

THE RELATIONSHIP BETWEEN LOGISTICS AND FINANCIAL PERFORMANCE OF SMES IN INDONESIA

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Abstract: Logistics is part of supply chain which support business activity to achieve high performance. This paper extends the previous research on the relationship between supply chain management and business performance. However, there are few research focus on assessing specific activity, such as, logistics and its relation to the business performance, especially financial performance. Previous research found that there is strong relationship between logistics and financial performance. The independent variables in this study include logistics cost, flexibility, reliability, security, service quality. Meanwhile, the dependent variable include financial performance. This study was conducted in Central Sulawesi Province by delivered 150 questionnaires, but there were 120 returned and fully completed the questionnaire. The result found that logistics cost and service quality have positive relationship to SMEs' financial performance in Indonesia. Meanwhile, flexibility, reliability and security have negative correlation to SMEs' financial performance. This paper also contributes to provide guidance in terms of relationship between logistics and financial performance in theoretical model for the managers or owner of SMEs.

Keywords: logistics performance, financial performance, SMEs

INTRODUCTION

As part of the functions of operations management, logistics plays an important role in transporting the flow of goods in and out of the company. The company need to facilitate the smooth flow of incoming raw materials (inbound) to the company with the aim to facilitate the operations. The proper inbound management will impact several aspect in the company, such as, on production schedules, distribution effectiveness, customer satisfaction and firm performance (Tracey, 2005). In fact, despite the role of logisticsis facilitating the incoming flows, logistics is also facilitating the outcome delivery. This role of logistics is expected

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to provide a better improvement of the quality of raw materials and the accuracy of the amount of raw material by the company. In other words, the logistics role should optimise the flow of goods in order to maintain quality, on time delivery and satisfaction. Therefore, the capability of logistics to manage both these flows will enhance the value added and have an impact on maintain the business performance.

The relationship between logistics performance and the company's financial performance was very positive and getting a lot of attention from academics. Anderson et al. (1997) suggests that the good performance of the logistics can reduce costs, increase revenue and efficiency and effectiveness of business assets used. Better logistics performance can assist the company in maintaining its relationship with customers by reducing cycle time required (Lambert and Pohlen, 2001). Other studies supporting the relationship between logistics performance and financial performance concluded that the cost of logistics and the quality very big influence on retail companies (Schramm-Klein and Morschett, 2006). Meanwhile, research Shang and Marlow (2005) concluded that the financial performance of manufacturing firms in Taiwan increased due to their logistics performance are improved. Thus, the company can have more benefits from the improvement of logistics performance.

In general, logistics management in large-scale enterprises are equipped with the high technology supported. Instead, logistics management is one of the problems, or it is one of the challenges for SMEs to be solved. The limitations of SMEs might affect their effort to improve their logistics performance. The limitations that could affect the logistics performance of SMEs can be seen as follows: lack of good storage facilities, lack of transportation facilities, lack of understanding of good logistics management, lack of skills and knowledge of technology, and integration as well as poor coordination with other entities. Some of these limitations may affect the improvement of the SMEs performance. Furthermore, SMEs is also facing with the increasing demand to shorten the cycle time of product distribution. This demand led to any effort required to reviewing the logistics distribution network. Some problems in the logistics distribution network might occur, such as, production, inventory locations, and the placement of the warehouse. Therefore, the decision-making process should take into account all the factors and improve coordination with all entities in order to improve business performance.

Nowadays, small medium-size enterprises (SMEs) have lots of challenge due to stay in business. The big confronts are: customer pressure for lower prices and higher quality of products or services; cost-efficiencies; improve lead time; and improve supply chain efficiency. In addition, most of SMEs have similar characteristics, such as, lack of standardization and formal working relationships, and having a flat organizational structure (Ghobadian and Gallear 1996). SMEs

could occupy fewer than 50 people, whilst more than 1,000 workers are paid by large companies (Chapman et al. 2000). In Indonesia, SMEs are difficult to compete with the large companies because they have many obstacles, such as, leaders or managers have lack of knowledge, low budget, employees have lack of skill, and small organization.

Therefore, the research questions of this research can be identified as follows:

1. How does the performance of logistics impact on the financial performance of SMEs in Indonesia?
2. Which is variable that has significant impact on the financial performance of SMEs in Indonesia?

LITERATURE REVIEW AND HYPOTHESIS

Logistics Cost

It is important to note that logistics is a part of supply chain management. There are many researches noticed that supply chain management have significant impact on the business performance. Large companies have distinctive operation compare to SMEs so that they have different challenges to achieve their goals (Soinio et al., 2012). The challenges consist of managing costs, integration and relationship. Camargo et al. (2012) introduce logistics improvement tools to reduce costs with focus on several areas, such as, provisioning, storing, distribution, customer cost and service. Therefore, large company have more capabilities to manage their supply chain because they have better resources compare to SMEs (Holter et al., 2008). The distinction of economic scale between SMEs and large companies might impact SMEs' logistics operation and their financial performance.

