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# Effect of Supply Chain Management Practices on Financial and Economic Sustainable Performance of Indonesian SMEs

Christina Whidya Utami<sup>1\*</sup>, Hendro Susanto<sup>2</sup>, Fanny Septina<sup>3</sup>, Yoseva Maria Pujirahayu Sumaji<sup>4</sup>, Ikbar Pratama<sup>5</sup>

<sup>1,2,3,4</sup>*School of management and business, Universitas Ciputra, Surabaya, Indonesia.*

<sup>5</sup>*School of Accounting, College of Business, Universiti Utara Malaysia, Sintok, Malaysia.*

*\*Corresponding Email: whidyautami@ciputra.ac.id*

**Abstract---** In contemporary business environment firms focus on sustainable Financial and Economic performance. Sustainable performance of the firms happens is the result of continuous value generation for shareholders and stakeholders of firm. This study intended to investigate the effect of Supply Chain Management Practices (SCMP) on Financial and Economic Sustainable Performance of Indonesian SMEs. For the achievement of the objective of study, researcher used quantitative research approach and questioner method was applied for the collection of data. To fulfil the objectives of this study, the data was collected from the managing directors, supply chain managers, planning managers, and procurement managers. PLS-SEM approach was carried out by the study for the examination hypotheses. The results of study concluded that SCM Practices have significant and positive influence on Financial and Economic Sustainable Performance of Indonesian SMEs. Moreover, findings of this study indicated that effective application of SCMP could enhance the financial and economic performance of the SMEs in developing countries. Findings of the study highlighted that the relationship with customer, strategic supplier integration and level of information sharing is necessary for financial and economic sustainable performance of SMEs. This study contributes to Supply chain literature and offer new empirical evidence that supply chain management practices are significant for sustainable financial performance. However, this study used only three SCM practices (relationship with customer, strategic supplier integration and level of information sharing), the other important aspects of SCM practices such as SCM formulation, implementation and evaluation would be used in future research.

*Key Words: Supply Chain Management Practices, Sustainable performance, SMEs, level of information sharing*

## 1. Introduction

Mangers adopt modern innovative strategies and technologies for achieving sustainable competitive advantage to compete with the continuous increasing competition in advanced business settings [1]. Supply chain is a widespread process that includes all activities from the raw material, its transformation into finished goods and delivery to ultimate users [2]. Moreover, strong cooperation and coordination among participants of supply chain process results into ensure the higher effectiveness and permanency [3]. Although, many studies are there that recognize the significance of supply chain in the performance of a firm [1, 4, 5]. However comparatively, only few of the researches are available those study the association of supply chain practices with sustainable financial and economic performance of firms.

The aim of supply chain is to create greater values equally for customers and supply chain participants [6]. Hence, improved performance is not only beneficial for a particular organization but also for whole of the chain of participants. Supply chain practices are included the implementation of set of activities that can be elucidated in the way that activities practiced in a firm for the purpose of efficient management of supply chain activities [7]. In spite of the fact that research on supply chain management (SCM) is gaining rapid attention of researcher however researchers to the study the relationship of supply chain management practices (SCMPs) and sustainable performance (financial and economic) have the diverse and disperse findings in terms of nature and completeness [4; 64].

Furthermore, extensive research been conducted regarding various aspects of SCM can be designated

as the interdisciplinary field of research in the subject. Accordingly, SCM is the field that has been considered in the context of multidisciplinary area of research [8]. Largely, the concept of supply chain management is categorized in the two broad perspectives that are purchasing of material and management of its supply. First perspective of purchasing focuses on the process of material purchasing and its management by considering it a primary business strategy [9]. Second perspective of supply management has its focus on transportation of goods and logistics control with the aim of improving interlinked logistics process that include stock management, transportation, producer relationships, delivery of goods and their storing. Resultantly, stock will be reduced not only within the firm but also across the firms involved in supply chain process [10].

