Improving Company Performance through Innovation Capability and Supply Chain Integration

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Abstract

This research aims to analyze the improvement of company performance through innovation capability and supply chain integration as a moderating variable, especially in the earthenware industry in Kasongan, Bantul, Yogyakarta. The data was taken through the distribution of questionnaires to 135 SMEs of earthenware craftsmen using proportionate stratified random sampling. The research conducted structural equation modeling to test the proposed hypotheses. The results of this research indicate that there is a significant positive effect of innovation capability on supply chain integration, and the positive effect of innovation capability and supply chain integration on company performance. So that it can be used as a reference to improve the SME's performance.

Keywords: Company Performance, Innovation Capability, Supply Chain Integration, SMEs

Introduction

The Creative Economy is part of the sectors that are expected to be able to become a new strength of the national economy in the future, along with the condition of natural resources which are degraded each year. Indonesian creative economy statistical data in 2016 states that from 2010 to 2016, the magnitude of Gross Domestic Product (GDP) of the creative economy has increased contributes to the national economy of 7.39% to 7.66% which is dominated by three subsectors including culinary 41.40%, fashion 18.01% and crafts 15.40% (Munaf, 2018)

One of the centers of SMEs engaged in the creative economy industry is the earthenware industry in Kasongan, Bantul, Yogyakarta. Kasongan is indeed famous for its earthenware products for a long time. About 95% of Kasongan residents are professionals as earthenware craftsmen. Under these conditions, improving the performance of SMEs in Kasongan can increase the welfare of the Kasongan community. However, in this dynamic era, competition is becoming more complex, especially from online sales, prices that are inferior to competitors because of a lack of integration with suppliers is also an obstacle in improving the performance of SMEs in Kasongan, Bantul.

Rapid technological growth and high levels of competition require companies to innovate products that will ultimately improve company performance. Performance is the primary key to survival in the global era. Many factors determine a company's performance; one of the considerations is innovation. Rapid technological growth and high levels of competition demand continuous innovation, which will ultimately improve the company's performance and competitiveness. Creativity and innovation competencies of a company will determine the company's performance (Ferreira, Coelho, & Moutinho, 2018; Ferreira, Coelho, & Weersma, (2019)).

Innovative organizations can improve individual and organizational performance, increase competitive advantage (Lii & Kuo, 2016). In addition to improving the performance of innovation, companies can also improve supply chain management in the company, specifically related to integration in the supply chain. Khalfan & Demott (2006) state that innovation can improve supply chain integration. It is also supporting by Lii & Kuo (2016).

Some literature mentioned that supply chain management is an essential factor in a company. But, a new and more needed issue in this dynamic era is how companies can create supply chain integrity. Supply chain integration is a practice that is implemented by companies in building strategic collaboration within and outside the ownership and span of corporate control

(Ali, Zhan, Alam, Tse & Tan, 2017). Fernandez & de Burgos-Jiménez (2017) explained that supply chain integration has three elements, including integration between suppliers, consumers, and internal company. Flynn, Huo & Zhao, 2010 stated that supply chain integration could improve company performance. Therefore, this study aims to analyze how to improve company performance by using innovation capability and supply chain integration as a moderator variable.

Literature Review

Innovation Capability

Liao & Li (2018) define innovation capability as the ability not only to identify and create new value but also to assimilate initiatives back into existing processes and operations. This study argues that the strength of innovation refers to the ability of companies to efficiently and effectively launch new products in response to changes in the business environment.

Mazzola, Acur, Piazza, & Perrone (2018), stated that innovation capability is widely seen as a driving force in building regional competitive advantage, therefore investigating how organizational positioning can improve activities related to the relevance of innovation in local competitiveness.

Then Idrris, Awuah, & Gebrekidan (2016) analyzed the relationship between innovation and supply chain, which found that the dimension of innovation capability is embedded in the company's supply chain. The focus company will be able to respond quickly to the needs and desires of current customers in the market by innovating.

Whereas, Khalfan & McDermott (2006) states in more detail that innovation can create an integration in supply chain management. This research offers transferable learning opportunities and motivation for other construction company staff who want to promote inclusion in their supply chains through innovative procurement routes. Different from several other studies, Liao & Li (2018) states that innovation can be created from excellent competence in supply chain management. The organizations must consider joint efforts to develop internal collaboration, supply network flexibility, and supplier operational capabilities as a package to create innovation capabilities.

