

# The Moderating Effect Of Supply Chain Dynamic Capabilities on the Relationship of Sustainable Supply Chain Management Practices, Supply Chain Integration and Business Performance

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**The Moderating Effect of Supply Chain Dynamic Capabilities on  
the Relationship of Sustainable Supply Chain Management  
Practices, Supply Chain Integration and Business Performance**

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**Abstract**

61  
The aim of the current study is to examined the moderating effect of supply chain dynamic capabilities (SCDC) on the relationship of sustainable supply chain management (SSCM) practices, supply chain integration (SCI) and business performance (BP) in the restaurant industry of Indonesia. For this purpose, the self-administered questionnaires were distributed among 269 supply chain managers which yield a 78% response rate. The Structural Equation Modeling (SEM) has shown that both the exogenous variable namely, SSCM practices and SCI have a positive and significant direct effect on the BP of restaurant industry of Indonesia. Moreover, the indirect effect also shown that SCDC is positively and significantly moderates among the relationship of SSCM practices, SCI and BP. In this regards, these findings indicate that SCDC is an important moderating variable which could help to take improvement in the SSCM practices and SCDC to improve the BP. These findings could add a body of literature in the empirical perspective which could help to increase the area of research in future.

60

**Keywords:** supply chain dynamic capabilities, sustainable supply chain management, supply chain integration, business performance.

**Introduction**

In the current age of life, Globalization was run by improvement in the field of transportation and communication (De Vass, Shee, & Miah, 2018). The reason of globalization is that the needs and requirements of the customers are rapidly changed. At the reasonable price, high quality, in the reasonable time, and right place the customers want suitable goods and services. On the other hand, if a firm want to enter in a new market place, it is necessary for them to correspond with the demands of beforehand customers (Huang, Yen, & Liu, 2014; van Donk & van Doorn, 2016). For the purpose of achieving the customer's satisfaction at this stage a firm must improve all their strategies and activities. Supply Chain Management (SCM) is a background that improves all the processes accomplished in the firms (Childs, 2016). Moreover, SCM work as a complicated operation which is consist on all the vendors' supportive movements, suppliers to service of after sales. To have an ability to sustain and develop any firm needs and requirements to identify its re-enforces on the conditions and qualities and deficiencies (Wong et al., 2010). Representing SCM could be a basis of competitive benefits (Huo, 2012) that is principal towards significant performance by as well as overall the firm performance (FP) (Huo, Qi, Wang, & Zhao, 2014).

17

The cooperation inside of supply chain and sustainable supply chain management (SSCM) consider as a significant job for improving business performance (BP) and enhancing competitive advantages.

101

At the most extreme level of performance it utilized supply chain (SC), it is essential for the firms to incorporate together of their practices and objectives (Kumar et al., 2017; W. Yu, 2015). That is necessary for Partners of SC to pay more attention on many appliances for assurance of competitive advantages: efforts of financial collaboration to support an innovative design of product design (Childs, 2016; C. W. Wong, Wong, & Boon-itt, 2013). The SCM is consist of integration and SSCM as well as synchronized for obtaining and reacting towards changes in customers' request (Rajeev, Pati, Padhi, & Govindan, 2017; J. Yu et al., 2013). There are the study revealed that the Supply Chain of Integration (SCI) have influences on FP (Huo et al., 2014; Kumar et al., 2017; Lu, Ding, Asian, & Paul, 2018) while other indicates that SCCM has an influence on BP (Crum, Poist, Carter, & Easton, 2011; Das, 2018; Golicic & Smith, 2013). Similarly, it seems that the value should be reflected towards influences of SCI practices, SCCM and procedures on the BP. In this way, this research discovers the SCI and SSCM influences on BP at the of Indonesia industry.

The restaurant industry has been contributing significantly towards extension of the entrepreneurial activities by enhancement in organization. In this way restaurant industry in Indonesia are increasing their area across of over economy parts, and contrary range of services and products are delivered for meeting markets requests (Palandeng, Kindangen, Timbel, & Massie, 2018). Therefore, the performance restaurant industry will influence on nation's economy. This studies also disclose that restaurant industry in Indonesia remain confronting many obstacles and difficulties therefore that effected the overall these business performance (BP) (Huo et al., 2014; Ralston, Blackhurst, Cantor, & Crum, 2015). Generally, restaurant industry in Indonesia are worried about achieving independently their all objectives and goals and continuous changing requirements and needs of customers due to extreme competitions between the firms. As a result, that leads to the challenges in incorporating SC processes and activities that delay in supplying services and products towards customers in a reasonable time and at suitable place and loss the competitive advantages (Huo, Ye, Zhao, & Shou, 2016).