Nevertheless, wide research is available in the subject area but Garza-Reyes and Kumar [1] and Green, et al. [2] proposed that limited research has been initiated regarding practices of supply chain management and financial performance. In their study, they indicated that the field of supply chain management is interdisciplinary in nature as well as have evolution in its features that accordingly have many confusions regarding conceptual understanding. However, indicated factors are responsible for generating gap between theory of SCM and its application in practice. Though, the general research conducted in supply chain may have significant association with the area (Nugraha et al., 2019). Therefore, studies regarding supply chain management practices implemented in the particular context of country or industry are better to be understood in that specific context. The study therefore makes contribution in addressing the prevailed gap of supply chain management theory and its practice. By considering the area, researchers have conducted studies in the particular sectors of automobile [11], pharmacological [12], toy [13], textile [14], biochemical [15], Manufacture (Fitri et al., 2019), telecom [16], etc. In the same way, most of the previous studies in the different aspects of subject are conducted in the context of developed economies by considering the developing economies as major source of material supply. By taking into consideration, it can be determined that researchers conducted their studies of SCMPs in the specific

context of countries or industries. In spite of this, limited studies are available to study the relation of supply chain management with regard to its practices. Effective practices of supply chain are much needed to be implemented for non-financial firm in developing economies to gain competitive advantage for their growth. Indonesian economy is a developing economy, consisting of most of the manufacturing SMEs that have limited and developing settings is much suitable for the investigation of the variables. The context provides justified opportunity to fill the contextual gap of Indonesian firms with respect to study the SCMPs of the Indonesian SMEs.

By keeping in view, the research gap, this study is being conducted with the purpose of identifying the association of SCMPs of Indonesian SMEs with their sustainable performance financially and economically. For the purpose of this study, supply chains are considered as the multi-dimensional concept that has both, upwards and downwards directions of the supply chain. In view of the previous studies, three practices that cover both of the aspects of downward and upward chains are considered for this study and that practices are developed, tested and validated [11, 17].

The study will significantly contribute for researchers as well as for SMEs by developing the understanding that how supply chain practices play a prominent role not only for supply chain activities but also for the success of the firms. Hence, this research will play a role of validated instrument and guide for Indonesian SMEs to study and adopt the practices of SCM. As far as the theoretical contribution in concerned, the study will expand the scope of the knowledge with regard to the supply chain practices in particularly developing countries context.

## **2. Literature Review**

### **2.1. Financial and Economic Sustainable Performance**

Sustainable performance of the firms happens is the result of continuous value generation for shareholders and stakeholders of firm in line with the requirements of environment [18]. Sustainable value has some important aspects that include well participation for environment and society with the more important factor of customer and shareholder satisfaction. Abdullah, et al. [19] stated that “sustainability contains on activities that increase socially valuable

life of the firms, generate the living friendly protective environment for all species as well as collectively for earth, increase the sustainability capacity of the society, help in resolving its major difficulties in maintain a perception of wellbeing, cooperation and individual autonomy for prevailing and upcoming generations of humanity. Sustainability is a brilliant way of undertaking business. By developing innovative and productive values in businesses, a sustainable business environment can be developed. Extraordinary performance and efficient use of limited available resources is possible through this sustainable culture that will lead to better results for society, economy and environment [19]. Cheng-Ye, et al. [20] discussed SCMPs in the words that an innovative management practice have its focus on creation of strong link among society, economy and environment by including entire process of purchasing, manufacturing, packing, warehousing, delivery and consumption of the final product with the support of supply chain activities with the purpose of achieving the long lasting progress of society, economy and environment.