More broadly, Lii & Kuo (2016) found that innovation can influence supply chain integration and supply chain integration on the company's competitive ability and performance. The innovation orientation influences supply chain integration and company performance. Drawing from previous studies of resource dependency theory shows how innovation orientation helps companies to integrate the supply chains and realizing the potential of supply chain management mechanisms.

Yunus (2018) added that collaboration with suppliers brings radical innovation, while collaboration with customers brings additional innovation. Contrary to the allegations of this research, although exciting, collaboration with customers hurts radical innovation. Both radical innovation and subsequent additions have a positive influence on company performance.

In addition to influencing the supply chain, innovation also has a direct influence on company performance. Laban & Deya (2019) market innovation is the most common and the highest predictor of organizational performance followed by product innovation then the organizational innovation process has the lowest impact because it is only used moderately.

The influence of innovation capability on company performance is also supported by Laban & Deya (2019) which states that innovation strategic innovation has combined positive influence on organizational performance. The results revealed that the organization had adopted a superior strategy concerning marketing, products, processes, services and human resources achieving excellent organizational performance

As for Zou, Guo & Song (2017) conducted a different analysis of what factors influenced innovation capability and also analyzed how it relates to company performance, then it was found that the company's past performance was positively associated with the ability of incremental innovation. The strength of incremental innovation and organizational aspirations is positively related to the power of radical innovation. Both progressive and radical innovation significantly produce superior performance.

Supply Chain Integration

Supply chain integration is a practice that is implemented by companies in building strategic collaboration within and outside the ownership and span of corporate control (Ali, Zhan, Alam, Tse & Tan, 2017; Aigbogun, Ghazali, & Razali, 2017; Namagembe, Sridharan, & Ryan, 2016). Supply Chain Integration can be interpreted as supply chain integration (SCI) can be defined as the degree to which producers collaborate strategically with partners in their supply chain and jointly manage inter-organizational and intra-organizational processes (Fernandez & de Burgos-Jiménez, 2017).

In his research, Fernandez & Jimenez (2017) explained that supply chain integration has two integrations, namely external and internal, where external integration includes the dimensions of integration between suppliers and consumers, and internal integration consists of the managerial aspect of the company. In his research stated that supply chain integration could improve company performance.

Company Performance

Company performance is the actual outcome or output of an organization measured against the desired output of that organization. Research conducted by Selvam, Gayathri, Vasanth, Lingaraja, & Marxiaoli (2016) states, company performance, is one of the most relevant constructions in the field of strategic management where company performance is part of organizational effectiveness that includes operational and financial results.

Conceptualization of company performance applies in various companies, which allows one to distinguish between good and worst performers in the eyes of each stakeholder. Some researchers emphasize that satisfaction as a measure of performance must be assessed from all stakeholders (Selvam, Gayathri, Vasanth, Lingaraja, & Marxiaoli, 2016; Almatrooshi, Singh, & Farouk, 2016).

Research Model

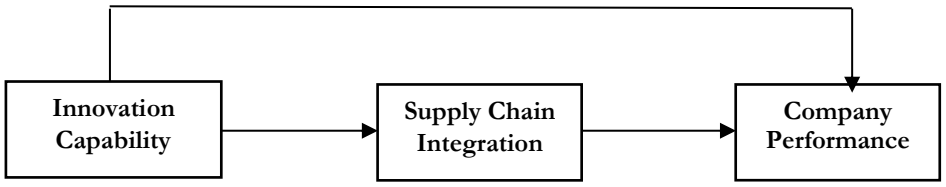

Figure 1. Research Model

Hypothesis Development

Innovation Capability and Supply Chain Integration

Some literature states that by having innovation capability, companies will be able to improve supply chain management, especially in supply chain integration.

The relationship between innovation and supply chain integration, supported by several literatures namely Na, Kang, & Jeong, (2019); Fernandez & de Burgos-Jiménez (2017); Ayoub, Abdallah, & Suifan (2017); Liao & Li (2018); Parulekar & Verulkar (2015); Lii & Kuo (2016); Selvam, Gayathri, Vasanth, Lingaraja, & Marxiaoli (2016); Rojo, Stevenson, Lloréns Montes, & Perez-Arostegu, (2018) & Yunus (2018) who stated that the ability of innovation can increase supply chain integration, both directly and jointly with other variables. Therefore this study proposes the following hypothesis:

H1: Innovation capability has a significant effect on supply chain integration.