2  
The basic purpose of this study is to investigate influences of SCI and sustainable supply chain management (SSCM) on the BP in Indonesia. On the other hand, this research also provides significant recommendations to the restaurants in Indonesia, as well as also for further industries. Lastly, this study contributes in scientific field. At the current stage, pay more attention on SCI, SSCM and BP is become progressively more significance due to its influence on firms' steadiness, progress, and existence. Hence, reviewing the influences of SCI and SSCM on the BP remain very necessary subject for the academicians and organizations.

#### Literature Review and Hypothesis Development

91

There are by utilizing different means many literatures categorized supply chain performance (SCP) and supply chain of integration (SCI) and all definition remained custom fitted that revealed by the indicated research, study, and business objectives. The SCI about coordination and cooperation as well as collaboration among different SC players that are enhance the FP. These supplementary segment will motivate and handle the SCI ideas and SCP, and also make an association between them.

15

#### Supply Chain Integration and firm performance

According to study, SCI is considered as a collaboration procedure into the players of SC which are supervise internal and external activities of a firm for the purpose of achieving effective flow of information, products and services that must provide at maximum extreme value towards the customers on reasonable cost and in accurate place (Nurmilaakso, 2008; J. Yu et al., 2013; Zolait, Ibrahim, Chandran, & Sundram, 2010). For the purpose of improving comprehension of SCI there are

90  
SCM are characterized in three dimensions (Chang, Ellinger, Kim, & Franke, 2016; Kim, 2009; Leuschner, Rogers, & Charvet, 2013). Therefore, suppliers are think about the key sources of input and information which essential for firms' objectives, consequently they have a necessary job in assembling products as well as service continuation to meet the requirements of customers (Flynn, Huo, & Zhao, 2010; C. Y. Wong, Boon-Itt, & Wong, 2011). At the current stage, there are manufacturing firms tend towards form a constant association between their suppliers that deal with customers' demands variance and reducing the time of production cycle and time of delivery which is defined by customers and firms (Liu, Ke, Wei, & Hua, 2013; Nurmilaakso, 2008; W. Yu, 2015). At that time suppliers are positively and progressively connected with manufacturing products and promote production towards remaining customers in neighboring (Lii & Kuo, 2016; Saleh & Roslin, 2015). Thus, an investigation categorized supplier's integration (SI) in the way of cooperation procedure between firms 71 partners that also encourage sharing of data, services, materials and experience. The exact things that redirect the objectives of relationship, partnership, and further applicable matters between firms and suppliers that are assessed by SI.

By recognized the objectives of link, internal integration (II) and coordination are the principal gravity point for both customers and suppliers, as well as it's viewed in the way of essence that make high consistency and stability towards all parties of SC (Ataseven & Nair, 2017; Liu et al., 2013; Qi, Huo, Wang, & Yeung, 2017; Santoso, 2020). Constructing the accurate procedure SC is depends on shared objectives and clear presence, that is originally be come from acceptance of entire 12 functional divisions the objectives of a firm (Chang et al., 2016; Thai & Jie, 2018; W. Yu, 2015; Zolait et al., 2010; Santoso et al., 2019). In addition, the dual customers' sorts all division is think about it (Chang et al., 2016; Lii & Kuo, 2016; Yusuf & Shehu, 2017). Therefore, primitive customers remain preeminent client that a firm aims towards render by finished goods and services, on the other hand there is different division for secondary customer and human resources at this stage depends on different outcomes for achieving their goals as well as in this way the firms can obtaining their objectives (Ataseven, Nair, & Ferguson, 2018; Huo et al., 2014; Tavana, Shabani, & Singh, 2019; Maryanti, 2019). According to this study, the II is defined in the way to keeping up collaboration and participation of cross-functional in the firms that is means to obtain strategic goals of an organizations. It remained estimated with indicators group which is cooperation in several departments.

The firms are considering that customers as a source of the life, therefore forth firms provides either services and goods, as well as it's viewed in the way of natural air which is necessary for a firm to improve 89 and having capability for withstand inside of presence of a substantial or extreme competition level (Chang et al., 2016; Leuschner et al., 2013). Requirements and demands of customers remain changed continuously, therefore what remained viewed as an important in previous maybe in the future become complementary (Flynn et al., 2010; Sabet, Yazdani, & De Leeuw, 2017). In view of that, it is very necessary for an organization to observe outer environments. Besides, for the preforming of customers' needs it must carry on the proactively more 77 or reactively to well excess of competitors (Danese & Bortolotti, 2014; Huo, 2012). In addition, in the present study, CI is categorized as a way to keeping up and building a significant association and partnership between customers. In this way it incorporates service, recommendations, outputs, and sharing information with customers. The present research is addresses SCI that incorporates suppliers and internal as well as CI.