One of the major purposes of the business is to gain economic stability. Liu, et al. [21] stated that economic sustainability is a reduction of process costs, increase in market share, enhance profitability and returns on assets associated with the economic intentions of the performance. The application of SCM practices in production firms results in improved economic performance [22]. By using direct ways of supply chain management practices, better results with respect to economy can be accomplished (Liu et al., 2012). Eltayeb, et al. [23] studied green supply chain on certified Malaysian firms and confirmed the association of green supply chain initiatives with SCMP. Key drivers of the green supply chain are customers that shape its demand and implementation. Influence of customers has been recognized regarding awareness of environment, sensible decisions in choosing firms, enhancing competitiveness, and economic performance [24]. Companies with practices to achieve sustainable performance are able to improve economic performance in term of income, profit, tax, as well as taking care of financial welfare of employee's [11]. Additionally, Chien and Shih [25] highlighted that the integrated SCMPs are beneficial in reducing

costs, promoting market shares, and increasing enterprises profits. Chan, et al. [26] conducted a study on environmental and corporate performance and proved significant relationship of SCMPs on firms' earning capacity, market share, sales growth, and tax returns on investment.

## 2.2. Supply Chain Management Practices

Nowadays, numerous studies from myriads fields have examined the involvement of various dimensions in SCM practices. Lenny Koh, et al. [27] described supply chain practices as, it includes combination of all that activities that are initiated with the aim of improving management in its supply chain processes. Moreover, Green Jr, et al. [6] argued that supply chain practices consist on user and producer network, material movements, information advancement and corporate culture. SCM practices mean supply chain forecasting, production on demand, and distribution practices. Chen and Paulraj [28] argued that SCM practices is more comprehensive approach that covers the range of extra dimensions of supply chain such as purchasing raw material, supply arrangements, logistics incorporation and coordination in supply chain. Additionally, it must be considered that SCMPs are influenced by some external elements that include industry kind, size of the firm, profitability, supply chain position, length and its type. Supply chain practices are considered by firms from different perspectives with the purpose of enhancing firm's performance. SCM practices refer to the operational activities or functional activities of an organization that are required to enhance the effectiveness of its SCM [29]. It is proven that SCM practices is a multi-dimension concept and it should be viewed in a broader concept comprehensively [30]. The aim of SCM is not only to improve the individual organizational performance but also the effectiveness of whole supply chain [11]. The effectiveness of various SCM practices will lead an organization toward highly competitive environment and to obtain sustainable financial and economic performance, whereas SCM seeks to have close association of internal function inside the organization and outside linking with customers, traders, and other associates [25]. SCM practices have become a crucial requirement in order to an organization survival in the competitive global race as well as sustainable

performance [1]. In the modern era, supply chain management practices comprises on association with suppliers, outsourcing contracts, reduction in supply chain time, consistency in the process and sharing of technological resources. This modern evaluation focuses on two major elements that are purchasing of material and strong bindings with the participants of supply chain process. Prior researches indicated that the extents of supply chain management practices have many distinct perspectives.

The core aim of implementation of supply chain practices is to improve the performance through supply chain that needed multi-functional integration not only within the firm but also outside the firm with suppliers and business partners [31]. In the context of developing economies like Indonesia, concept of supply chain management is not implemented by managers or implemented partially without its true spirit and essence [32]. Typical production and distribution process has been changed rapidly in most of the countries for that most of the firms are required to alter their production process [26]. Consequently, many of the firms are facing challenges regarding time of production, place of production, quantity of product and its cost reduction. In response to it, many of the firms have realised the fact that they have to get rid of these challenges not only within the firms but also in the entire supply chain process. The improvement in supply chain process is not merely the result of internal elements but it includes many of the external elements such as globalization, minimum barriers for international trade, enhanced information technology and environmental issues. That is why; prominent factors that provide strong support for prevailing issues in SCM are included computerized production timetables, efficient management of stock, governmental support in terms of legislations and incentives, existence of only European market, launching of Capable Industrial Sectors, and the guidance of Global Agreement on Tariff and Trade (GAAT) and World Trade Organization (WTO) [33]. Resultantly, Implementation of supply chain practices is inevitable for achieving good profitability and sustainability in the competitive environment [34]. Some of the researchers have dissimilar opinion about the perspectives of SCMPs but they are agreed upon its aim of achieving better performance of the firms [35, 36].

