JMIF
Journal of Management and Islamic Finance
Volume 1, Number 2, December 2021, pp. 281 – 293
DOI: https://doi.org/10.22515/jmif.v1i2.3778

ANALYSIS OF THE INFLUENCE OF SUPPLY CHAIN MANAGEMENT ON COMPANY PERFORMANCE: STUDY ON CATFISH FARMING COMMUNITY OF RED WATER SYSTEM AND BIOFLOC IN WONOGIRI

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Article Info

Article History

Received:
07 July 2021

Accepted:
26 December 2021

Published:
31 December 2021

Abstract

The aim of this study is to analyze the factors that influence the performance of the company's supply chain management with a case study of the catfish farming community red water system and biofloc in Wonogiri 2021. This study used a questionnaire as a medium in collecting data which was then analyzed by multiple regression in SPSS 25.0. Three variables consisting of information sharing, long term relationship, and cooperation, is considered to have an influence on the performance of the company's supply chain management. The results showed that information sharing and cooperation significantly influence the performance of the company's supply chain management, while long term relationship has no significant effect. Based on the results of this study, it can be concluded that the factors considered by the catfish farming community red water system and biofloc in Wonogiri, to provide better company performance are information sharing and cooperation. There are clarity and trust in information sharing and cooperation between breeders, farmers, and collectors, so the quality of the information sharing and cooperation are obtained allows farmers to run the business well. Therefore, to improve the performance of enterprise supply chain management, the catfish farming community need to optimize long-term relationship. This is due to the lack of trust that exists between the breeders, farmers, and collectors due to prices that often change; this causes farmers to often look for new breeders or collectors in the hope of not harming the farmers.

Keywords: *Company Performance, Supply Chain Management, Information Sharing, Long-Term Relationship, Cooperation, Catfish Farming Community of Red Water System Biofloc.*

INTRODUCTION

Indonesia has the potential of natural resources to increase the growth of freshwater aquaculture. One of the freshwater commodities that have the potential to be developed is catfish.

Catfish farming has a very high profit prospect because it has advantages and advantages when compared to other freshwater fish; it can grow fast and still survive in a bad environment.

Catfish farmers must have an efficient supply chain management. This is a competitive advantage for catfish farmers in Wonogiri with farmers in other areas. By using the supply chain, catfish farmers can reduce production costs. In addition, competitive advantage is the difference between farmers who use supply chain and those who do not use supply chain management. Like the obstacles that occur in raising catfish. One of them is the mileage and prices that are always changing. The long distance is an obstacle in marketing the harvest of catfish farmers in Wonogiri. As a result, the supply chain performance for catfish is not efficient because the farther the distance, the more costs must be incurred. Meanwhile, in cooperation between breeders, farmers and collectors do not have complete trust. So, many farmers buy catfish seeds not only to one breeder, but also other breeders.

The Red Water System and Biofloc communities in Wonogiri are catfish farming communities applying new ways to minimize the use of large amounts of water. The Red Water System (RWS) is one of the new ways in catfish farming activities by utilizing Lactobacillus and Saccharomyces bacteria in the process of raising catfish seeds without changing the total pond water until harvesting by fermenting yakult, tape yeast and molasses (Science, 2018). In addition to using new ways to minimize water use, the catfish farming community must be able to design and have a supply chain management strategy to be able to direct the course of marketing goals to be achieved in improving company performance, so that companies can survive in the competition

In the catfish community, the red water system and biofloc in Wonogiri have groups for catfish breeding, rearing and collectors. The procedure used by the community begins with the nursery process requiring collaboration with silkworm farmers to stock up on fry feed. After the fry are three centimetres in size, they are ready to be marketed to community members who focus on raising catfish. Members of the rearing group need a lot of information regarding the price of feed, the quality of catfish seeds and medicines so that the price agreed upon by the collecting group does not harm the catfish rearing group. The amount of information needed by catfish farmers such as the price of quality feed at affordable prices, superior seeds, collectors that do not harm farmers makes supply chain performance increasingly affect the procedures carried out by the catfish community. Moreover, many beginner catfish farmers do not have accurate information, good cooperation, and do not have a market so that many novice farmers prefer to close their businesses. Catfish farmers must use strategies to create the proportion of supply needed in the ideal Wonogiri to increase the role of local farmers, to encourage commodity supply

chain scheduling to meet sustainable needs, and improve facilities to support supply chain management processes.

