Supply Chain Financing as an Antecedent of Supply Chain Success: An Indonesian Perspective

Sri Juniati[#1], Asep Deni Iskandar[#2], Ai Rosita[#3], Omar Alaeddin[*4]
[1, 2, 3] Widyatama University
[4*]Universiti Kuala Lumpur Business School
*corresponding author: omar.alaeddin@unikl.edu.my

Abstract— The prime objective of this empirical research is exploring the role of supply chain financing in enhancing the supply chain management performance of the firms operating in the manufacturing sector of Indonesia. In addition to that the current study has also intended to study the impact of firm cash flow on supply chain management performance. Finally, the study has also examined the mediating role of firm cash flow in the relationship between supply chain financing and supply chain management performance. The multiple regression is used to achieve the novel objectives of the current study. The data by means of an adapted questionnaire is collected form the finance and operation managers of manufacturing firms listed in Indonesian stock exchange. Prior to regression analysis the data has undergone basic diagnostic test and after confirmation of reliability, validity and multicollinearity we have carried out a regression analysis. The direct relations of hypotheses H1,H2,and H3 are significant and positive, whereas the results of H4 are also significant, Which indicates that the firms cash flow mediates the relationship between supply chain financing and supply chain management performance

Keywords: *Supply chain Financial management, supply chain management, Indonesia*

1.0 Introduction

Supply chain management relates to the coordination and collaboration of various stakeholders for optimizing the flow of information, goods and cash along the SC [1]. Collaboratively, firms often handle flow of information and goods among its supply chain partners, but do not practice this in terms of cash flows. Notable examples, such as Ford Motor Company, has been documented. [2] mentioned that extensions in systematic payment term are practiced in some of other industries and leads to SC disruptions. Discussing another point of view, motivation was provided by [3] and [6], for better handling of financial flows. Median inventories has decreased from 18.3% in 1980s to 7.4% of all assets in 2000s, across industries. Therefore, tools for management are needed for undertaking opportunities in supply chain enhancement. In an example of Aberdeen Group, in response to the developments, around 15% of companies has already started advancing methods for managing their cash flows in supply chains [7] [8]. In this paper, all these methods that are defined as controlling, managing and planning cash flows in supply chain to facilitate material flows of supply chain efficiently, are considered as financial supply chain management. FSCM requires the integration of supply chain managers and financial managers with the firm, and cooperation with the service providers beyond the firms' borders i.e. customers, suppliers, and banks. Contrary to the classical financial flow management that follows the typical rationale of cash flow optimization by an individual firm, the financial supply chain extends the range to the entire functioning of supply chain. The present study focuses on aspects of FSCM that are closely associated with OM finance link and short-term credit. In this way, instead of focusing pure financial perspective, we will focus on production economics perspective and supply chain.

For illustration of the definition of FSCM, in terms of supplier financing, the example of a company plc is considered [4]. The approach of a company enables suppliers to get an immediate loan from the Citi Bank right after the delivery to the company. Instead of any waiting for payment, an interest is paid to the bank by supplier, based on the credit rating of a company, while the company as a set out pays to the bank in regular terms. It makes a company to improve its liquidity of upstream[5] SC and further aid physical capital [4], [5]. In this context, a company manages, plans, and supervise cash flows towards suppliers[8]. Precisely, the basic distinctions among firms with a classical approach and those employing FSCM approach are the main focus i.e. supply chain versus firms, the aim i.e. integrated solutions for maximum material flow along the FSCM, and stakeholders including SC managers, financial managers, banks, customers and suppliers [8],[9]. In an attempt to present a solid example, stretching payment terms using buyer power is just not FSCM, but extending these terms as well as improving suppliers' liquidity through finance platform is actually part of financial supply chain management [9],[10].

Because of increased practical relevance, [11] suggested that, analytical research has significantly improved the capability of inventory models in case financial flows are considered. Contrarily, empirical SC research lags behind due to its limited attention over Financial supply chain management phenomenon. Similarly, scholars are more interested to investigate trade finance from corporate risk perspective than the SC perspective, thus omitting the interaction among operational and financial flows in SCs [12] So, we aim to address this existing research gap through empirical analysis in order to get better understanding of the Financial supply chain management phenomenon.

