Moderating Effect of Information Sharing on the Relationship of Supply Chain Management Capabilities and Business Performance: A Study on the Indonesia Food Industry

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***Abstract*- Indonesia is viewed as one of the biggest exporters and producer of foods and also plays an essential role in the development of Indonesia economy. Nevertheless, food industry provides help to the country to generate high level of income. To effect the performance of food industry, there are lot of factors. For this purpose, it is intensively challenging to choose that factor which effects more in the performance of food industry that could lead to a negative or the positive impact on another factor. Therefore, objective of the study is to explore the moderating effect of the information sharing on the relationship of supply chain management (SCM) capabilities and business performance (BP) of Indonesia food industry. Using cross sectional research design, 500 questionnaires were distributed among the supply chain managers of food industry by using a judgmental sampling technique which yield a 40% response rate. The data was analyzed by the Structural Equation Modeling technique. The key findings of the study have shown that SCM capabilities have positive and significant association with the BP. Similarly, it was also shown that information sharing significantly moderates within two components of SCM namely, strategic sourcing, technology capability and BP. Whereas has insignificant moderating effect on the relationship of logistic integration commitment and BP. Hence, current study contributed some theoretical implications in the existing body of literature. The study limitations and future directions are also being discussed.**

Keywords; *supply chain management capabilities, information sharing, business performance, food industry, Indonesia.*

Introduction

In the contemporary environment, the increased competition among the organizations and to consider organizational change, every organization should develop their performance [66-68]. For this purpose, firms need to design and implement all the strategies which could provide help to improve their performance. For this reason, most important goal of the firms is the continuous improvement of performance [1]. Business performance (BP) is considered one of the important apprehension of shareholders and managers of economic entities. Therefore, company's BP is considered achievement of organizational goals or active performance could be effective and constructive [2]. In line with this, performance is a description of the work levels or objectives which could leads to satisfactory and optimal results or outputs in a given time period [2]. As the financial goals are associated with the company's profitability [3]. To describe this, many factors may influence BP of companies and each company tries to improve its business processes through selecting a set of effective ways [4].

Among all of these factors, [5] describes that supply chain management (SCM) capabilities are considered an important factor to enhance the BP. In the early stage at 1980, supply chain management (SCM) was introduced as s term through a consultant. The mainly purpose of this concept was to discuss the internal function of the business. For example, manufacturing, distribution, purchases and sale of the business [6]. Then, with the passage of the time, the scope of the SCM was mainly spread all over the world from an intra-organization logistics to internal organizational issues, which was consists of all the key process and functions of the business. In addition, [7] further explored that it is considered an important system which provides helps to coordinate a sequence of inter-related BP to,

1. Obtain the parts and the raw material for the business.
2. Convert the parts and raw material of the business into the finished goods.
3. Increase the values of all those products.
4. Promote and also provide helps to distribute all of these products to the consumers, retailers or the customers.

In the same vein, main concern of the SCM is, to improve the functioning efficiency, and profitability of a company, and also their supply chain partners. An organization begins to realize that for any organization is not sufficient to improve the productivities of the organizations but also whole process of supply chain could be more effected and competitive [7]. It is cleared that practicing and comprehension of SCM has been turned into a basic essential to remain in the competitive worldwide race and to develop beneficially [8]. Numerous organizations have reacted to these conditions by concentrating on their center capabilities, and re-

appropriating non-center exercises that were recently performed in-house. In any case, expanded re-appropriating yields less advantage to vertically incorporated organizations whose main concern to facilitate the products that were competitive in nature and services was mainly relying upon the abilities of their production network. Accordingly, there is a need to accomplish the correct harmony among inner and outer re-appropriating activities. The productive usage of SCM requires incorporating inward elements of an organization and adequately connecting them with the outer activities of its accomplice organizations in the store network [8].

In addition, several other challenges such as weak management relationship, technological insufficiencies, in the information sharing distress, and absence of top management support are considered a few major challenge and issues in SCM [9]. And also, owing to some unavoidable factors, some manufacturing facilities are isolated and secluded with common interruptions in the basic supply of utilities such as internet connection, electricity and water, leading to operating downtime [8]. Along with these several challenges, previous studies have a major focus on the developed countries as compare to the developing country countries especially, Indonesia food industry which have different cultural values. So the generalizability of these studies is limited on the developing country like Indonesia food industry because the organization structure is different from the developed economies. The food industry of Indonesia played an important role in the social and economic development of the Indonesia.