### **2.3. Customer Relationship**

For the better satisfaction of customers, organizations must have knowledge of current as well as future customers' needs because success of organization depends upon the customers. Nowadays, customer relationship management (CRM) has become an important element supply chain management. Effective customer relation management can produce success for the organization in supply chain management significantly [14]. Furthermore, CRM can be designated as a continuous activity of the firm regarding supply chain selling, promotion and service policy. For that, firms try to forecast actual needs of customers with the help of integrated information technology for the sake of product development within organization to enhance customer satisfaction and recognition for the firm.

Prajogo and Olhager [37] defined customer relationship management (CRM) as it is all about the planning, executing and assessing effective relationship of supplier and customers both upwards and downwards. Additionally, CRM generally consisting of the elements of providing product information to consumers, having contact with customers to forecast demand and fulfil their needs and wants, acknowledge orders from customers, convenient order generating system, providing information to customers during order time and finally the product distribution stage [37]. Many studies are available on CRM and it is considered as the central and essential element effective SCM [14, 37, 38]. Moreover, previous studies highlighted the benefits of customer relationship. Relationship with customer in SCM practices may leads to improve the organizational performance [34], increased in sale and profit [39], sustaining customer loyalty, distinctive products as compare to competitors, and superior value creation for customers. Van der Vaart and van Donk [40] argued that long-term and close relationship with customers is important for the organization to practice of better supply chain management. The strong affiliation between the organizations and customers enable organizations to give a fast respond to its customers. In addition, an organization having a strong affiliation with clients is able to differentiate their product from competitors by receiving feedback form customer and enjoy customer loyalty in result of their satisfaction [36]. Consequently, it could enhance customers' loyalty

and customers' satisfaction [41]. Furthermore, the requirement for personalized service and mass customization may make a customer relationship as one significant component of CRM practices. Based on the above literature this study hypothesized:

**H<sub>1</sub>.** Customer Relationship has a significant positive relationship with Financial and Economic Sustainable Performance.

#### **2.4. Strategic Supplier Partnership**

Papakiriakopoulos and Pramatarı [8] defined strategic supplier partnership (SSP) as "the long-term relationship between the organisation and its suppliers". SSP has its focus on long lasting direct relation with customers for shared planning and problem resolving efforts [42]. Supplier partnership is initiated with the purpose of enhancing strategic as well as operational efforts and competences to achieve firm's goals [6]. A leading supply chain has the prominent role of an efficient supplier partnership [42]. An important contextual issue is that how an organization has effectively associated with the suppliers to enhance required competencies. Numerous studies are available that have strong evidence for the relation of strategic sourcing acts to enhance supply chain outcomes. Narasimhan and Talluri [9] conducted a study in 215 North American firms and concluded that strategic sourcing has strong positive association with achievement of manufacturing goal. In this study, strategic sourcing includes strategic subcontracting and supplier ability examination. Furthermore, strategic supplier partnership concept is the essential element of second order idea of supply chain management. Strategic sourcing elements can be illustrated as the extent of supply network management inside the hierarchy of firm, coordination of supply chain with the other operations of firm, sharing information with suppliers and wide-ranging supplier development actions [43]. Furthermore, information generation and sharing between retailers and suppliers are significantly influenced by strategic sourcing [14]. Suppliers and retailers have different information in various domains. Therefore, by combining this information, a unique set of knowledge can be created that will expand firm knowledge. Improved understanding among retailers and suppliers could enhance probability of new product recognition [2]. In this process, retailers have to face many kinds of risks.

First, retailers display new untested products in their selling points. Second, reputation of retailers will be at risk if product does not deliver according to the requirements of the customers. Customer will blame sellers for selling low standard goods. Third, retailers will have to test new products for providing wide range of variety to attract customers. Consequently, where retailers have established relation with suppliers, they are compelled to display new untested products.