Supply Chain Integration and Company Performance

Wan Omar (2017), Kumar & Kushwaha (2018); Ali, Zhan, Alam, Tse & Tan, (2017); Tan, Ali, Makhbul Ismai (2017); Yusoff, Yusof & Hussin (2015) stated that supply chain has an essential

role in company development. Fernandez & de Burgos-Jiménez (2017) measure supply chain integration with three indicators, namely supplier integration, consumer integration, and company internal integration. The case of SMEs, especially those in traditional markets, is very suitable for some of the studies. The critical aspects that must be improved for SMEs are finance and marketing, so the following hypotheses are proposed.
H2: Supply chain integration has a significant effect on company performance.

Innovation Capability and Company Performance

Liao & Li (2018) define innovation capability as the ability not only to identify and create new value but to assimilate initiatives back into existing processes and operations. In addition to influencing the supply chain, innovation capability can also directly affect company performance. The relationship between innovation capability and company performance is supported by Lim, Darley, & Marion (2017); Tsai & Wang (2017); Zou, Guo & Song (2017) therefore this study proposes the following hypothesis:
H3: Innovation capability has a significant effect on company performance.

Research Method

Population and Samples

The population used in this study is the SMEs in the Kasongan earthenware industry, Bantul, Yogyakarta. The population is 302 (three hundred and two business units). The sampling technique used to determine the number of respondents is the Proportionate Stratified Random Sampling that reflects the population layer. (Sekaran & Bougie, 2013; Dhivyadeepa, 2015).

Based on the population of earthenware craftsmen in Kasongan, Bantul, Yogyakarta in 2017, the sample divided based on levels/strata into 2 (two) categories as follows: (1). The number of Small Businesses, and (2). The number of Medium Enterprises.

The number of earthenware craftsmen SMEs Kasongan, Bantul, Yogyakarta, is 302 with the following details:

Table 1: SME Earthenware Craftsmen Kasongan, Bantul, Yogyakarta

No	The number of workers	Frequency	Percentage
1	Small enterprises (5-19 people)	159	52.65%
2	Medium enterprises (20-100 people)	143	47.35%
	Total	302	100%

Source: BPS Yogyakarta, 2017

Samples were drawn based on the proportion of 50% of the total craftsmen of each stratum and group. To get the number of samples proportionally representing each stratum and group. The number of samples can be seen in the following table:

Table 2: Number of SME Samples Based on Business Size

No.	Strata/Firm's size	Sample Amount
1	Small business	79.5
2	Medium business	71.5
Total Sample Amount		151

Source: Processed Data

Data Collection

The primary data are used in this study collection from the questionnaires given to the owner/manager of 151 SMEs in the Kasongan earthenware industry, Bantul, Yogyakarta. And 135 questionnaires were adequately filled by the owners or managers. The questionnaire is a close

question and used a Likert scale can be created as the simple sum of questionnaire responses over the full range of the scale (e.g., 1 = strongly disagree to 5 = strongly agree).

Variable and Measurement

Innovation capability

Innovation capability is measured by the four items, as follows (Yang 2012): (1). Our knowledge and skills base is developing at the right speed; (2). Our company emphasizes creativity through substantial investments in R&D; (3). Our company can identify and create new value for customers; (4). Our company has utilized organizational intelligence and managed technology to enhance innovation

Supply chain integration

Supply chain integration in this study had three dimensions: customer integration, supplier integration, and internal integration (Flynn, Huo & Zhao, 2010). Customer integration is measured by three items: (1). Creating a supply chain team that includes members from various companies, (2). Expanding the supply chain to include members outside direct suppliers, (3) and expanding the supply chain to include members outside of customers directly. Supplier integration is measured by three items: (1). Increase the supply chain throughout the combination of activities; (2). Creating a higher level of trust among supply chain members; (3). Involve all members of the supply chain in the product/service/marketing plan. Internal Integration is measured by three items: (1). Participate in supplier decision making, (2). Look for new ways to integrate supply chain activities (3). Assist suppliers in increasing supplier capabilities.

Company performance

Company performance in this study had three dimensions (Selvam, Gayathri, Vasanth, Lingaraja, & Marxiaoli (2016): entrepreneurial performance, business performance, and strategic objective. Entrepreneurial performance is measured by two items: (1). Achieve high levels of customer satisfaction, and (2). Achieve a high level of merchant satisfaction. Business performance is measured by two items: (1). The number of traders has increased, and (2). Trader turnover continues to grow. Strategic objectives are measured by one item: Our strategic objectives have been achieved according to our plans and expectations.

