Information Management and Business Review
Vol. 6, No. 5, pp. 226-233, Oct 2014 (ISSN 2220-3796)

Trend of BS 8900: 2006 Guidance for Managing Sustainable Development Application in Thai Logistics Service Providers

Pareeyawadee Ponanake
Dhonburi Rajabhat University, Bangkok, Thailand
pareeyawadee@gmail.com

Abstract: The research aimed to study 1) the opinions of Thai logistics provider towards BS8900:2006 Guidance for Managing Sustainable Development and 2) the trend of Thai logistics providers towards the application of BS8900:2006 Guidance for Managing Sustainable Development. Populations were Freight Forwarding service providers on the list of Thailand's logistics service providers for freight forwarding service and TIFFA including international logistics company i.e. UPS, DHL, TNT and FedEX. The sample groups were random by multi stage sampling. The size of sample group was 168 persons. The research methods were questionnaires which were analyzed by percentage, Mean, Standard Deviation, and inferential statistics perfuming by Logistic Regression. The research found that 1) the opinions of Thai logistics providers towards BS8900:2006 Guidance for Managing Sustainable Development was strongly agreement 2) The probability of application of BS8900:2006 Guidance for Managing Sustainable Development was increased 2.134 times and the accuracy of forecast was 84.5%

Keywords: *Sufficiency Economy, Guidance for Managing Sustainable Development, BS89000:2006, Thai Logistics Service Provider*

1. Introduction

The result of National Economic and Social Development Plan issue no. 1-7 was concluded that the economy, society, natural resources and environment had a lot of problems such as the unstable development, this caused the amendment of the 8th National Economic and Social Development Plan which adhered to royal ideal of "Sufficiency Economy" and continuously developed to the plan issue no.9-10. The Sufficiency Economy plan in 10th plan was widely applied in many state agencies and became the government policy and practice such as financial regulations, financial institutions stability, reasonable investment in large projects and efficient risk management. The private agencies also applied the royal idea in their productions by using local materials, wisdom and environment friendly. The business administration concentrated the saving, research and profit returning to society and staffs. The academic institutions rushed to build knowledge, curriculum arrangement, teaching and learning, training, knowledge exchange concerning the Sufficiency Economy Philosophy. In agricultural section, farmers used the new theory in their farming which they can make and save money including wealthy and also people participated and had self- immunity, cultural improvement, quality of life and family, good relations, sufficient income and good living.

Sustainable Development idea was meant to the development way to respond the demand without right limitation of descendents in the future and King Bhumibol provides the Sufficiency Economy which encouraged Thai people to have wisdom and flight with greed in capitalism and consumerism. People realized the sufficiency economy, moderation, carefulness of consumption and natural resources usage which they had ever less concern. The sample practice of the Sufficiency Economy was acted by His Majesty the King for a long time. It should be concluded that the Sufficiency Economy emphasized the action with rationality, moderation, self-immunity on the base of carefulness, intelligence, morality (honesty, patience, diligence, perseverance, wisdom and share) which leaded to life of balanced economy, society, environment, stability and sustainability at the end. To successfully apply the Sufficiency Economy philosophy in organization, the business owners should understand the philosophy accurately as well as expand the idea to their staffs at every level and businesses were competitive in the globalization and sustainable growth. Furthermore, to build visions, staffs should have clear vision to build their confident and be pleased to be a part of organization development with the principle of Sufficiency Economy philosophy (Wiriyapiphat, 2009).

The business owners should apply the sustainable development more responsible than people, excluding concentrating the effective goods production and cleaner technology (CT), reduce, reuse, recycle, eco design, Life Cycle Assessment including environment standard ISO14001. The green supply chain management (GSCM) became the philosophy which organizations and partners could make profit and market sharing by reducing environmental risk management and impact of GSCM whereas they improved the econological system (Rao & Holt, 2005; Zhu et al., 2007; DeFigueiredo & Mayerle, 2008). People got pressure from community and consumers who concerned the environment, then leaded to strict regulations of environment for instance European Union (EU) issued the laws that manufacturer should manage electronic garbage by integrating environment and manufacture (Rao & Holt, 2005; Yang et al., 2009, Paulraj, 2009). Moreover, the green supply chain management in global, each company should prepare the effective environmental and social management of suppliers (Seuring & Muller, 2008; Yang et al., 2009). Even though those companies practiced following the environmental systems and were responsible for society and laws, they could be the sustainable competition and make profit (Paulraj, 2009). The British Standards Institution managed the sustainable practice for organizations and announced BS8900:2006 Guidance for Managing Sustainable Development which got ideas from sustainable development management developed either state or private agencies of any size by concerning to the balance of economic, society and environment (Trakulhiranpadung, 2001).

