



Paper Code : BM7 – 120

BUILDING EXPORT PERFORMANCE MODEL WITH PRODUCT INNOVATION, TECHNOLOGY AND PARTNERSHIP CAPABILITIES (STUDY ON FURNITURE EXPORTERS JEPARA)

SAMSUL ARIFIN

Post Graduate of Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya

Lecturer of Universitas Islam Nahdlatul Ulama (UNISNU) Jepara

samsul@gmail.com

Abstract

The objective of this research is to build a new concept to overcome the gap of research results on product innovation on export performance. The implications are for the development of theory, managerial and policy as the basis for solving the problem of export performance in furniture UMKM in Jepara.

Design / Methodology - This study identifies the affecting variables, the magnitude effect of the variables, and how the variables influence the company's export performance.

Findings - The lack of poorly handled export performance will have direct and indirect negative impact on the company's viability, the effectiveness of overall corporate management, as well as regional and national economies. Partnerships need to be cultivated so that not only stakeholders can be satisfied but also customers. Therefore, sustained relationships with customers as marketer partners can be achieved. The development of information technology helps companies to implement partnerships and it is the right strategy to increase the excellence to compete in the long term sustainably.

Limitations of the study - This study only examines three factor variables that affect export performance. They are product innovation, technological capabilities and partnerships.

Practical Implications - this empirical research supports the theory that product innovation and technological capability play an important role in improving export performance.

Keywords: *export performance, product innovation, technological capabilities and partnership*

Introduction

Export-oriented micro, small and medium enterprises (MSMEs) have an economic role in contributing to the national product of a country by providing goods or services and to the country's export performance. Companies must improve their export performance in order to remain competitive and able to survive in the increasingly fierce competition situation through improving product quality, product differentiation and



appropriate marketing strategy in order to remain competitive in the international market (Boehe and Barin-Cruz, 2010). Export performance is defined as how a business entity achieves the strategic and financial goals of its export marketing strategy. The core of export performance includes some objectives. They are what the volume of sales to be achieved, market share, and profitability of export markets to be realized. By increasing export performance, it will also increase the level of profitability and profit on sales in export markets. By this, a country with a particular industry will potentially be able to monopolize the product market, even for countries with similar product quality with above-average quality. Boettke and Coyne (2006) claimed that product innovation leads to increased economic growth, which is the result of the expression of the company's skills and their desire to innovate or make innovative products.

Innovation is the activity of generating new combinations through the development of new unfamiliar products, the new methods introduction of production, the exploitation of new markets that have never been entered, new resource discoveries, and the adoption of new running ways of a company. Through this activity, the company creates new opportunities that will increase the production which have impact on economic growth. Calantone et al. (2002) states that innovation power enables companies to create products that are more valuable, limited, distinguish from competitors and cannot be imitated. Innovation power is the ability of companies to abandon old habits, and courage to try something new or never done before. This capability makes the company always eager to adopt new ideas or technologies, ahead of other companies. Supporting the opinion of Calantone et al., 2002, Man (2010) states that innovation is the ability of an enterprise to realize ideas into new products, processes or services, which leads the company to higher profits, and increasing market share. Furthermore, Man added that the company with the innovative power get more advantages than other companies in improving productivity and production process which is directed to the company efficiency. On the other hand, the company will be able to create opportunities and competitive advantage. There are two types of innovation, manufacturing innovation and end-user innovation. Manufacturing innovation arises when companies develop innovative activities to sell to others, whereas end-user innovation is a company's act of developing innovation for themselves because their products do not fit the market needs (Matopoulosi and Vlachopoulou, 2008). Meanwhile, Ellonen et al., (2008), added that product innovation, process, behavior and strategy should be developed by technology-based small industries. It is because the industries have low ability in adapting to their technology and the rapid development of technology. This condition makes them only fulfill orders which can be done by the technology they have. Constraints faced by small industries to develop their innovative power is caused by the difficulty to accept change. The change is not considered as a challenge but an



obstacle for them. As a result there is no willingness or ability to try new methods which they consider to have a high risk of failure. This reason encouraged Ellonen et al. (2008) to develop a benchmark for the success of innovation power development that is relevant to technology-based small industries.