Since by definition, FSCM has a broader scope, aim of this paper is an early step to investigate financial supply chain management. Thus, mainly the focus will be on short-term credit management of liquidity of buyer-supplier relation, as cash management and cash holdings are gaining importance along buyers and suppliers. Focal firms from supply chain and suppliers are interviewed to get answers for the research questions. These research questions are:

i. How firms manage their cash flows of upstream supply chain?
ii. Why firms use ways to manage cash flows differently?
iii. How FSCM affect performance of a supply chain firm?

An inductive case study approach with investigative nature is conducted as done by; [13], This study will make major contributions to the existing literature through focusing on finance and Supply chain management interface, thus transaction cost economics is used as the basis for theoretical base for research framework

2.0. Literature Review

2.1. Supply Chain Financing

The connection of FSCM to SCM and finance from the SC and financial perspective is discussed. Furthermore, transaction cost economics has been elaborated, providing a theoretical approach and presentation of our observations to explain the FSCM phenomena. While financial flow is constituted to be an elemental pillar of SCM [19], [20]. However, [21], [22], and [23], mentioned that scholars have recently started to exhibit through analytical modelling that how planning, controlling and managing financial flows positively affect profitability, along the supply chain. For instance, scholar like [24], [25], [26], and [27], presented ways in which inventory control models need to be adapted for financial considerations, like stochastic prices, trade credits, or financial constraints. These models show basic elements of financial supply chain management, since they provide an adequate solution for SC such as, manage delayed payments by grasping liquidity positions of suppliers and handling capital cost [28],. All the mentioned researches pinpoint a vital element of financial SCM i.e. financial flows and product information are required to be handled in a coordinated manner. Although, the mentioned studies have explained analytical framework for evaluating performance impact of financial supply chain management (FSCM), but they are based on certain assumptions, like absence of opportunism, decision-making, and absolute knowledge sharing [29]; [30], For the purpose of current research, careful consideration of these analytical studies is done. This paper, however, provides a step to further understand supply chain and its link to financial SCM using case study analysis.

On the other hand, [31] suggested that cash flows management is an essential aspect in financial management. [33],and [34], mentioned that the available literature has not mainly focuses the focal firms rather it also threw light on the importance and role of cash-flow uncertainties prevailing in SC with a purpose to obtain more cash. Practices including trade credit, buyer credit, and supplier credit have been argued under trade finance [35], providing major insights regarding FSCM. In accordance with the line of this paper, the review is limited to short-term credit that also takes in account trade credits. This specific area of short-term and long-term decisions regarding financing often leads to different approaches of management . Furthermore, short-term time horizon has gained practical relevance and interest only recently. [2], has provided motivation through their study, whose empirical evidence showed that in supply chains, financially constrained firms usually pass on more than one fourth of their liquidity shocks towards upwards. As a result, liquidity of the supplier declines due to sheer extension of payment, making a firm more capable of external shocks in a financial crisis. Hence, short-term credit occupies an important place in the field of supply chain literature.

[31] suggested that cash flows management is an essential aspect in financial management. [32], [32],and [33], mentioned that the available literature has not mainly focuses the focal firms rather it also threw light on the importance and role of cash-flow uncertainties prevailing in SC with a purpose to obtain more cash. Practices including

trade credit, buyer credit, and supplier credit have been argued under trade finance [34], providing major insights regarding FSCM. In accordance with the line of this paper, the review is limited to short-term credit that also takes in account trade credits. This specific area of short-term and long-term decisions regarding financing often leads to different approaches of management [33], [54-58] Furthermore, short-term time horizon has gained practical relevance and interest only recently. [2], has provided motivation through their study, whose empirical evidence showed that in supply chains, financially constrained firms usually pass on more than one fourth of their liquidity shocks towards upwards. As a result, liquidity of the supplier declines due to sheer extension of payment, making a firm more capable of external shocks in a financial crisis. Hence, short-term credit occupies an important place in the field of supply chain literature [35], [54-55].

