



THE INFLUENCE OF PRODUCT QUALITY, COSTS, AND DISTRIBUTION ON THE INCOME OF PORANG FARMERS

Sefnat Aristarkus Tang¹

¹Faculty of Economics Tribuana Kalabahi University, Indonesia

Corresponden Author: sefnat16@gmail.com

Abstract

This study aims to determine the effect of product quality, cost, and distribution on the income of porang farmers in Kuifana Village, District South Century Alor Regency. The population in this study was all porang farmers with a sample of 30 people. And the Data collection uses questionnaires and data processing using multiple linear regression. The results showed that the significance value of the t-test of the product quality variable was 0.016, the cost variable was 0.000, and the distribution variable was 0.031. When compared with the alpha value, the t-test value of each independent variable is smaller than the alpha value ($\alpha=0.05$) so that partially the product, cost, and distribution variables have a significant positive effect on the income variable. While simultaneously, the significance value of the F test is 0.000, where this value is smaller than the alpha value ($\alpha = 0.05$). Simultaneously, all independent variables have a significant positive effect on the dependent variable.

Keywords: revenue, product quality, cost, distribution

INTRODUCTION

The level of national economic growth determines by the implementation and results of national development, as well as the ability of the government to generate enthusiasm and participation of all people in carrying out products. The higher the economy, the greater the facilities provided for the benefit of the community.

Revenue is a significant thing in determining the profit or loss of a business. The gain or loss came from comparing income and expenses or costs incurred on the payment. Income can use as a gauge of a company's success and a determining factor in its long-term viability.

Product is the most crucial element in the marketing mix, which has various meanings and meanings, but in general, a product is anything that can offer the market to notice, buy, use, and consume. The product includes a physical object, service, personality, place, organization, or idea. Product decisions have quality, features, brand type, packaging, and development, based on market research, testing, and seller service. Products with good quality can be one of the factors supporting the increase in income.

Product quality must consider because it will show the identity of the company. If the product market is problematic, consumers will feel dissatisfied and switch to other similar companies to get better quality. Products that have different characteristics from others will make

them superior outcomes compared to similar products and balanced with quality that does not disappoint (Kelly, 2020).

The cost has various meanings depending on the user's intent on the term. Horngren in Sari et al. (2021) defines cost in a broad sense as the sacrifice of economic resources measured in units of money, which has occurred or may occur to achieve specific goals, while in a narrow sense, the cost is part of the cost of goods sacrificed to earn income.

One critical factor that should not ignore is choosing the right distribution channel to distribute goods or services from producers to consumers. Distribution is distributing goods or services from producers to consumers (Hurriyati in Dewi, 2021). Distribution activities have an essential role for producers because these activities can distribute goods produced by producers to the community. If the goods or services did not spread to consumers, the production results would only accumulate in the warehouse so that producers would experience losses. When goods and services transfer from producers to customers, they should be more accessible.

One of the leading commodities in the agricultural sector, such as porang (itchy sweet potato), has become a source of income for the people of East Nusa Tenggara, NTT, especially in Kuifana village, Abad Selatan District, Alor Regency. Currently, porang (itchy sweet potato) is a potential commodity in contributing to the income of farming families.

Kuifana Village is one of the villages in NTT Province which is rich in natural resources. Excellent natural resources that can improve the community's economy, such as cashew, candlenut, copra, cloves, vanilla, and others, but it turns out that other natural resources can support the economic needs of the community namely by managing porang (itchy sweet potato).

Porang (itchy sweet potato) is one of the wild plants that did not know to the public. Still, the porang plant (itchy sweet potato) is now used as a natural resource with reasonable income to support the community's economic growth.

The people of Kuifana village generally manage other natural resources such as candlenut, vanilla, and others. But with a price or income that is quite tempting to handle porang or commonly called (itchy sweet potato), many Kuifana villagers are interested in processing porang (itchy sweet potato) as additional income to support the economic growth of the Kuifana village community. Over time this porang tuber plant is one of the primary natural resource. It creates a constant hope to support various aspects of the economy for daily expenses, education, and health.

