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Urban community empowerment: context on supply chain collaboration in the SMEs

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Abstract. The purpose of this research is to analyze the effect of EB application to operational performance through buyer-supplier collaboration, as well as the influence of buyer-supplier collaboration on operational performance. The context of small industries that ultimately by empowering the community will increase business competitiveness. Community empowerment is a process of creating a community and control over its environment. One concept that is considered as a new paradigm today is e-business (EB), which continues to grow. Data analysis method used is Structural Equation Model (SEM) by the use of PLS program. Based on the analysis from various industries such small garment manufacture, furniture and food, showed that all companies have a supply chain patterns are almost the same. Each company has associated premises supplier, manufacturing and enterprise users of the product. One way to empower the environment is to improve business competitiveness. The development of information and communication technology has been developing very fast and it has brought a significant impact for many aspects of life, including in the business world. EB existence of a significant impact on business practices, at least in terms of the improvement of direct marketing, and organizational transformation.
Keywords : buyer-supplier collaboration, e-business, SMEs, technology context, urban community empowerment

1. Introduction

Community empowerment is a process of creating a community and of much greater control over its environment. The process demands organizational means in order to develop. The organization enables the people in the community to manage their lives by themselves [1]. In this era of globalization and modern, information technology needs become very important for the community. The development of information and communication technology has been developing very fast and it has brought a significant impact for many aspects of life, including in the business aspects. One concept that is considered as a new paradigm today is e-business (EB), which continues to grow. EB existence of a significant impact on business practices, at least in terms of the improvement of direct marketing, organizational transformation, etc. EB refers to the definition of e-commerce more broadly, not just the buying and selling of goods and services but also serving customers, collaborating with business partners and conduct electronic transactions within an organization. Others looked at EB as a collaborative activity and intra business performed by using the internet [2].

Talking about EB there will be a lot of definitions that covers various fields, if interpreted EB as an abbreviation of electronic business, namely all forms of business activities conducted using electronic media such as computers, mobile phones, and the Internet. On the whole, EB can be defined as the use of information and communication technologies by organizations, individuals, or parties related to

running and managing a business so that it can provide benefits, either in the form of security, flexibility, integration, optimization, efficient, and/or an increase in productivity and profit [3].In large enterprises, IT and e-business is used to facilitate business processes. The existence of internet applications business to business (B2B) and has provided new and innovative applications for supply chain management [2], [4]. Many companies are using e-business applications such as electronic procurement, electronic catalogs, customer relationship management applications to simplify its business processes along the supply chain [3], [5]. E-business can help ease the company's business processes, especially in managing the supply chain will be a plus for the company, because business processes are automated these companies can reduce the cost, time, and can control the activities of their supply chain, and the most important thing a company can do a collaboration with the parties that are members of the supply chain. Basically the company is unable to perform any activity the production process itself and certainly need others who can help him so that by the establishment of e-business in the supply chain can be a way to alleviate it.

EB has three main dimensions, namely interactive application, application coordination and integrative application. The implementation of three dimensions on a company engaged in services (especially banking) can perform using the interactive web-based internet technologies such as EDI (electronic data interchange), provides a private portal for suppliers, conduct audio conference, etc. In addition, the company can monitor and analyse the company's expenses, monitor supplier performance, there are records and electronic booking status, and employment contracts with suppliers organized electronic. Lastly, the system used by the company is easy to cast, integrated and processed, the changes can be seen ordering the e-procurement system, and EB applications used by the company together with applications used by the supplier and the buyer [6].

Application of EB maximum application and function properly then the collaboration that took place between buyers with suppliers will be well maintained so that the operational performance of the company will be considered to be good and has a positive value and can make it ahead of the competition. However, instead when EB application using is not running with the maximum collaboration will not be achieved as expected which in turn creates a split between the two parties and the operational performance of the company will not be achieved maximal.

Basically, the concept of EB applications in affecting operational performance through buyer-supplier collaboration was to apply the context of technology (technology context). Technology context is the level of technology intensity or sophistication of some of the information necessary to determine the attributes of a product, as a manifestation of the complexity of the products that affect supply chain strategy and performance. In this case, the core production allowing the change of logistics, the increasing number of emerging information, and makes the company relatively sophisticated in running their business activities. Thus, the influence of the buyer-supplier collaboration the operational performance of companies will increase, due to the influence of the use of technology. There are other journals [7] which states that the establishment of operational performance is influenced by technology context. In the main journal stated that for future research should consider further research suggestions technology. Thus, technology is added as a moderating variable context. This needs to be communicated to look for reasons for the importance of this research study.