The literature available on short-term credit flow in supply chains revolves mainly around the trade finance, that is linked closely to financial supply chain management, which is an excellent review regarding trade credit theories by n [37], The research question of this study was to explore motives of suppliers to extend trade creditors towards buyers, although buyers do have the access to other financial markets. Consequently, antecedents of the trade credit provision comprises of financial benefits of supplier, as company may have a knowledge about buyer comparatively better than financial institutions . According to [38], suppliers also uses trade credits for practicing price discrimination, while buyers might use this kind of tactics for reducing cost of transaction associated with each batch [39],Although the literature has provided explanations regarding trade credits and motives associated with it, however it failed to provide evidence of how firms actually handle short-term credit as well its implications for SCM. Klapper [39] have empirically exhibited that powerful buyer firms are more capable of obtaining trade finance as compared to the powerless buyers, this indicates that power-oriented bargaining often sets in place than the bilateral management. This paper aims to complement the stream of this literature through focusing managed approaches that are implemented by buying firms which can do far better for optimizing cash flows than just holding buyer power.

Finally, for the purpose of establishing a middle range theory, a theory of transaction cost economics was employed as a supporting theory of research framework for the current study. This theory is particularly selected, as it provides fundamental concepts like bounded rationality or opportunism that helps to understand and implement the FSCM framework. Additionally, it helps reduce the transaction costs. The transaction cost economics started from the pioneering studies by [41],and [41]' mentioned in their study, that TCE has been used widely to interpret the phenomenon of SCM, such as, supplier performance and effective governance [43] economies of integration, and relational contracting [44] The theory can be applied to FSCM, as it predicts the important effects of opportunism, bounded rationality over TC, and uncertainty, and make inferences on relational contracts [45], [45] suggested that transaction cost involves all costs that are necessary for running a relationship, because it is characterized with the transactions of information, services, goods, and cash. It is somehow obvious, that resistance in cash flows plays an important role in transaction costs, while making transaction cost economics a suitable lens for current investigation. The analysis section of this study includes description on how the TCE mechanism can be incorporated to link and substantiate our several observations.

2.2. The Risk Evaluation of Supply Chain Finance

From a fundamental model of SCF, it is easy to understand that the impact of this kind of financing is merely the concentration of financial resources to principal group of entities. Practically, in supply chains, domestic banks usually widen the credit to 10-20% of core business in order to establish more business using higher credit support for the enterprises. Resultantly, a series of problems arise, firstly if these companies (core group) do have their links with banks especially with 10 banks and each providing similar support in terms of credit, the companies will possess an invisible credit expanded to 100-200%, with such credit capacity the firm can still stay in doubt about its growth, secondly, how banks can supervise from such a credit growth? Thirdly, with the lower level of information technology [14] as in case of China, how firm evaluate and review authenticity of considerable trade documents? Fourthly, how to protect and prevent moral and financial risks? To tackle with these problems, risks of financial SC will be analyzed. First, core corporations lack efficient understanding of risks as in large Chinese groups, assets management has often been neglected and groups failed to distinguish between investment department and assets management department. With the absence of rules for asset management and shortage of professional staff, insufficient attention has given to the area of Supply Chain risk[15]. Many financial risks have been brought due to the shortage of efficient management system and less market sensitivity in the group's financial system. Bankruptcy or operating difficulties has given rise by assets management for domestic companies of supply chain., If the financial chain of core group breaks, it can destruct the whole Supply chain finances. [16], Secondly, the credit situation is serious in China because of the complex credit environment. It can commonly be said that credit has lost its worth [17]. For instance, debtors generally borrow a large amount of money, uses it and not even dare to return, while few entities owed performance and enrichment to arrears, several such phenomena are there which shows that deadbeats are worthwhile, dragging debts are somehow paid and debts of refused paying are also justified. Similar to international letter of credit for international trade guarantee, there is no domestic letter applicable for domestic trade. The account's bill settlement is also applied in domestic trade. In 1997, administrative regulations were announced about domestic letter of credit, which never been renewed in 10 years.[18] A less viable pattern is available for RMB letter of credit, in which withdraws and deposits are processed directly through any banks' branch. Domestic trade settlement does not account for guarantee that is accepted and circulated through all sides, thus contributing to risks in supply chain finance operations and transactions.