The income of porang (Italy sweet potato) farmers in Kuifana Village, Abad Selatan District, and Alor Regency get influenced by distribution factors, costs, and product quality.

Because the topography of the area, which is 80 percent mountainous with inadequate road infrastructure, makes it a bit difficult for four-wheeled vehicles to pass and forces farmers to use the services of a motorcycle taxi with a reasonably high cost. In addition, the product has been stored in the warehouse for a long time, resulting in product damage and significantly affecting the quality of the porang (itchy sweet potato) product in Kuifana Village, Abad Selatan District Alor Regency.

Based on the description above, the problems in this study are: Does the quality of the product affect the income of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency?; Does the cost involve the income of porang (itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, Alor Regency?; Does distribution affect the payment of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency?; Do product quality, cost, and distribution affect the income of porang (itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, Alor Regency?. while the objectives of this study are: To determine the effect of product quality on the income of porang farmers in Kuifana Village, Abad Selatan District, Alor Regency; to assess the impact of costs on the payment of porang (itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, Alor Regency; to determine the effect of distribution on the income of porang farmers (yam gata) in Kuifana Village, Abad Selatan District, Alor Regency; and to determine the impact of product quality, cost, and distribution on the income of porang (Italy sweet potato) farmers in Kuifana Village, Abad Selatan District, Alor Regency.

THEORETICAL STUDY

Income

Samuelson & Nordhaus Sari, (2018) state that income is the total income (money and not money) of a person or a household during a specific period. Meanwhile, Sukirno in Anggraini (2018) states that income is the maximum value consumed by a person in one period. Meanwhile, Antonio in Aprilia (2019) says that income is a gross increase in assets or a decrease in liabilities, or a combination of both during the selected period of income statement resulting from lawful investment, trading, providing services, or other activities at seeking profit. Meanwhile, according to the Big Indonesian Dictionary.

It states that income is a sum of money received by individuals, companies, and organizations in the form of wages (wages), salaries (Solaris), rent (rent), interest (interest), commissions (commissions), fees (fees) and profits (profit). Along with the assistance, pension benefits, old age, and others. Income is a significant thing in carrying out a business because this income will relate to the company's development.

Definitions above can conclude that income is the amount of money received by a person or company in a certain period for consumption.

Quality Product

Quality Product quality is a determining factor for income levels. If the quality of a product is good, it will increase the level of consumer purchases so that the level of income will also increase. Products, services, people, processes, and the environment that meets or exceeds expectations are the link to product quality, according to Windarti & Ibrahim in Jaya et al. (2021). Meanwhile, Kotler & Armstrong in Kelly (2020) states that product quality is the ability of a product to perform its functions. This product includes overall durability, reliability, accuracy, ease of operation, product repair, and other product attributes. Meanwhile, Buchari in Nador et al. (2020) states that product quality is the overall combination of characteristics of goods and services from marketing, engineering, manufacture, and maintenance that makes the products and services used to meet customer expectations.

From the description above, it can conclude that product quality is the ability of the product to carry out its function to meet or exceed expectations.

Cost

Cost is an essential factor that must consider when producing a product. Mulyadi in Sari et al. (2021) states that the cost is the sacrifice of economic resources measured in units of money, which has occurred, is happening, or is likely to occur for specific purposes. This cost consists of raw material, labor, and factory overhead costs, commonly called production costs. Hansen and Mowen in Rosalia (2020) state that production costs are the amount of money spent relating to the manufacture of goods and the provision of services. Meanwhile, Nuraini in Rosalia (2020) stated that production costs are costs incurred to process raw materials into finished products ready to be sold. Meanwhile, Sukirno in Anggraini (2018) says that production costs are the total costs incurred by the company to fund production activities.

