

# Analysis of Supply Chain Management Performance in the Community Coffee Production System in Bajawa, Ngada Regency

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## Keywords:

Supply Chain Management,  
Performance Analysis,  
Community Coffee Production

## ABSTRACT

Research on Supply Flow Performance Management in the Bajawa People's Coffee Production System was carried out in Ngada Regency, with the aim of finding out the relationship between cooperation and the performance of the Bajawa coffee supply flow, knowing the relationship between information sharing and the supply flow performance of Bajawa coffee and knowing the long-term relationship with Bajawa coffee supply flow performance. Many factors can influence the performance of supply flow management in companies, including information sharing, long term relationships, and cooperation. The method used in this research is to analyze the relationship between the dependent variable (cooperation, information sharing and long-term relationships) and the independent variable (Bajawa coffee supply flow performance). From the results of the multiple linear regression analysis carried out, it shows that: the long-term relationship variable has the greatest influence on the Bajawa coffee SCM performance variable (dependent) with a coefficient value of (0.047), then the cooperation variable with a value of (0.019), and which has the smallest influence is the information sharing variable (0.018). This means that the three independent variables have a positive and significant effect on the dependent variable.

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## INTRODUCTION

Today's business world continues to compete to create a variety of increasingly high consumer needs, and they are increasingly smarter in choosing their needs. Every company will make every effort to increase productivity, efficiency, fast and easy service, and continue to create various new innovations to remain superior and survive in the market.

This research was conducted at the Bajawa Coffee industry in Ngada Regency, especially those processing typical Bajawa coffee. Ngada is one of the best quality coffee producers in Flores, NTT, where the most famous coffee is Bajawa coffee. Ngada, which has been cultivating coffee since the 1950s, according to the KOMPAS Archipelago Coffee Exploration Team, can be a model for creating a fairer coffee trade chain for farmers (KOMPAS, 12/2/2018). Bajawa itself is the capital of Ngada Regency, many product processing cooperatives want to increase sales of Bajawa Coffee, but still face many challenges.

The problems that are often faced in coffee cooperatives are generally the same as the problems that usually occur in other food processing industries, making it difficult for them to develop. Cooperatives do not dare to borrow capital from banks because they do not understand the procedures. The issue of partnerships is important, because it is difficult to bring together coffee farmers and product processing cooperatives. Labor or human resources, labor productivity is one of the factors that influences industrial development, especially cooperatives (Wuli, 2023). Low levels of education make it difficult for product processing cooperatives to develop and affect labor productivity.

Marketing or distribution of products is still difficult, because the market for coffee processing cooperatives is still dominated by several large companies with a lot of capital, making it difficult for small cooperatives to compete. Industry must be able to design and have supply chain management performance to be able to direct the course of the goals to be achieved in improving company performance, so that companies can survive in competition. Many factors can influence the performance of supply flow management in companies, including information sharing, long term relationships, and cooperation.

Thus, it can be seen that with the existence of a coffee cooperative in Ngada Regency , it can have a positive impact on the economy in the area because there is a lot of demand for Bajawa coffee production , even exports to the United States (KOMPAS, 29/9/2022) . Based on the description above, the author conducted this research with the title "Analysis of Supply Chain Performance Management in the People's Coffee Production System in Bajawa, Ngada Regency".

The research aims to investigate three key aspects within the context of Bajawa coffee supply chain management. Firstly, it seeks to assess the impact of information sharing on supply chain performance. Secondly, it aims to examine the influence of long-term relationships on the performance of Bajawa coffee supply chain management. Lastly, it focuses on analyzing the effect of cooperation on the performance of the Bajawa coffee supply chain.

## METHODS

A *Supply Chain Management* must be able to integrate well in order to meet consumer needs and desires and ultimately produce benefits for the process. The process of designing a supply chain performance measurement system allows companies to find out problems that exist in a process so that the company can take action to resolve the problem and prevent the problem from spreading. By observing the performance of the supply chain, companies can take precautions if there are signs of problems in the process (Pujawan and Mahendrawathi, 2010).

