The Effect of Strategic Supplier Partnership and Customer Relationship on Supply Chain Integration and Business Performance
(Study of Red Onion Farmers in East Java)

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Abstract
This research was conducted to determine the effect of strategic supplier partnership and customer relationship on farmer business performance through supply chain integration. This type of research is explanatory research with a quantitative approach. The data used in this study are primary data obtained by distributing questionnaires. The sampling method uses multistage proportional random sampling with a sample of 200 farmers. Data analysis in this study uses path analysis method with the help of SPSS 23. The results of this study indicate that strategic supplier partnerships have no significant effect on supply chain integration and farmer business performance. Customer relationship has a positive and significant effect on supply chain integration and farmer business performance, supply chain integration has a positive and significant effect on farmer business performance.

Keywords: Strategic Supplier Partnership, Customer Relationship, Supply Chain Integration, Business Performance

INTRODUCTION
Supply chain activity for the economy is a crucial element because with it the goods that have been produced can reach the end consumers. This supply chain has an important role for the economy, especially for the community. This is because the supply chain can provide added value for every trade actor involved in it. At present competition is no longer between individual organizations but between supply chains [1].

Supply chain management is an approach used to achieve the integration of various core business organizations through original suppliers to end users who provide goods, services and information that can provide additional value to consumers. [2] states that supply chain management is an approach that is applied to bring suppliers, companies, warehouses, and other storage places (distributors, retailers, and retailers) together efficiently, so that products can be produced and distributed with the right amount, the right location, and the right time to reduce costs and meet customer needs. [3] states that successful business organizations are those who manage all points in the supply chain; from suppliers to customers / end users (end users).

The supply chain of agricultural products is different from the supply chain of manufactured products. The basic difference between the supply chain of agricultural products and other supply chains is the continuous change in the quality of agricultural products along the supply chain [4]. In this study, the object of research is agricultural products, namely onion. Effective management of shallot supply chains is supported by the creation of good supply chain management practices. One of the important supply chain management practices to be implemented is the strategic supplier partnership and customer relationship.

Effective supplier partnerships are the most important main component of the supply chain [5]. The practice of strategic supplier partnerships fosters significant long-term relationships among members of the supply chain [1]. [6] defines strategic supplier partnerships as long-term relationships between organizations and suppliers. It focuses on direct, long-term relationships and is interested in joint planning and joint problem-solving efforts [5]. Therefore, long-term strategic supplier partnership practices allow an organization to have a strong integrated and collaborative
relationship to achieve sustainable performance [7].

According to [8] One of the most important practices for each organization is customer relationship. [6] defines Customer relationship as a whole set of practices used for the purpose of managing customer complaints, building long-term relationships with customers, and increasing customer satisfaction. [9] states that business organizations with strong customer relations are expected to have a systematic process for handling complaints, so they will actively work to minimize customer service problems, and are also expected to meet customer needs.

Successful implementation of a supply chain practice will lead to better customer satisfaction and customer satisfaction will lead to better financial performance [10]. The practice of supply chain management cannot improve their own efficiency individually, because efficiency can be achieved through the interaction of various supply chains [11], one of which is supply chain integration.

Adoption and strategic implementation of supplier partnerships and customer relationships as one part of the practice of supply chain management has been widely recognized to improve organizational performance [12], where various studies have found a positive relationship between strategic supplier partnerships and customer relationships on integrative supply chains and organizational performance. [13] adopting strategic supplier partnerships as part of supply chain management practices that have a significant effect on supply chain integration. [9] in the results of his research customer relationship gives a greater influence on organizational performance compared to Supplier involvement. The research conducted by [14] which states that integration facilitates knowledge sharing between supply chain partners, allows them to overcome environmental uncertainty and observe that the importance of supply chain integration and its contribution to business success. Supply chain integration connects an organization with customers, suppliers and other channel members by integrating relationships, activities, functions, plans and locations [15]; [16].