LITERATURE REVIEW

Supply chain management is the strategic planning of each line involved in supply chain activities with the aim of linking supply chain management with consumer demand. Creating an effective supply chain management system will greatly assist companies, among others, in managing inventory and costs more efficiently, increasing productivity, faster delivery processes, generating greater profits, which in turn increases customer loyalty (J. & Chuong, 2014). Companies that implement supply chain management aim to satisfy buyers or consumers by working together to make cheap and quality products and deliver goods or products on time (Rahmasari, 2011). The purpose of supply chain management is to make the total cost of all parts, from the transportation and distribution of raw materials, work-in-process, and finished goods to more effective and efficient costs so as to reduce costs. Supply chain management revolves around the efficient integration of suppliers, manufacturers, warehouses, distributors, retailers, and retailers covering all company activities, from the strategic level to the operational tactical level.

Rachbini (2016) defines company performance as the level of company achievement in meeting the targets, vision, and mission that have been set by the company, as a responsibility to carry out optimal company activities and can be measured by comparing with company targets or company performance. Performance is the ability to work as seen from the work. Company performance is something produced by the company in a certain period with reference to the company standards that have been set.

Information sharing also allows supply chain members to obtain, maintain, and convey the information needed to ensure effective decision making and can strengthen relationships between elements (Yaqoub, 2011) and (Hudnurkar et al., 2014). Sharing information allows companies to obtain good and accurate information by accessing the information shared so as to create a more efficient and cost-effective supply chain. The information sharing paradigm is that the high level of cooperation in the supply chain requires actors to share information and operational planning voluntarily and jointly.

Indrajit and Djokopranoto (2016) state that cooperation is the best alternative in managing the company's supply chain optimally. For this reason, organizations or companies that are in supply chain management of course need accurate and fast information and need trust from suppliers of goods or services and all of that cannot be realized without good cooperation.

Allah SWT in the Qur'an says: " Cooperate with one another in goodness and righteousness, and do not cooperate in sin and transgression." (Qs Al-Maidah [5]: 2). Rasulullah (saw) says, "Help your brothers who do wrong and those who are wronged". So the friends ask, "We do indeed help those who are wronged, but how do we help those who do wrong?". The Prophet replies, "Preventing him from continuing to does injustice means that you have helped him" (Bukhari and Ahmad). From the Qur'an and the hadith, it explains us to help each other to anyone without exception. Likewise in collaborating with partners or other people, if we work together and help each other in terms of goodness then it will also produce well for us or others. In creating long-term relationships, companies, suppliers, and even customers must have good relationships. Sustainable relationships affect product quality and product distribution from upstream to downstream in a timely manner to end users. With the trust between companies, suppliers and customers can achieve efficiency in company performance (Rahmasari, 2011). In addition to trust, there is an element that needs to be done, namely commitment. Commitment is a belief that maintaining good relations with other parties which is important and affects the optimal benefits obtained by both parties in a relationship (Sari et al., 2014). In principle, the ultimate goal of managing long-term relationships is the company's profitability obtained through continuous and mutually beneficial relationships so as to create consistent and sustainable long-term relationships.

METHOD

The research method was quantitative research. Quantitative research method is one type of research whose specifications are systematic, well-planned and clearly structured from the beginning to the making of the research design. The data were primary data obtained from researchers directly by using a questionnaire with a Likert Scale.

The population in this study was the Red Water System and Biofloc Catfish Community in Wonogiri. This community consisted of 73 people. The sample used was the census technique; the researcher determined the sample to be studied by providing equal opportunities to all members of the population to be designated as a sample. From a total population of 73 people, the researchers decided to make the entire population a sample in the study.

Data analysis is the method used in processing the data that has been collected then researchers get the results of data analysis which is then useful in forming conclusions from research results. By looking at the form and framework in this study, the data analysis technique applied the SPSS 25.0 application.

RESULTS AND DISCUSSIONS

Results of Data Analysis

Respondents in this study were all male and female members of the catfish farming community in Wonogiri. The numbers of respondents were 73 people. Of the 73 respondents consisted of 61 male respondents and 12 female respondents

1. Validity Test

The information sharing variable consists of three question items. The results can be seen in table 1 below.

Table 1. Information Sharing Validity Test Results

No. Item	R count	R table	Description
1	0,706	0,227	Valid
2	0,817	0,227	Valid
3	0,749	0,227	Valid

Source: Processed Data (2021)

Based on the results of testing the validity of the information sharing variable, it is revealed that all question items r count > r table (0.227) with a significance value (p value) < 0.05, so the three question items in the distribution variable are declared valid.