As per the latest report of [9] reported the 9 percent contribution of the food industry in growth of the Indonesia economy. Prior studies reported key issues in SCM in the food industry such as deficiency of scheduling and communication [10]. Therefore, this study expands prior works by investigating the role of information sharing in the supply chain management capabilities and BP in the food industry of Indonesia. Unlike previous studies which have mainly focusing on linking technology to supply chain performance [11-14], this study examines technology capability from both aspects technical, and the social aspects which is information sharing. Within the previous business literature, factors such as logistics incorporation commitment [15], technological advancement [15], logistics integration [16], and strategic sourcing [17] have and information sharing has been cited as important in achieving BP. Based on the previous discussions, there were divergent empirical results reported on the direct effects of these dimensions on BP in the existing literature highlighting the existent of a moderator. While information sharing has not been explicitly theorized as moderator in the past literature, information sharing has been implicitly serve as an important link between these dimensions and BP.

The study objective is to investigate the moderating effect of information sharing on the relationship of SCM capabilities and business performance (BP) in the food industry of Indonesia. To achieve this objective, the current study is divided on the various sections namely, introduction, literature review, conceptual framework, methodology, results and discussions. Lastly conclusion, theoretical and practical implication and limitations of the study are discussed.

2. Literature Review

2.1. Supply chain management

In the contemporary environment, supply chain management (SCM) is considered interdisciplinary topic which is created from other topics such as purchasing, marketing and management information system etc. It consists of lot of methods which are used for the efficient manufactures, warehouses, consumers and retailers so that proper number of goods could be created and distributed at the best place [18]. In line with this, aim of SCM is to exchange the proper information related which is necessary to fulfill the requirements of the market, to improve the new products in the current market, to reduces the number of suppliers for manufacturer, activate and release the appropriate management resources to develop the long term relationship shaped initially based on the member's trust [19].

2.2. Supply Chain Management Capabilities

SCM capabilities are refers with the network ability, to form, assimilate, and also reconfigure the internal along with the competencies which are external to address all the widely changing environment [20]. In the same vein, [21] further explained that there is an explicit link which is created between exceptional profitability and capabilities. In line with this, Day [21] explains the capabilities into the three terms. Firstly, in the outside-process capabilities which provide help to the companies to compete through the predicting and active changes in the market by developing sound relationship with suppliers, customers, and consumers [22]. Secondly, inside-out processes capabilities which consists of internal capabilities which enables to the firms in achievement of the opportunities in the contemporary competent environment [22]. On the other hand, also provides help to facilitate the companies in providing information in the proper manner which helps to brings value for the customers and convinces the capability of the organization in the long- run. Thirdly, capabilities which are called spanning process capabilities that are related with all the process which provides help to support the predicted needs that is being fulfilled through the business [23]. They can do so mainly by appropriately assimilating the "outside-in and inside-out capabilities".

2.3. Business Performance

Business performance (BP) that refers how the organizational activities and results of them as well [24]. There is no generally accepted method for measuring the performance of companies; however, business financial and accounting results are the ultimate goal of many companies [25]. Previous experimental studies show that multidimensional structural performance could be measured by several measurement criteria [25]. Based on the conducted researches, the evaluation of organizational performance which is mainly divided into two dimensions: operational and BP [26]. Based on this, a company's BP is called the achievement of organizational

goals or as active, constructive, and effective performance [27]. BP is referred with the company's achievement of the shareholder's financial goals in order to increase their wealth. These goals include indicators and criteria such as profit earnings, profit of percentage of, sales revenues, market share, capacity of production and return on investment (ROI which are considered as an important part of organization's performance [28, 29]. Business performance is one of the important concerns of shareholders and managers of economic entities and using new methods managers try to manage their organization and provide an outstanding performance [30].

3. Conceptual framework

Figure 1 illustrated the higher level of conceptual framework for this research. The framework identifies that the SCM capability factors will have an impact on BP and this relationship is moderated by information sharing.

