

Supply Chain: Partnership, Capability and Performance (A Case Study on Service Companies at Yogyakarta Indonesia)

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Abstract: This study about the relationship between supply chain partnership, supply chain capability and supply chain performance in the context of Small and Medium companies (SMEs) of service sectors in Yogyakarta, Indonesia. Data were collected use questionnaire and analyzed use SmartPLS. Results of the study are relationships between supply chain partnership and supply chain performance is not significant but supply chain partnership to supply chain performance is mediated by supply chain capability and supply chain capability to supply chain performance is positive and significant.

Key words: Supply chain, partnership, capability, performance, PLS, Indonesia

INTRODUCTION

Supply chain management was evolved from process approach to system approach. Process approach refers to the coordination of activities of all respective business partners in the supply chain that are integrated with each other to reach end customer's satisfaction. While system approach refers to all resources and capabilities to achieve superior performance. Supply chain involves the integration of various business functions and inter-organizations in long-term cooperation to improve performance (Mentzer *et al.*, 2000).

Supply chain management refers as system approach used in managing networks of companies that working together to create and deliver products or services to end users. Partners in a supply chain are working together and coordinating all activities to increase end customer's satisfaction. Supply chain management is an integration of various business processes through various parties to provide products and services and information which provide value added for customers and stakeholders (Giunipero *et al.*, 2008).

Supply chain is a bond of many organizations involved directly from upstream to downstream and in which there is a flow of products/services, finance and information. Supply chain management is a systematic and strategic process of coordinating the various business functions of an organization and across organizations to generate long-term performance. Characteristics of supply chain management are integration behavior, share information, cooperate on

activities performed, active participation and long-term relationship (Mentzer *et al.*, 2000; Giunipero *et al.*, 2008).

Supply chain partnership is a cooperative relationship between company with its suppliers and distributors (Gunasekaran *et al.*, 2001; Hult *et al.*, 2008). Supply chain capability is the ability to manage partnerships between companies both demand side and the supply side that is required to harmonize the relation and cooperation. Sometimes a conflict arises within organization or between organizations (Morash, 2001; Tracey *et al.*, 2005). Supply chain performance is the embodiment of cost, quality, time and flexibility in managing the supply chain (Tracey *et al.*, 2005; Miguel and Brito, 2011). Supply chain partnership and supply chain capability are the basic foundation to achieve supply chain performance.

Based on previous literature review related with partnership and capability and performance of a supply chain, most of studies were in the context of manufacturing and trading and just a little bit focused on the Small and Medium Enterprises (SME) in service sectors.

The purpose of this study is to predict the relationship between supply chain partnership and supply chain capability on supply chain performance in the context of service companies SMEs in Yogyakarta Indonesia. Research problem is how the relationship between the supply chain partnership, supply chain capability and supply chain performance. This study starts with the problem and then elaborated into research

questions based on literature review to develop hypotheses and will be statistically tested to seek a predictive explanation between supply chain partnership and supply chain capability on supply chain performance.

Literature review: The existence of a relationship between resources owned by a company and its capabilities in managing resources to achieve superior performance is a view widely held by resource-based view. Resources are factors owned by a company that consists of tangible and intangible. Capability is the ability to manage these resources to grow at a different rate than other companies. When companies obtain the benefits of superior performance, it is said to achieve a competitive advantage. The company will achieve sustainable competitive advantage if it is able to control both tangible and intangible resources which have characteristics of: Valuable, Rare, In-imitated and Non-substituted (VRIN) (Barney, 2007).

Resource-based view explains that resources and capabilities of an organization is required and managed to achieve superior performance to generate competitive advantage. This research is based on the resource-based view to explain how the intangible resources (supply chain partnership) and capabilities (supply chain capability) are the foundation for achieving superior performance such as supply chain performance (Grimm, 2008; Ketchen and Hult, 2007).

Supply chain partnership is the intangible resources owned and managed by the company in collaboration with partners in the supply chain that has a high dependence, holding trust, meet commitments, conflict resolution together, adjust the organization to be compatible and have a common vision of top management (Mentzer *et al.*, 2000). Supply chain partnership is a partnership between the company and its suppliers and customers. Partnership with suppliers indicated by integrating with supplier partners, so as to improve productivity, quality and flexibility. While partnerships with customers indicated by integrating customers, thereby increasing customer satisfaction and delivery.