According to [17] by integrating the relationships of supply chain actors it will provide several benefits such as adding product value, improving market access, strengthening operations, facilitating business growth, increasing organizational skills, and building financial strength. [18] stated that to measure business performance farmers could use production quantity, quality, and profit. Better quantity and quality of production can increase the relevance and bargaining power of farmer associations in the supply chain. This causes a higher profit performance and the welfare of small farmers will increase because the production process increases and the price conditions achieved are better. The relationship of agricultural partnerships has been carried out in various countries and is significantly able to improve the welfare of farmers through increased production [19] and [20] as well as through market access and better prices [21]; [22] thus influencing the increase in farming income [23] [20].

Shallot is one of the leading vegetable commodities that has been cultivated for a long time by farmers intensively. This vegetable commodity belongs to an unsubstituted spice group that serves as a food seasoning, traditional medicinal ingredients and also industrial raw materials in processed food products. The increase in shallot production has not yet been able to solve the basic problems of shallot supply chain activities such as the high fluctuations in shallot prices.

Shallot is one of the basic commodities which often fluctuates in price due to problems from the supply chain system. The results of research conducted by [24] show that the supply chain system that occurs in the marketing of shallots is not yet efficient. [25] found problems that caused the ineffectiveness of the shallot supply chain based on measurements, namely a) the availability of shallots was still low during the off season, b) the absence of an appropriate inventory system, c) the difference in prices at the producer level with end consumers very high, d) limited availability of market information, e) Distribution has not gone well.

As an alternative solution to the problems mentioned, this research will be conducted in four shallot growing districts in East Java, namely Nganjuk Regency, Kediri Regency, Malang Regency, and Probolinggo Regency. The location selection in this study is based on the consideration that the four districts have similar environmental conditions. Based on the description above, the researcher wants to examine the effect of strategic supplier partnership and customer relationship on
The Effect of Strategic Supplier Partnership and Customer Relationship (Fauziah, et al.)

farmer’s business performance through supply chain integration.

MATERIAL AND METHOD

This type of research is explanatory research with a quantitative approach. Explanatory research is a type of research that emphasizes causality or causality between two or more variables that influence each other. The location of this study was carried out in four poor onion producing districts, namely Nganjuk, Kediri, Malang, and Probolinggo Regencies. The conceptual research is as follows:

![Conceptual Research Model](image)

**Data Collection**

The data collection technique in this study was a direct survey of respondents using a questionnaire. The questionnaire in this study contained several questions using the Likert scale as a measurement scale. In this study the population is all farmers who are members of the Combined Farmers Group in the villages that have been selected in Nganjuk, Kediri, Malang and Probolinggo Regencies. Because the population in this study is infinite the sampling method in this study uses multistage proportional random sampling. Then the sample in this study was determined using the Roscoe formula so that a sample of 200 respondents was obtained.

The sampling technique in this study went through several stages. The first step is to select the shallot producing sub-district in each district, the second stage selects villages in the selected sub-districts and gets a combined list of farmer groups along with the names of their members, the third stage randomizes the names of farmers to be sampled in this study. Researchers before plunging into the field already had names of farmers who were respondents.

RESULT AND DISCUSSION

Test the validity and reliability on the surface to see the validity of the instruments used. Validity is measured from \( r \geq 0.30 \). The basis for decision making is said to be valid if the coefficient value is more than 0.3. The basis of decision making is whether a measurement is reliable or not. If the alpha crobach value is greater than 0.6, it can be called reliable. Strategic supplier validity test partnership partnership consisting of 6 items and each item is declared valid, customer relationship consists of 6 items and each item is declared valid. Supply chain integration variable consists of 4 items declared valid, and Business Performance with 8 items and each item is declared valid.

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Alpha Cronbach’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strategic Supplier partnership</td>
<td>0.778</td>
</tr>
<tr>
<td>2</td>
<td>Customer Relationship</td>
<td>0.843</td>
</tr>
<tr>
<td>3</td>
<td>Supply Chain Integration</td>
<td>0.604</td>
</tr>
<tr>
<td>4</td>
<td>Business Performance</td>
<td>0.886</td>
</tr>
</tbody>
</table>

*alpha crobach ≥0.60
Source: Primary data processed by SPSS, 2018

Table 1 shows that the strategic supplier partnership variable is reliable, customer relationship is declared reliable, Supply Chain Integration is declared reliable, and Business Performance is also stated to be reliable.