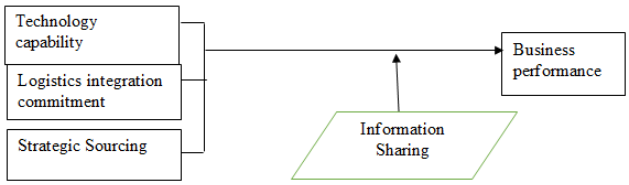

Figure 1. Conceptual Framework

The research framework is grounded in two well-established theories namely, Resource Based view, and Dynamic Capability Theory. The resource based view (RBV) asserts that an organization's sustainable competitiveness relies on the company's ability to control the valuable, rare, heterogeneous and imitable resources and capabilities [31]. Based on this argument, globalization proceeds and information technology developed the value and ability to link supply chain partners across the globe becomes more apparent [32]. The application of information technology (IT) in supply chains are seen as a tool which makes information sharing along with supply chain possible and critical to company's successful performance operations. Moreover, within supply chains, among the partnering firms there is need of effective and efficient products transactions and information sharing [33].

At second, Dynamic Capability Theory, which highlights how the supply chain partners could deploy, acquire and could reconfigure the resources within the organizations and supply chain process [34]. This study integrated three constructs including commitment strategic sourcing, logistics integratration and information sharing. Accordingly, the logistics integration commitment which has main concerned with the long-term orientation with the both parties' buyers and suppliers to cooperating the coordination of logistics function [35]. The second element, strategic sourcing refers to the process of designing and managing supply networks in line with BP [36]. The ways firms source from suppliers have changed considerably. Rather than through keeping the large suppliers and low price materials, firms are now integrating suppliers into their firm's operations, leading to various collaboration practices. In a global environment, strategic sourcing has gradually become a significant component of company's global strategies to achieve the different premeditated goals [37].

3.1. Hypothesis Development

The following hypothesis for the current study based on the objective of the study are depicted below.

3.2. Logistics Integration Commitments and Business Performance

Business performance refers to how well the firms could be able to achieve their financial goals [38]. It evaluates to the business growth and profitability [39]. The logistic integration along with the suppliers might be able to the firms to gain knowledge from the suppliers, like, scheduling, inventory level and production which helped to the organization to optimize inter organizational process [39]. The logistics integration could also be helped to reduce the direct cost by gathering information about the supply network and allow to firm to identify capable supplier which helped to increase the performance of the organization [40]. In the same vein, (Flynn, Huo, and Zhao 2010) further recommended that supplier could be able to achieve the higher customer level service, that in turn helped to increase the business performance [41]. Therefore, based on this it is hypothesized that;

H_1: There is a significant association between the logistic integration commitments and business performance

3.3. Strategic Sourcing and Business Performance

Prior studies have been discussed that strategic sourcing practices played an important role to enhance the business performance [42]. Strategic sourcing has the ability to increase the purchasing function of the organization to increase the performance of the organization through the various planning process [43]. With the help of the strategic sourcing, manufacturing firms could be able to communicate with the customer according the customer demands, which help to the organization to prepare the goods according to the requirements of the customers (Chiang et al., 2010). This advantage might be helped to the companies to enhance the business performance of the organization because this would be helped to the organization to satisfy the need of the diverse customers in the international market [44]. Based on these arguments, this study postulates that:

H_2: There is a significant association between the strategic sourcing and business performance in the food industry of Indonesia.

3.4. Technology Capability and Business Performance

Generally, the management of the supplier is referred all the practices that could help to promote the closer involvement along with the few selected supplier through the establishment of the long term relationship and better coordination with them [45]. Prior studies have been found that the management of the supplier is directly and indirectly effects to the business performance. In the extant literature, most of the researchers believes that gain

in the companies is to be achieved from the latest changes in the technology and business performance. As per the findings of [46] who emphasized that return in the organization is to be arise from the activities such as development or exploration of the latest new product and process. They were further suggested that it is very important to apply the successful innovations in the organization, thereafter, a company could be able to gain a good performance that might also be helped to achieve the competitive advantage [46]. Thus based on this, it is hypothesized that;

H_3: There is a significant relationship between technology capability and business performance in the food industry of Indonesia.