#### Business performance

It is indicated that an additionally extensive conceptualization as well as increasingly capable to performance measure must incorporate the operational performance indicators, and also those performances on financial basis (Mao, Zhang, & Li, 2017; Ralston et al., 2015). Accordingly, these are

primarily the reason is that measures of non-financial can be overcome the boundaries of that only using measures of financial performance. It is indicated that in this study several advantages are provided for measures of non-financial, consists on the facts that measures of non-financial remain appropriate than the financial ones. Measures of financial performance are progressively quantified, as well as they remain predictable with firms' strategies and objectives (Leuschner et al., 2013; Van der Vaart & van Donk, 2008).

On the other hand, measures of non-financial are different and it can be changed later some time when needs of market change and manage to be this flexible in future (Huo et al., 2014). Although measures of financial performance are assured to reflect valuation of an organization with outside components of an organization's limits, and inside a operational measures point out about more directly effectiveness of objectives and responsibilities (Leuschner et al., 2013; C. Y. Wong et al., 2011). In the specific SC area these categorization of performance is reflecting the competencies, including cost, reliability, customer's satisfaction, and consistent quality and transportation speed. In this way measures of FP provides a significant suggestion about the efforts of SC extents. For the purpose of perceiving the importance of non-financial and financial performance there is SC firms should incorporate with both measurements. Therefore, following hypotheses are developing for this purpose:

<sup>12</sup>  
**H<sub>1</sub>:** SCI practices has a significant relationship with the financial performance of restaurant industry of Indonesia.

<sup>12</sup>  
**H<sub>2</sub>:** SCI practices has a significant relationship with the non-financial performance of restaurant industry of Indonesia.

#### <sup>97</sup> **The Relationship between SSCM Practices and Organizational Sustainable Performance**

Various studies have been conducted who investigated that how the SSCM practices could increase the organizational sustainable performance (OSP). A study conducted on the manufacturing firms by the Zailani, Jeyaraman, Vengadasan, and Premkumar (2012) who found that SSCM practices have positive and significant association with the sustainable performance, especially from the social perspective and economic perspective. In the same vein, a further study Hasan (2013) that was conducted on the five different firms also the positive effect of SSCM on the sustainable performance. Huatoco et al. (2013) confirmed that firms SSCM activities has significant and positive association with the sustainable performance. Towers, Perry, and Chen (2013) further used the explorative method to found the positive effect of SSCM on the brand of firms as well as also on the performance within the industry of the Scottish cashmere. Similarly, it is also found in the other studies that SSCM has a positive association with the sustainable performance (Luthra & Haleem, 2015). Thus after seeking this association it is hypothesized that:

<sup>12</sup>  
**H<sub>3</sub>:** SSCM practices has a significant relationship with the financial performance of restaurant industry of Indonesia.

<sup>12</sup>  
**H<sub>4</sub>:** SSCM practices has a significant relationship with the non-financial performance of restaurant industry of Indonesia.

#### <sup>10</sup> **The Relationship between Sustainable Supply Chain Management Practices, Supply Chain Dynamic Capabilities and business Performance**

<sup>81</sup>  
Previous researches on the dynamic capabilities has shown that it has a positive and significant effect on the business performance. It is further investigated by Eriksson (2014) that dynamic capabilities has the abilities to gain the competitive advantage and hence also provide help to gain the performance of the industry. Similar findings have been shown by the various other studies of (Menguc & Barker, 2005). As, currently the dynamic capabilities are relatively considered to be a new concept, and there is also a limited researches how it could effect to sustainable performance. A study explored by Brun,

Caniato, Moretto, and Cardi (2013) on the luxury industry and found the positive impact of supply chain dynamic capabilities on the sustainable performance and on the new products of firms. On the other hand, various other researchers also analyzed this relationship through the various specific dimensions and found that strategic cooperation ability could help to increase the sustainable advantage of firm.

The SSCM would provide help to achieve the competitive advantage which are short term, which in the turn could be boost with the further development of the dynamic capabilities (Brun et al., 2013). The combination of both of SSCM and dynamic capability is limited with respective to empirical research. All kind of information is provided by the customer orientation and participation in the SSCM practices (Dangol & Kos, 2014), and to some of the extent encourage the dynamic capabilities and improve the sustainable performance. In addition, Ernst and Kim (2002) further explored that cultivation and spillover of the firm's capability in global supply chain has shown that firms are able to gain the knowledge and resource's from various chain members and therefore has improved their capability (Leuschner et al., 2013). Moreover, Prieto, Revilla, and Rodríguez-Prado (2009) also elaborate that trust of the supply chain partner is considered to be a vital in dynamic capabilities of the firms.