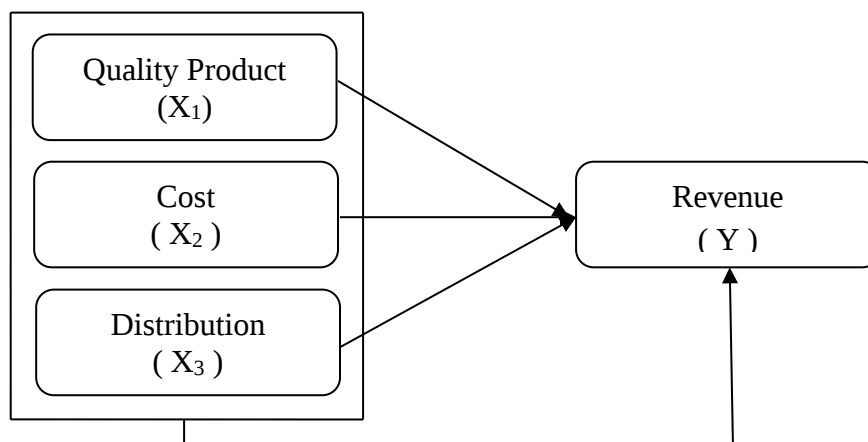
From the description above, it can conclude that production costs are costs incurred to fund the production process from raw materials to finished and ready-to-sell goods.

Distribution

In smoothing the flow of goods from producers to consumers, it cannot be separated from distribution problems because this is an essential factor that should not ignore. Private (2008) in

Sundari et al., (2021) states that distribution or location is a marketing activity that seeks to facilitate the delivery of goods and services from producers to consumers so that their use follows what is needed (type, quantity, price, place, and location). When needed). At the same time, Hurriyati (Dewi, 2021) states that distribution refers to various marketing activities that seek to expedite and facilitate the delivery or distribution of goods and services from producers to consumers. Meanwhile, Kotler et al. in Dewi (2021) suggest the distribution of a group of traders and agents who combine name and physical transfers for one product to create specific market uses.

Based description above, to clarify the influence between variables in this study, a framework of thought is put forward, as shown in Figure 1 below:



Description:

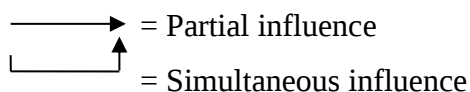


Figure 1. Basic research

Framework Based on the above framework, Then the hypothesis in this study is:

- H₁: Product quality has a significant positive effect on the income of porang farmers (Itchy sweet potato) in Kuifana Village, Abad Selatan District, and Alor Regency.
- H₂: Cost has a significant positive effect on the income of porang (itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, Alor Regency.
- H₃: The favorable distribution significantly affects the income of porang (itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, and Alor Regency.

H₄: Product quality, cost, and distribution have a significant positive effect on the income of porang (Itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, and Alor Regency.

METHOD

This research carries out on each porang (itchy sweet potato) farmer in Kuifana Village, Abad Selatan District, Alor Regency, with 30 people. The data collection techniques used are observation, interviews, questionnaires, and literature study. The data analysis technique used is a research instrument test consisting of validity and reliability tests, followed by multiple linear regression analysis to determine the effect of independent variables on the dependent variable. Hypothesis testing using t-test or partial test and F test or simultaneous test.

Test of Research Instruments The

The test instrument used in this research is the validity and reliability tests.

a. Validity test

A test validity test uses to measure a questionnaire's validity (Ghozali, 2018). A questionnaire is said to be valid if the questions on the questionnaire can reveal something that the questionnaire will measure. Therefore, validity assesses whether or not the questionnaire has questions that can measure the target construct. The conditions that will influence the decision-making process are as follows: if the r -count is lower than 0.300 (r 0.300), it cannot use. If the r_{count} is greater than or equal to 0.300 (r 0.300), then it is valid, but if the r_{count} is less than 0.300 (r 0.300), it is invalid. To determine the validity, the product-moment that Pearson suggested utilizes. Evaluation of reliability

b. Reliability test

Test reliability is a tool to measure a questionnaire that indicates a variable or construct (Ghozali, 2018). A questionnaire is reliable or reliable if a person's answer to the statement is consistent or stable from time to time.

In this study, the technique used to determine the reliability of the instrument is Cronbach's alpha with the following decision-making requirements:

1. If the Cronbach's alpha value is more than or equal to 0.600 (Cronbach's alpha 0.600), it is reliable.
2. If the Cronbach's alpha value is less than 0.600 (Cronbach's alpha <0.600), it is unreliable.