3.5. Logistics Integration Commitments, Information Sharing and Business Performance

The Logistics integration commitment would also drive firms to improve their BP. Given that firms could face higher level of degree of uncertainties, leading to the long lead time and imprecise the forecasting of demand in a logistics integration that require a good [47]. Such integration creates the continuous connection among the firms and suppliers, and would facilitate firms in reducing various problems including bull ship effect [48]. Therefore, coordinated logistics function authority firms to accept the lean production system which are connected with reliable order cycles and inventory costs reduction. Following this trait, this study postulates that:

H_4: Information sharing significantly moderates in the relationship of logistic integration commitment and business performance of food industry in Indonesia.

4. Strategic Sourcing, Information Sharing and Business Performance

There are numerous strategic sourcing which practices have been shown in the existing literature to enhance BP [49]. Strategic sourcing enables the purchasing function to develop the work closely and also containing with supplier which are selected in the different various planning process. Similarly, through the various strategic purchasing, manufacturing firms are able to communicate demand changes quickly, enabling the various suppliers to understand and to meet all the changing requirements in the earlier stage [50] to enhance BP. Based on all of these assumptions, this study hypothesizes that:

H_5: Information sharing significantly moderates in the relationship of strategic sourcing and business performance of food industry in Indonesia.

4.1 Technology Capability, Information Sharing and Business Performance

A good IT infrastructure could be assumed as common in most firms in the developed countries, such assumption might not be applied in some developing countries 'firms [51]. As firms extends information sharing across supply chains, partnering organizations' technology (e.g. software, and hardware) need to be seamlessly compatible to achieve superior BP [52]. Therefore, based on all of these assumptions, this study therefore is postulated that:

H_6: Information sharing significantly moderates in the relationship of technology capability and business performance.

5. Methodology

This study employed quantitative approach, employed self-administered questionnaire, and cross-sectional research design to examine the research framework and proposed hypotheses. This techniques in primary study is considered an important practical approach for providing the data which could be used for the wider generalization of the study [53]. For this purpose, all the respondents were selected from food industry and get the responses from the multiple industries that has been listed through works industrial work department and Ministry of Industry of (Indonesia). Judgmental sampling technique was developed to choose the respondents. As they were mainly the managers of supply chain. Hence, response was requested from a top-level executive of production who were considered to be a responsible for all the policies of supply chain. From the target sample the survey was conducted on the 500 samples, 220 responses have been used for all the analysis. Thus, the response rate was about 44%. The questionnaire was comprising of demographic and 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree) to collect the responses from the respondents to each mode of the hypotheses.

5.1. Measurements

The independent variables were measured using 15 items grouped into three constructs - technology capability, strategic sourcing and logistics integration commitment. Similarly, secondly, moderating variable, information sharing was measured by 7 items and lastly, business performance is dependent variable which are measured by 5 items. The following Table 1 highlights the measures used to assess the variables identified.

Table 1. Measurements of Study

Constructs	Measures	References
Technology capability	1. My organization is using most advanced IT systems. 2. My organization has the skilled and knowledgeable IT staff. 3. My organization has well experienced in deploying the IT applications. 4.Our partners of supply are technically supporting with the firms in the information system. 5. There are direct computer-to-computer links with all of my key supply chain partners. 6. Inter-organizational coordination is achieved through using the electronic links.	[54]
Logistics integration commitments	1.Logistics integration is playing an important role in our supply chain system through providing all the material till the end delivery. 2. We have a unified integration of logistics activities with all of our key supply chain partners. 3. The inbound and outbound distribution of all goods with our supply chain partners that is well integrated.	[55]

	4. Inter-organizational logistics happenings are very closely coordinated.	
Strategic sourcing	1.We heavily source components and semi-processed products across national boundaries. 2. We gain an access to our suppliers 'capabilities to enterprise and progress the major components and the finished products. 3. Technical engineering activities are the main characteristic for supplier involvement in this organization. 4. We are well informed about our supplier 's product and market. 5. We depend on supplier's knowledge and expertise in developing new product.	[50]
Information sharing	1. Our organization share and interchange all the information that is related to change in the end-users need and behavior. 2. in our organization all the information is shared and exchanged to changes all the technology for the focal products. 3. in our organization all the information is shared and exchange within the network as soon as unexpected problem is arises. 4. in our organization regularly shares the policies, information, strategies along with the network partner. 5. Our organization share and exchange all the information of the organization know how and business performance inside the network partner. 6. Our organization has established a good network information due to allocate the sales information within the network partner. 7.Our organization has been using information sharing along with buyers and suppliers via extranet.	[56, 57]
Business performance	1. Market share 2. Return on investment 3 Production capacity 4. Sales revenue, 5. Profit as a percentage of sales	[22]

6. Analysis of the Study

To test the model, we used the structural equation modelling (SEM) technique through using the partial least squares (PLS) with Smart PLS 3.0 [58] software.