Data analysis method

This study used SmartPLS 3.0 to run Structural Equation Modelling (SEM). Partial Least Square (PLS), using two evaluation model measurements in the analysis test, namely 1) Outer Model proposes to test the validity and reliability; 2) Inner Model aims to test quality (testing hypotheses to test with predictive models) (Hair, Black, Babin & Aderson, 2010; Kline, 2015).

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Table 3. Evaluation of Measurement Model (Outer Model)

No.	Criteria	Threshold	Rule of Thumb
1	Convergent Validity: Loading Factor Value(LFV) Average Variance Extracted (AVE)	Value > 0.7 is ideal Value > 0.5 is accepted	The indicator is valid to measure the construct
2	Composite Reliability Cronbach's Alpha	Value ≥ 0.7 is acceptable Value ≥ 0.8 is very satisfying	The construct is reliable

Source: Hair, Black, Babin & Aderson (2010); Marsh, Guo, Dicke, Parker, & Craven (2018)

Table 4. Evaluation of Structural Model (Inner Model)

No.	Criteria	Threshold	Rule of Thumb
1	R – Square (R^2)	Value = 0.67 as substantial, Value = 0.33 as moderate Value = 0.19 as weak.	The effect of certain independent latent variables on the latent dependent variable
2	Hypothesis Testing (Bootstrapping)	The significance value used (two-tailed) t-values was 1.65 (α = 10%), 1.96 (α = 5%) and 2.58 (α = 1%).	Significance

Source: Hair, Black, Babin & Aderson (2010); Marsh, Guo, Dicke, Parker, & Craven (2018)

Results and Discussion

Profile of Respondents

Table 5: Profile of Respondents

Profile of Respondents	Frequency	Percentage
Gender		
Male	85	63.0%
Female	50	37.0,%
Age		
19-30 years old	52	38.5%
31-40 years old	54	40.0%
41-50 years old	29	21.5%
Status		
Single	25	18.5%
Married	110	81.5%
Education		
Elementary	10	7.4%
Junior High School	40	29.6%
High School	54	40.0%
Others	31	23.0%
Income		
< 1.000.000	74	54,8%
1.000.000– 5.000.000	61	45,2%
>5.000.000	0	-
TOTAL	135	100%

Source: Processed Data

Based on table, it can be seen that the number of male respondents was 85 (63.0%) while female respondents were 50 (37.0%) people. While based on age, the average respondent is aged 19-30 years as many as 52 people (38.5%), the rest are aged 31-40 people as many as 54 people (40.0%) and 41-50 years as many as 29 people (21, 5%). Meanwhile, based on the status of the respondents, on average, they already have a family or are married, as many as 110 respondents (81.5%) and the remaining 25 respondents (18.5%) are still single. The most recent education of the respondents was middle and high school graduates, 54 high school graduates (40.0%), 40 junior high school graduates (29.6%), 21, primary school graduates (7.4%), and 31 people who attended or never attended school (23.0%). And the last is income. The income of the respondents is less than Rp. 1,000,000.00 was 74 people (54.8%) and those who were more than Rp. 1,000,000.00 less than Rp. 5,000,000.00 were 61 people (45.2%).

Testing Validity and Reliability

The table 6 explains that the value of all variables in reliability testing using either Cronbach's Alpha or Composite Reliability values > 0.70, and validity testing using AVE (Average Variance

Extracted) values > 0.50. Therefore, it can be concluded that the variables tested are valid and also reliable, so it can be continued to test the structural model.

Table 6. Constructability of Reliability and Validity

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
IC	0.761	0.848	0.582
SCI	0.805	0.859	0.554
KP	0.742	0.847	0.65

Source: Processed Data, 2019

Structural Model Analysis

Evaluation of structural models or inner models aims to predict relationships between latent variables. The structural model is evaluated by assessing the percentage variance described by looking at the R-Square value for endogenous latent constructs and AVE for productivity by using resampling procedures such as jackknifing and bootstrapping to obtain stability from estimation.