Problems regarding information sharing, long-term relationships and cooperation in the Bajawa coffee supply chain in Ngada Regency are resolved using the regression analysis method. Regression analysis studies the form of relationship between one or more independent variables (X) and one dependent variable (Y). Regression analysis was carried out using questionnaires to respondents so that information sharing, long-term relationships and cooperation with supply chain management could be linked. Bajawa coffee in Ngada Regency. Based on research conducted by Bernard, F Simplus. 2011 with the title *Analysis of the Influence of Relationship Quality Factors on Supply Chain Performance*, it is important to carry out an analysis of the factors that influence supply chain performance.

The analysis used in this research is regression analysis to study the form of relationship between *information sharing*, *long term relationship* and *cooperation* which are independent variables and the performance of the Bajawa coffee supply flow which is the dependent variable.

To examine the influence of cooperative cooperation, long-term relationships and information sharing on supply flow performance, multiple linear regression analysis was used. In the multiple linear regression analysis model, it will be tested simultaneously (F test) or partially (t test). *Information sharing*, *long term relationship* and *cooperation* are independent variables in this research. is the independent variable in this research. The following is a literature review regarding several factors that influence supply flow performance:

1. The Relationship of Long Term Relationships to *Supply Chain Management Performance*  
Based on several previous studies used as a reference in this thesis, it is stated that long-term relationships have a positive effect on *Supply Chain Management performance*. Based on research conducted by Ariani (2013) entitled *Analysis of the Effect of Supply Chain*

*Management on Company Performance*, it is stated that long-term relationships have a positive effect on *Supply Chain Management performance*. Apart from that, research from Fitri (2016) entitled *Analysis of the Effect of Commitment, Communication and Long-Term Cooperation Strategy between Suppliers and Companies on Supply Chain Performance* and research from Bujang (2007) entitled *Factors that Influence Testing of Factors that Influence Trust and Commitment In the Relationship Between Suppliers and Companies*, it also states the same thing that long-term relationships have a positive effect on *Supply Chain Management performance*.

2. **The Relationship of Information Sharing to *Supply Chain Management Performance***  
 Research conducted by Ariani (2013) entitled *Analysis of the Effect of Supply Chain Management on Company Performance*, states that information sharing has a positive effect on *Supply Chain Management performance*. Apart from that, research from Ferlando (2016) entitled *The Effect of Trust and Information Sharing on Relationship Commitment in Supply Chain Management* and research from Mahardhika (2014) entitled *The Effect of Information Sharing and Relationship Quality on Company Operational Performance* also stated the same thing that information sharing has an effect. Positive impact on *Supply Chain Management performance*.
3. **Cooperative Collaboration Relations**  
 Based on research results from Aditya Nugroho , 2017, entitled *analysis of factors in the implementation of SME supply chain management* , it was stated that in order to optimize supply chain management performance, product managers must pay attention to the smooth flow of raw material supply for the smooth running of the business. Increased supply flows can be overcome through good cooperation with suppliers and joining business cooperatives. So the better the cooperative cooperation relationship, the better the supply flow performance will be.  
 Zailani and Rajagopal (2005) believe that successful companies are companies that carefully and thoroughly integrate their internal and external production processes. This is because by integrating the company's internal and external, the company has an advantage over its competitors because they can easily find out what is happening and what will happen if they see the integration between these parts. In addition, the greater the scope of a company's supply chain integration, the more complex and difficult it will be but will provide a competitive advantage with higher efficiency and higher customer satisfaction. *Supply Chain Management* that is able to integrate all functions and parties in it will make the flow of goods and information smooth. Bowersox (in Zailani and Rajagopal, 2005) explains that an effectively integrated process in *Supply Chain Management* is the key to success for companies to achieve a competitive advantage in order to satisfy consumer desires.