This software is called a second generation software that could be used to test the complex model along with the latent variables. Table 2 has been showing the results which were obtain through the measurement of model. Based on the Table 2, it could be clearly seen that all of the loading are above the 0.70 that is called the threshold value that is suggested by [59]. The AVE (Average Variance extracted) of all the constructs which has exceeding value 0.5 [60]. As is it is explained by that minimum value of composite reliability (CR) should be 0.70 [58]. So, we could have been concluded that convergent validity has been achieved. Table 2 and 3 further shown the discriminant validity results. Hence, it is explored by [61] and [62] that minimum value of AVE in the measurement model should be minimum higher than the cross loading. As it is shown in the Table 3 and Table 4 all values meet the criteria of discriminant validity. Each construct AVE should always be the higher than the correlation between all of these. It is clearly shown in the following Table 2 and 3 that all the construct fulfills the criteria for the discriminant validity. Accordingly, it is suggested by [63] suggests that measured variable loading should always be higher than the cross loading through at least 0.1 that is considered sufficient for the discriminant validity. As such we can conclude that discriminant validity is achieved.

Table 2. Loading of the Measurement Model

Constructs	Items	Loadings	Alpha	CR	AVE
Technology capability	TC1	0.837	**0.851**	**0.913**	**0.692**
	TC2	0.785			
	TC3	0.879			
	TC4	0.825			
	TC5	0.793			
	TC6	0.867			
Logistics integration commitments	LIC1	0.758	**0.758**	**0.824**	**0.544**
	LIC2	0.702			
	LIC4	0.704			
Strategic sourcing	SS1	0.703	**0.774**	**0.833**	**0.507**
	SS2	0.701			
	SS3	0.705			
	SS4	0.814			
	SS5	0.796			
Information sharing	IS1	0.795	**0.834**	**0.827**	**0.554**
	IS2	0.809			
	IS3	0.839			
	IS5	0.786			
	IS6	0.719			
	IS7	0.657			
Business performance	BP1	0.591	**0.898**	**0.913**	**0.678**
	BP2	0.786			
	BP3	0.704			
	BP4	0.757			
	BP5	0.806			

Note: BP-Business Performance, IS-information sharing, LIS-Logistic Integration commitments, SS-Sharing Sourcing, TC-Technology Capability.

Table 3. HTMT Discriminant Validity

	BP	**IS**	**LIC**	**SS**	**TC**
BP					
IS	0.334				
LIC	0.168	0.724			
SS	0.449	0.823	0.835		
TC	0.719	0.607	0.724	0.611	

Note: BP-Business Performance, IS-information sharing, LIS-Logistic Integration commitments, SS-Strategic Sourcing, TC-Technology Capability.

Table 4. Forner Lacker Diminant Validity

	BP	IS	LIC	SS	TC
BP	0.824				
IS	0.304	0.668			
LIC	0.168	0.724	0.737		
SS	0.449	0.823	0.835	0.712	
TC	0.719	0.607	0.724	0.611	0.832

Note: BP-Business Performance, IS-information sharing, LIS-Logistic Integration commitments, SS-Strategic Sourcing, TC-Technology Capability

The Q^2 or predictive relevance analysis has been done through using the blindfolding procedure [46]. If the value of Q2 is larger than 0, we could have concluded that the model has adequate predictive relevance [58]. The Q2 was 0.174 that was greater than 0, thus predictive relevance was established.

6.1. Direct relationship

The next steps in assessing the structural model are to examine the hypothesized relationships among constructs in the measurement model. The model explanatory power was resolute through inspecting how well the observed data fit the hypothesized relationship among the constructs. Following, [54], bootstrap the re-sampling approach has been hired to test all the significant of all each coefficient. As recommended by [55], five thousand duplications through using the randomly selected subsamples which were performed to test all the hypothesized relationships. Table 5 depicts the beta coefficients and t-values for the first 3 direct hypotheses. As depicted, this study found support for eight out of 3 hypotheses tested.

