

# The Relationship between Entrepreneurial Business and Logistics Cost Management

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**Abstract**— This research aims to study the relationship between the entrepreneurial business factor and the logistics cost planning. The population in this research were small and medium-sized enterprises. 400 samples were collected using questionnaires as a research tool. The statistics used for data analysis were percentage, mean, standard deviation, hypothesis testing with Chi-Square by determining the statistical significance level of 0.05. The results show that most of participants were on service sector, which was 47.0% of the total participants, followed by the manufacturing industry of 23.5 percent of the v, consumption of 23.5 percent of the participants, and other types of businesses 4 percent of the participants. The result of hypothesis testing showed that there is a relationship between entrepreneurial business factors and logistics cost planning with the statistically significant at the 0.05 level

**Keyword:**- *Entrepreneurial business, logistics cost planning, SMEs, Relationship*

## I. INTRODUCTION

Logistics management is the movement, storage, distribution of goods, services, or information from source to source of demand. with an integrated process by focusing on efficiency and effectiveness The goal is to deliver in a timely manner and to reduce costs. create customer satisfaction and promote added value to products and services for business and industry Logistics is very important to reduce costs. to create more business profits including being used as an important tool in business competition both in terms of increasing efficiency in customer service Build good relationship with customers both inside and outside the organization. as well as being the basis of business growth resulting in speed due to information technology. [1]

Logistics is part of the supply chain. The goal of logistics management focuses on efficient and effective logistics management. create customer satisfaction Supply Chain Management Section There

will be a goal as a broader management principle. From purchasing raw materials from suppliers until delivery of products to customers to create a business advantage. Logistics cost planning

The Agility Emerging Markets Logistics Index 2020 report concludes that small businesses (S) were unable to manage the costs of running a business and make a profit which led to their disadvantage to large operators who had the ability to manage costs. This was in line with data from the Agility Emerging Markets Logistics Index 2020, which was a benchmark. competition in logistics considering the factors that attracted logistics providers such as intermediary between importers and exporters, container shipping lines transport operators and air distributors. According to the survey, the three main factors that prevented small businesses from global trade were bureaucratic trade management (17%), government/border instability (%). 14) and lack the ability to compete with Major competitors (14%) [2] Cost management Efficiency was an important factor in driving any business especially, it was an import or export business both medium and small. Each of them had a lot of competitors. There were also new entrepreneurs who were ready to compete in the industry all the time. Creating added value from what was available without investing in additional resources considering as a guideline to improve operational efficiency[3]

Although the business was generates income and profits for small and medium-sized business operators, however, it was in higher competition. Therefore, it was imperative that entrepreneurs had good transportation and storage of goods in order to maintain good quality of products [4]. Logistics management therefore increased efficiency and promotes increase speed and spawn maximum efficiency for operators. The benefits of logistics Business would increase profits. Moreover If there were a good logistics system planning or good distribution planning, it could reduce storage space,

reducing the amount of storage. And It would help reduce costs. Therefore, planning a good logistics system would reduce the damage caused by time issues, reduce costs and create profits and customer satisfaction [4][5]

*A.Objective*

To explore the relationship between entrepreneurial business factors are related to logistics cost planning.

*B.Hypothesis*

There is a relationship between entrepreneurial Business factors and logistics cost planning.

**II. LITERATURE REVIEW**

Logistics costs occupy a very important place in the composition of the company's management costs, yet traditional cost calculation methods are largely insufficient to provide sufficient information for good management. Leads to a specific management tool: the total cost of ownership. Customer profitability analysis direct profitability of products and cost accounting by activities. It also presents an incomplete view of what constitutes total logistics costs over the years.[6]

*Small and Medium Enterprises ( Small and Medium Enterprises, SMEs)*

Office of Small and Medium Enterprises Promotion The definition of enterprises is to cover three major groups of businesses, namely; ( 1) Production Sector covers production in the agricultural sector( Agricultural Processing) Manufacturing and Mining, ( 2) Trading sector covering wholesale (Wholesale) and retail (Retail); (3) Service Sector

As for the size characteristics of small and medium enterprises Determined from the superlative value of fixed assets for the entity each type as follows:

1. Manufacturing company: medium size, no more than 200 million baths, small size, no more than 50 million baths.
2. Service business: medium size, no more than 200 million baths, small size, no more than 50 million baths.
3. Trade: medium-sized wholesale not exceeding 100 million baht, small-sized not exceeding 50 million baht.