## RESULTS

### A. Bajawa Coffee Supply Flow in Ngada Regency

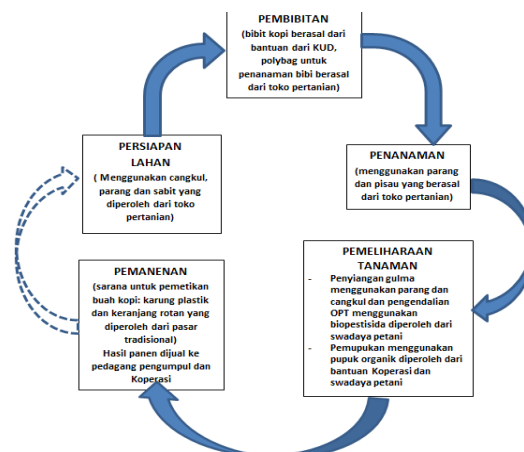


Figure 1. Upstream Sector Bajawa Coffee Supply Flow (On-Farm).

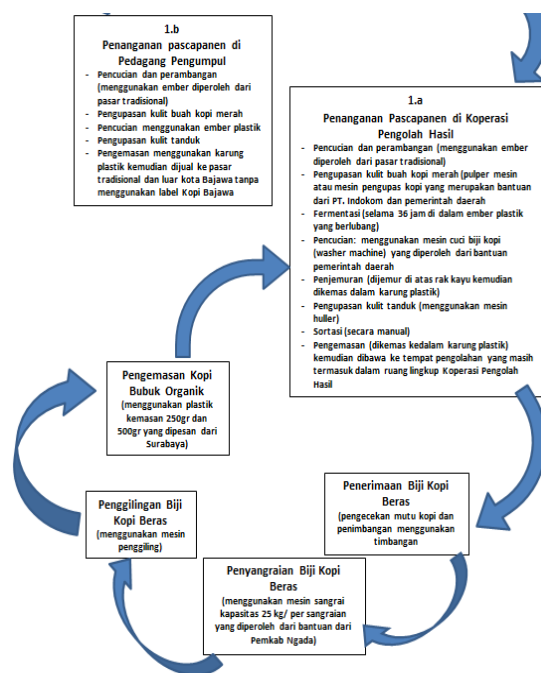


Figure 2. Downstream Sector Bajawa Coffee Supply Flow (Off-Farm).

### B. Multiple Regression Analysis

Regression analysis is conceptually a simple method for examining the relationship between variables (Chatterjee & Hadi, 1986). The relationship between the intended variables is described in the form of an equation or model that connects the dependent variable (Y) and one or more independent variables (X).

To examine the influence of cooperative cooperation, long-term relationships and information sharing on supply flow performance, multiple linear regression analysis was used. In the multiple linear regression analysis model, it will be tested simultaneously (F test) or partially (t test). The conditions for the significance test of the F test and t test are as follows: Accepting  $H_a$ : if probability (p)  $\leq 0.05$ , this means that cooperative cooperation, long-term relationships and simultaneous or partial information sharing have a significant influence on supply flow performance.

**Table 1**  
**Multiple Linear Regression Test Results**

Variable	B	t count	Sig t	Information
(Constant)	-.052			
Cooperative Cooperation	,196	2,497	.019	Significant
Long Term Relationships	,294	2,087	,047	Significant
Information Sharing	,398	2,531	.018	Significant
F count	44,563			
Sig F	0,000			Significant
Adj. R square	0.818			

Source: 2018 primary data

1. Simultaneous Regression Test (F test)

Based on Simultaneous Regression, an F-count value of 44.563 was obtained with probability (p) = 0.000. Based on the provisions of the F test where the probability value

( $p \leq 0.05$ ), cooperative cooperation, long-term relationships and information sharing are simultaneously able to predict supply flow performance. This is supported by research from the Marlin Fian Majid Axiom, Bambang Munas Dwiyanto, which states that cooperative cooperation, long-term relationships and information sharing have a real influence on the performance of the water supply chain. Thus, in accordance with the theory compared with the results of data analysis carried out by the researcher, the hypothesis is accepted.