Table 5. Estimated Path Coefficient- Direct Effect

Hypothesis	Relationship	Beta	Standard Deviation	T Statistics	P Values	Results
H_1	LIC -> BP	0.240	0.072	3.336	0.001	Supported
H_2	SS-> BP	0.291	0.059	4.905	0.000	Supported
H_3	TC -> BP	0.132	0.059	2.248	0.025	Supported

Note: p<0.05, BP-Business Performance, LIS-Logistic Integration commitments, SS-Strategic Sourcing, TC-Technology Capability

Accordingly, logistic integration commitment (LIC) has shown significantly and positively direct effect on BP (β=0.24; t=3.336, *p*=0.001) that supported to the hypothesis (one). In addition, the result also highlighted that strategic sourcing (SS) was significantly related to Business performance (BP) (β=0.291; t=4.905; *p*=0.000). The findings provide support for hypothesis H2. Furthermore, technology capability was also significantly and positively related to the business performance (β=0.132; t=2.248; *p*<.025). Therefore, hypothesis H_3 was supported. All of these indicates that food industry of Indonesia played an important role to implement the SCM capabilities to enhance their business performance. The SCM capabilities play an important role to enhance the business performance. Thus, this shows that for the food industry to enhance the business performance SCM capabilities are considered to be important predictor. All of the results are depicted in the following Table 5.

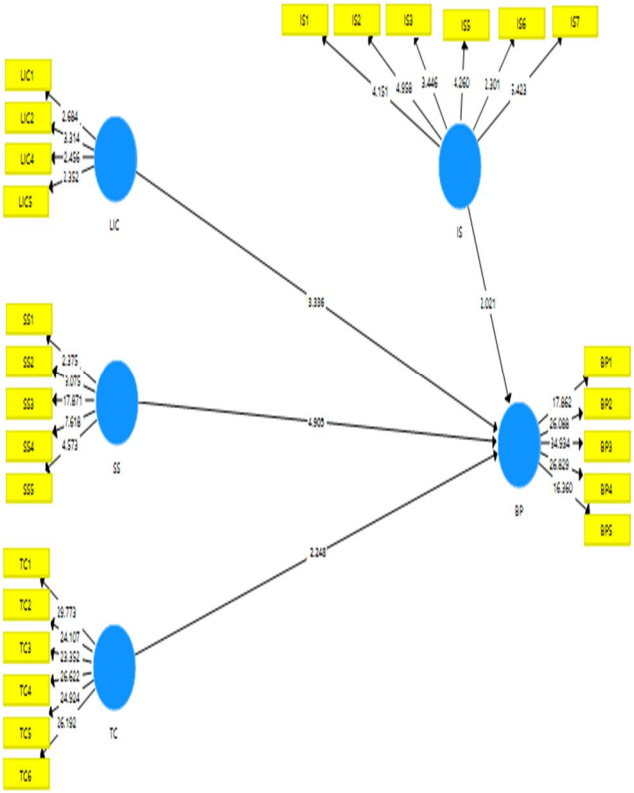

Figure 2. Direct relationship between the exogenous and endogenous variables

6.2. Testing Moderating Relationship

The research model hypothesized that information sharing moderate in the relationship of three antecedents of SCM capabilities on the business performance. The moderation test was employed by using the two stage calculation approach. This approach was employed as per the suggestion of the [63], who recommended that when the objective of study is whether is that moderating variable significantly moderates in the relationship of exogenous and endogenous variable. For this purpose, to test the moderation hypotheses, this study has used [64] criteria to determine whether the moderation condition is exist.

The findings of the current study have shown that information sharing is significantly moderates in the relationship of strategic sourcing (SS), technology capability (TC) and business performance (BP). These findings support to the hypothesis (five and six). This shows that information sharing is considered to be significant moderator in the relationship of strategic sourcing, technology capability and business performance of food industry of Indonesia. On the other hand, it is found that information sharing is not significantly moderates in the relationship of logistic integration commitment and business performance. These findings do not support to the hypothesis (four). The contradiction in

the hypothesis might due to the reason that food industry of Indonesia is not sharing the proper information for the logistic integration commitment because it is intangible in nature. Therefore, without proper information this could not significantly effect on their relationship. Another, possible reason might be a due to the fact that it might be an overlapping of other variables. Therefore, a future research might be existed in the future in their relationship. All of these results are depicted in the following Table 6.