Thirdly, recognition and process of property rights are somehow confused and complicated. There is absence of consistent standards in warehousing norms and transportation in China, and many cases of property rights that frequently appears in transactions. It is quite confusing how current Chinese legislation caters with such kind of cases. It employs contract approach, in which contract just acts as an evidence for changes in debt and is ineffective to handle evidence in order to visualize the effects of changing property rights in circulation. As it is hard to get corresponding guarantee, banks find it hard to practice control over the process of property rights, resulting in inherent vulnerabilities in financial risks of SCM.

H1: Supply chain Financing (SCF) has significant impact on the supply chain management performance.

H2: Supply chain Financing (SCF) has significant impact on firm cash flow (FCF)

H3: firm cash flow (FCF) has significant impact on the supply chain management performance.

H4: Firm cash flow (FCF) mediates the relationship between Supply chain Financing (SCF) and supply chain management performance.

Figure 1 depicts the theoretical framework of this study. The resource-based theory and agency theory are used to conceptualize the framework shown in figure 1.

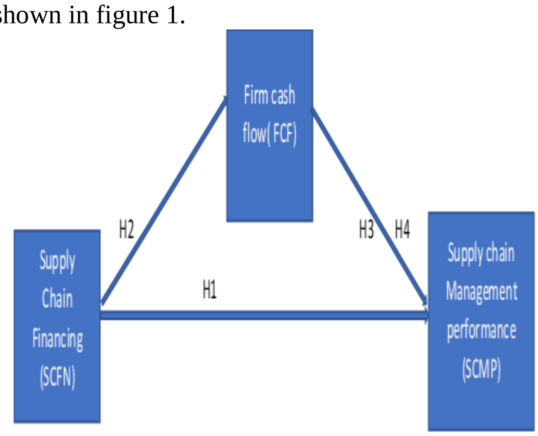

Figure 1: Conceptual framework

3.0. Methodology

Fundamentally, this study employs survey which is known to be the most common
method of generating primary data in business research [47]. This study shall employ two ways of administering survey which is by email and by hand. The distribution of questionnaires through email is sent to each prospective respondent accompanied with a cover letter explaining about the purpose and objective of the study. As for the normal distribution by hand, the respondents are explained about the objectives of the study and the feedback expected from each of the respondent. The data is analyzed using a quantitative method which is Statistical Package for the Social Science 19.0 (SPSS). The researcher uses descriptive statistics method as a way to compile and interpret the raw data. The data will then be processed in a more concise 47 form. In this study, several statistical techniques are used which are frequencies distribution, correlation and multiple regression analysis for testing the collected data. The hypothesis is tested by using Pearson correlation and multiple regressions from which the result will reveal the strength and direction of the relationship between dependent and independent variables and also the most influential variables among variables listed for the study. According to Pallant [47], the relationship between variables can be determined by the value presented from -1 to 1. Also, this value helps to explain the strength of relationship. A perfect positive correlation indicated by value 1 while a perfect negative correlation between variables is explained by -1 while value 0 indicates no relationship.

4.0. Research Analysis and Discussion

The first and foremost step in the data analysis is to access the validity of instrument used in this study. The CFA has used for this purpose. According to the rule of thumb of [48],.[49] for practical significance, the factor loading should have values greater than 0.50. However, for this study, it is recommended that the sample size to determine the accepted value of factor loading to the relationship between sample size and factor loading values is 276. All items have a factor loading of more than 0.40. This is because of the sample size of this study (276).

Authors, such as [50] and note that data of more than 30 and up to 150 is assumed to be normal. It is argued that the larger the data size, the more it becomes normal [51]. Also, [52] affirm that "sample data becomes normal as the sample of the study becomes larger and larger". This implies that as the sample becomes larger, the normality is considered to improve. However, this study went further to conduct a normality test in order to see if the data is normal or otherwise.