2. Partial Regression Test (t test)

$$Y = -0.052 + 0.196 X_1 + 0.294 X_2 + 0.398 X_3 + e$$

a. Constant = -0.052

This means that if there are no cooperative cooperation variables, long-term relationships and information sharing that influence the supply flow performance relationship, then cooperative cooperation relationships, long-term relationships and information sharing are -0.052 units.

b. Cooperative Cooperation ( $X_1$ )

Based on the partial regression test, the t-count value was 2,497, the regression coefficient (beta) was 0.196 with probability ( $p = 0.019$ ). Based on the results of data processing where the probability value ( $p \leq 0.05$ ), it can be concluded that cooperative cooperation has a positive and significant effect on supply flow performance. This shows that the better cooperative cooperation will also be able to improve supply flow performance. This is of course supported by research from Aditya Nugroho which states that increasing supply flows can be overcome through good cooperation with suppliers and joining business cooperatives. So the better the cooperative cooperation relationship, the better the supply flow performance will be.

c. Long Term Relationships ( $X_2$ )

Based on the partial regression test, the t-count value was 2,087, the regression coefficient (beta) was 0.294 with probability ( $p = 0.047$ ). Based on the results of data processing where the probability value ( $p \leq 0.05$ ), it can be concluded that long-term relationships have a positive and significant effect on supply flow performance. This shows that the better the long-term relationship, the better the supply flow performance will be. This is also supported by research written by Cempakasari, Diah Arum and Yoestini. 2003, stated that *Long Term Relationships* have a positive effect on the supply chain.

d. Information Sharing ( $X_3$ )

Based on the partial regression test, a calculated t-value of 2,531 was obtained, with a regression coefficient (beta) of 0.398 with a probability ( $p = 0.018$ ). Based on the results of data processing where the probability value ( $p \leq 0.05$ ), it can be concluded that information sharing has a positive and significant effect on supply flow performance. This shows that the better information sharing will be able to improve supply flow performance. This is supported by research from Lestari, Purbasari Indah. 2009 which states that information sharing is one of the positive supporting factors in supply flows.

**C. Coefficient of Determination (adjust.  $R^2$ )**

The large influence of cooperative cooperation, long-term relationships and simultaneous information sharing on supply flow performance is shown by the Adjusted R Square value of 0.818. This means that 81.8% of supply flow performance is influenced by cooperative cooperation, long-term relationships and information sharing, 18.2% is influenced by other variables not included in the research model. Thus it can be seen that performance measurement is something complex and a big challenge because it is multidimensional so that using a single measurement will not provide a comprehensive understanding. Supply chain performance is a factor commonly used to measure the impact of strategies implemented by companies related to the distribution process from upstream to downstream (Cook and Graver 2001). Several factors that can influence supply flow performance are cooperative cooperation, long-term relationships and information sharing.

The influence is not only from the contribution of each variable, but can also be seen from the contribution of the three major variables cooperation, long-term relationships and information sharing on supply flow performance results. From these results, it can be seen that the large influence of cooperative cooperation, long-term relationships and simultaneous information sharing on supply flow performance is shown by the Adjusted R Square value of 0.818. This means that 81.8% of supply flow performance is influenced by cooperative cooperation, long-term relationships and information sharing, 18.2% is influenced by other variables not included in the research model.

Based on the results of multiple linear regression tests, the independent variables in this research, namely, long-term relationships, information sharing, and cooperative cooperation have a positive influence on the performance of *Supply Chain Management* in the Bajawa people's coffee industry in Ngada Regency. This supports previous research conducted by Ariani (2013), Fitri (2016), Bujang (2007), Ferlando (2016), Mahardhika (2014), Bernard (2011), Zailani and Rajagopal (2005).

## CONCLUSION

Based on the research and analysis conducted, several significant conclusions can be drawn. Firstly, collaboration demonstrates a positive and noteworthy impact on the supply flow performance of Bajawa Coffee, underscoring that improved cooperation among supply chain management points leads to enhanced supply flow performance. Secondly, long-term relationships also exhibit a positive and substantial influence on the supply flow performance of Bajawa Coffee, highlighting that stronger and enduring relationships between supply chain management points can enhance the performance of Bajawa coffee supply flow. Additionally, information sharing plays a positive and substantial role in improving the supply flow performance of Bajawa Coffee, emphasizing that more effective information exchange between supply chain management points can enhance supply flow performance. Lastly, it is important to note that the variables of cooperation, long-term relationships, and information sharing collectively exert a significant influence on the supply flow performance of Bajawa Coffee in Ngada Regency.

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