One strategy to win the competition is to strengthen supply chain management. Implementation of a series of activities in the supply chain starting from the upstream suppliers to downstream customers. [8], [9]. Each of the activities in the supply chain can be trusted to give effect to the performance of the company, as an example of collaborative activities between supplier and purchaser (buyer-supplier partnership) that can either be assessors on the performance of suppliers and enterprises, cooperative relationship will either be established if their confidence (trust) between suppliers with buyers [10]. According to the theory of social exchange (social exchange theory), people will do the exchange in this case the purchase because of the relationship of trust.

2. Research Method

Referring to the research objectives, then this kind of research is causal research that aims to determine the causal relationship by manipulating one or more independent variables or to exercise control over

the other connecting variables [11]. The research design used is Hypothesis Testing.

This study focused on a small industry in diverse kind, such as companies convection, furniture and food. Third attempt the same type of business - at industrial scale is still small, thus making the data bias due to the diversity of the industry can be avoided. Methods of data analysis used in this research is Structural Equation Model (SEM) by the use of PLS program [12].

3. Results and Discussion

The significance of estimated parameters provides very useful information about the relationship between research variables. Hypothesis test results can be seen in Table 1.

Table 1. Path coefficients (Mean, STDEV, T-Values).

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
BSC -> OP	0.325934	0.338618	0.078415	0.078415	4.156522
EB -> BSC	0.528423	0.565366	0.064521	0.064521	8.189987
EB -> OP	0.339700	0.380615	0.400883	0.400883	8.473807
EB * TC -> OP	0.715474	0.767101	0.617235	0.617235	1.159160
TC -> EB	0.481377	0.507839	0.055585	0.055585	8.660187
TC -> OP	0.098618	0.084366	0.303136	0.303136	0.325327

In the first hypothesis, to be observed is whether there are positive influence between EB Application of the Operational Performance seen. Positive effect of EB Application of the Operational Performance indicated by the variable relationship to the Operational Performance Application EB with the value t stat = 8.4738> 1.96 and with the effect of 0.3397 so that Ho rejected.

Electronic Business Application is an information system that is focused on supporting organizations and/or activate the activity of electronic processes with key suppliers. The use of multiple application demonstrates the use of an electronic application rate is good. The application is measured in this study were (i) interactive application, (ii) Coordination application, (iii) Integrative application.

Use of EB can improve operating performance indicated by many aspects, including a decrease in bookings cost, time of message, inventory turnover and the cost of raw materials preparation, and improving the quality, good quality product components as well as the durability of the product. EB using have characteristics that is more flexible, resilient to the poor performance of suppliers, flexibly to changes in demand, flexible to changes in the quantity and variety of products and constantly striving to innovate as well.

Table 2. Indirect effect.

Track	Indirect effects	
		Sub Total
EB *Application* BS Collaboration *Operational Performance*	(0.528423)(0.325934)	0.1722

The second hypothesis testing results show the value t stat = 8.1899 <1.96 and the magnitude of the effect of 0.5284. While the variable relationship Buyer-Supplier Collaboration on Operational Performance indicates the value t stat = 4.1565 <1.96 and with the effect of 0.3259 so that H_2 is accepted. H2 test result is supported by hypothesis mediation test with product of coefficient strategy seen in Table 2.

It can be concluded that the existence of EB application will affect the operational performance in case of collaboration between the buyer and the supplier (buyer-supplier collaboration). The results of

this study support the results of previous research that has been done by [13]. Where the results of his research stating that the EB application has facilitated the company to conduct information sharing and in making the right decisions, so that the collaboration that exists between the two sides will continue to run, which in turn will improve the company's performance in terms of operating either as cost, quality, flexibility, and innovation.

The third hypothesis tested positive influence between EB Application of the Operational Performance moderated by Technology Context. Mechanisms is to look one by one relationship between EB Application of the Operational Performance and Application EB moderated by Technology Context. The results to be obtained is the direct effect and influence with moderation showed a nonsignificant value of t stat = 1.159 and the magnitude of the effect of 0.7154. It can be concluded that the H3 is rejected, which means variable Technology Context can not moderate EB Application of the Operational Performance.