Logistics system was one of the factors which raised level of trade investment competition of country as it was main cost of entrepreneur in agricultural, industrial and service area. However, Thailand had the basic logistics systems which focused the delivery from manufacturer to consumer in principle whereas the development countries such as Australia, EU and USA had the progressive logistics systems which integrated logistics system starting the raw materials purchase till production and delivery to consumers (Department of Trade Negotiations, 2013). Presently the logistics service providers are separated into 5 major services; land logistics service providers, sea logistics service providers, air logistics service providers, freight forwarders and warehouse service providers which are registered with Department of Business Development more than 10,000 companies and 80% of these companies are SME of which registered capital is less than 5 million Baht and administered by family and most of them are only logistics service.

From the Project report of study the increasing competency in Thai logistics competition showed that most of logistics service providers in Thailand are famous foreign companies and many Thai logistics service providers are capable of competition with oversea companies (Department of Trade Negotiations, 2013:12).

- Land logistics service providers companies have 97.95% of Thai shareholders and 2.05% of foreigners including the big companies such as DHL (16%) and Thai Cement (10%).
- Water logistics service providers companies have 93% of Thai shareholders and 7% of foreigners including the big companies such as NYK (14%) and OOCL (12%).
- Air logistics service providers companies have 64% of Thai shareholders and 36% of foreigner shareholders such as TG, NIPPON and BFF.
- Warehouse service providers companies have 86% of Thai shareholders and 14% of foreigner shareholders such as DHL (11%) and CEVA (10%).
- Shipping companies have 87% 0f Thai shareholders and 13% of foreigner shareholders including major companies such as DHL (22%) NYK (22%) and MAERSK (12%).

Table 1: List of major logistics providers companies in Thailand

Rank	Land Logistics	Sea Logistics	Air Logistics	Freight Forwarder	Warehouse
	DHL	NYK	TG	DHL	DHL
		OOCL	NIPPON	NYK	CEVA
	NYK	MAERSK	DHL	MAERSK	SCHENKER
	CEVA	KLINE	BFF	CEVA	NYK
	LINFOX	APL	AGILITY	NIPPON	IDS

Source: Project Report of Study the increase of competency in competition of Thai logistics ref. (Department of Trade Negotiations, 2013)

From above data, the researcher would like to study the trend of applying BS8900:2006 Guidance for Managing Sustainable Development in Thai logistics service providers to be competitive in long term which the purposes of study are as follows:

- To study the opinions of Thai logistics provider towards BS8900:2006 Guidance for Managing Sustainable Development.
- To study the trend of Thai logistics service providers to apply BS8900:2006 Guidance for Managing Sustainable Development in their organizations.

2. Literature Review

Sustainable Enterprise with BS 8900: 2006: Sustainable development for the business organization should have a social responsibility. In addition to optimizing the use of resources to produce goods and Cleaner Technology (CT), reduce, reuse and recycle. Besides Eco Design, Life Cycle Assessment (LCA) as well as the entering of Environmental Management Systems (EMS) (ISO 14001) is another interesting one. Also Organization's Managing Sustainable; British Standards Institution prepared and announced the standard of BS 8900: 2006 Guidance for Managing Sustainable Development which establish the concept or guideline for Managing Sustainable Development. The public and private sectors of all sizes had developed their organization regardless balance of economic, social and environmental. Organization's Managing Sustainable principle (Trakulhirunpadung, 2011) comprise of

- Inclusively: cover stakeholder who had the positive impact and negative impact.
- Integrity: honest, fair, impartial and compliance with laws and regulation related correctly.
- Stewardship: to maintain the quality of life, environmental, social, skill development, share, applications and acceptance.
- Transparency: ability to access reliable information.