It is proposed by Hazen, Cegielski, and Hanna (2011) that SSCM practices might not be considered as the source of competitive advantage. In addition, (Dubey et al., 2017) further argued that SSCM could impact on the competitiveness of the enterprise through the moderating linkage. With respective to the resource base view, dynamic capabilities could be often moderate the sustainable resources to improve the performance (Lin, Chow, Madu, Kuei, & Yu, 2005). Guiffrida, Datta, and Min (2011) further investigated that dynamic learning capability could be more effectively moderate the impact of the SSCM practices on the performance. On the other hand, various other scholars also explored the relationship among the sustainable supply chain management, dynamic capabilities and business performance (Kannan & Tan, 2005; Sroufe & Cukovic, 2008). The researcher has started their work from the dynamic and proposed that the relationship of the supplier has a positive effect on the flexibility of the production and optimization of the product, hence improve the sustainable performance. They further also confirmed the combined effect of dynamic capabilities within the supplier and firm efficiency relationship. Thus based on the previous discussions, it is hypothesized that:

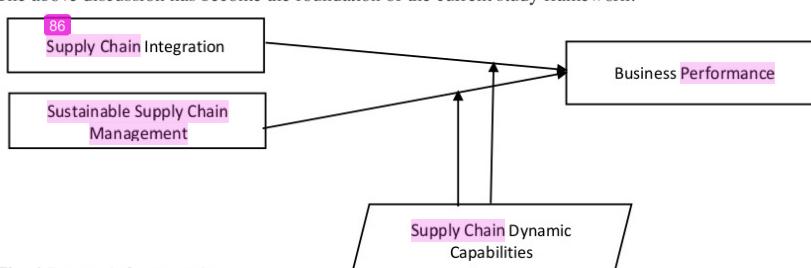
**H5:** SCDC significantly moderates in the relationship of SCI and financial performance of restaurant industry of Indonesia.

**H6:** SCDC significantly moderates in the relationship of SCI and non-financial performance of restaurant industry of Indonesia.

**H7:** SCDC significantly moderates in the relationship of SSCM practices and financial performance of restaurant industry of Indonesia.

**H8:** SCDC significantly moderates in the relationship of SSCM practices and non-financial performance of restaurant industry of Indonesia.

The above discussion has become the foundation of the current study framework.



**Fig. 1** Research framework

## 59 Research Methodology

The present study is cross sectional and correlational in nature because the data has been collected on time. A quantitative approach through using the self-administered questionnaire was used to investigate the relationship between the exogenous, moderator and endogenous variable in the restaurant industry of Indonesia. The primary data for the current study has been collected by using the five point Likert Scale from strongly agree=1 to strongly disagree=5. For measure all the variable the questionnaires were taken from the extant literature or studies. Five items for the SSCM practices has been adopted from the various studies (Hammervoll, Jensen, & Beske, 2012; Pagell & Wu, 2009; Reekie & Sundaram, 2017; Reuter, Foerstl, Hartmann, & Blome, 2010). Similarly, five items have been adopted for the supply chain dynamic capabilities (Dangol & Kos, 2014; Jiangtao, Yibin, & Minqiu, 2017; Klassen & Vereecke, 2012). In addition, the supply chain integration was measured by three dimension. Each dimension was measured by ten items which were adopted from the study of (A30ullah, Abdullah, & Saleh, 2017). In addition, two type of performance indicators were used like financial and non-financial performance that was consists of four items. Among the four items two following items, sales growth and net profit were used for the financial performance, while two items, lead time and customer satisfaction were used for the measurement of non-financial performance. Moreover, for the data collection, questionnaire translated both in the English and Indonesia language. At the time of study, there were almost 900 supply chain managers were working in Indonesia five star hotels. The samples size 269 supply chain managers for the current study was selected by using the (Krejcie & Morgan, 1970) table which were working in the five star hotels in the Indonesia by using a simple random sample technique. There two sampling techniques which has been used in the method72y. One is probability and other is non probability. In the probability sampling, each element has an equal chance of occurrence while non-probability not equal chance of occurrence of the elements. The generalizability of the probability sampling is more as compare to non-probability sampling. Therefore, for the current study a simple random technique has been used so that the generalizability of findings could be increased (Sekran & Bougie, 2013). In this regards, total 269 self-administered questionnaires were distributed among the supply managers of five star hotels in the Indonesia. The total of 210 questionnaires were returned back from the hotels which is 78% response rate of the total. As a result, 210 responses were included for the analysis.