Medium size, retail no more than 6 quarter baths, Small retail size, no more than 30 million baths. Gu and dong suggested that logistics companies should control the total cost of the entire supply chain of logistics starting from their characteristics in terms of cost containment, to accelerate development and improvement, so as to improve their competitiveness Make a very important industry in China's economic development and a new economic growth point. At the same time, logistics companies should reduce their costs, have close contact with all companies in the supply chain, establish mutual aid and mutual benefit

sharing When implementing cost control, logistics companies should implement not only partial logistics cost control , rather the total logistics cost should be analyzed and controlled from the perspective of the overall supply chain. sourcing, and analyzed and controlled to form the complete process of the entire supply chain Total logistics cost. It can also effectively control and supervise total logistics costs.[8]

Choncharoen Sawangrat ( 2008) studied the factors affecting the logistics cost of hand tools. Thai industry by analyzing the relationship of various factors with logistics costs according to group activities. A total of 70 industrial handicraft samples indicated that the customer service factor hiring subcontractors and raw material procurement and the level of raw materials influenced the cost of logistics management. Inventory Management factors influenced the cost of holding inventory. Factors of location and warehouses influenced the cost of warehouse management. And factor of transportation influenced on the cost of transportation. [8,9,10]

**III. RESEARCH METHODOLOGY**

Population used in the study was entrepreneur of small and medium enterprises in Pathum Thani Province with the total of 24,453 persons[2]

The Taro Yamane formula was used to calculate the sample size at the 95% confidence level. The 5% tolerance yields the sample size was conducted. Therefore, the sample size used in this research was 400 samples. The online questionnaires was used for data collection.

Online questionnaires were used as the tools for data collection. The research tool was an online questionnaire, a check list survey, a Rating Scale and open-ended questionnaires. The questionnaire was using a five-point Likert scale (1 = very negative, 2 = negative, 3 = neutral, 4 = positive, 5 = very positive). Questionnaire was tested to find the confidence value of the questionnaire (reliability) using the Cronbac Alpha method which had a confidence value of 0.82. The data was analysed using SPSS with descriptive analysis and Chi-Square.

**VI. RESEARCH RESULT**

Table 1 the type of Entrepreneurial Business

Type of business	Frequency	Percentage
Services	188	47.0
Consumption	94	23.5
Manufacturing Industry	102	5.25
Other	16	4.0
<b>Total</b>	<b>400</b>	<b>100</b>

From Table 1, it was found that most of the respondents had the type of service, which was 188 people, representing 47.0% of the total respondents,

followed by the manufacturing industry of 102 people, representing 23.5 percent of the respondents. Overall, the third place was consumption of 94 people, representing 23.5 percent of the total respondents, and lastly, other types of businesses (such as hero Ligae, import of medical equipment, leasing, food) , 16 people, accounting for 4 percent of the total respondents.

*Hypothesis testing*

Entrepreneurial business factors are related to logistics cost planning.

A statistical hypothesis can be written as follows:

$H_0$  = There is no relationship between entrepreneurial business factor and logistics cost planning

$H_1$  = There is a relationship between entrepreneurial business factor and logistics cost planning

Table 2 Results of the analysis of the relationship between Entrepreneurial Business factors and logistics cost planning based on type of business.