In addition, Andiç, et al. [24] indicated that strategic supplier partnerships include activities such as buy goods and services from suppliers which may impact the system of suppliers and operational capabilities that will increase the firm value as well as enhance the SCM performance of an organization. Hence, strategic supplier partnership enable an organization to be more effectively work with supplier that are likely to share and liable for the successful of the products provided. Suppliers who participate in the early process of products can offer an organization the more influential choice of design, help them to choose the finest mechanisms and tools, and assist in strategy assessments [44]. Thus, the integrated organizations strategies may work carefully combine with suppliers to remove inefficient time and efforts [45]. Thus, this study hypothesized:

**H<sub>2</sub>.** Strategic Supplier Partnership has a significant positive relationship with Financial and Economic Sustainable Performance.

#### **2.5. Level of information sharing (LIS)**

Level of information sharing (LIS) means "the extent to which critical and proprietary information is communicated to one's supply chain partner" [46]. Information sharing can vary in many aspects and dimensions such as strategic, tactical in nature, delivery to customer and overall market knowledge [37]. More focus on the information sharing will result in increasing supply chain partners strategically [46]. Appropriate information management can enhance learning and improvement of manufacturing businesses and their association with supply chain. Practices of information management are based upon the knowledge sharing of supply chain participants as well as learning in the entire process of supply chain regarding common problems [7]. Mutual understanding and supply chain performance (SCP) indicators in the study will guide for the assessment of

development level of the firm's information, capabilities and behavioural features [47]. Resultantly, LIS will not only develop harmony among internal operations of the firm but it will also enhance external association among supply chain participants by making it approachable to the supply chain prerequisites.

Green, et al. [2] stated that by making sure the sharing of quality information will significantly help in developing effective SCM. Similarly, Diabat, et al. [14] recommended that organizations must make sure the flow of information without any delay and disturbance. By considering the educational importance of quality information sharing, it is regarded as the important dimension of the SCMPs [48]. Information quality represents the quality of information content [49]. The term is often used synonymously with data quality that which information is transformed from two or more data. Knowledge quality can be defined as the degree to which the information fits with the firm's needs. The quality of information is determined by the criteria of relevance, timeliness, completeness, accuracy, credibility and adequacy [50]. Besides, Scholten and Schilder [51] suggests four dimensions are significantly important for reliability and validity in measuring information quality that include data quality, timeliness, portability, and usability. Information quality itself is a concept of diverse dimensions for which studies have presented numerous indicator variables. These dimensions are precision, accuracy, applicability, consistency,

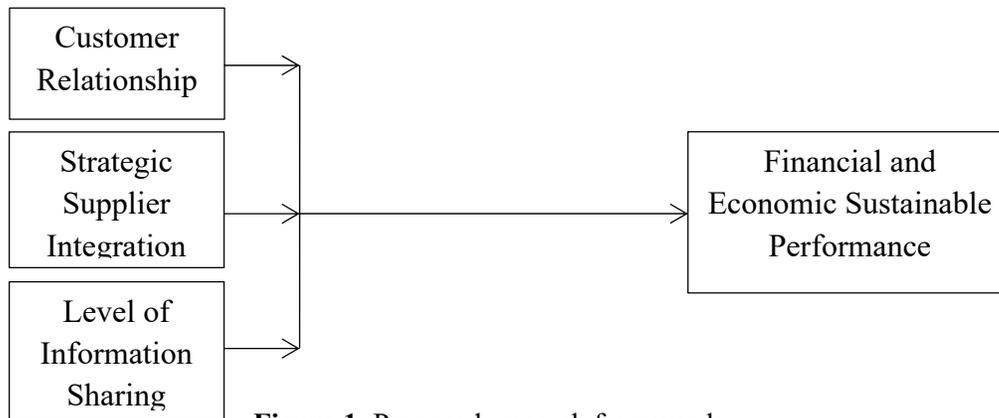
extensiveness, adequacy, comparability, appropriateness, dependability, understand ability, and limitations [52]. Subsequently, Hall and Saygin [53] characterized the quality of information in terms of reliability (i.e., consistency and accuracy), timeliness, relevance (i.e., significance, preciseness, and adequacy), and scope (i.e., exhaustiveness and completeness) in their study. Lack of information accuracy was one of the critical failure factors pertaining to SCM [54] and it may results in some negative consequences like bullwhip effect to the supply networks. The role of information quality in SCM is crucial, since it serves as the foundation for informed decision [55]. As an illustration, the delivery is fully relied on the quality of information shared. Thus, the commitment of shared high quality information significantly improved the overall performance regarding supply chain [56, 57]. Particularly, improved network integration, general receptiveness, associations, and eventually market performance [58]. Doerr, et al. [59] described the importance of quality data for logistics is dependent to timeliness, comprehensiveness, and appropriateness. However, the significant of its impact on SCM is subject to what, when, how, and who the information is obtained [54]. On the bases of the above discussion of literature this study hypothesized:

