%
Gender	Male	42	34.4
	Female	80	65.6
Age	Lower 26 years	5	4.1
	26-35 years	35	28.7
	36-45 years	60	49.2
	46-55 years	17	13.9
	Upper 56 years	5	4.1
Education	Lower bachelor degree	12	9.8
	Bachelor degree	52	42.6
	Master degree	58	47.5
Graduated program	IT	13	10.7
	Others	109	89.3

Personal characteristics		Number	%
Field of work	Lower 1 year	9	7.4
	1-5 year	36	29.5
	6-10 year	34	27.9
	11-15 year	17	13.9
	16-20 year	14	11.5
	Over 20 year	12	9.8
Salary	Lower 10,000 Bath	11	9.0
	10,001-20,000 Bath	66	54.1
	20,001-30,000 Bath	30	24.6
	Over 30,000 Bath	15	12.3

5.2 There is medium opinion level in self immunity, and high opinion level in reasonableness, moderation, knowledge condition and virtue condition, show in Table 2

Table 2 Opinion Level of requirement in Strategic management of ICT using SEP.

Opinion Level of requirement in Strategic management of ICT	\bar{x}	S.D.	Opinion Level with requirement
moderation	4.1421	.86766	high
reasonableness	3.6496	.56193	high
self immunity	3.3087	.38550	medium
knowledge condition	3.9016	.55163	high
virtue condition	3.9836	.66784	high
Total	3.7971	.41245	high

From table 2 CIO and Personal in organization give their opinion in medium level in self immunity (\bar{x} =3.3087) and high level in moderation (\bar{x} =4.1421) reasonableness (\bar{x} = 3.6496), knowledge condition (\bar{x} =3.9016) and virtue condition (\bar{x} = 3.9836)

5.3 Hypothesis test with t-test, at reliability 0.05 found that acceptance the hypothesis that CIO and personal in organization have high level opinion in Strategic management of ICT using SEP, in the frame 3 chain 2 condition i.e. moderation, reasonableness, self immunity, knowledge condition, and virtue condition, show in Table 3

Table 3 Show result test opinion level of personal in organization with requirement in Strategic management of ICT using SEP.

Opinion Level of requirement in Strategic management of ICT	Test Value = 3.41					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
moderation	9.319	121	.000	.7321	.5766	.8876
reasonableness	4.709	121	.000	.2396	.1389	.3403
self immunity	-2.901	121	.004	-.1013	-.1704	-.0322
knowledge condition	9.844	121	.000	.4916	.3928	.5905
virtue condition	9.487	121	.000	.5736	.4539	.6933
Total	10.367	121	.000	.3871	.3132	.4611

From table 3 Hypothesis test with t-test, at reliability 0.05 found that acceptance the hypothesis that personal in organization have high level opinion in Strategic management of ICT using SEP, in the frame 3 chain 2 condition i.e. moderation, reasonableness, self immunity, knowledge condition, and virtue condition.

6. Conclusion

To study Opinion Level of requirement in Strategic Management of ICT using SEP found CIO and personal in Thai public organizations with requirement in Strategic management of ICT using SEP. their opinion in medium level in self immunity and high level in moderation reasonableness, knowledge condition and virtue condition. From this result, researcher will apply for development research conceptual framework of strategic management of ICT using SEP for a Thai public organizations on next.

7. Discussion and Suggestion

The result research can be a way to develop model of Strategic management of ICT using SEP. Next step, for case study, should develop success indicator index of model that synthesis and test for evaluate ICT management model.

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