The multicollinearity result shows the correlation between all the variables in the model. It is assumed that all the independent variables in the model should show some sort of relationship with the dependent variable. However, their correlation or relationship should not be too high as that would bring about the problem of multicollinearity. Thus, multicollinearity is defined as too high a score or correlation and the relationship between the two or more independent variables. Collinearity is a condition indicating that two independent variables are perceived to be visibly correlated [53]. Researchers should try as much as possible to avoid the problem of multicollinearity as it could affect the analysis and consequently lead to misleading and useless interpretation of the result. Within the context of this study, multicollinearity was tested using the regression analysis, and the results indicated that the data is free from the problem of multicollinearity,

Authors, such as, [51] observed and acknowledged the problem of non-response bias error in any research work. This problem may arise as a result of many reasons such as some respondents not having enough time to fill the questionnaire. Again, it could also be because of the fear of their superiors and the sensitivity of the questions to be responded to [50], [51], [52]. Other reasons could also be that respondents do not cooperate or the inability to reach the selected respondents or that respondents fail to supply the required information. To avoid the problem of non-bias response errors, the researcher is expected to ensure that the selection of the potential respondents is properly done. In addition, questionnaires are as much as possible structured very well and clearly right from the beginning of the questionnaire design [50], [51],[52]. Furthermore, questionnaires that are not properly filled by the respondents should be discarded or rejected.

Factor analysis is the most commonly used test to determine the construct validity of data [50], [51], which is established by indicating reduction or summarization to make the data more visible, straight forward, and manageable; and to ascertain which of the items are most suitable for each dimension [49], [50], [51]Moreover, [53] points out two issues that have to be considered when conducting factor analysis: the sample size and the intercorrelations among the items. The sample size must be greater than 150 which is adequate for conducting a factor analysis. With regards to the inter-correlations between the items, Bartlett's Test of Sphericity has to be significant (p< 0.5) for factor analysis to be considered suitable .

Table 1. Convergent and Discriminant Validity

	Indicators	Loadings	CR	AVE
SCF	SCF1	.943	0.975	0.872
	SCF2	.955		
	SCF4	.902		
	SCF5	.825		
	SCF7	.955		
	SCF8	.822		
	SCF9	.717		
FCF	FCF1	.824	0.702	0.737
	FCF2	.712		
	FCF3	.771		
SCMP	SCMP1	.822	0.960	0.871
	SCMP2	.955		
	SCMP3	.722		
	SCMP4	.825		
	SCMP5	.941		

There are several aspects of a reliability test. However, the most commonly used estimate is Cronbach's Coefficient Alpha which refers to precision for scales.We have used the Cronbach alpha as measure of reliability and results shows that the value of all construct is above 80 percent which is according to many prior researchers is very good. Thus, there is no reliability issue in our study.

For the hypothesis testing we have used the multiple regression analysis. The results of direct relations are explained in the following table 3.

Table 3. Direct Effect

	(β)	SD	T-value	P-Values
H1	0.321	0.125	3.411	0.000
H2	0.432	0.147	3.658	0.000
H3	0.321	0.035	2.961	0.009

The mediation results of the currents study are reported in table 4. The coefficient value and p value indicate that the FCF is strong mediator

Table 4. In-Direct Effect through Mediation

	(β)	SD	T-value	P-Values
H4	0.322	0.121	4.311	0.000

The results of the current study have shown a great deal of agreement with the hypothesized results.