**H<sub>3</sub>.** Level of information sharing has a significant positive relationship with Financial and Economic Sustainable Performance.

## 2.6. Research Framework

Proposed research framework of the study for the examination of proposed relationship Supply Chain

Management Practices and Financial and Economic Sustainable Performance of Indonesian SMEs is presented in this section.



**Figure 1:** Proposed research framework

### 3. Methodology

This section of the study illuminates the methodology and design of this study. Basically, research methodology enlightens the major plan of action for conducting research. It explain how the data will be collected and analysed for the testing of hypotheses [60]. The main objective of this study was to investigate the relationship between Supply Chain Management Practices and Economic and financial performance of the Indonesian SMEs. To attain the objective of this study, quantitative research approach was carried out. In quantitative approach survey questionnaire was used to collect the data from respondents. The scale for each variable adapted from the previous studied. The questions for “supply chain management practices” were adapted from the study of Gorane and Kant [35]. While, the scale for “Economic and financial performance” was adapted from the study of Brent and Labuschagne [18]. 5 point Likert scale was used in questioners, where “1 demonstrate as highly disagree, 2 as disagree, 3 as neutral, 4 as agree and 5 as highly agree”. The researchers distributed 400 questionnaires among the

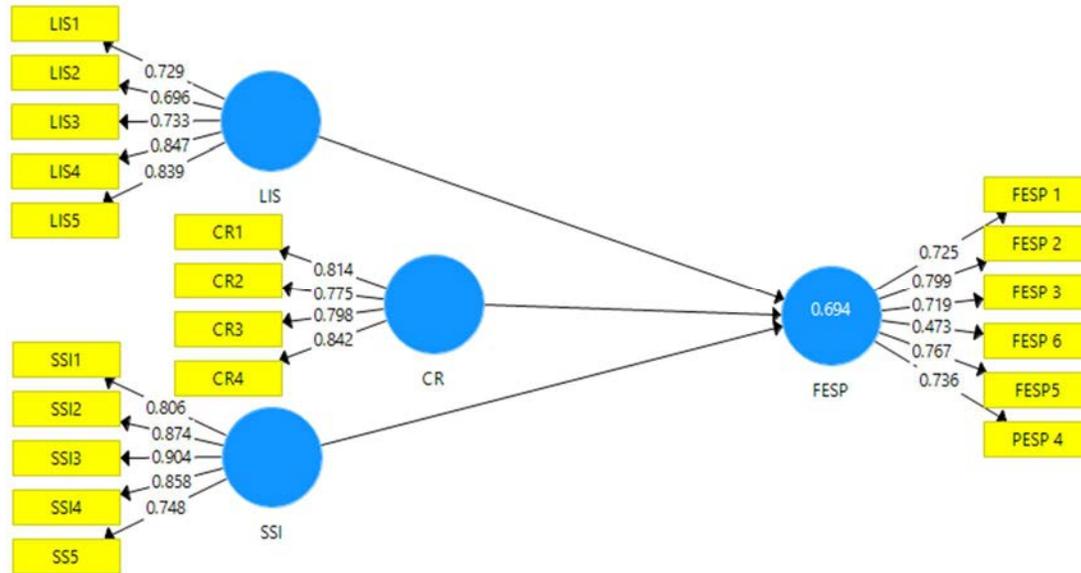
managing directors, supply chain managers, planning managers of Indonesian SMEs. From 400 questionnaires, only 241 were returned and useable for the analysis.