Logistics Cost Planning	Type of Entrepreneurial Business				n	$\chi^2$	Sig
	Services	Consumption	Manufacturing	Other			
Industry							
400 36.12 0.023							
1. customer service costs	43	32	20	-	95		
	45.26%	33.69%	21.05%	-			
2. transportation cost	-	41	21	23	85		
	-	48.24%	24.70%	27.06%			
3. warehouse costs	-	32	44	14	90		
	-	35.55%	49%	15.45%			
4. order processing and information system costs	-	23	37	23	83		
	-	27.71%	44.58%	27.71%			
5. quantity costs	-	19	13	15	47		
	-	40.43%	27.66%	31.91%			

From the table 2 shown, there was a relationship between entrepreneurial business factors and logistics cost planning based on type of business by using the Chi-square statistic at the significance level of 0.05. It was found that the chi-square value was 36.12 and the significance level of the test (Significant Sig.) was 0.023, which was less than the level of significance. The set significance is (Sig. < 0.05), i.e. reject the main

hypothesis  $H_0$ , accept the secondary hypothesis  $H_1$  means that the entrepreneurial business factor was related to logistics cost planning based on type of business which is consistent with the hypothesis

**V. CONCLUSION AND DISCUSSION**

There is a relationship between entrepreneurial business factors based on type of business with logistics cost planning with the statistically significant at the 0.05 level.

Factors of Entrepreneurial Business are related to logistics activities, which is consistent with the research of Gu and Dong in their study of Logistics Cost Management from the Supply Chain Perspective which suggested that logistics companies should control the total cost of the entire supply chain of logistics starting from their characteristics in terms of cost containment, to accelerate development and improvement[8]. This research suggests that logistics activities are one of the vital factors for Entrepreneurial Business to manage company’s profit. However, this research did in Pathum Thani province only, in the future should conduct research all province in Thailand.

**References**

[1] Waters D., Logistics: An Introduction to Supply Chain Management, Palgrave Macmillan 2003

[2] Office of Small and Medium Enterprises Promotion (2021) Economic Valuation for Small and Medium Enterprises Office of Small and Medium Enterprises Promotion (OSMEP), 2021, Bangkok :

[3] Agility Emerging Markets Logistics Index 2020 retrieved from 10 March 2022 <https://www.agility.com/en/emerging-markets-logistics-index/>

[4] Pochanan Kreetha. (2009). Logistics management of the Jasmine Suan Farmers Group. in Charoen Phon Subdistrict Banphot Phisai District Nakhon Sawan Province Naresuan University/ Phitsanulok. DOI : [https://doi.nrct.go.th/ListDoi/listDetail?Resolve\\_DOI=10.14457/NU.the.2009.29](https://doi.nrct.go.th/ListDoi/listDetail?Resolve_DOI=10.14457/NU.the.2009.29)

[5] Reungsak Krachangchan (2006) . Logistics Management of Rice Mill Business Entrepreneurs in Roi Et Province. Study, independent research, Master of Business Administration. Mahasarakham University. Mahasarakham. 72 pages.

[6] Ruthi Banomyong. (2004). Logistics Management in Thailand. Bangkok: Good Times Publishers.

[7] Silva, L. M.; Silva, A. M.; Oliveira, C. H. A. de; Carneiro, H. A. V.; Souza, P. T. de; Beserra, F. J.; da Silva, C. M. G.; Rondina, D., 2014. Reproductive responses and productive characteristics in ewes supplemented with

- detoxified castor meal for a long period. Rev. Bras. Zootec., 43 (8): 419-427
- [8] Yu Gu, Shaojian Dong (2016). Logistics Cost Management from the Supply Chain Perspective, Journal of Service Science and Management, 2016, 9, 229-232
- [9] Ruth Banomyong (2018) Cross-border logistics and e-commerce trends in logistics and trade logistics Thailand 17, 189 (May 2018) 21-26 [7] (Praam Chanchiva, 2012).
- [10] Thanakorn Muenjai 2019 the factors and logistics activities affecting the efficiency of the shipping process of ornamental flower business entrepreneurs in Khlong 15 Ornamental Flower Village, Nakhon Nayok Province Independent research Faculty of Business Administration Rajamangala University of Technology Thanyaburi 2019
- [11] Choncharoen Sawangrat (2007) Factors affecting logistics costs of Thai industrial handicrafts. Graduate School Chiang Mai University, Chiang Mai [10] Napassorn Leeraphong (2004)
- [12] Suthathip Lertwiwachaiporn et al. (2018) logistics and supply chain management for truffle farmers Suphanburi Province <http://www.rdi.rmutsb.ac.th/2011/download/n60/7.pdf> retrieved from 15 January 2022