Table 6. Moderation tests using PLS

Hypothesis	Relationship	Beta value	Standard Deviation	T Statistics	P Values	Results
H_4	LIC *IS-> BP	0.068	0.043	1.609	0.108	Not supported
H_5	SS*IS -> BP	-0.122	0.051	2.387	0.017	Supported
H_6	TC*IS -> BP	0.48	0.074	6.47	0.000	Supported

Note: p<0.05, BP-Business Performance, LIS-Logistic Integration commitments, SS-Strategic Sourcing, TC-Technology Capability, IS-information sharing.

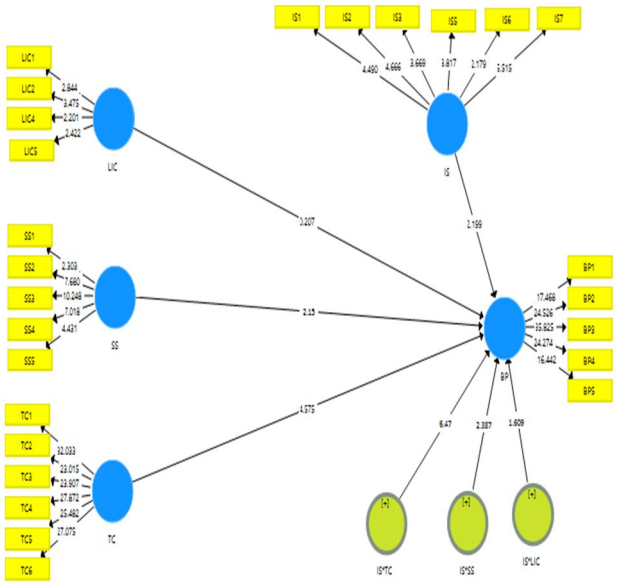

Figure 2. Moderating effect of information sharing in the relationship of exogenous and endogenous variable.

7. Conclusion

The current study has shown the general importance of the supply chain management (SCM) capabilities, information sharing and BP of the Indonesia food industry. The current study findings supported all the direct hypothesis, therefore, SCM capabilities are considered an important determent to enhance the performance of the firms. On the other hand, indirect effect findings reveal that information sharing significantly moderates within the two antecedents of SCM capabilitises namely technology capability, strategic sourcing and business performance. Whereas, is not significantly moderates in the relationship of logistic integration and business performance of food industry. This finding shows that there is need of time to restructure to the information sharing system in the food industry of Indonesia to shows it significant impact.

Consequently, through the transferring and acquiring information organizations should be reducing alteration in the system and then improving the distribution system predictability. Hence, under the current circumstances of the industry of Indonesia, as per the findings, could improve the better productivity through their competitors and to gain all the business goals. Thus, based on the findings it has very important managerial implications. Since, most of the firms, as presented through the main part of the Indonesia food industry do not have major resources. From this time, it is very essential that they should be cleared all the significances for the investment of the resources and also emerging the capabilities which could match their strategies of the business.

However, the current study is rigorous and systematic, therefore the current study has some limitations which can show the opportunities for the future research. At first, the respondent was the singular due to this the responses were suffered from the individual distinctive perspective and also has limited access along with the same responses through the upper management [65]. At second, the current study was limited on some indicators of SCM capabilities, therefore to enhance the importance of SCM capabilities to improve the business performance should be assessed other indicator of SCM capabilities. Therefore, for the future research could be done other indicators of SCM capabilities, such supplier involvement and business strategy. In addition, further research could be done for testing the interactive special effects between different components to examine the incompatible belongings to between them for forecasting the different types of performance. At last, this is an exploratory study in nature which has mainly focused on the single industry, therefore after seeking the importance of other manufacturing industries a future should be done on another manufacturing industry. such as the, pharmaceutical, electronics, and automotive industry, etc. By itself, all of these sectors might be helped for future research.

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