<table>
<thead>
<tr>
<th>H</th>
<th>B</th>
<th>T Statistic</th>
<th>p-value</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>0.059</td>
<td>0.876</td>
<td>0.382</td>
<td>Not-significant</td>
</tr>
<tr>
<td>H2</td>
<td>0.093</td>
<td>1.834</td>
<td>0.068</td>
<td>Not-significant</td>
</tr>
<tr>
<td>H3</td>
<td>0.360</td>
<td>5.371</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>H4</td>
<td>0.432</td>
<td>7.977</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>H5</td>
<td>0.447</td>
<td>8.331</td>
<td>0.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

*P<0.05
Source: Primary data processed by SPSS, 2018
Table 2 shows that H1, namely strategic supplier partnership has no significant effect on Supply chain integration. H2, strategic supplier partnership has no significant effect. H3 customer relationship has a significant effect on Supply chain integration, H4 customer relationship has a significant effect on farmer business performance and H5 Supply chain integration has a significant effect on farmer business performance.

Table 3. Direct and Indirect Effects

<table>
<thead>
<tr>
<th>Relations between variables</th>
<th>Effect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1-Y1</td>
<td>0,059</td>
<td>0,059</td>
</tr>
<tr>
<td>X1-Y2</td>
<td>0,093</td>
<td>0,093</td>
</tr>
<tr>
<td>X2-Y1</td>
<td>0,360</td>
<td>0,360</td>
</tr>
<tr>
<td>X2-Y2</td>
<td>0,432</td>
<td>0,432</td>
</tr>
<tr>
<td>Y1-Y2</td>
<td>0,447</td>
<td>0,447</td>
</tr>
<tr>
<td>X1-Y1-Y2</td>
<td>-</td>
<td>0,052</td>
</tr>
<tr>
<td>X2-Y1-Y2</td>
<td>-</td>
<td>0,321</td>
</tr>
</tbody>
</table>

Source: Primary data processed by SPSS, 2018

Table 3 explains the magnitude of the influence between variables both directly and indirectly. The direct effect of the Strategic Supplier Partnership on Supply chain integration is 0.059. Understanding the Strategic Supplier Partnership on farmer business performance is 0.093, while the indirect influence of strategic supplier partnerships on farmer business performance through supply chain integration is 0.052. Effect of Customer Relationship on Supply Chain Integration of 0.360. The effect of Customer Relationship on Farmer Business Performance is 0.432, while the indirect influence of Customer Relationship on Farmer Business Performance through Supply Chain Integration is 0.321. The direct effect of Supply Chain Integration on Farmer Business Performance is 0.447.

The accuracy of the hypothesis model from this research data is measured by the relationship of the coefficient of determination ($R^2$) in the two equations. The model results are as follows:

$$R^2_{model} = 1 - (1 - R^2_1) (1 - R^2_2)$$

$$= 1 - (1 - 0.236) (1 - 0.517)$$

$$= 1 - (0.764) (0.483)$$

$$= 1 - 0.3690$$

$$= 0.6309\text{ atau } 63.09\%$$

The results of the calculation of model accuracy of 63.09% explained that the contribution of the model to explain the structural relationship of the three variables studied was 63.09%. While the remaining 36.91% is explained by other variables not found in this research model.

Figure 2. Results Analysis of Path Analysis The equation of the path diagram as follows:

Sub Struktur I: $Y_1 = 0.59 X_1 + 0.360 X_2$

Sub Struktur II: $Y_2 = 0.093 X_1 + 0.432 X_2 + 0.447 Y_1$
Effect of Strategic Supplier Partnership on Supply Chain Integration

The path analysis results prove a positive but not significant influence between the Strategic Supplier Partnership (X1) on Supply Chain Integration (Y1). The beta coefficient value of 0.059 is interpreted that the influence of the Strategic Supplier Partnership (X1) on Supply Chain Integration (Y1) has a positive direction, with tcount of 0.876 and probability of 0.382 (p > 0.05), then the decision is H0 accepted and H1 rejected, which means that the Strategic Supplier Partnership (X1) has a positive but not significant effect on Supply Chain Integration (Y1). The results of this study do not support research conducted by [13] who found a direct influence between the Strategic Supplier Partnership (X1) and Supply Chain Integration (Y1).

