# The efect of characteristics of SMEs to the order processing and information system costs Kanokporn Chaiprasit, Prin Weerapong, Ryan Faderogaya

https://doi.org/10.22306/atec.v9i4.184

Received: 02 Oct. 2023; Revised: 06 Nov. 2023; Accepted: 12 Dec. 2023

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**Keywords:** logistics, order processing, information system, cost reduction, characteristics of small and medium enterprises (SMEs).

Abstract: It is apparent that the logistics process can reduce cost in order to have an efficient profit, efficient suitable and efficient economical way to run a sustainable business. This research aimed to study the effect of characteristics of small and medium-sized enterprises (SME) on the reduction of operating costs to get the most benefit and most suitable and the most economical way to run a sustainable business. A case study of logistics of small and medium-sized enterprise entrepreneurs in Pathum Thani Province by using questionnaires to collect 400 sets of data. The results of the study showed that the purchase order and the information system affected the reduction of operating costs. Participants responded the different registered capital of small and medium-sized enterprises (SME) have differences in managing cost systems, and the business uses information systems in the flow of information through electronic processes that are ordered by customers systematically with statistical significance at the level of 0.05.

### 1 Introduction

Enterprise management is an important part of enterprise management and an important factor that contributes to enterprise operations. It is apparent that logistics process can reduce cost in order to have the efficient profit, efficient suitable and the efficient economical way to run a sustainable business [1]. Logistics management is an important strategy that helps Small and medium enterprises (SMEs) can enhance their capabilities, compete and be able to earn more profits [2]. The main goal of logistics cost management can be divided into are two factors: 1) To reduce the total cost 2) To be able to respond to demand attract customers effectively, but to achieve goals [2]. Entrepreneurs, it is necessary to study the meaning, logistics management, main logistics activities, SME business logistics cost and profit management planning, analysis and calculating costs to determine. The distribution prices is considered to enable SMEs to manage the cost. Therefore, attention must be paid to the planning and control of such logistics activities. Effectively improve the success potential of SME entrepreneurs and possess their potential.

### 1.1 Objective

To study the effect of the characteristics of Small and Medium Enterprises (SMEs) to the purchase order and information system cost

#### 1.2 Research hypothesis

There is the effect of the characteristics of Small and Medium Enterprises (SMEs) to the purchase order and information system cost.

#### 1.3 Expected outcome

To enable SMEs to choose the method that is most useful most suitable and the most economical for sustainable business operations.

# 1.4 Cost reduction

Cost refers to expenses that expected to occur and cause the business to receive benefits or returns in the form of assets or services. Business costs can be considered separately based on usage for instance, benefits that should be received during a certain period of time. Order processing and information system costs are costs related

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to the process of managing customer orders. Both communication inside and outside the organization and demand forecasting [3].

#### 1.5 Order processing and information system costs

Order processing and information system costs are costs that arise from the order process activities, beginning with the receipt of an order from the customer. Word data management Internal and external communications, purchase order, product distribution Including forecasting future customers' needs [4].

# 2 Methodology

## 2.1 Population

Population used in the study is Entrepreneurs of small and medium enterprises that export business in Pathum Thani Province. In the total of 24,453 persons.

# 2.2 Sample

Sample group used in the study Because they know the exact population. Therefore calculate the group size

samples using the Taro Yamane formula instead of values, using the formula at the 95% confidence level. The 5% tolerance yields the sample size. Therefore, the sample size used in this research Equal to 400 samples.

The questionnaire was using a five-point Likert scale (1 = very negative, 2 = negative, 3 = neutral, 4 = positive, 5 = very positive). The data was analysed using SPSS with descriptive analysis and ANOVA.

#### 3 Result and discussion

#### 3.1 Result

The characteristics of the participants are summarized in Table 1. The number of participants of the study was accounted to 400 (N=400) where more than 31.3 percent of the participants has registered capital 1-5 million, 31.1 percent of the participants has registered capital 6-10 million, 17.7 percent of the participants has registered capital 11-20 million, 8.7 percent of the participants has registered 21-30 million, 4.7 percent of the participants has registered capital 31-40 million and 6.4 percent of the participants has registered capital Over 40 million respectively.

Table 1 Characteristics of SMEs

Register Capital	N <sup>"</sup>	%
1-5 million	147	31.3
6-10 million	146	31.1
11-20 million	55	17.7
21-30 million	22	8.7
31-40 million	10	4.7
Over 40 million	20	6.4
Total	400	100

# 3.2 Hypothesis testing

The different of Characteristics of SMEs in registered capital affect the purchase order and information system cost.

H $_{0}$ : Different registered capital factors do not affect the purchase order and information system cost.

H  $_{\rm l}$ : Different registered capital factors affect the purchase order and information system cost.