Technological capability has been explained by various researchers. One of them is Garcia Muina (2007) that conceptualizes it as a tool to apply competitive strategy and create value in certain environment. Then, they become an ability that mobilize different scientific and technical resources that enable a company to develop its innovative product or manufacture effectively. Similarly, Marjolein (2004) describes the technological capability as ability to make the right investment choices; to increase production capacity; and to engage in continuous improvement of product quality. In addition, it is explained that the technological capability is an effort made to address investments in time and resources aimed at helping, adjusting and improving existing technologies and creating new technologies through reverse engineering. The technological capability consists of two broad elements, that is, which can be realized and which are not. Elements that have the technological capability are human aspect. It includes skills, knowledge, attitudes and abilities. It is generally believed that this element is tacit and very difficult to measure or move (M. Gillian (2004)). The second is a non-materialized element. This is a part of the technological capability that is codified and easily transferable between users. These include tools and software (M. Gillian (2004))

Partnership is a business with many owners, each of whom has invested in this business. Some partnerships include individuals who work in business, while other partnerships may include partners who have limited participation for business. Industrial partnerships stand to strengthen mutual interests and accelerate success. The example of collaboration are partnering with companies to advance the interest in exchange for multiple benefits. Cooperation activities with other companies or institutions are seen by the company as an opportunity to access complementary sources of technology (for sharing skills) to develop faster innovations, to improve market access, to realize economies of scale and scope, and to share costs and deployment (Hagedoorn, (Glaister and Buckley, 1996; Narula and Hagedoorn, 1999; Cassiman and Veugelers, 2002; Sakakibara, 1997; Miotti and Sachwald, 2003; Aschhoff and Schmidt, 2006). Cooperation activities are usually characterized by intensive knowledge exchange and mutual learning, essentially by combining complementary assets and building synergies (Dachs et al., 2004; Becker and Dietz, 2004). In other words, since cooperative agreements related to innovation support the accumulation of knowledge that may be transformed into new technological and organizational innovations, the company's decision to work together opens up their technology choices (Mowery et al., 1998; Caloghirou et al., 2003).



As suggested by Gomes-Cassares et al.,(2006), companies listed in cooperative or alliance activities engage in a more solid flow of knowledge than non-allied companies. Sheth and Parvatiyar (2002) suggest that there are three things to look out for in marketing partnerships. First, a marketing partnership is a comprehensive relationship between marketers, suppliers and customers who bring togetherness. The marketing partnership concept is different from the marketing concept. The partnership concept separates the customer's activities and marketing activities. Second, marketing partnerships are an interactive process rather than exchanges and transactions as well as marketing principles. Third, marketing partnerships are interdependent activities and cooperation between producers and customers. The role of marketing partnerships in marketing strategies is to provide sustainable competitive capabilities. Long term marketing strategy requires the support of corporate financial performance towards sustainable competitive advantages, which include customer trust, profit in cooperation, and emotional control in understanding the customer.

Research of innovation on export performance, there were still findings that showed negative results as conducted by Lemonakis et al (2014) and Ndesaulwa and Kikula (2016). In another study conducted by Deligianni et al (2009) showed that there were no significant positive results on innovation and technological capabilities. Meanwhile, Hao and Yu (2011) showed negative result. From the previous researches, there was inconsistent result of innovation on export performance. Obstacles of MSMEs in reaching the international business are financial capacity, promotion, small networking, business systems, cultures and new traditions. Consequently, it needs a lot of experience and adjustments in facing global world business competition. For that reason, partnership that combines the activities of several business enterprises is needed in an adequate organization. This paper is seen from the implications of research results. Theoretical development of managerial and policy implications as a basis for solving the problem of export performance of furniture MSMEs in Jepara. The results of this research is expected to give contribution to the development of theories related to the improvement of export performance through innovation, product capability and partnership. In addition, the results of the study are also expected to contribute to the novelty model as well as the measurement of investigated variables in accordance with the local context by including them in local content indicator. Based on the research background described above, the problem can be formulated that export performance in furniture companies in Jepara regency is relatively low and tend to decrease. Thus, research on the export performance of the company along with the influenced factors needs to be investigated in order to improve the export performance of the company. In this research, it is necessary to identify accurately the affecting variables of export performance, the effect of the variables, and how the effect of the variables on the

export performance of the company is. By identifying the affecting variables of export performance, these variables can be managed and improved in order to increase the export performance of the company. The problem of low export performance that is not handled properly will have a direct and indirect negative impact on the company's survival, the effectiveness of the company's management, as well as the regional and national economy.

Methods

This research used quantitative method. Population of this research was furniture international market exporter companies in Jepara. The export-oriented companies are 307 companies (Data of Department of Industries and Commerce Jepara 2016). This study used 5% limit of error from the total number of the companies. The technique sampling used is simple random sampling technique. To determine the number of samples representing the population in the study, the researcher used Slovin formula (Umar, 2004: 108). Based on the calculation, the total sample was 174 companies.