Logistics: Logistics is the planning procedure, operation, control and 2 ways transportation, goods warehouse, service and concerned data effectively and efficiently from beginning production to final destination to respond the customers' needs. Logistics network consists of goods delivers or material provider or supplier, production centre, warehouse, distribution centre and retailer which there are material flow, work-in-process and ready goods between various divisions of supply chain (Atteerawong & Chantraprakaikul, 2006). The purposes of logistics management are to operate effectively by integration of activities including material provider, transportation and goods warehouse when the transportation expenses and higher cost of import and export margin. Concentration of logistics is suitable for job application (Khamboon, 2008). Logistics Service Providers: LSPs means to management business which provides the services of transportation, transportation, shipping, freight forwarder, transportation service supporter, customs service, inventory management, purchase, warehouse management, containers stations, deposit, storage, collection, package and distribution of goods and services.

Logistics entrepreneur means to transportation service provider not only by car, sea, air but also by pipe line. Transportations are not only transportation of packages, goods but also passengers. The transportation includes buses, ferry, cruise, air line and planes which can transport passengers (Logistics Research Centre and College of Logistics Management, Burapha University: 6-3). Office of the National Economic and Social Development Board appointed as the Secretariat of National Logistics and Service Management Board, separates the Thai logistics into 5 categories

- Goods transportation covers the work scope of logistics concerning the transportation of goods both local and export in the various ways by road, train, sea and air.
- Goods storage, maintenance and warehouse management and goods labeling or packaging including goods distribution.
- Services concerning logistics including customs procedures.
- Other logistics services as the complementary services.
- Packaging and post

Categories of Logistics Providers: Logistics providers are separated into 4 categories as follows:

- Subcontractor is the form of original service by assigning the simple jobs to the outsources. The concerned jobs are unskillful and no high technology or no high risk which save money to use subcontractors.

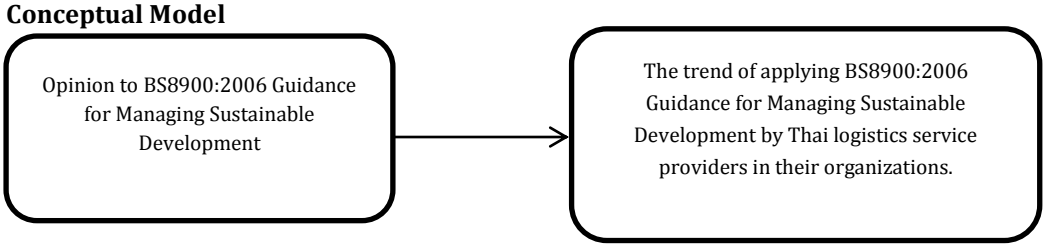
- Logistics Provider is the kind of job concerning logistics of which procedures are more complex than subcontractor. The kind of jobs uses special skill and technology but not integration. The users can use many logistics providers and manage them by network.
- Third Party Logistics (3PL) are the logistics service providers which must have skills, global network with high technology tools and investments. The scope of work will be widely and TPL will be the agent of user and customers and must have integrated network especially world-wide network and have high investment.
- Fourth Party Logistics (4PL) is the logistics providers at the highest level which are responsible of management and control each 3PL to be able to cooperate each other. Their duties will be agent of service users and control 3PL to practice according to user's agreement.

The Importance of Third Party Logistics (3PL) Providers: The major trend of world is the globalization and free trade cause each countries more closer, more intervention, including the development of science and progressive communicative technology which impact directly to work and management of many companies, for instance, short product life cycle, more specific need of customers which effect the business growth of build-to-order. According to high competitive situation as mentioned, the companies state to brand building and outsource some jobs (not major jobs), for instance, outsource of logistics activities etc.