5.0. Conclusion

Organizations are now extremely exploring the potential of SCM concept to get their products to market in minimum time and lower total cost, meanwhile enhanced total quality, increased customer service, and greater profit. It enables coordinating and controlling of material flow and information flows throughout the business process from sources to customers wherein gets the correct product to the right place at the minimum cost with minimum inventory while offers greater customer service and shortens lead times. Thus, in twenty-first century, SCM is a crucial and significant strategy to success in the global markets. The prime objective of this empirical research is exploring the role of supply chain financing in enhancing the supply chain management performance of the firms operating in the manufacturing sector of Indonesia. In addition to that the current study has also intended to study the impact of firm cash flow on supply chain management performance. Finally, the study has also examined the mediating role of firm cash flow in the relationship between supply chain financing and supply chain management performance. The multiple regression is used to achieve the novel objectives of the current study. The data by means of an adapted questionnaire is collected form the finance and operation managers of manufacturing firms listed in Indonesian stock exchange. Prior to regression analysis the data has undergone basic diagnostic test and after confirmation of reliability, validity and multicollinearity we have carried out a regression analysis. The direct relations of hypotheses H1,H2,and H3 are significant and positive, whereas the results of H4 are also significant, Which indicates that the firms cash flow mediates the relationship between supply chain financing and supply chain management performance. and timely delivery of goods from raw materials and supplies through manufacturing to the ultimate customer or user. It is required the flow of information in both forward and rearward directions in the supply chain. Without effective information flow, the goals of supply chains cannot be achieved. In addition, the successful implementation of an effective SCM and effective inter-organizational system requires the cooperation of a large number of external partners The findings of the current study have revealed the fact that the majority if the respondent has shown a great deal of agreement with our proposed hypothesizes [59-61]. The current study which in author knowledge is among few pioneering studies on this issue, will be helpful for financial experts, operation managers, academicians, researchers and other policy makers in formulating policies

References

[1] Stevens, G. C., & Johnson, M. (2016). Integrating the supply chain… 25 years on. International Journal of Physical Distribution & Logistics Management, 46(1), 19-42.

[2] Boissay, F., & Gropp, R. (2007). Trade credit defaults and liquidity provision by firms.

[3] Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). Why do US firms hold so much more cash than they used to?. The journal of finance, 64(5), 1985-2021.

[4] Wandfluh, M., Hofmann, E., & Schoensleben, P. (2016). Financing buyer–supplier dyads: an empirical analysis on financial collaboration in the supply chain. International Journal of Logistics Research and Applications, 19(3), 200-217.

[5] Li, D., & Wu, W. (2017). Working Capital Management from the Perspective of Supply Chain. Management & Engineering, (29), 71-81.

[6] Basheer, M. F. (2014). Impact of Corporate Governance on Corporate Cash Holdings: An empirical study of firms in manufacturing industry of Pakistan. International Journal of Innovation and Applied Studies, 7(4), 1371.

[7] Basheer, M. F., Waemustafa, W., & Ahmad, A. A. (2018). The Paradox of Managerial Ownership and Financial Decisions of the Textile Sector: An Asian Market Perspective. The Journal of Social Sciences Research, 184-190.

[8] Chen, X., Cai, G., & Song, J. S. (2018). The cash flow advantages of 3PLs as supply chain