Results

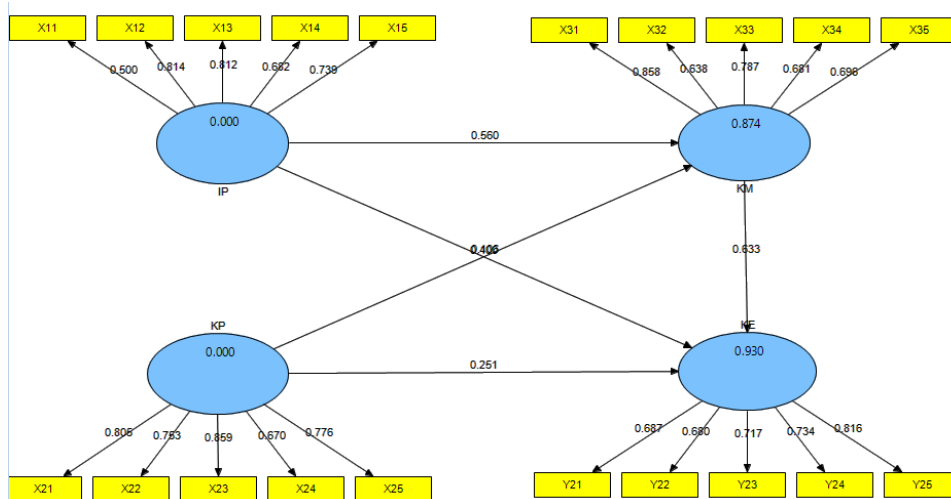
The empirical research model is based on Partial Least Square (PLS) by using Smart PLS software. The analysis technique used to answer the hypothesis is structural equation modeling using Partial Least Square (PLS) approach. The PLS approach is distribution free or a powerful research method. It is because it does not assume certain distributed data but the data can be nominal, ordinal, interval, and ratio. In addition, the number of samples does not have to be large (Ghozali, 2013).

The hypothesis testing was analyzed by using T Statistics and Estimation Coefficients (shown in the Original Sample column) compared to the required statistics or T tables above 1.658. This research proposed five hypotheses which further discuss in the following section:

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)
IP -> KE	0.460079	0.469715	0.109295	0.109295	4.209508
IP -> KM	0.560120	0.566847	0.084083	0.084083	6.661533
KM -> KE	0.632602	0.613040	0.103847	0.103847	6.091686
KT -> KE	0.503723	0.495838	0.108234	0.108234	4.654037
KT-> KM	0.399807	0.394761	0.084610	0.084610	4.725298

Source: Processed data, 2017

For the Coefficient of Estimation shown in the Original Sample column, the relationship of each construct is illustrated below.



From the picture, it could be drawn that the increasing of product innovation would be followed by enhanced partnerships as well as technological capabilities. If the technological capability was increase, partnership would be increase as well. However, the improvement of product innovation would make greater partnership improvement when it was compared to technological capability.

Product innovation enhancement would be followed by improvements in export performance as well as technology and partnership capabilities. If technology and partnership capabilities were increase, the increasing of partnership would make greater export performance improvements when it was compared to technology and product innovation capabilities.

The first hypothesis testing of this research was product innovation that had effect on to partnership. Based on the data, it was known that the t-value was 6.661533 and the estimated coefficient value was 0.560120. The result above showed that there was a positive effect between product innovations on partnership with t-count value (6.661533) greater than t-table value (1.658). Thus, it could be said that Hypothesis 1 of this research was accepted. From the results of this study proved that product innovation had a positive effect on the partnership. It proves that the results of research strengthen the previous research conducted by Nieto (2007)

The second hypothesis of this research was that technological capability had effect to partnership. Based on the data, it was known that the t-value was 4.725298 and the estimated coefficient value was 0.399807. The result above showed that there was a positive effect between technological capabilities to partnership with t-count value (4.725298) greater than t-table value (1,658). It could be concluded that second hypothesis of this research was accepted. It proved that the technological capabilities gave positive effect to the partnership. This result, supported the previous research conducted by Noorhassidah Mohd Radzi et al. (2017)

The third hypothesis of this research was product innovation that had effect to export performance. Based on the data, it was known that the t-value was 4.209508 and the estimated coefficient value was 0.460079. The result above showed that there was positive effect between product innovations on export performance with t-count value (4.209508) greater than t-table value (1.658). It could be concluded that the third hypothesis of this research was accepted. It proved that product innovation had positive effect on export performance. The result contradicted to the research investigated by Lemonakis et al (2014) and Ndesaulwa and Kikula (2016) which the result of their researches showed negative result. In line with this study was study conducted by Najib and Kiminami (2011). They stated that product innovation had significant positive effect on business performance in the food processing industry.