#### 3.1. Analysis and Discussion:

SMART-PLS was adopted was used in this study for data analysis purpose. Both Measurement and Structure Equation Model were applied in the data analysis process. Measurement model was used for data screening. In measurement model reliability analysis and validity analysis had been conducted. Structure Equation Modelling was used to test hypotheses and examination the proposed relationship among the variables.

#### 3.2 Measurement Model:

Reliability and discriminant validity of constructs was examined through “Measurement model”. In measurement the values of “Cronbach’s Alpha” and “composite reliability”(CR) was used to examine reliability of data [61]. While, the square root of AVE was used to investigate discriminant validity.



**Figure 2:** Measurement Model Assessment

**Table 1.** Cronbach's alpha and CR:

Sr#	Constructs	Cronbach's alpha	CR
1	Financial and Economic Sustainable Performance	0.704	0.836
2	Customer Relationship	0.896	0.881
3	Strategic Supplier Integration	0.811	0.798
4	Level of Information Sharing	0.903	0.869

**Table 2.** Discriminant Validity

Sr#	Constructs	1	2	3	4
1	Financial and Economic Sustainable Performance	<b>0.812</b>			
2	Customer Relationship	0.642	<b>0.415</b>		
3	Strategic Supplier Integration	0.514	0.212	<b>0.613</b>	
5	Level of Information Sharing	0.509	0.115	0.481	<b>0.725</b>

#### 4. Structural Model

After the assessment of reliability and validity of data through assessment model, the next step was to assess the structural model. Structure model carried to examine the hypotheses of this study. For the assessment of hypotheses, t-value and P-value was used. The threshold level for the t-value is minimum 1.96, while, for the p-value is maximum 0.05. Table 3 presents the findings of structure model assessment. Results indicate that customer relationship (CR) has significant positive influence on financial and economic sustainable performance of SMEs with t-

value 4.146 and  $\beta$ -value 0.272. These finding are consistent with the study of [62]. Results also found that level of information sharing (LIS) has positive relationship with financial and economic sustainable performance of SMEs with t-value 8.388 and  $\beta$ -value 0.527. These findings are in line with [1]. Finally, findings of this study illuminated that Strategic Supplier Integration (SSI) has positive effect on financial and economic sustainable performance of SMEs with t-value 2.177 and  $\beta$ -value 0.123. These findings supported H1, H2 and H3.