R-Square (R^2)

Table 7. Path Coefficient Measurement of Significance of SCFA

Variable	R Square	R Square Adjusted
SCI	0.455	0.407
KP	0.340	0.326

Source: Primary data processed, 2019

Based on the table above, it can be seen that the influence of innovation capability model on supply chain integration gives a value of 0.455, which can be interpreted that the variability of supply chain integration constructs that can be explained by the constructability variability of innovation capability is 44.5% while 21. Likewise with the innovation capability model of company performance giving a value of 0.340, which can be interpreted that the constructability variability of company performance that can be explained by the constructability variability of innovation capability is 34.0%, while the rest is explaining by variables outside of this study.

Hypothesis Testing

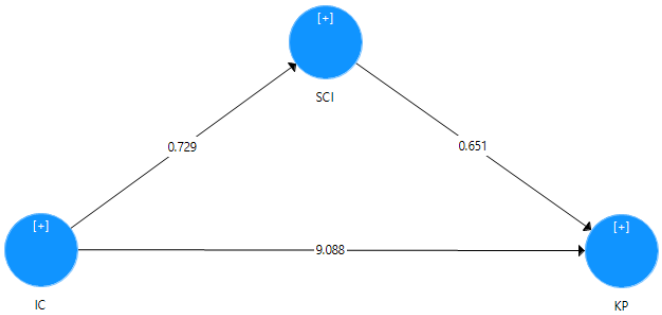

Figure 2. Structural Model Testing

The bootstrapping method is performed to find out the influence between variables. The bootstrap approach represents nonparametric for the precision of the estimate. In the SmartPLS application, the significance value can be known by looking at the value of the parameter coefficient and the statistical significance value t. The requirement for rejection of the hypothesis is if the significance value of t – value > 1.96 and or the value of p-value < 0.05 at the significance level of 5% then Ho is rejected, conversely if the value of t - value < 1.96 and or value p-value > 0.05 at the significance level of 5% then Ho fails to reject.

The following hypotheses are proposed in this study:

1. Ho: There is no positive effect of innovation capability on supply chain integration
   Ha: There is a positive influence of innovation capability on supply chain integration
2. Ho: There is no positive effect of innovation capability on company performance
   Ha: There is a positive influence of innovation capability on company performance
3. Ho: There is no positive effect of supply chain integration on company performance
   Ha: There is a positive effect of supply chain integration on company performance

Table 8. Path Coefficient

Construct	Original Sample (O)	Sample Mean (M)	Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
SCI -> KP	0.511	0.524	0.059	8.072	0.000
IC -> SCI	0.553	0.593	0.072	8.162	0.000
IC -> KP	0.570	0.573	0.063	9.088	0.000

Source: Processed Data, 2019

The Effect of Innovation Capability on Supply Chain Integration

Based on the table above, it can be seen that the innovation capability construct has a significant positive effect (O = 0.553) with the supply chain integration construct. The t-statistic value in this construct relationship is 8.162 > 1.96, and the p-value is 0.000 < 0.05. Therefore, the first hypothesis stating that innovation capability has a positive influence on supply chain integration is proven.

The results of this study are following previous studies Ayoub, Abdallah, & Suifan (2017), which found that innovation capability has a positive and significant relationship to supply chain integration. While Iddris, Awuah, & Gebrekidan, (2014); Iddris (2016), also confirmed that supply chain integration Sciences, be positively influenced by innovation capability. It is consistent with research conducted by Yunus (2018), which states that there is a positive relationship between innovation capability and supply chain integration.

The Effect of Innovation Capability on Company Performance

The exogenous construct of innovation capability has a significant positive effect (O = 0.570) on the endogenous construct of company performance. This is based on the t-statistic value in this construct relationship is 9,088 > 1.96, and the p-value is 0.000 < 0.05. Therefore, the second hypothesis stating that innovation capability has a positive influence on firm performance is proven. The results of this study are following previous studies Lim, Darley, & Marion (2017), which states that there is a positive influence by innovation capability on company performance. These results are the same as previous research conducted by Rajapathirana & Hui (2018), which revealed a strong and significant positive relationship between innovation capability and company performance. The results of the two studies are consistent with research conducted by Ferreira, Coelho, & Moutinho (2018); Ferreira, Coelho, & Weersma (2019), where the results indicate that dynamic capability, creativity, and innovation capability has a significant impact on company performance.

The Effect of Supply Chain Integration on Company Performance

The exogenous construct of supply chain integration has a significant positive effect (O = 0.511) on the endogenous construct of firm performance. This is based on the t-statistic value in this construct relationship is 8,072 > 1.96, and the p-value is 0,000 < 0.05. Therefore, the third hypothesis, which states that supply chain integration has a positive influence on firm performance, is proven.