orchestrators. Manufacturing & Service Operations Management.
[9] Camerinelli, E. (2016). Measuring the value of the supply chain: linking financial performance and supply chain decisions. Routledge.
[10] Gelsomino, L. M., Mangiaracina, R., Perego, A., & Tumino, A. (2016). Supply chain finance: a literature review. International Journal of Physical Distribution & Logistics Management, 46(4), 348-366.
[11] Gupta, D., & Wang, L. (2009). A stochastic inventory model with trade credit. Manufacturing & Service Operations Management, 11(1), 4-18.
[12] Chauffour, J. P., & Malouche, M. (Eds.). (2011). Trade finance during the great trade collapse. The World Bank.
[13] Choi, T. Y., & Wacker, J. G. (2011). Theory building in the OM/SCM field: pointing to the future by looking at the past. Journal of Supply Chain Management, 47(2), 8-11.
[14] Basheer, M., Siam, M., Awn, A., & Hassan, S. (2019). Exploring the role of TQM and supply chain practices for firm supply performance in the presence of information technology capabilities and supply chain technology adoption: A case of textile firms in Pakistan. Uncertain Supply Chain Management, 7(2), 275-288.
[15] Paulsson, U. (2018). The risk management process and the supply chain security. Publications of the Hazard projects.
[16] Stich, B., Amdal, J., & Webb, P. (2019). Chassis: The Unsung Linchpin in the Global Supply Chain. In Building a Sustainable Transportation Infrastructure for Long-Term Economic Growth(pp. 45-71). IGI Global.
[17] Yue, H., Xu, J., Wang, J., Wu, D., & Niu, B. (2019). A General Introduction and Overview of Supply Chain Finance. In Green Finance for Sustainable Global Growth (pp. 1-29). IGI Global.
[18] Leng, P., & Hugan, H. A. (2018). Bank Criminal Act: Case of Fraud Using Letter of Credit-Bank as a Victim (Doctoral dissertation, Petra Christian University).
[19] Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., & Zacharia, Z. G. (2001). Defining supply chain management. Journal of Business logistics, 22(2), 1-25.
[20] Mentzer, J. T., Myers, M. B., & Cheung, M. S. (2004). Global market segmentation for logistics services. Industrial marketing management, 33(1), 15-20.
[21] Caldentey, R., & Chen, X. (2009). The role of financial services in procurement contracts. Handbook of Integrated Risk Management in Global Supply Chains; Kouvelis, P., Boyabatli, O., Dong, L., Li, R., Eds.
[22] Liu, Z. L., Anderson, T. D., & Cruz, J. M. (2012). Consumer environmental awareness and competition in two-stage supply chains. European Journal of Operational Research, 218(3), 602-613.
[23] Kaviani, K., Wu, T., Wei, J., Amirkhany, A., Shen, J., Chin, T. J., ... & Chuang, B. R. (2012). A tri-modal 20-Gbps/link differential/DDR3/GDDR5 memory interface. IEEE Journal of Solid-State Circuits, 47(4), 926-937.
[24] Aggarwal, S. P., & Jaggi, C. K. (1995). Ordering policies of deteriorating items under permissible delay in payments. Journal of the operational Research Society, 46(5), 658-662.
[25] Sarker, B. R., Jamal, A. M. M., & Wang, S. (2000). Supply chain models for perishable products under inflation and permissible delay in payment. Computers & Operations Research, 27(1), 59-75.
[26] Berling, P., & Rosling, K. (2005). The effects of financial risks on inventory policy. Management Science, 51(12), 1804-1815.
[27] Gupta, D., & Wang, L. (2009). A stochastic inventory model with trade credit. Manufacturing & Service Operations Management, 11(1), 4-18.
[28] Protopappa-Sieke, M., & Seifert, R. W. (2010). Interrelating operational and financial performance measurements in inventory control. European Journal of Operational Research, 204(3), 439-448.
[29] Bendoly, E., Donohue, K., & Schultz, K. L. (2006). Behavior in operations management: Assessing recent findings and revisiting old assumptions. Journal of operations management, 24(6), 737-752.
[30] Wuttke, D. A., Blome, C., & Henke, M. (2013). Focusing the financial flow of supply chains: An empirical investigation of financial supply chain management. *International journal of production economics*, *145*(2), 773-789.
[31] Mun, S. G., & Jang, S. S. (2015). Working capital, cash holding, and profitability of restaurant firms. International Journal of Hospitality Management, 48, 1-11. Bigelli, M., & Sánchez-Vidal, J. (2012). Cash holdings in private firms. Journal of Banking & Finance, 36(1), 26-35.
[32] Howorth, C., & Westhead, P. (2003). The focus of working capital management in UK small firms. Management Accounting Research, 14(2), 94-111.
[33] Walker, W. T. (2016). Supply chain architecture: a blueprint for networking the flow of material, information, and cash. CrC Press..
[34] Zhu, Y., Xie, C., Sun, B., Wang, G. J., & Yan, X. G. (2016). Predicting China’s SME credit risk in supply chain financing by logistic regression, artificial neural network and hybrid models. Sustainability, 8(5), 433.
[35] Yan, N., Sun, B., Zhang, H., & Liu, C. (2016). A partial credit guarantee contract in a capital-constrained supply chain: financing equilibrium and coordinating strategy. *International Journal of Production Economics*, *173*, 122-133..