Flexibility

The level of business competition is very tight causing every effort must implement the right strategy to win the business competition. Flexibility is one of the business strategies that can be done to minimize the impact of increasing the level of competition. SMEs has more capability in term of flexibility (Dagayach and Deshmukh, 2001). SMEs has low level organizational hierarchy so that they easy to adapt with any changes and gain both effectiveness and efficiency in their operation (Thakkar, 2008).

Reliability

There are many researchers claim that reliability is one aspect of the logistic service performance. There are several benefits to maintain relationship between logistics service and their customer include improve collaboration, and effective

communication (Panayides, 2007). The high level of relationship can improve the integration between the customers and customers' customer (Hertz and Alfredsson, 2003). The more reliable the logistics service the more capacity to reduce the cost between customer and supplier (Selnes and Sallis, 2003).

Security

There are few studies claim that the issue of security include in the logistics service performance. Most of dimensions of the logistics performance were focused on the cost, flexibility and reliability. A study by Blackhurst et al. (2005) found that there are more than 50 percent of the respondents argue that any disruption which are caused by security could impact their profit. Meanwhile, a study by Voss (2013) found that delivery reliability is the main key issue in logistics compare to security, price, quality, and location.

Service Quality

Service quality is one of the big challenges for SMEs while theirs under lack of resources. Meanwhile, resources plays an important role in improving service quality. SMEs need to improve and connect their assets through their final service and product to satisfy their customers, such as, trust, incentive and information system. The application and better management of IT can improve the quality performance of company and then lead to improve the competitive advantage (Peres-Arostegui et al., 2011).

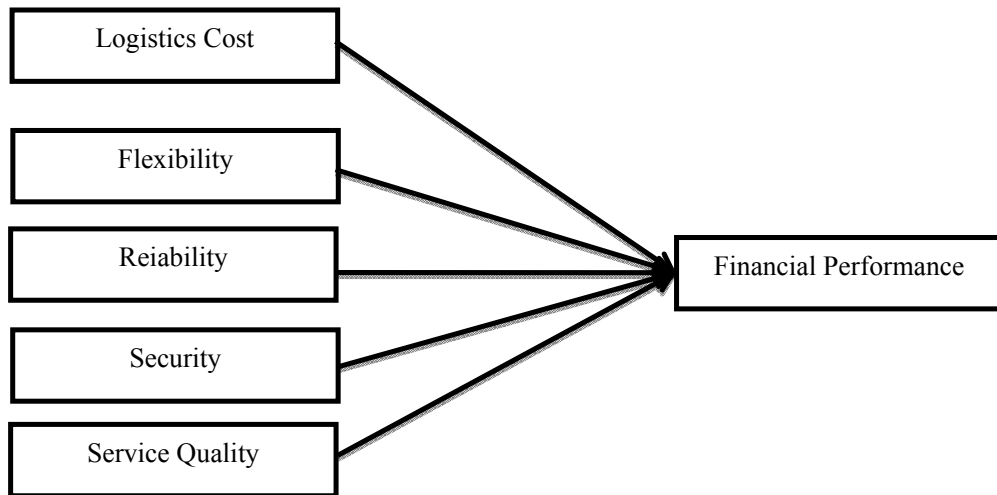
Based on literature review, the five determinants of logistics are linked to financial performance Indonesian SMEs. Therefore, the conceptual model is developed to identify the research paper as shown in Figure 1.

The organization structure of SMEs is one factor to achieve more profit. This structure has low impact on profit (Pelham and Wilson, 1996). However, there have several scholars concluded that logistics performance has positive impact on business performance (Liu and Ma, 2005; Cho et al.,2008). For these reasons, the hypotheses are:

- H1. Logistics cost will be positively related to financial performance of SMEs in Indonesia
- H2. Flexibility will be positively related to financial performance of SMEs in Indonesia
- H3. Reliability will be positively related to financial performance of SMEs in Indonesia
- H4. Security will be positively related to financial performance of SMEs in Indonesia

H5. Service quality will be positively related to financial performance of SMEs in Indonesia

Figure 1: Research framework of study



RESEARCH METHOD

The data were collected from Indonesia SMEs in Central Sulawesi Province Indonesia in different type of products and market in order to test hypotheses. There were 150 questionnaires sent out, 30 of which were returned due to not full completed so that the result of overall response rate of 80 percent. This response rate is considered high because most of the SMEs are willing to participate in this study. In terms of sample characteristics, the average of working period for their business is 12 years. The type of business of SMEs involve in this study include food and beverage, furniture, souvenirs, and weave fabrics. This study adapted 5-item Likert type scale. The primary data collection for this study was quantitative method which focus on survey. The questionnaires in this study were designed with based on literature review. In constrast, most of literature review is based on the SMEs in developed countries and a few research focused on developing countries, such as, Indonesia. The questionnaires were delivered to one key respondent in each SMEs. Most of the respondents are the owners due to small structure of organization.