## 78 Data Analysis

Several prior studies adopted partial least square – structural equation modelling (PLS-SEM) approach in testing the direct and indirect relationship of variables (Buil, Martínez, & Matute, 2018; Lim & Loosemore, 2017; Singhai, Wint & Kummer, 2018). Therefore, the research hypotheses of present research were assessed through PLS-SEM. The measurement and structural model of the study were assessed by using Smart PLS 3 software. PLS-SEM approach is appropriate in case of non-normal data or small sample size (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014).

## 77 Measurement Model of 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 (Hair Jr, Hult, Ringle, & Sarstedt, 2016) software. This software is called a second generation software that could be used to test the complex model along with the latent variables. Table 1 has been showing the results which were obtain through the measurement of model. Before assessing the model, the construct reliability and validity must be established (Hair, Sarstedt, H35ins, & Kuppelwieser, 2014). In this regards, in the first process of SEM analysis the convergent and discriminant validity of the construct was being assessed. All of the measurement model results have been depicted the Table 1. The minimum recommended value for the factor loading is 0.5, for Cronbach's alpha > 0.70, for average variance extracted (AVE) > 0.5 and lastly for composite reliability (CR) is >0.70 (Hair, Hult, Ringle, & Sarstedt, 2014). The Table 1 has shown that construct has fulfilled the criteria of the following measurement for the assessment of the measurement model. In addition, for the measurement of the discriminant validity, there are three following criteria's, cross loadings, fornell and larcher criterion that should be greater than diagonal value, and HTMT in which

4

all the values should not exceed from 0.85 (Hair, Hult, Ringle, & Sarstedt, 2017). All of the discriminant values results are depicted the following Table 2 and Table 3.

**Table 1: Measurement Model of the study**

| Measurement Scale                   | Items             | Loadings | Cronbach's Alpha | AVE          | CR           |
|-------------------------------------|-------------------|----------|------------------|--------------|--------------|
| Sustainable supply chain management | SSCM1             | 0.707    | <b>0.72</b>      | <b>0.57</b>  | <b>0.80</b>  |
|                                     | SSCM 2            | 0.826    |                  |              |              |
|                                     | SSCM 3            | 0.725    |                  |              |              |
|                                     | SSCM4             | 0.791    | <b>0.73</b>      | <b>0.52</b>  | <b>0.76</b>  |
|                                     | SSCM5             | 0.542    |                  |              |              |
| SC Dynamic Capabilities             | SCDC1             | 0.729    | <b>0.79</b>      | <b>0.54</b>  | <b>0.86</b>  |
|                                     | SCDC2             | 0.702    |                  |              |              |
|                                     | SCDC3             | 0.792    |                  |              |              |
|                                     | SCDC4             | 0.759    |                  |              |              |
|                                     | SCDC5             | 0.695    |                  |              |              |
| Supplier integration                | SI1 <sup>19</sup> | 0.758    | <b>0.75</b>      | <b>0.50</b>  | <b>0.83</b>  |
|                                     | SI2               | 0.748    |                  |              |              |
|                                     | SI3               | 0.697    |                  |              |              |
|                                     | SI4               | 0.747    |                  |              |              |
|                                     | SI5               | 0.578    |                  |              |              |
|                                     | SI6               | 0.890    |                  |              |              |
|                                     | SI7               | 0.780    |                  |              |              |
|                                     | SI8               | 0.830    |                  |              |              |
|                                     | SI9               | 0.902    |                  |              |              |
| Internal integration                | II1               | 0.745    | <b>0.71</b>      | <b>0.52</b>  | <b>0.76</b>  |
|                                     | II2               | 0.723    |                  |              |              |
|                                     | II3               | 0.699    |                  |              |              |
|                                     | II4               | 0.892    |                  |              |              |
|                                     | II5               | 0.723    |                  |              |              |
|                                     | II6               | 0.673    |                  |              |              |
|                                     | II7               | 0.893    |                  |              |              |
|                                     | II8               | 0.652    |                  |              |              |
|                                     | II9               | 0.726    |                  |              |              |
|                                     | II10              | 0.786    |                  |              |              |
| Customer integration                | CI1               | 0.890    | <b>0.810</b>     | <b>0.830</b> | <b>0.705</b> |
|                                     | CI2               | 0.672    |                  |              |              |