Effective supplier partnerships can also create opportunities to build joint planning and joint problem solving efforts among members of the supply chain [26]. This strategic relationship with suppliers will enhance the ability of business actors [27] and increase integration and collaboration among partners in the supply chain [28].

Red onion farmers in Nganjuk, Kediri, Malang and Probolinggo districts have made good relations and cooperation with their suppliers. Red onion farmers choose saprotan, seed, fertilizer and pesticide suppliers not only with consideration of low prices but also considering quality. Red onion farmers also solve problems faced such as pest outbreaks that attack onion plants, usually farmers will consult with drug sellers before buying the right medicine to eradicate the pest. But in this study the Strategic Supplier Partnership and Supply Chain Integration have no significant effect because farmers feel there is no monitoring process regarding the planting process and the harvest process.

The pattern of partnership or partnership relationships will affect the benefits of partnerships with suppliers. In Nganjuk, Kediri, Malang, and Probolinggo Regencies the partnership pattern built between shallot farmers and suppliers of saprotan, seeds, fertilizers and pesticides is still personal and simple not through institutions so that there is no clear relationship between farmers and suppliers. The partnership relationship does not have a clear contract, both parties do not know their respective roles so that well-established partnerships do not have a significant influence on the integrative supply chain. It is better if the partnership relationship is not only personal but through institutions such as farmer groups, farmer groups and cooperatives and using a clear contracting system so that partnership relationships can run well and provide maximum benefits. Unlike the case with manufacturing partnerships that are always clearly formed through work contracts that contain the objectives and roles of each party, so that the benefits of the partnership between business actors have a major influence on the integrity of both parties.

Effect of Strategic Supplier Partnership on Business Performance

The path analysis results prove a positive but not significant influence between the Strategic Supplier Partnership (X1) on Farmer Business Performance (Y2). Obtained a beta coefficient of 0.093 means that the effect of the Strategic Supplier Partnership (X1) on Farmer Business Performance (Y2) has a positive direction, with tcount of 1.834 and a probability of 0.068 (p > 0.05), then the decision is H0 accepted and H1 rejected, which means that the Strategic Supplier Partnership (X1) has a positive but not significant effect on Business Performance (Y2). The results of the study supporting the research conducted by [5] found a not significant direct influence between the Strategic Supplier Partnership on Business Performance.

This study also does not support the statement [29] that supply chain management practice activities, one of which is the strategic supplier partnership has an influence on innovation performance and business performance. The strategic nature of the Strategic Supplier Partnership is to explain the two objectives of the supply chain, namely: to improve the performance of the organization itself and improve the overall performance of the supply chain [30]. [31] also revealed that the strategic supplier partnership in the long term will make business people have strong integration and collaboration so that better business performance is achieved. Red onion farmers in four districts namely Nganjuk, Kediri, Malang and Probolinggo have established good relationships with suppliers but in reality do not have a significant influence on the business performance of shallot farmers in the four districts.

Suppliers of pesticides are regularly present in regular meetings of Poktan and Gapoktan along
Effect of Customer Relationship on Business Performance

The results of path analysis prove that there is a positive and significant influence between Customer Relationship ($X_2$) and Farmer Business Performance ($Y_2$). Obtained beta coefficient value of 0.432 means that the effect of Customer Relationship ($X_2$) on Farmer Business Performance ($Y_2$) has a positive direction, with $t_{count}$ of 7.997 and probability of 0.000 ($p <0.05$), then the decision is $H_1$ accepted and $H_0$ rejected, which means that the higher the Customer Relationship ($X_2$) will increase Farmer Business Performance ($Y_2$) as well as vice versa if the lower the Customer Relationship it will reduce Farmer Business Performance. This research supports research conducted by [9]; [32]; [6] which states that customer relationships have a significant effect on business performance.