Testing the validity of the long-term relationship variable consists of three question items, the results can be seen in table 2 below.

Table 2. Long-Term Relationship Validity Test Results

No. Item	R count	R table	Description
1	0,578	0,227	Valid
2	0,624	0,227	Valid
3	0,582	0,227	Valid

Source: Processed Data (2021)

Based on the results of testing the validity of the long-term relationship variable, it is revealed that all items r count > r table (0.227) with a significance value (p value) <0.05, so the three question items in the long-term relationship variable are declared valid.

Testing the validity of the Cooperation variable consists of three question items. The results can be seen in table 3 below.

Table 3. Cooperation Validity Test Results

No. Item	R count	R table	Description
1	0,752	0,227	Valid
2	0,840	0,227	Valid
3	0,736	0,227	Valid

Source: Processed Data (2021)

Based on the results of testing the validity of the cooperation variable, it is known that all question items r count > r table (0.227) with a significance value (p value).

Testing the validity of the company's performance variables consists of five question items. The results can be seen in table 4 below.

Table 4. Table of Company Performance Variable Validity

No. Item	R count	R table	Description
One-Sample Kolmogorov-Smirnov Test Unstandardized Residual N: 73 Normal Parameters[a,b] Mean: .0000000 Std. Deviation: 1.95975810 Most Extreme Differences Absolute: .082 Positive: .077 Negative: -.082 Test Statistic: .082 Asymp. Sig. (2-tailed): .200[c,d] 1	0,640	0,227	Valid
2	0,654	0,227	Valid
3	0,582	0,227	Valid
4	0,673	0,227	Valid
5	0,588	0,227	Valid

Source: Processed Data (2021)

Based on the results of testing the validity of the company's performance variable, it can be seen that all question items r count > r table (0.227) with a significance value (p value) < 0.05, so the five question items in the company's performance variable are declared valid.

2. Reliability Test

Reliability testing is by using the statistical test Cronbach Alpha (α). A variable can be said to be reliable briefly shown in table 5 as follows.

Table 5. Reliability Test Results

Variable	Alpha Cronbach	Description
Information Sharing (X1)	0,610	Reliable
Long Term Relationship (X2)	0,618	Reliable
Cooperation (X3)	0,667	Reliable
Supply Chain Management (Y)	0,608	Reliable

Source: Processed Data (2021)

Based on the results of the reliability test shown in table 5 above, it can be seen that all question items from each variable are declared reliable. This is indicated by the results of the Cronbach Alpha value of each variable with a value of more than 0.6.

3. Normality Test

The following is the results of the Kolmogorov Smirnov test. Based on table 6 above, it can be seen that the Asymp value. The sig from the Kolmogorov Smirnov test for the variables of information sharing, long-term relationships, cooperation, and company performance is 0.200, the value is greater than 0.05 (>0.05). This proves that in the regression model in this study there is a normal distribution between the variables related to the independent variable, then the regression model in this study has met the assumption of normality.

Table 6. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		73
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.95975810
Most Extreme Differences	Absolute	.082
	Positive	.077
	Negative	-.082
Test Statistic		.082
Asymp. Sig. (2-tailed)		.200[c,d]

Source: Processed Data (2021)

4. Multicollinearity Test

Table 7. Multicollinearity Test Results

Variable	Tolerance	VIF	Description
Information Sharing	0,999	1,001	There is no multicollinearity
Long Term Relationship	0,984	1,017	There is no multicollinearity
Cooperation	0,985	1,015	There is no multicollinearity

Source: Processed Data (2021)

Based on table 7 above, it can be seen that the Tolerance Value of information sharing = 0.999, long-term relationship = 0.984, Cooperation = 0.985, the tolerance value of the four variables is more than 0.1. As for the Variance Inflation Factor (VIF) value of information sharing = 1.01, long-term relationship = 1.017, Cooperation 1.015, the VIF value of the three variables is less than 10. This shows that the regression model in this study does not have a correlation between the independent variables or the assumption of correlation-free in the model is met.

5. Heteroscedasticity Test

Table 8. Heteroscedasticity Test Results

Variable	T hitung	Sig	Description
Information Sharing	2,722	0,008	There is no heteroscedasticity
Long Term Relationship	1,367	0,176	There is no heteroscedasticity
Cooperation	5,562	0,000	There is no heteroscedasticity

Source: Processed Data (2021)

Based on the results of the analysis as shown in table 8 above, it can be seen that each variable has a significance value (p value) > 0.05, so it can be concluded that each variable does not contain heteroscedasticity, thus fulfilling the requirements in regression analysis.