|                           |    |      |              |              |              |              |  |
|---------------------------|----|------|--------------|--------------|--------------|--------------|--|
|                           | 95 | CI3  | 0.780        |              |              |              |  |
|                           |    | CI4  | 0.872        |              |              |              |  |
|                           |    | CI5  | 0.560        |              |              |              |  |
|                           |    | CI6  | 0.712        |              |              |              |  |
|                           |    | CI7  | 0.701        |              |              |              |  |
|                           |    | CI8  | 0.732        |              |              |              |  |
|                           |    | CI9  | 0.784        |              |              |              |  |
|                           |    | CI10 | 0.894        |              |              |              |  |
| Financial performance     |    | FP1  | 0.891        | <b>0.901</b> | <b>0.921</b> | <b>0.703</b> |  |
|                           | 84 | FP2  | <b>0.672</b> |              |              |              |  |
| Non-financial performance |    | NFP1 | <b>0.789</b> | <b>0.892</b> | <b>0.905</b> | <b>0.801</b> |  |
|                           |    | NFP2 | <b>0.909</b> |              |              |              |  |

Note: SSCM- Sustainable supply chain management, SCDC- SC Dynamic Capabilities, SI- Supplier integration, II- Internal integration, CI- Customer integration, FP-financial performance, NFP-non financial performance.

4  
**Table 2: Fornell and Larcker Criterion for Discriminant Validity**

|             | SSCM         | SCDC         | SI           | II           | CI           | FP           | NFP          |
|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>SSCM</b> | <b>0.755</b> |              |              |              |              |              |              |
| <b>SCDC</b> | 0.436        | <b>0.722</b> |              |              |              |              |              |
| <b>SI</b>   | 0.522        | 0.437        | <b>0.736</b> |              |              |              |              |
| <b>II</b>   | 0.434        | 0.51         | 0.563        | <b>0.709</b> |              |              |              |
| <b>CI</b>   | 0.353        | 0.686        | 0.407        | 0.472        | <b>0.890</b> |              |              |
| <b>FP</b>   | 0.230        | 0.453        | 0.530        | 0.630        | 0.510        | <b>0.921</b> |              |
| <b>NFP</b>  | 0.520        | 0.201        | 0.431        | 0.341        | 0.231        | 0.206        | <b>0.892</b> |

Note: SSCM- Sustainable supply chain management, SCDC- SC Dynamic Capabilities, SI- Supplier integration, II- Internal integration, CI- Customer integration, FP-financial performance, NFP-non financial performance.

**Table 3: HTMT Analysis for Discriminant Validity**

|             | SSCM  | SCDC  | SI    | II           | CI    | FP    | NFP |
|-------------|-------|-------|-------|--------------|-------|-------|-----|
| <b>SSCM</b> |       |       |       |              |       |       |     |
| <b>SCDC</b> | 0.536 |       |       |              |       |       |     |
| <b>SI</b>   | 0.422 | 0.337 |       |              |       |       |     |
| <b>II</b>   | 0.634 | 0.601 | 0.632 |              |       |       |     |
| <b>CI</b>   | 0.353 | 0.486 | 0.307 | <b>0.572</b> |       |       |     |
| <b>FP</b>   | 0.230 | 0.553 | 0.430 | 0.630        | 0.510 |       |     |
| <b>NFP</b>  | 0.520 | 0.201 | 0.231 | 0.341        | 0.231 | 0.206 |     |

Note: SSCM- Sustainable supply chain management, SCDC- SC Dynamic Capabilities, SI- Supplier integration, II- Internal integration, CI- Customer integration, FP-financial performance, NFP-non financial performance.

### Direct Effect

After the assessment of the measurement model, the researchers have applied the PLS-SEM analysis has applied for testing the hypothesis. The model is consisting of two dependent variables i.e. financial performance, non-financial performance (dependent variable) having  $R^2$  0.30, 25 and  $Q^2$  0.15, and 12 respectively (see Table 6) that establish the substantiality of the Model. Table 4 presents the results of PLS bootstrap algorithms that confirms the significant direct relationship of sustainable supply chain management (SSCM) on financial performance (FP) ( $\beta = 0.205$ ,  $t$  value = 3.18,  $p$  value = 0.002), and non-financial performance (NFP) is ( $\beta = 0.385$ ,  $t$  value = 6.41,  $p$  value = 0.000). In addition, the supply chain integration also has positive and significant impact on financial performance (FP) ( $\beta = 0.357$ ,  $t$  value = 5.57,  $p$  value = 0.000). Moreover, the direct also shown that SCI also has positive and significant impact on non-financial performance (NFP) in restaurant industry of Indonesia. Thus, considering direct relationship, all the hypotheses are supported in this study. These results are consistent with studies of (Hasan, 2013; Huatoco et al., 2013), who found the SSCMP as a significant predictor of performance in various countries. Particularly in Indonesia, SSCM practices will help to avoid purchasing of products that can result in environmental degradation (Ching & Moreira, 2014). Consequently, it enables the organizations to improve their financial performance (Kannan & Tan, 2005) by improving profits and sales through sustainability activities (Paulraj, Lado, & Chen, 2008).