The results of this study are following previous studies Kumar & Kushwaha (2018), stated in their research that there is a positive relationship between supply chain integration and company performance. It is also consistent with the results of a study conducted by Ali, Zhan, Alam, Tse & Tan (2017), stating that there is a positive and significant effect of supply chain integration on company performance. While research conducted by Yusoff, Yusof & Hussin (2015), found positive results where supply chain integration can significantly affect company performance.

Table 9. Summary of Hypothesis Test Results

No	Hypothesis	t– Statistic	p-value	Conclusion
1	Innovation capability has a positive effect on supply chain integration	8.162	0.000	**Ho is rejected**
2	Innovation capability has a positive influence on company performance	9.088	0.000	**Ho is rejected**
3	Supply chain integration has a positive influence on company performance	8.072	0.000	**Ho is rejected**

Source: Primary data processed, 2019

Conclusion

There is a significant positive effect between innovation capabilities on supply chain integration. It shows that companies with high innovation capabilities will be able to improve supply chain integration. There is a significant positive effect of innovation capability and supply chain integration on company performance. It can be used as a reference to improve SME's performance. Companies that capable of implementing supply chain systems properly will be able to improve their company's performance.

The company needs to conduct periodic evaluations of owner and managers perceptions related to company performance to find out whether the conditions are following company perceptions related to company performance such as the implementation of innovation capabilities and supply chain integration.

In improving company performance, organizations should reform their supply chain integration and innovation capability.

The company needs to conduct periodic evaluations of owner and managers perceptions related to company performance to find out whether the conditions are following company perceptions related to company performance such as the implementation of innovation capabilities and supply chain integration.

References

Aigbogun, O., Ghazali, Z., & Razali, R. (2017). The Impact of regulatory function on supply chain resilience: Reliability of measurement scales. *Global Business and Management Research: An International Journal*, 9(1s). 524-531.

Ali, M. H., Zhan, Y., Alam, S. S., Tse, Y. K. & Tan, H. K. (2017). Food supply chain integrity: the need to go beyond certification. *Industrial Management & Data Systems*, 117(8), 1589-1611.

Almatrooshi, B., Singh, & Farouk, S. (2016). Determinants of organizational performance: a proposed framework. *International Journal of Productivity and Performance Management*, 65(6), 844-859

Ayoub, H. F., Abdallah, A. B., & Suifan, T. S. (2017). The effect of supply chain integration on technical innovation in Jordan: the mediating role of knowledge management. *Benchmarking: An International Journal,* 24(3), 594-616.

BPS Yogyakarta. (2017). *DIY Dalam Angka.* Yogyakarta: BPS.

Dhivyadeepa, E. (2015). *Sampling Techniques in Educational Research*. United States: Laxmi Book Publication Solapur.

Ferreira, J., Coelho, A., & Moutinho, L. (2018). Dynamic capabilities, creativity, and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation,* 1-18

Ferreira, J. A. B., Coelho, A., & Weersma, L. A. (2019). The mediating effect of strategic orientation, innovation capabilities, and managerial capabilities among exploration and exploitation, competitive advantage, and firm's performance. *Contaduría y Administración.* 64 (1), *Especial Innovación*, 1-25.

Fernandez, J. T., & de Burgos-Jiménez, J. (2017). Supply chain integration and performance relationship: a moderating effects review. *The International Journal of Logistics Management*, 28(4), 1243-1271

Flynn, B. B., Huo, B., & Zhao, X. (2010). The impact of supply chain integration on performance: A contingency and configuration approach. *Journal of Operations Management,* 28, 58-71.

Hair, J. F. Jr., Black, W. C., Babin, B. J., & Anderson, R. E., (2010), *Multivariate Data Analysis,* 7th Edition, Person Prentice Hall, Essex, UK

Iddris, F., Awuah, G. B., & Gebrekidan, D. A. (2014). The role of innovation capability in achieving supply chain agility. *International Journal of Management and Computing Sciences,* 4(2), 104-112.

Iddris, F. (2016). Measurement of innovation capability in the supply chain: an exploratory study. *International Journal of Innovation Science,* 8(4), 331-349.

Kumar, A., & Kushwaha, G. S. (2018). Supply chain management practices and operational performance of fair price shops in India: An empirical study. *Scientific Journal of Logistics*, 14(1), 85-99.