Technology context is the level of technology intensity or sophistication of some of the information necessary to determine the attributes of a product, as a manifestation of the complexity of the products that affect supply chain strategy and performance. Companies that run the technology context, the core production process of being changed from manual to automatic, allowing the change of logistics, the increasing number of emerging information, and make the company a relatively sophisticated in running their business activities. Thus, the influence of the buyer-supplier collaborationi the operational performance of companies will increase, due to the influence of the use of technology.

The results of this study contrast with research that has been done by [7] which states that the technology context has associated with operational performance. Small scale industry today still have low technology intensity, so that technological turbulence is still slow. This means that the company is still rarely make changes logistic processes, products become obsolete, changing the core production processes, new products are rarely introduced. In addition, product complexity is quite high, which has a tendency technically complex, requiring a lot of information, has a large number of sub-components, necessary efforts and significant engineering expertise and skills, less sophisticated.

In small companies, the use of electronic applications is still regarded as a very big investment for the company. Most of the companies studied using only electronic applications business is still modest, so that the ordering process is not maximized supply chain. In addition, the number of companies involved in the supply chain either as a supplier or as a user company still small in number, so that the advantages - advantages that can be obtained because the use of electronic applications business is not too felt the company. Variations reservations were not complex, delivery scheduling, and shipping costs can still be handled by the company's electronics business applications simple.

The coefficient of determination R Square of buyer-suplier collaboration, EB application, Operational performance, and technology contest respectively are 0.3558, 0.3178, 0.6451 and R square value equation EB Application to the Buyer-Supplier Collaboration is 0.3558 indicating that 35.58% of the variance Buyer-Supplier Collaboration can be explained by changes in the EB Application. While the R-square for equality Buyer-Supplier Collaboration on Operational Performance is 0.6451 indicating that 64, 51% of the variance of customer integration can be explained by changes in information technology.

Based on the analysis that has been conducted on 289 respondents from various industries, namely small companies convection, furniture and food, showed that all companies have a supply chain patterns are almost the same. Each company has associated premises supplier, manufacturing and enterprise users of the product.

Links between companies look of the fabric of cooperation between both parties that the buyer and supplier, we need a container or a system that is able to unite the two so as to build and improve its performance. The test results showed that the EB application to have a positive relationship to operational performance. So also in the hypothesis testing indirectly, EB application will be a positive influence on operational performance through buyer-supplier collaboration. The results of this study support the results of previous research that has been done [13]. Where the results of his research stating that the EB application has facilitated the company to conduct information sharing and in making the right decisions, so that the collaboration that exists between the two sides will continue to run, which in turn will improve the company's performance in terms of operating either as cost,

quality, flexibility, and innovation.

In the later hypothesis, it is known that the technology variable context can not moderate EB application to operational performance. The results of this study according to research conducted by [7] which states that the technology context has no connection with the operational performance. Difficulty use of technology in the context of small businesses mainly caused by the large investment that the technology used is still simple.

Based on the results of research that has been conducted found that EB application and significant positive effect on operational performance. In addition, the EB application also affects indirectly through buyer-supplier collaboration. From these results it can be said that the collaboration is an important factor in influencing the performance, especially the performance in terms of cost. In addition, the managerial implications of this collaboration is considered as a concept that building activity - activity interactions and processes, such as information sharing, joined in making the right decisions, and the sharing of cost and risk.

4. Conclusion

Management needs to ensure also that the system can transmit, and process to integrate internal and external data and ensure that the EB application is applied successfully integrated with EB system suppliers. Technology can improve the competitiveness of companies but the limitations of technology in SMEs become a certain challenge for the company, so SMEs are required to be more creative in doing business by strengthening supply chain management through community empowerment. As for suggestions for future research that research results more perfect is as follows: First, research on medium-scale industry on the variety of products and high technology. Second, further research is expected to increase the sample size, so as to better show the representation of the population. Third, further research is expected to use the measurement of operational performance indicators - real and measurable indicators, such as counting the cost, quality, innovation and flexibility with quantitative data. Fourth, increase the dependent variable is financial performance, so that the effect of EB application for performance not only in terms of its operations but it can be seen in terms of finances as well. It would be interesting to be identified, whether the collaboration can be a source of competitive advantage or a sustainable competitive advantage.

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