Table 4: Direct Effect

| Hypothesis   | Beta  | S.E   | T Value | P Value | Decision  |
|--------------|-------|-------|---------|---------|-----------|
| SSCMP-> FP   | 0.205 | 0.065 | 3.179   | 0.002   | Supported |
| SSCMP -> NFP | 0.385 | 0.060 | 6.403   | 0.000   | Supported |
| SCI -> FP    | 0.357 | 0.064 | 5.571   | 0.000   | Supported |
| SCI->NFP     | 0.347 | 0.060 | 5.562   | 0.001   | Supported |

Note: SSCM- Sustainable supply chain management, SCI- Supply chain integration, FP-financial performance, NFP-non financial performance\* Significance level = 0.05

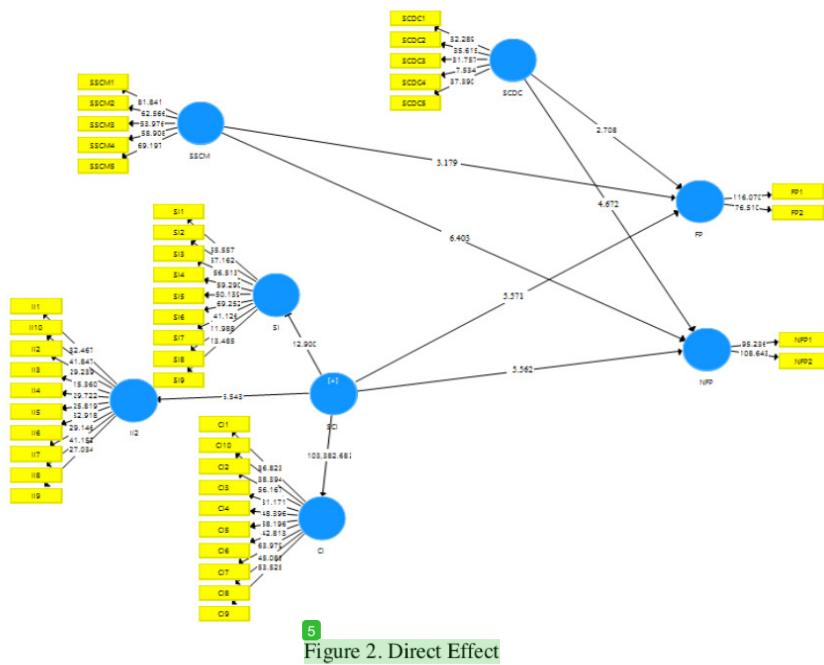


Figure 2. Direct Effect

#### Testing Indirect Moderating Effect

58

The research model hypothesized that supply chain dynamic capabilities moderates on the relationship of sustainable supply chain management (SSCM), supply chain integration (SCI) and business performance (BP) of restaurant industry of Indonesia. The moderation test was employed by using the product indicator calculation approach. This approach was employed as per the suggestion of the Hair, Hult, Ringle, and Sarstedt (2017), 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 (Baron & Kenny, 1986) criteria to determine whether the moderation condition is exist.