The fourth hypothesis of this research was partnership that had effect on export performance. Based on the calculated data, the t-value was 6.091686 and the estimated coefficient value was 0.632602. The result showed that there was positive influence between partnerships on export performance which t-count value (6.091686) was bigger than t-table value (1.658). It could be concluded that the fourth hypothesis was accepted. This study proved that partnership had positive effect on the Export Performance. This study supported the previous research investigated by Mulatu (2014).

The fifth hypothesis of this research was that technological capability had effect on export performance. Based on the calculated data, it was obtained that the t-value was 4.654037 meanwhile the estimated coefficient value is 0.503723. The result showed that there was positive influence between technological capabilities on export performance which t-count value (4.654037) was greater than t-table value (1.658). It indicated that fifth hypothesis of this research was accepted. From the results of this study proved the technological capabilities had positive effect on Export Performance. It reinforced the previous research conducted by Nur Yakin (2016). In order to find out whether Partnership was the mediator variable for the relationship of product innovation with export performance and capability with export performance. The direct, indirect and total effects were presented in the following table:

	Product Innovation (X1)	Technological Capability (X2)	Partnership (Y1)
Partnership (Y1)			
Direct effect	0,56012	0,399807	-
Export performance (Y2)			
Direct effect	0,460079	0,503723	0,632602
Indirect effect	0,596361	0,5162045	-
Explanation	intervening	intervening	

Source: primer data administered by using PLS



From the results of the calculated data, the intervening variable of product innovation to export performance through partnership and technological capability to Export Performance through Partnership was the intervening variable and the proposed model was accepted.

Product innovations built through partnerships can improve export performance. Product innovation in the form of the company's ability to produce unique and elegant products that meet customer needs will be able to improve Export performance that is measured by the ability of the product in increasing sales and market share. A more dynamic industry environment supports innovative capabilities and gives impact on the company's business performance. There are two kinds of network relationship of cooperation or business network. They are vertical network and horizontal network. Vertical networks can be defined as networks between individuals or divisions within an organization or institution including supplier's resources, wholesalers and retailers and consumers. Meanwhile, horizontal networking is a network whose nature or parallel position even including competitors that will stimulate to achieve competitive advantage, for example development or innovation of new products. Higher innovation capabilities in business make improvement of business performance and higher innovation capabilities supported by favorable government policies that give better improvement on business performance. Najib and Kiminami (2011) argue that product innovation has a significant positive impact on business performance. Furniture industry make innovation to produce something new and different. Production ability with creative thinking and innovative action is an additional value and a valuable advantage for business actors. Therefore, it can make improvement of performance. The ability of innovation (product, market, service and technology) can improve efficiency and effectiveness of work which is reflected by the growth of sales, market share growth, profit growth and increasing return on assets (ROA). Nieto (2007), examined the high and low level of innovation on product innovation, collaboration and sustainability, different types of partners and networks, specific business size, intensity of research and development, and export intensity and industry characteristics by using multiple regression methods. It revealed that technology collaboration is essential in achieving higher levels of product innovation. Collaboration, sustainability and collaborative network composition are very significant dimensions. Collaboration and sustainability with partner types and diversity networks, clients and research organizations in this sequence have a positive impact on new innovations, while collaboration with competitors has a negative impact. The greatest positive impact on the level of new innovation comes from a collaborative network of different types of partners.



A certain level of technological capability will have a positive effect on MSMEs, such as being a strategic tool to compete, increase innovation, produce innovative products, react to market changes, improve company performance and develop awareness of the importance of technological capability. Technological capability will be able to grow partnerships. It is able to move the partnership which is the capital of MSMEs furniture in Jepara. This partnership will encourage MSMEs furniture to create partnerships that can improve the performance of Jepara furniture exports. Exporters should build high-level partners with overseas distributors as partnerships contribute positively to the company's export performance. Wang et al. (2006) described the results of his research that found technological capability not only give direct effect, but also indirect effect to the overall business performance and performance of new products with customer value as the mediator variable.