6. Multiple Linear Test

Table 9. Multiple Linear Regression Analysis Test Results

Variable	Unstandardized (B)	T	Sig	Description
Konstanta	2,759			
Information Sharing (X1)	0,424	2,722	0,008	Significant
Long Term Relationship (X2)	0,230	1,367	0,176	Not significant
Cooperation (X3)	0,772	5,562	0,000	Significant
R^2 = 0,361 F hitung = 12,978				
T tabel = 1,997 F tabel = 2,74				

Source: Processed Data (2021)

The constant value is 2.759. This indicates that the variables of information sharing, long-term relationships, and cooperation, the supply chain management performance of the red water system catfish farmers in Wonogiri is 6.147.

The regression coefficient value of the information sharing variable (X1) is positive, namely 0.424. This means that if the information sharing variable increases by one unit, the company's supply chain management performance will increase by 0.424 assuming other variables remain.

The regression coefficient value of the long-term relationship variable (X2) is positive, namely 0.23. This can be interpreted if the long-term relationship variable increases by one unit, the company's supply chain management performance will increase by 0.230 assuming other variables remain.

The value of the regression coefficient of the Cooperation variable (X3) is positive, namely 0.772. This can be interpreted if the Cooperation variable increases by one unit, the company's

supply chain management performance will increase by 0.772 with the assumption that other variables remain.

Model Accuracy Test

1. F Test

Table 10. F Test Result (Anova)

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	230.203	3	76.734	12.978	.000[b]
	Residual	407.961	69	5.912		
	Total	638.164	72			

Source: Processed Data (2021)

The F test is required to determine the effect of the independent variable on the dependent variable in a stimulant manner and to determine the determination of the regression model used. Based on the F test, the F_{count} value is 12.978 > Ftable (2.74) with a significant value of 0.000 at a significant level of 0.05. Thus, it can be concluded that the regression model chosen is correct.

2. Determination Test (R^2)

Table 11. Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.601[a]	.361	.333	2.432
a. Predictors: (Constant), X3, X1, X2				

Source: Processed Data (2021)

The R^2 test is used to determine how far the proportion of variations in the independent variables can explain the dependent variable well. Based on the results of the analysis above, it can be seen that the R Square is explained by the independent variable of 0.361, which means that the variability of the independent variable can be explained by the dependent variable of 36%. This means that independent variables including information sharing, long-term relationships and cooperation affect the company's supply chain management performance by 36% while the remaining 64% is influenced by other variables not examined by researchers in this study.

Hypothesis Test

1. t Test

Table 12. t Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.759	2.939		.939	.351
	X1	.424	.156	.262	2.722	.008
	X2	.230	.168	.133	1.367	.176
	X3	.772	.139	.539	5.562	.000
a. Dependent Variable: Y						

Source: Processed Data (2021)

The results of the t test analysis for the information sharing variable obtained t count value of 2.722 > t table (1.997) with a probability value of 0.008 meaning less than 0.05, then H0 is rejected, which means that the information sharing variable has a significant influence on the supply chain performance of company management in the catfish farmers community of red water system and biofloc in Wonogiri.

The results of the t-test analysis for the long-term relationship variable obtained a t-count value of 1.367 > t-table (1.997) with a probability value of 0.176 greater than 0.05, then H0 is accepted, which means that the long-term relationship has no significant effect on the company's supply chain management performance in the catfish farmers community of red water system and biofloc in Wonogiri.

The results of the t-test analysis for the cooperation variable obtained a t-count value of 5.562 > t-table (1.997) with a probability value of 0.000 less than 0.05 (0.003 <0.05), then H0 is rejected, which means that cooperation has a significant effect on supply chain performance. The results of the t-test analysis for the cooperation variable obtained a t-count value of 5.562 > t-table (1.997) with a probability value of 0.000 less than 0.05 (0.003 <0.05) then H0 is rejected, which means that cooperation has a significant effect on supply chain performance of company management in the red water system and biofloc catfish farming community in Wonogiri.

DISCUSSION

Sharing Information

From the research results, it reveals that the information sharing variable has t count of 2.722 > t table (1.997) with a probability value of 0.008 which means it is smaller than 0.05, then H0 is rejected meaning that the information sharing variable has a significant positive effect on supply chain performance of company management in the red water system and biofloc catfish farming community in Wonogiri.