This study present result for specific performance measure of financial. There are five hypotheses in this study and the measures were examined for reliability

and validity. Factor analysis is used to obtain the value of validity. This study required a minimum KMO value of 0.50 and a minimum of factor loading value of 0.4. Cronbach's alpha is used to measure each dimension. This study required a minimum Cronbach's alpha value of 0.60. The value is considered low (Singh, 2007).

RESULTS AND DISCUSSION

The regression analyses were performed to test the hypotheses, this study classifies financial performance as the dependent variables while logistics costs, flexibility, reliability, security and service quality as the independent variables. Table 1 summarise the results of the multiple regression analysis to test the impact of logistics on financial performance.

Table 1
Multiple regression analysis

<i>Independent Variables</i>	<i>Standardised Beta</i>	<i>T</i>	<i>Sig.</i>
Logistics Costs	0.165	2.103	0.038*
Flexibility	0.040	0.527	0.599
Reliability	-0.055	-0.730	0.467
Security	0.033	0.466	0.657
Service Quality	0.541	6.948	0.000*
R ² = 0.383	F=14.153	DW=2.065	

Note: *p<0.05

The regression analysis were performed to test the hypotheses, this study classifies financial performance as the dependent variables while logistics costs, flexibility, reliability, security and service quality as the independent variables. Table 1 summarise the results of the multiple regression analysis to test the impact of logistics on financial performance. The analysis shows that logistics cost, service quality have a positive significant impact on financial performance (p<0.05). It describes the relationship between logistics cost (H1), service quality (H5) and financial performance (Y) and therefore H1 and H5 are statistically supported by the data. Meanwhile, the result of analysis depicts that flexibility (H2), reliability (H3), and security (H4) have a negative impact on financial performance. Thus, the analysis is insufficient to support the H2, H3, and H4 (p>0.05) so that it cannot be said that these variables will lead to improve financial performance of the Indonesian SMEs. The overall relationship between logistics cost, flexibility, reliability, security, and service quality with financial performance is moderate (R-squared=0.383).

Furthermore, H1 depicts the association between logistics cost and financial performance of Indonesian SMEs. The result reveals that logistics cost have a positive relationship to the financial performance of Indonesian SMEs. This result is related to a study of Toyli et al. (2008) that a firm can reduce costs related to warehouse and inventory as long as the transportation of goods are properly managed. In addition, logistics service providers (LSP) are also contribute to reduce costs and therefore it will impact the financial performance (Aghazadeh, 2003).

H2 represent the association between flexibility and financial performance of Indonesian SMEs. The empirical result validates that flexibility can not support the financial performance of Indonesian SMEs. Following that, H3 depicts the relationship between reliability and financial performance of Indonesian SMEs. The empirical result confirms that reliability can not support the financial performance of Indonesian SMEs. Similarly, H4 corresponds to the association between security and financial performance of Indonesian SMEs. The empirical result shows that security can not support the financial performance of Indonesian SMEs.

The issues of flexibility, reliability, and security are not the big issues for the respondents due to the characteristics of product and customers. The scope of market which are local based affect the respondents' decision to answer whether the third instruments have a positive impact on their financial performance. In addition to this, poor relationship and coordination between suppliers and customers might impact on the overall performance. To some extent, these instruments can be included in the operational performance so that they will have indirect relationship to the financial performance. Another study concluded that availability, reliability and speed have relationship to the market share (Stank, Goldsby, Vickery, and Savitskie 2003). So, it is clear that the instruments have not direct positive impact on financial performance of SMEs in Indonesia.

H5 describes the relationship between service quality and financial performance of Indonesian SMEs. The empirical result revelas that service quality have a positive relationship to financial performance of Indonesian SMEs. This finding related to a study of Anderson, Fornell, and Lehmann (1994) that the effective logistics operation will enhance customer satisfaction and then market share as well as profitability. The capability to improve customer satisfaction will positively impact on customer loyalty (Leuthesser and Kohli, 1995;Innis and La Londe, 1994). This finding also depicts that logistics operation should improve service quality in order to customer satisfaction and loyalty.

This paper has shown the relationship between logistics and financial performance in 120 Indonesian SMEs. The five determinants of logistics have

tested and analysed using SPSS version 16. The statistical results support two out of five hypotheses of research framework.

CONCLUSION

The empirical study shows that logistics operation has a significant impact on financial performance of Indonesian SMEs. This study also highlighted several propositions for theory and managerial practice. In theoretical terms, logistics cost and service quality have positive impact on financial performance of Indonesian SMEs. Meanwhile, flexibility, reliability and security have a negative impact on financial performance of Indonesia SMEs. Furthermore, this study contributes to provide managerial practices. First, SMEs should focus on reducing logistics costs and maintain service quality in order to improve financial performance. Second, such instruments include flexibility, reliability, and security should not be abandoned by SMEs because improving these instruments can impact on market share. This study still has limitation in terms of scope and the number of respondents whereas it should be enlarged into other type of SMEs. In addition, the future research should include the overall business performance with different analysis method. Thus, the future research should contribute to this issue in different region in Indonesia or nationality with large scale of respondents.

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