Internal networks of companies as well as inter-company networks are needed to complement each other for the advancement of the company. It was revealed that the partnership could be used to improve business relationships in the global world. Thus, partnerships can be an alternative mechanism in the face of international business competition. Kanagal (2010) suggests that marketing partnerships play a role in competition and are used to design marketing strategies. As relationship with customer, main customers and communities are key in marketing strategy. For that reason Jepara furniture entrepreneurs need a partnership that combines the activities of several business entities because it is needed an adequate internal organization. In this case, the participation of the government and several stakeholders including the consulate general of the republic of Indonesia and ITPC (Indonesian Trade Promotion Center) is much demanded. The principle of operation is simple: building an effective partnership network with key stakeholders can make profits come. Now more and more companies are also forming separate offers, services and messages for individual customers based on information about past transactions, demographics, psychographics, media preferences and distribution. By focusing on the most profitable customers, products and channels, the company hopes to achieve profitable growth and achieve a larger amount of customer spending in building a high customer loyalty. There are four views on marketing partnerships in the form of business enterprise integration: first, resource-based views, such as differences in financial performance, are determined by differences in the various resources that the company has. Complementary resources will bring the company into possible partnerships to fill and complement each of the various resources. Second, a capacity-based view, this view is based on the idea that every company has the ability to develop complementary resources within the partnership. And more important is the ability of partner vigilance that connects to complementary resources.



The partnership approach will make the company in good position if the company adopts this approach. The company become stronger and be able to adapt to changes in the marketplace. Thus, the partnership approach will put the company as one unity in marketing activities. In an increasingly complex business environment marketers are required to be more creative and innovative in carrying out its role. Customers are seen as a partner company because of mutual need and interdependence with each other. Partnerships can extend customer life cycle. Therefore, sellers must sell their products that have quality, competitive prices, timely delivery of products, easy obtained information, and addition value for customers. Partnership needs to be done not only to make stakeholders satisfied but also customers. By this, the sustainable relationship is obtained that is the customer as a partner marketers. The development of information technology helps companies to implement partnerships and it is the right strategy to increase long-term and sustainable competitive advantage.

The results of this study need to be investigated and developed. This study has limitation on the context of export performance. Future research should examine whether observed effects will be present in the furniture industry. Although this research makes relevant theoretical contributions to research on product innovation, technological capabilities, and partnerships, other additional variables can be relevant to capture the impact of an increase in exports. Further studies should include variables other than product innovation that may affect the causal relationship between partnership and the export performance dimension.

Further research is recommended to investigate the study of Export Performance by incorporating elements or constructs of research such as using variables Eco-friendly products (green products), Eco-friendly technology, customer value, as antecedents Export Performance. Beside that, it needs to expand the area of similar research subject, furniture Exporters, into regional or national scope.

References

- Aschhoff, B. dan T. Schmidt. 2006. Empirical Evidence on the Success of R&D Co-operation – Happy together?. *ZEW Discussion Paper 06-062*. Mannheim.
- Becker, W. dan J. Dietz. 2004. R&D co operation and innovation activities of firms evidence for the German manufacturing industry. *Research Policy* 33 : 209- 223.
- Boehe, D.M. dan L. Barin-Cruz. 2010. Corporate Social Responsibility, Product Differentiation Strategy And Export Performance. *Journal Of Bussiness Ethics* 91 : 325–346.
- Boettke, P.J, and C.J, Coyne. 2006. Entrepreneurship and Development: Cause or Consequence ?. *Working Paper 6*. Mercatus Center : George Mason University.