The researcher used one-way analysis of variance (One Way ANOVA) with statistical significance set at the .05. level according to the determination of statistical significance to test differences among groups. In the case that there are differences between groups, the Least Significance Difference (LSD) test statistic will be used to compare the differences between those groups on a pairwise basis. The results of the hypothesis test results are as follows:



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Table 2 Statistics comparing differences in opinions regarding the purchase order and information system cost classified by registered capital

registered capital	Mean	SD	F	Sig.	
1-5 million	4.231	.697	3.579	.003	
6-10 million	4.183	.679			
11-20 million	4.129	.717			
21-30 million	4.228	.594			
31-40 million	3.833	.936			
Over 40 million	3.722	.889			
Total	4.146	.723			

By comparing differences in opinions regarding the purchase order and information system cost classified by registered capital found that fee Sig. has a value equal to .00, which is less than 0.05, therefore rejected. H<sub>0</sub> and accept H<sub>1</sub> which means different registered capital factors affect the purchase order and information system cost significant level at 0.05.

Due to the differences were found for each group, the researcher therefore tested the differences in each group in pairs using statistical tests. LSD details as shown in the following table.

Table 3 Statistics comparing differences in opinions regarding the purchase order and information system cost classified by

registered capital In pairs									
registered capital	average	1-5	6-10	11-20	21-30	31-40	Over 40		
		million	million	million	million	million	million		
		4.23	4.18	4 .13	23.4	83.3	72.3		
1-5 million	4.23	-	.486	.103	.004	.398*	.509*		
6-10 million	4.18		-	.054	045	.349*	.460*		
11-20 million	4.13			-	099	.295	.406*		
21-30 million	4.23				-	.394*	.505*		
31-40 million	3.83					-	.111		
Over 40 million	3.72						_		

sign means \* note The Statistically significant at the level 0.05

From table 3 Found that SMEs with different registered capital have 7 pairs of opinions regarding the purchase order and information system cost that are significantly different at the level 0.05.

- 1. SMEs with different registered capital 1-5 million The average opinion about the purchase order and information system cost was higher. SMEs with different registered capital 31-40 million with an average of -.398\*.
- 2. SMEs with different registered capital 1-5 million The average opinion about the purchase order and information system cost was higher. SMEs with different registered capital Over 40 million with an average of .509\*.
- 3. SMEs with different registered capital 6-10 million The average opinion about the purchase order and information system cost is higher than SMEs with different registered capital 31-40 million. with an average of .349\*.

- 4. SMEs with different registered capital 6-10 million The average opinion about the purchase order and information system cost was higher than SMEs with different registered capital Over 40 million . with an average of .460\*.
- 5. SMEs with different registered capital 11-20 million There is an average opinion about the purchase order and information system cost being more than SMEs with different registered capital Over 40 million with an average of .406\*.
- 6. SMEs with different registered capital 21-30 million There is an average opinion about the purchase order and information system cost being 31-40 million more than SMEs with different registered capital. with an average equal to .394\*.
- 7. SMEs with different registered capital 21-30 million There is an average opinion about the purchase order and

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information system cost being more than SMEs with different registered capital Over 40 million with an average equal to .505\*.

#### 3.3 Conclusion

The characteristics of Small and Medium Enterprises (SMEs) has affected to the purchase order and information system cost. This means most the Small and Medium Enterprises (SMEs) use information systems in the flow of information through electronic processes.

#### 3.4 Discussion

Determining the reduction of operating costs explains the order processing and information system effects of operating costs.

The study found that there is a strong effect of registered capital of SMEs to order processing and operating costs and information system costs. The effect of registered capital of SMEs to order processing and operating costs and information system costs which consistent to the work of Sasitorn Onsanit 's research, analyzing the activities affected to the logistics that reduce the cost of logistics systems [5].

#### References

- [1] LAMBER, D.M., STOCK, J.R., ELLRAM, L.M.: Fundamentals of Logistics Management, Boston, Mass: Irwin/McGraw-Hill, 1998.
- [2] SURIYA, K., SRICHUCHAT, S.: Analysis of Logistics System For development Medium sized enterprises and small and Lanna community enterprises Chiang Mai Province, 2007.
- [3] SRIWICHAI, N.: Logistics cost analysis of the small ceramic industry in Lampang Province, Independent study Master of Business Administration Logistics and Supply Chain Management Program, Mahawathiyalaya Mae Fah Luang, 2012.
- [4] SITTIWANGKHUN, K.: Logistic cost analysis Logistics in the vegetable processing industry of the Development Center Nong Hoi Royal Project using activity based cost approach, Master of Engineering Thesis, Industrial Engineering Program National Institute of Development Administration, 2012.
- [5] ONSANIT, S.: Analysis of Cost Reduction Logistics using Activity-based Costing System (ABC) Case Study: Johnson Controls and Summit Integrated Company Limited, Master of Business Administration Thesis: Sripatum University Chonburi Campus, 2011.

#### **Review process**

Single-blind peer review process.