Then it can be concluded that the higher the relationship between shallot farmers and customers will improve the business performance of shallot farmers and, conversely, the lower the relationship between farmers and collectors, the traders will reduce the business performance of shallot farmers. This is because a portion of the income from the farmer’s business is obtained from the customer. If farmers do not have a good relationship with collectors, and traders, farmers will not get the same price. Based on field observations, farmers tend to sell shallots to collectors, traders and not directly to end consumers. Collectors and traders are intermediaries who sell shallots to the end of consumers, if farmers do not have a good relationship with collectors, and traders and sell the yield of shallots to traders and traders who do not have a good relationship they tend to suffer losses.

Collectors and traders usually do not directly pay full money to farmers, they provide a 50% DP to farmers with a promise of 2 months to be repaid but in fact there are still many farmers who claim collectors do not pay the rest of their harvest money. Although some farmers have no other choice but to sell their crops to the collectors because they consider the resilience of shallots that are easily spoiled and over time will shrink. Therefore the need for Customer Relationship between farmers and collectors and traders so that farmers get the right price. This study supports the statement of [8] which states that one of the most important practices for each organization is customer relations. Successful
implementation of a supply chain practice will lead to better customer satisfaction and customer satisfaction will lead to better financial performance [10].

**Effect of Supply Chain Integration on Business Performance**

The path analysis results prove a positive and significant influence between supply chain integration \( Y_1 \) and farmer business performance \( Y_2 \). Beta coefficient value of 0.447 means that the influence of supply chain integration \( Y_1 \) on farmer business performance \( Y_2 \) has a positive direction, with a tcount of 8.333 and a probability of 0.000 \( (p <0.05) \), then the decision is H1 accepted and H0 rejected, which means that the higher supply chain integration \( Y_1 \) will increase farmer business performance \( Y_2 \) and vice versa if the lower supply chain integration \( Y_1 \) will reduce farmer business performance \( Y_2 \). The results of this study support the research [33], [34], [14] which states that supply chain integration has a positive and significant effect, there is an increase in Business Performance.

This study also supports the statement [35] Main motivation An integrative supply chain for most supply chain partners is to strive for superior business performance through adjusting customer needs with materials and information along the supply chain. [30] stated that achieving superior excellence and at the same time achieving sustainable profitability requires supply chain management that is closely related to internal and external integration. Integration and collaboration will improve business performance [36].

Relationships built between farmers and partners can also increase the quantity and quality of crops so that simultaneously improving the business performance of shallot farmers can be seen from increasing farmers' profits. Partners also always hold periodic technical training or regular meetings in the shade of farmer groups (Poktan) or joint farmer groups (Gapoktan). Poktan also helps farmers to get farmer sign cards, this makes it easier for farmers to get subsidized fertilizers. Collaboration and collaboration are formed that make it very easy for farmers to carry out operational activities.

**CONCLUSION**

This study aims to examine the relationship between strategic supplier partnerships for integrative supply chains, supply chain performance and business performance. The study was conducted on onion farmers who were members of a combination of farmer groups in Nganjuk, Kediri, Malang and Probolinggo Regencies. Data was obtained from distributing questionnaires to 200 shallot farmers. Analysis was carried out by path analysis method. The results of this study indicate that strategic supplier partnerships have no significant effect on integrative supply chains and farmer business performance. Customer relationship has a positive and significant effect on integrative supply chains and farmer business performance, integrative supply chains have a positive and significant effect on farmer business performance.

Based on the above conclusions, there are some suggestions that are expected to be useful for various parties. For shallot traders, they should further enhance cooperation or integration between farmers, suppliers, collectors and traders because superior seeds are needed to produce superior onions, pesticides or fertilizers are also important for shallots to avoid pests that can cause failure. harvest, a good customer relationship can determine the selling price of shallots. With the establishment of good relations between suppliers, farmers, and customers, it can also improve the integration of good supply chains so as to improve farmer business performance.

For the next researcher, it is expected to be able to examine with a wider sample and analyze based on the area of each onion production center because there are different characteristics of the shallot trade system in each center region. The disadvantages of this study are that the object of research in this study was only carried out on shallot farmers who are members of farmer group combinations, so that the next researcher is expected to examine not only farmers but also drug suppliers, seedlings, collectors and traders the information obtained is even wider.

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**REFERENCES**

The Effect of Strategic Supplier Partnership and Customer Relationship (Fauziah, et al.)