3. Methodology

Populations and sample group of the study were selected from freight forwarding service providers on the list of Thailand's logistics service providers and TIFFA including international logistics service providers (UPS, DHL, TNT and FedEx Thailand) totaled 168 companies. The research data was collected during April 2013 – August 2013. The independent variables were BS8900:2006 Guidance for Managing Sustainable Development and dependent variables were the trend of applying BS8900:2006 Guidance for Managing Sustainable Development of Thai logistics service providers in their organizations. Research framework is as following

Figure 1: Conceptual Model



Research tool was questionnaires which separated into 3 parts as follows:

- Part 1 was general information and personal status of Thai logistics providers which was qualitative data measured by Normal Scale and Ordinal Scale.
- Part 2 was the questionnaires about the opinion to BS8900:2006 Guidance for Managing Sustainable Development which was quantitative data measured by Interval Scale. Each question had 5 levels of answers respectively.
- Part 3 was the questionnaires about the trend of application of BS8900:2006 Guidance for Managing Sustainable Development which was qualitative data measured by Normal Scale.

Descriptive Statistics: The personal data of sample group and statistics of data analysis i.e. Percentage. The opinion to BS8900:2006 Guidance for Managing Sustainable Development, statistical methods i.e. Frequency, Percentage, Mean and Standard Deviation (SD). Trend of application of BS8900:2006 Guidance for Managing Sustainable Development in Thai Logistics Service Providers, statistics of data analysis i.e. percentage.

Inferential Statistics: The hypothesis was tested by logistic regression for tested trend of application of BS8900:2006 Guidance for Managing Sustainable Development.

4. Finding

The result of data analysis found that most of Thai logistic providers were company limited at 80.3%. The most of the capital registered was started 10,000,001 Baht up at 59.5%. The service kind of logistic providers was third party logistics in the area of Bangkok, local and international country at 62.5%. Most of company had 201 staffs up at 57.7% and period of business started from 11 years up at 63.7%. The research result was shown in Table 3 showed that the opinion towards the BS8900:2006 Guidance for Managing Sustainable Development had mean = 3.9083 and strongly agreement.

Table 2: Sample group's quantity and percentage which distinguish as per Business Type, Capital registered, Type of Service Area, Number of employees and period of business

General Information		Quantity	Percentage
1. Business Type			
	Sole Proprietorship	10	6.0
	Limited Partnership	0	0
	Company Limited	135	80.3
	Public Company Limited	23	13.7
2. Capital registered			
	Less than or equal to 5,000,000 Baht	30	17.9
	5,000,001-10,000,000 Baht	38	22.6
	10,000,001 Baht up	100	59.5
3. Type of Service Area			
	Third Party Logistics Service Provider; Specific Service areas in Bangkok and its Vicinity	12	7.1
	Third Party Logistics Service Provider; Specific Service areas in Bangkok, metropolitan and nationwide	51	30.4
	Third Party Logistics Service Provider; Specific Service areas in Bangkok, local, nationwide and international	105	62.5
4. Number of employees			
	Less than or equal to 50 employees	41	24.4
	51-100 employees	14	8.3
	101-150 employees	0	0
	151-200 employees	16	9.6
	201 employees up	97	57.7
5. period of business			
	Less than 1 year	9	5.3
	1-5 year	26	15.5
	6-10 year	26	15.5
	11 years up	107	63.7
Total		**168**	**100**

Table 3: Mean ($\bar{X}$), standard deviation (S.D.)

	$\bar{X}$	S.D.	Opinion Level
Opinion to BS8900:2006 Guidance for Managing Sustainable Development	3.9083	0.68787	Strongly Agreement

From Table 3 found that the opinion level towards the application of BS8900:2006 Guidance for Managing Sustainable Development was strongly agreement.

Table 4: Quantity and percentage of sample group in the trend of application of BS8900:2006 Guidance for Managing Sustainable Development

Data		Quantity	Percentage
Trend of application of BS8900:2006 Guidance for Managing Sustainable Development	*No trend*	26	15.5
	With trend	142	84.5
Total		168	100

From table 4 found that the percentage of trend of application of BS8900:2006 Guidance for Managing Sustainable Development was 84.5% and no trend of application was 15.5%.