Supply chain capability is the ability to manage the supply side and demand side of the supply chain (Morash, 2001). Supply chain capabilities consist of outside-in capabilities, inside-out capabilities and spanning capabilities (Tracey *et al.*, 2005). Supply chain capability is the ability to build and maintain long-term relationships. Supply chain capability consists of cooperation, integration, long-term relationship and share information (Miguel and Brito, 2011).

Supply chain performance is a demand-focused performance consists of customer service and quality and supply-focused performance consists of costs and

productivity (Morash, 2001). Supply chain performance can be evaluated from the measured operating performance of cost, quality, time and flexibility (Miguel and Brito, 2011). Supply chain performance in several previous studies more emphasis on the performance of the process approach as SCOR and performance by using a balanced scorecard approach. However, different views suggests that supply chain performance can be measured by the performance of the partnership as supply chain partnership.

The study was based on resource-based view in the supply chain context of service business of Small and Medium Enterprises (SME) in Yogyakarta Indonesia. Studying various concepts such as supply chain partnership, supply chain capability and supply chain performance were conducted in order to establish the research framework and hypotheses. By linking partnership to performance can be hypothesized that supply chain partnership positively affects supply chain performance (H_1). And by linking capability with performance can be hypothesized that supply chain capability positively affects supply chain performance (H_2). And we hypothesized the relationship between supply chain partnership and supply chain performance is mediated by supply chain capability (H_3).

MATERIALS AND METHODS

The population in this study are SMEs service companies at Yogyakarta Indonesia. They were chosen in consideration that they had capability and partnership with suppliers and distributors. Supply chain partnership and supply chain capability that they owned are controlled in a cooperative relationship between SMEs, its suppliers and its distributors in order to achieve supply chain performance. There are 500 SMEs service company's population in Yogyakarta based on data from regional statistics office and 100 samples use by convenience sampling.

All of variables are latent and reflected through indicators to be measured by questionnaires. All variables measured by 5 point likert scale where 1 indicates "strongly disagree" and 5 indicates "strongly agree".

Variabel supply chain partnership consists of 4 indicators are high dependence, holding of the trust, fulfilling commitments requested and settling conflicts together (Morash, 2001). Variabel supply chain capability consists of 4 indicators are strategy development, procurement activity, customer service and dissemination of information (Tracey *et al.*, 2005). Supply chain Performance consists of 4 indicators are cost saving, improved quality, timeliness and flexibility (Miguel and Brito, 2011).

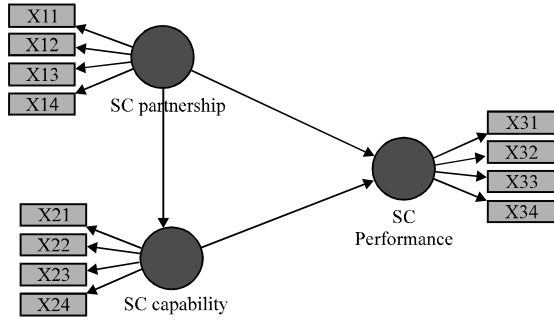


Fig. 1: Outer model and inner model of SmartPLS

Data collection were obtained directly from managers of service SMEs through questionnaires. Delivery of questionnaires conducted via email to the managers of SMEs enclosed with a letter of introduction to participate in this research. Subsequently followed up by telephone interview. Primary data are respondent’s answers to the questionnaire that dealings with the variables studied. While secondary data obtained from many sources from relevant various resources.

Data analysis were performed to determine the general picture of the respondent and the descriptions of variables. Identification of respondents with descriptive analysis in the form of data analysis such as type of company and how long company operates in term of partnerships with suppliers and distributors.

The analysis technique quantitatively uses Structural Equation Modeling (SEM) that consists of two types namely covariance-based which is often called SEM (Structural Equation Modeling) and variant-based or component-based which is often called PLS (Partial Least Square).