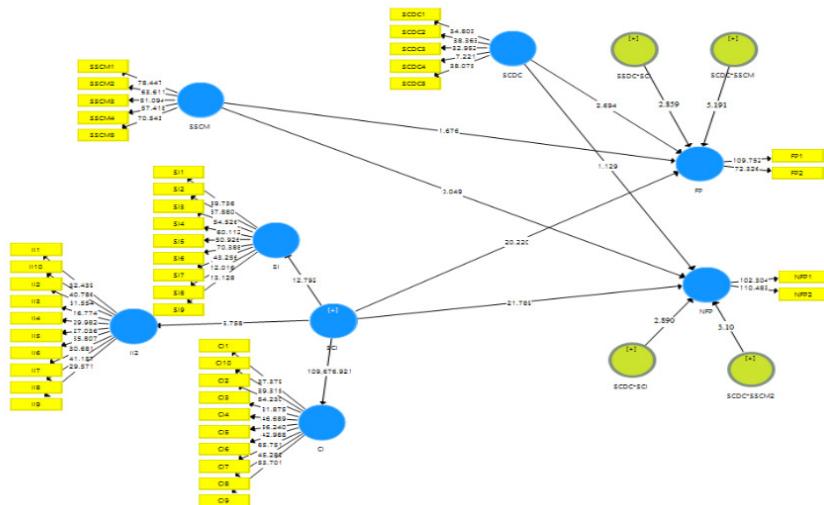
59 findings of the moderation (see Table 5) inferred that SC dynamic capabilities moderates the relation<sup>12</sup> of SSCMP with FP ( $\beta = 0.230$ ,  $t$  value = 5.19,  $p$  value = 0.000), non-financial performance (NFP) ( $\beta = 0.525$ ,  $t$  value = 3.10,  $p$  value = 0.002). In addition, the supply chain dynamic capabilities (SCDC) also significantly moderates on the relationship of SCI and both perspective of performance which is financial ( $\beta = 0.115$ ,  $t$  value = 2.86,  $p$  value = 0.004 and non-financial performance ( $\beta = 0.117$ ,  $t$  value = 2.89,  $p$  value = 0.003). This shows that higher level of SCDC in the business is considered to be more significant in the relationship of SSCM practices, supply chain integration (SCI) and business performance (BP) of the Indonesia restaurant industry. These results replicate the findings of several prior studies (Clifford Defee & Fugate, 2010; Paulraj et al., 2008); who found the significant indirect role of SC dynamic capabilities in enhancing organization's performance through SSCM activities. These findings not only provide the mechanism for enhancing organization's performance, but will also

motivate the managers to adopt the SSCM practices to enhance their competitive strength and overall business performance.

**Table 5: Indirect Effect**

| Hypothesis       | Beta  | S.E   | T Values | P Values | Decision  |
|------------------|-------|-------|----------|----------|-----------|
| SCDC*SSCMP-> FP  | 0.230 | 0.044 | 5.191    | 0.000    | Supported |
| SCDC*SSCMP > NFP | 0.125 | 0.040 | 3.10     | 0.002    | Supported |
| SCDC*SCI -> FP   | 0.115 | 0.040 | 2.859    | 0.004    | Supported |
| SCDC*SCI->NFP    | 0.117 | 0.050 | 2.890    | 0.003    | supported |

**Note:** SSCM- Sustainable supply chain management, SCDC- SC Dynamic Capabilities, SCI- Supply chain integration, FP-financial performance, NFP-non financial performance\* Significance level = 0.05



**Figure.3** Moderating Effect

**Table 6 Predictive Relevance and  $R^2$  of the Model**

| Endogenous variables      | R <sup>2</sup> | Q <sup>2</sup> |
|---------------------------|----------------|----------------|
| Financial performance     | 0.30           | 0.15           |
| Non-financial performance | 0.25           | 0.12           |

## Conclusion

<sup>69</sup> The present study contributes to the existing literature in several ways. First, it provides the empirical evidence of the relationship among the sustainable supply chain management (SSCM), supply chain integration (SCI) and business performance (BP) of Indonesia restaurant industry that strengthen the findings of prior studies (Hoejmoose & Adrien-Kirby, 2012; Saenz, Koufteros, Touboulic, & Walker, 2015). Second, this study is amongst the few that explore the SSCM practices and SCI relationship with organization's performance in developing countries specifically Indonesia. It also extends the literature and provide generalizability to the findings of prior studies that focused on developed countries (Silvestre, 2015). Finally, our findings provide empirical support to indirect effect of SC dynamic capabilities in the association of SSCM, SCI along with the business performance and adds knowledge to the existing literature.

The present research provides considerable implications to the practitioners specifically related to restaurant industry. First it provides the mechanism of enhancing BP through the SSCM practices and SCI. Second, it encourages the managers to adopt SSCM by establishing its link with overall business performance from past studies. This will motivate them and enhance their confidence in implementing sustainability activities in their existing SCM system. Finally, this research will help the restaurant managers in enhancing their competitive advantage through taking a proper initiative on the sustainable supply chain management (SSCM), supply integration (SCI) and business performance (BP). This research has some limitations since it has a cross-sectional design and the data obtained make inferences about the responses at one time only. However, a longitudinal study is preferred to assess change in responses at different point of time and to establish the causal relationships among variables. Furthermore, the data was collected from Indonesia restaurant SC managers. Thus, future research should enlarge the sample and balance the number of purchasing and other managers, to conduct a comparative analysis between two groups of managers. Moreover, this study uses parcel sum of squares or multidimensional construct using in this study to draw the overall conclusion about latent variables. Therefore, it is recommended that the prior studies should analyze the whole model by focusing on each dimension of the construct.

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# The Moderating Effect Of Supply Chain Dynamic Capabilities on the Relationship of Sustainable Supply Chain Management Practices, Supply Chain Integration and Business Performance

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