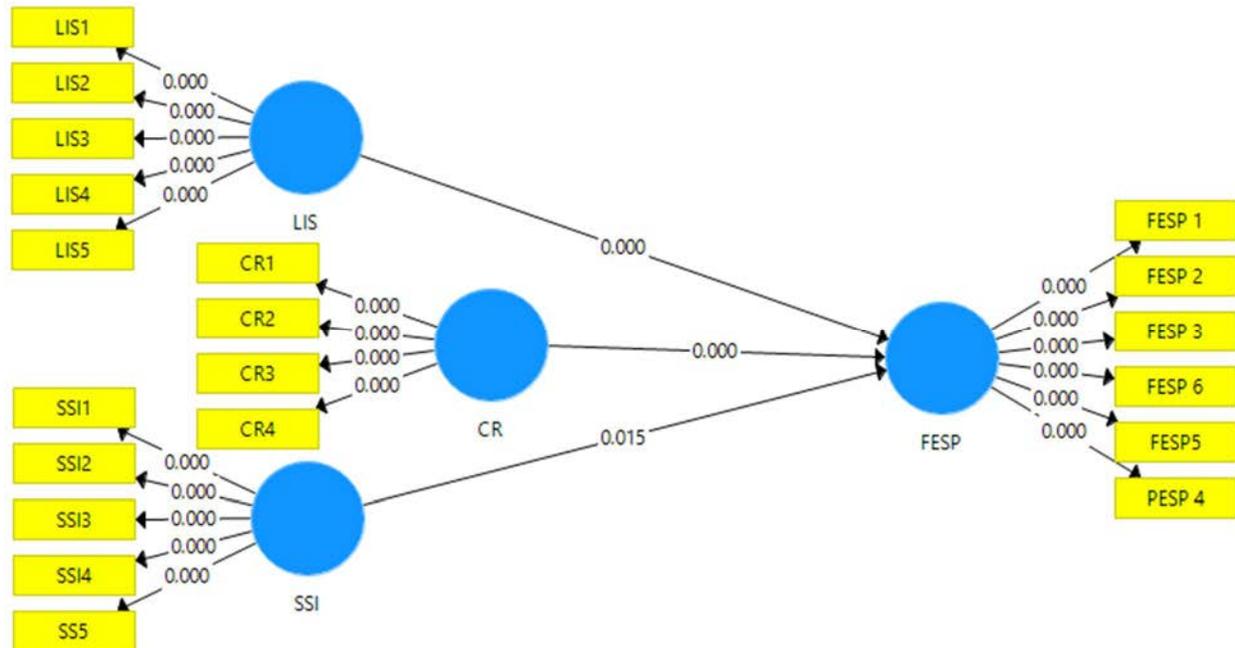


Figure 3: Structural Model Assessment

Table 3. Structural Model Assessment (Results)

	( $\beta$ )	(STDEV)	T Statistics	P Values
CR -> FESP	0.272	0.066	4.146	0.000
LIS -> FESP	0.527	0.063	8.388	0.000
SSI -> FESP	0.123	0.057	2.177	0.015

Table 4 indicates the value of variance explained ( $R^2$ ). Variance Explained ( $R^2$ ) demonstrates the percentage of variation in dependent variable that occurred due to the set of independent variables.

Variance explained ( $R^2$ ) of this study is 69.4%. This is substantial variance explained as per the recommendations of Chin [63].

Table 4. Variance Explained ( $R^2$ )

Construct	$R^2$	Variance Explained
Financial and Economic Sustainable Performance	0.694	substantial

## 5. Conclusion

Economic and financial is necessary for the sustainable survival of any organization. The purpose of this research was to examine the effect of Supply Chain Management Practices on Financial and Economic Sustainable Performance of Indonesian SMEs. For achieving the objective of study, researcher used quantitative research approach and survey method. Questioner method was applied for the collection of data. This study documented the influence of SCM Practices on Financial and

Economic Sustainable Performance of Indonesian SMEs. SMEs play a role in the economy of the any country like a backbone. The effective application of SCM practices could enhance the financial and economic performance of the SMEs in developing countries. The results of this study offer new indication regarding SCM practices that favour to financial and economic sustainable performance of SMEs in Indonesia. Results highlighted that better relationship with customer, strategic supplier integration and level of information sharing have

positive relationship with financial and economic sustainable performance of SMEs. The study's findings highlighted the importance of chain management practices.

Moreover, from the practical aspect, findings of this study can help firms in the manufacturing industry to identify and implement supply chain management practices that may be useful to ensure the effectiveness and efficiency of their daily activities as well as improve their financial and economic performance. Although the results of this study suggest that SCM practices are related to the financial and economic performance of SMEs in Indonesia, these results are based on one study. More

empirical studies are needed to provide more evidence to further support the notion that SCM practices and financial performance. This study used only three SCM practices (relationship with customer, strategic supplier integration and level of information sharing), the other relevant as well as important aspects of SCM practices such as SCM formulation, implementation and evaluation which this study did not address, would be further investigated in future research. Moreover, it is also important to note that the SCM practices identified in this study may not necessarily prevail in firms that operate in the other business sectors.

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