[36] Petersen, M. A., & Rajan, R. G. (1997). Trade credit: theories and evidence. The review of financial studies, 10(3), 661-691.
[37] Meltzer, A. H. (1960). Mercantile credit, monetary policy, and size of firms. The Review of Economics and Statistics, 429-437.
[38] Ferris, J. S. (1981). A transactions theory of trade credit use. The Quarterly Journal of Economics, 96(2), 243-270.
[39] Klapper, L., Laeven, L., & Rajan, R. (2011). Trade credit contracts. The Review of Financial Studies, 25(3), 838-867.
[40] Williamson, O. E. (1989). Transaction cost economics. Handbook of industrial organization, 1, 135-182.
[41] Williamson, O. E. (1981). The economics of organization: The transaction cost approach. American journal of sociology, 87(3), 548-577.
[42] Zhang, M., & Huo, B. (2013). The impact of dependence and trust on supply chain integration. International Journal of Physical Distribution & Logistics Management, 43(7), 544-563.
[43] Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements?. Strategic management journal, 23(8), 707-725.
[44] Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. Administrative science quarterly, 269-296.
[45] Carr, A. S., & Pearson, J. N. (1999). Strategically managed buyer–supplier relationships and performance outcomes. Journal of operations mana
[46] Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage Learning.
[47] Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education (UK).
[48] Hair, J. F. (2010). Black, WC, Babin, BJ, & Anderson, RE (2010). *Multivariate data analysis*, *7*.
[49] Hameed, W. U., Basheer, M. F., Iqbal, J., Anwar, A., & Ahmad, H. K. (2018). Determinants of Firm's open innovation performance and the role of R & D department: an empirical evidence from Malaysian SME's. *Journal of Global Entrepreneurship Research*, *8*(1), 29.
[50] Sekaran, U. (2000). Research Methods for Business; A skill business approach. *New York: John Willey & Sons*.
[51] Jarrett, J., & Kraft, A. (1989). *Statistical analysis for decision making*. Allyn & Bacon.
[52] Fowler Jr, F. J., Gallagher, P. M., Stringfellow, V. L., Zaslavsky, A. M., Thompson, J. W., & Cleary, P. D. (2002). Using telephone interviews to reduce nonresponse bias to mail surveys of health plan members. *Medical care*, 190-200.
[53] Abdul Hadi, A.R., Zainudin, Z., Husain, H.I. & Rehan, R., (2019) Interaction of Short-Term and Long-Term Interest Rates in Malaysian Debt Markets – Application of Error Correction Model and Wavelet Analysis, *Asian Academy of Management Journal*, (forthcoming).
[54] Ahmed, U., Zin, M. L. M., & Majid, A. H. A. (2016). Impact of Intention and Technology Awareness on Transport Industry's E-service: Evidence from an Emerging Economy. *산경연구논집 (IJIDB)*, *7*(3), 13-18.
[55] Ali, A., & Haseeb, M. (2019). Radio frequency identification (RFID) technology as a strategic tool towards higher performance of supply chain operations in textile and apparel industry of Malaysia. *Uncertain Supply Chain Management*, 7(2), 215-226.
[56] Suryanto, T., Haseeb, M., & Hartani, N. H. (2018). The Correlates of Developing Green Supply Chain Management Practices: Firms Level Analysis in Malaysia. *International Journal of Supply Chain Management*, 7(5), 316.
[57] Haseeb, M., Abidin, I. S. Z., Hye, Q. M. A., & Hartani, N. H. (2018). The Impact of Renewable Energy on Economic Well-Being of Malaysia: Fresh Evidence from Auto Regressive Distributed Lag Bound Testing Approach. *International Journal of Energy Economics and Policy*, 9(1), 269-275.
[58] Haseeb., H. Z., G. Hartani., N.H., Pahi., M.H. Nadeem., H. . (2019). Environmental Analysis of the Effect of Population Growth Rate on Supply Chain Performance and Economic Growth of Indonesia. *Ekoloji*, 28(107).
[59] Jayaswal, M., Sangal, I., Mittal, M., & Malik, S. (2019). Effects of learning on retailer ordering policy for imperfect quality items with trade credit financing. *Uncertain Supply Chain Management*, *7*(1), 49-62.
[60] Bahadoran, H., & Nazari, M. (2018). Investigating the effect of empowerment aspects on the competence level and success of primary school principals. *Management Science Letters*, *8*(5), 445-454.
[61] Wibisono, C., Nurhatisyah, N., & Gustiawan, F. (2018). Work motivation and leadership on the performance of employees as predictors of organizational culture in broadcasting commission of FIAU islands province, Indonesia. *Management Science Letters*, *8*(5), 247-258.