Table 5: Percentage of variation in Logistic Regression Model and test of model

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square	Chi-square	df	p-value
1	138.835[a]	.035	.060	14.549	8	.069

From table 5 found that Nagelkerke R Square = 0.60 which meant that 6% of variation could be explained by logistics equation and p-value equaled 0.69 which higher than statistical significance equaled .05, it concluded that this model was fit.

Table 6: Test of reliability of Model

Observed		Predicted		
		Trend of application of BS8900:2006 Guidance for Managing Sustainable Development		Percentage Correct
		No trend	With trend	
Step 1	Trend of application of BS8900:2006 Guidance for Managing Sustainable Development	No Trend 0	26	.0
		With trend 0	142	100.0
	Overall Percentage			84.5

The cut value is .500

From table 6 found that the BS8900:2006 Guidance for Managing Sustainable Development was applied in 168 companies which was 100% accurate and overall percentage was 84.5%.

Table 7: Probability of events

		B	S.E.	Wald	df	Sig.	Exp (B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	Opinion towards BS8900:2006 Guidance for Managing Sustainable Development	.758	.316	5.738	1	.017	2.134	1.148	3.967
	Constant value	-1.172	1.182	.985	1	.321	.310		

From table 7 found that the probability of events of application of BS8900:2006 Guidance for Managing Sustainable Development in their businesses were increased by 2.134.

5. Conclusion

The research found that the opinions of Thai logistics service providers towards the BS8900:2006 Guidance for Managing Sustainable Development, were highly agreed which corresponded with the research of Ponanake (2010) on the topic of the factors of communication influencing the awareness of standard of social responsibility ISO 26000 of company staffs in Thonburi area. The result found that in overall the awareness of company staffs was highly level. The probability of trend of application of event of BS8900:2006 Guidance for Managing Sustainable Development increased 2.134 and overall percentage

of correct forecast equaled 84.5% which corresponded with the research of Tangkiatsilp & Sayaphan (2008) about the opinions of Thai exporter towards social responsibility ISO 26000. The research result found that the opinions towards international standard of all social responsibility related with the trend of application of international standard of social responsibility and opinions towards social responsibility report had statistical significance of 0.05.

Recommendation: BS8900:2006 Guidance for Managing Sustainable Development stated the suitable investment and expanded their businesses without debt. The government will be the part of financial and academic supports to the companies. The entrepreneurs must corporate with the government by applying the standard to their businesses which provides the benefits and no effect to other agencies and environment for better society in the future and lead to sustainable businesses. According to the research of Thepphitak & Duangpatra, (2011) studied the increase of competency of Thai logistics service providers and found that most of Thai logistics service providers (between 78% – 85%) were medium and small size of businesses and lack of logistics management knowledge and business operation in globalization. Thus, both state agencies and concerned organizations should start their propaganda of the BS8900:2006 Guidance for Managing Sustainable Development to Thai logistics service providers in order that they were able to compete sustainably and effectively with the international competitors, and without over-debt investment. The state agencies should organize the media to public the BS8900:2006 Guidance for Managing Sustainable Development and also pointed out the advantage of concept to society in order that society will support and pressure the organizations to reorganize. In addition, the companies which applied the BS8900:2006 Guidance for Managing Sustainable Development should spread their ideas to their competitors or their associated companies. Furthermore, the business development should be measured and evaluated from manufacturers to end users who applied BS8900:2006 Guidance for Managing Sustainable Development.

The staffs of companies and organizations should understand the BS8900:2006 Guidance for Managing Sustainable Development and be the parts and supporters of organizations (Poochinda, 2012) and should be supported by concerned organizations. The administrators should be the models of living following the BS8900:2006 Guidance for Managing Sustainable Development. The comparison of benchmarks, the follow up and operative evaluation of excellent organizations applying the BS8900:2006 Guidance for Managing Sustainable Development should be done. The continuous follow-up and evaluation should be set as the best practice for the sustainable organizations and set up learning center of sustainable business based on Sufficiency Economy concept and was able to be competitors. In the future, the companies will select suppliers which operated standard BS8900:2006 and at the same time set up network and collaboration among the same supply chains.

Acknowledgement: This research is a part of research on "Comments of Thai Logistics Providers to BS8900:2006 Guidance for Managing Sustainable Development" funded by National Research Council of Thailand.

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