Khalfan, M. M., & McDermott, P. (2006). Innovating for supply chain integration within construction. The Australian Journal *Construction Economia and Building,* 6(2), 44-54.

Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling,* Fourth Edition. New York, London: The Guilford Press.

Laban, O. M., & Deya, J. (2019). Strategic Innovations and the Performance of Information Communication Technology Firms in Nairobi, Kenya. *International Journal of Academic Research in Progressive Education and Development*, 8(2), 1–24.

Liao, Y., & Li, Y. (2018). Complementarity effect of supply chain competencies on innovation capability. *Business Process Management Journal*, 25(6), 1251-1272

Lii, P., & Kuo, F.-I. (2016). Innovation-orientation supply chain integration for combined competitiveness and firm performance. *International Journal of Production Economics,* 174, 142-155.

Lim, J.-S., Darley, W. K., & Marion, D. (2017). Market orientation, innovation commercialization capability, and firm performance relationships: the moderating role of supply chain influence. *Journal of Business & Industrial Marketing,* 32(7), 913-924.

Marsh, H. W., Guo, J., Dicke, T., Parker, P. D., & Craven, R. G. (2018). Confirmatory Factor Analysis (CFA), Exploratory Structural Equation Modeling (ESEM) & SetESEM: Optimal balance between goodness of fit and parsimony. *Multivariate Behavioral Research,* 1-18

Mazzola, E., Acur, N., Piazza, M., & Perrone, G. (2018). "To own or not to own?" A study on the determinants and consequences of alternative intellectual property rights arrangements in crowdsourcing for innovation contests. *Journal of Product Innovation Management, 0(0),*1-22.

Munaf, T. (2018). Ekonomi Kreatif. Data Statistik dan Hasil Survei. Kerjasama Badan Ekonomi Kreatif dan Badan Pusat Statistik, 1-23

Na, Y., Kang, S., & Jeong, H. (2019). The effect of market orientation on performance of sharing economy business: Focusing on marketing innovation and sustainable competitive advantage. *Sustainability*, 11(3), 729-747.

Namagembe, S., Sridharan, & Ryan, S. (2016). Green supply chain management practice adoption in Ugandan SME manufacturing firms. *World Journal of Science, Technology and Sustainable development*, 13(3), 154-173.

Parulekar, A., & Verulkar, A. (2015). Supply chain management and its relationship with organizational performance: A literature review. *Journal of Commerce & Management Thought*, 6(4), 770-787.

Rajapathirana, R. P. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation & Knowledge*, 3(1), 44–55.

Rojo, A., Stevenson, M., Lloréns Montes, F. J., & Perez-Arostegu, M. N. (2018). Supply chain flexibility in dynamic environments. *International Journal of Operations & Production Management ,* 38(3), 636-666.

Sekaran, U., & Bougie, R. (2013). *Research Methods for Business: A Skill Building Approach.*

West Sussex: John Wiley & Sons Ltd.

Selvam, M., Gayathri, J., Vasanth, V., Lingaraja, K., & Marxiaoli, S. (2016). Determinants of firm performance: A subjective model. *International Journal of Social Science Studies*, 4(7), 90-100

Tsai, M. C., & Wang, C. (2017). Linking service innovation to firm performance: The roles of ambidextrous innovation and market orientation capability. *Chinese Management Studies*, 11(4), 730-750.

Tan, K. H., Ali, M. H., Makhbul, Z. M. & Ismai, A. (2017). The impact of external integration on halal food integrity. *Supply Chain Management: An International Journal*, 22(2), 189-199.

Lii, P., & Kuo, F.-I. (2016). Innovation-orientation supply chain integration for combined competitiveness and firm performance. *International Journal of Production Economics,* 174, 142-155.

Wan Omar, W. M. (2017). Developing a model for the halal food supply chain. *Dissertation, RMIT University.*

Yang, J. (2012). Innovation capability corporate Growth: An empirical investigation in China. *Journal of* engineering *and technology management,* 29, 34-46.

Yunus, E. N. (2018). Leveraging supply chain collaboration in pursuing radical innovation. *International Journal of Innovation Science,* 10(3), 350-370.

Yusoff, F. A. M., Yusof, R. N. R., & Hussin S. R. (2015). Halal food supply chain knowledge and purchase intention. *International Journal of Economics and Management*, 9(s), 155-172.

Zou, B., Guo, F., & Song, M. (2017). Elastic and plastic innovation capability in firms. *Industrial Management & Data Systems,* 117(1), 198-212.