SmartPLS statistical package was used to verify the relationship among the research variables. The verification method is designed to predict the relationship of supply chain partnership, supply chain capability on supply chain performance by using multiple relationship model among variables. Statistical analysis conducted to answer the research questions and test all hypotheses using SmartPLS Software as per Fig. 1.

RESULTS AND DISCUSSION

Discriminant validity can be seen from cross loading between indicators with its construct and appears that construct correlation with the indicators higher than the correlation with other bigger one.

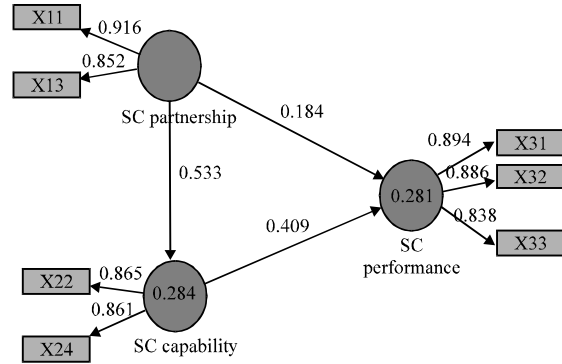


Fig. 2: PLS Algorithm

Table 1: Cronbach’s alpha, composite reliability and AVE

Constructs	Cronbach’s	Composite	AVE
SC partnership	0.726	0.878	0.782
SC capability	0.656	0.853	0.744
SC performance	0.847	0.906	0.762

Convergent validity of the measurement model (outer model) with all reflective indicators can be seen from the correlation between the scores of indicators with a score construct, that is considered valid if the correlation value > 0.7. Some indicators have to be dropped or deleted from the outer model are X12 and X14 (SC partnership), X21 and X23 (SC capability) and X33 (SC performance), so, all remainings indicators of variables are valid (X11, X13, X22, X24, X31, X32 and X34) as per Fig. 2.

Structural model or inner model in SmartPLS use to see the R-square value and path coefficients. It can be seen that the path coefficient between supply chain partnership and supply chain performance 0.184. Supply chain capability and supply chain performance 0.409. Supply chain partnership to supply chain capability 0.533. And the R² value is 0.284 (SC capability) and 0.281 (SC performance).

Reliability test can be seen from Cronbach’s Alpha and composite reliability and average variance extracted. From Table 1 can be seen that all constructs have good reliability.

Based on all hypotheses are tested can be seen in Fig. 3 that explain the relationship between SC partnership to SC performance is not significant (1.158<1.96 at 5%) and SC capability to SC performance is significant (3.809>1.96 at 5%). SC capability as a mediator between SC partnership and SC performance (5.294>1.96 at 5%).

This study revealed that supply chain partnership as an intangible resources in the context of resource based view is not related to supply chain performance but have

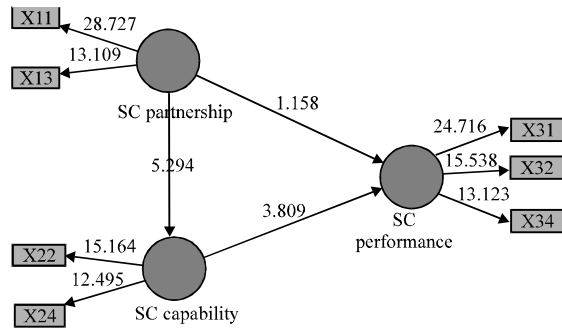


Fig. 3: PLS Bootstrapping

to be mediated by supply chain capability. And supply chain capability as a capability in the context of resource based view is positively related to supply chain performance.

CONCLUSION

Based on above findings are indicated that: there is positive relationship and significant between supply chain partnership to supply chain capability and supply chain capability has a positive relationship and significant to supply chain performance and supply chain partnership have to be mediated by supply chain capability to has a positive relationship and significant to supply chain performance.

This study found that partnership as an intangible resources in the context of resource based view is not related to performance but have to be mediated by capability. And capability in the context of resource based view is positively and significant related to performance.

LIMITATION

Limitations of this study was conducted just in small sample SMEs service companies at Yogyakarta Indonesia.

RECOMMENDATIONS

Future research can be done with more extensive coverage areas. And can be conducted by a mix method both quantitative and qualitative to obtain a deeper understanding.

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