Therefore, the information sharing variable plays a significant role as a variable affecting supply chain management performance in red water system and biofloc catfish farmers in

Wonogiri. According to Ariani & Dwiyanto (2013), information is very useful in making decisions that are obtained at the right time, quickly, and of good quality. With clarity in the sharing of information between breeders, farmers and collectors, the quality of the information obtained makes farmers run their businesses well. In this community, the sharing of information related to the price of seeds, the price of feed and the quality of the seeds and feed influence the decision making of farmers. With accurate information, farmers can estimate how much capital they will spend and the income they will receive. Likewise in ensuring the quality of catfish, it uses good feed and superior seeds.

Exchanging information on an ongoing basis done by the red water system catfish community will add insight to farmers about the characteristics of catfish. Catfish is a fish that has cannibalistic nature, so it is necessary to know catfish how to deal with catfish so that they are not cannibalistic or suppress the level of cannibalism as low as possible. Then farmers can also exchange information when the catfish is sick, like the fungal disease of aeromonas which causes catfish to experience mass death. The information obtained can help overcome existing problems. So, the farmers do not lose in running their business.

Long Term Relationship

The results of this study indicate that the long-term relationship variable obtained t value of 1.367 > t table (1.997) with a probability value of 0.176 greater than 0.05, then H0 is accepted, referring that the long-term relationship has no significant effect on supply chain management performance in the red water system and biofloc catfish farming community in Wonogiri.

Therefore, in this study, the long-term relationship variable does not play a significant role as a variable that affects supply chain management performance in the red water system catfish farming community in Wonogiri. There is a lack of trust between farmers and breeders or collectors because prices often fluctuate. For example, the breeders in the community give standard prices to catfish farmers, but over time, about two or three times they give a much more expensive price, and vice versa with farmers and collectors. At the beginning of the harvest, the collectors dare to give a high price, then over time the collectors give the lowest price. This has resulted in catfish farmers often looking for new breeders or collectors in the hope of not harming catfish farmers.

In addition to the lack of trust, the red water catfish community also has no commitment. This can be seen from the breeders with farmers and farmers with collectors who cannot prosper both. They walk alone to get high profits without thinking about the losses suffered by the other party. This is contrary to (Rachbini's (2016b) theory which states that the principle and purpose of long-term relationships is for company profitability obtained sustainably through mutually

beneficial relationships so as to create consistent and sustainable long-term relationships. Usually it occurs between farmers and collectors. Collectors often provide very low prices to farmers without thinking about the losses experienced by the farmers.

Cooperation

The results of the t-test analysis for the cooperation variable obtained t-count value of 5.562 > t-table (1.997) with a probability value of 0.000 less than 0.05 (0.003 <0.05), then H0 is rejected, meaning that cooperation has a significant positive effect on supply performance company chain management in the red water system and biofloc catfish farming community in Wonogiri.

In the catfish farming community, the red water system has a good responsibility and contribution. Each member has a big responsibility to run the catfish business. For example, nurseries are responsible for providing good and quality seeds before they are sold to farmers. Each of these breeders has a contribution to continue to develop and improve the quality of catfish seedlings. If there are breeders who fail to mate catfish broodstock, then from other breeders will help to solve the problem and learn about it. So this will not happen again in other breeders. After being sold to farmers, the quality of catfish affects crop yields. Catfish farmers are responsible for raising catfish with good quality as well. This can be seen in terms of the selection of feed that has high protein content. The higher the protein given, the better the quality of the catfish will be. Not a few farmers who suffered losses due to catfish disease. When someone experiences this problem, many other farmers provide solutions and contribute directly until the catfish affected by the disease has recovered, likewise for collectors. The collectors are responsible for taking the harvest that has been managed by the farmers, and providing a reasonable price according to market needs. Cempakasari and Yoestrini in Fitrianto & Sudaryanto, (2016) state that there is cooperation with good suppliers for reliable needs and is expected to produce a good understanding of the needs of each party so as to increase the profitability of the company itself.

CONCLUSION

1. Information sharing has a positive and significant impact on the company's supply chain management performance in the red water system and biofloc catfish farming community in Wonogiri.
2. The long-term relationship has a positive but not significant effect on the company's supply chain management performance in the red water system and biofloc catfish farming community in Wonogiri.

3. Cooperation has a positive and significant impact on the performance of the company's supply chain management in the red water system and biofloc catfish farming community in Wonogiri.

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