- Calantone, R. J., S. T Cavusgil dan Y. Zhao. 2002. Learning organization, firm innovation capability, and firm performance. *Industrial Marketing Management*. 31 : 515-524.
- Caloghirou, Y., S. Ioannides, dan N. Vonortas. 2003. Research Joint Ventures. *Journal of Economic Surveys* 17 : 541-570.
- Cassiman, B. dan R. Veugelers. 2002. R&D Cooperation and Spillovers: Some Empirical Evidence from Belgium. *American Economic Review* 44 (3) : 1169-1184.
- Dachs, B., B. Ebersberger dan A. Pyka. 2004. Why do Firms Co-operate for Innovation? A Comparison of Austrian and Finnish CIS 3 Results. *Volkswirtschaftliche Diskussionsreihe der Uni Augsburg* 255. Augsburg.
- Deligianni, I., I. Voudouris Dan S. Lioukas. 2009. *The Impact Of Technological Capability, Entrepreneurial Locus Of Control And Political Competence On New Venture Innovation*.
- Ellonen Riikka, K. Blomqvist, dan K. Puumalainen. 2008. The Role of Trust in Organizational Innovativeness. *European Journal of Innovation Management*. 11(2) : 160 – 181.
- García-Muiña, FeGrnando E., dan Navas-López, José E. 2007. Explaining and measuring success in new business: The effect of technological capabilities on firm results. *Technovation* 27(1-2) : 30-46.
- Ghozali, Imam. 2013. *Aplikasi Analisis Multivariate Dengan Program SPSS. Edisi ketujuh*. Semarang: Badan Penerbit Universitas Diponegoro.
- Gillian, M. 2004. *Technological Learning: A Strategic Imperative for Firms in Developing World*. Edward Elgar Publishing Limited.
- Glaister, K.W. dan P.J. Buckley. 1996. Strategic Motives for International Alliance Formation. *Journal of Management Studies* 33 (3) : 301-332.
- Gomes-Casseres, B., J. Hagedoorn dan A. Jaffe. 2006. Do Alliances Promote Knowledge Flows?. *Journal of Financial Economics* 80 : 5–33.
- Hagedoorn, J. 1993. Understanding the Rationale of Strategic Technology Partnering: Interorganizational Modes of Cooperation and Sectoral Differences. *Strategic Management Journal* 14 (5) : 371-385.
- Hao, S. dan B. Yu. 2011. The Impact Of Technology Selection On Innovation Success And Organizational Performance. *Ibusiness* 2011 3 : 366-371.
- Kanagal, N. (2006). *Role of Relationship Marketing in Competitive Marketing Strategy*. Indian Institute of Management, Bangalore.
- Lemonakis, C., V. Konstantinos dan F. Voulgaris. 2014. Innovation And Manufacturing Exports : The Case Of Greek Firms. *Journal Of Computational Optimization In Economics And Finance* : 6-9.
- Man, M. M. K. 2010. The Relationship between Distinctive Capabilities, Innovativeness



- Strategy Types and the Export Performance of Small and Medium – Size Enterprises (SMEs) of Malaysian Manufacturing Sector. *International Journal of Management and Innovation* 2(1) : 15-30.
- Marjolein, C. dan H. Romijn. 2004. *Technological Learning in Small Enterprise Clusters: Conceptual Framework and Policy Implications*, In: S. Mani and H. Romijn, Eds., Innovation, Learning and Technological Dynamism of Developing Countries, UNU Press : 135-157.
- Matopoulou, Aristides and Maro Vlacopoulou. 2008. Identifying Innovation Strategies : Insights from the Greek Food Industry. Paper prepared for presentation at the 110th EAAE Seminar “System Dynamics and Innovation in Food Networks” Innsbruck-Igls, Austria.
- Miotti, L. dan F. Sachwald. 2003. Cooperative R&D: Why and with Whom? An Integrated Framework Analysis. *Research Policy* 32 (8) : 1481-1499.
- Mulatu, F. 2014. *Networking And Business Performance Of Medium Sized Enterprises In Addis Ababa*. Addis Ababa University.
- Najib, M. Dan A. Kiminami. 2011. Innovation, Cooperation And Business Some Evidence From Indonesian Small Food Processing Cluster Performance. *Journal Of Agribusiness In Developing And Emerging Economies* 1(1) : 75-96
- Narula, R. dan J. Hagedoorn. 1999. Innovation Through Strategic Alliances: Moving Towards International Partnerships and Contractual Agreements. *Technovation* 19 : 283-294.
- Ndesaulwa, A. P. dan J. Kikula. 2016. The Impact Of Innovation On Performance Of Small And Medium Enterprises (Smes) In Tanzania: A Review Of Empirical Evidence. *Journal Of Business And Management Sciences* : 3-4.
- Sakakibara, M. 1997. Heterogeneity of Firm Capabilities and Cooperative Research and Development: An Empirical Examination of Motives. *Strategic Management Journal* 18 (6) : 143-165.
- Sheth dan Parvatiyar 2002. *Customer Relationship Management : Emerging Concept, Tools, and Application* : New Delhi : Tata-McGrawHill.
- Umar, 2004. *Metode Penelitian untuk Skripsi dan Tesis Bisnis* Penerbit Raja Grafindo Persada Jakarta. Cetakan ke 6 : 108
- Wang, Y., Hing-Po Lo, Quan Zhang Dan Youzhi Xue. 2006. *Journal Of Technology Management In China* 1(1) : 27-52.