Multiple linear regression

Namely income by using multiple linear regression analysis with the equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Where:

Y = dependent variable (farmers' income)

a = constant

X₁ = product quality variable

X₂ = cost variable

X₃ = distribution variable

b₁, b₂, b₃ = regression coefficient

e = standard error

Hypothesis

Hypothesis testing uses a t-test or partial test and an F test or simultaneous test.

1. T-test (partial test) Partial

The test uses to test the effect of each independent variable on the dependent variable. The test is carried out by comparing the significance value of the t-test (sig) with the alpha value (α), provided that: if the significant value of the t-test of each independent variable is greater than the alpha value (sig > α), then H_a is rejected, whereas if the value of the significance of the t-test of each variable is less than or equal to the alpha value (sig ≤ α), then H_a is accepted. In this study, researchers used a significant level of 5% or 0.05.

2. F test (simultaneous test) Simultaneous

The test uses to test research hypotheses simultaneously, measuring and finding out the effect of independent variables on the dependent variable. The test carries out by comparing the significance value of the F test (sig) with the alpha value (α) with the provisions. If the significant value of the F test is greater than the alpha value (sig > α), then H_a is rejected, whereas if the significance value of the F test is less than or equal to alpha (sig ≤ α), then H_a is accepted. In this study, researchers used a significant level of 5% or 0.05.

RESULTS AND DISCUSSION

Research instrument

a. Validity test

Test the results of the validity test on the variables used in this study can see in the following table:

Table 1. Validity test results

Variable	No. Statement	r-count	Requir ements	Information
Income (Y)	P1	0.640	0.300	Valid
	P2	0.618	0.300	Valid
	P3	0.783	0.300	Valid
	P4	0.695	0.300	Valid
Quality Product (X ₁)	P1	0.653	0.300	Valid
	P2	0.620	0.300	Valid
	P3	0.526	0.300	Valid
	P4	0.639	0.300	Valid
Costs (X ₂)	P1	0,666	0,300	Valid
	P2	0,356	0,300	Valid
	P3	0,523	0,300	Valid
	P4	0,718	0,300	Valid
Distribution (X ₃)	P1	0.662	0.300	Valid
	P2	0.566	0.300	Valid
	P3	0.693	0.300	Valid
	P4	0.757	0.300	Valid

Based on the data in table 1 above, all statements used to measure variables in this study have a r_{count} greater than the required conditions. Determine that it is 0.300 so it can conclude that all the ideas used are declared valid so that the data can use for analysis, next sister.

b. Reliability test

Test the results of the reliability test of the variables used in this study can see in the following table:

Table 2. Summary of reliability test results for

Variables	Cronbach's Alpha	Requirements	Information
Income (Y)	0,843	0,600	Reliable
Quality Product (X ₁)	0,796	0,600	Reliable
Cost (X ₂)	0,760	0,600	Reliable
Distribution (X ₃)	0,836	0,600	Reliable

Based on the processing in table 2 above, it can see that the Cronbach's alpha value from the reliability test results of the porang farmer income variables (Y), product quality (X₁), cost (X₂), and distribution (X₃) shows the required value, which is greater than 0.600 so that all The variables used in this study.

Namely, the income of porang farmers, product quality, costs, and distribution was declared reliable.

Multiple linear regression

The results of multiple linear regression analysis can see in the following table:

Table 3. Effects of multiple linear regression

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	.706	.482			1.463	.155
X1	.326	.126	.314		2.590	.016
X2	.509	.120	.476		4.225	.000
X3	.227	.100	.215		2.283	.031

Based on the processing in table 3 above, it obtains a multiple linear regression equation as follows:

$$Y = 0.706 + 0.314X_1 + 0.476X_2 + 0.215X_3$$

The meaning of the regression equation above is that: the constant value of 0.706 means that if all the independent variables used in this study are zero (0) or constant, the value of the dependent variable, namely the income of porang farmers, will be 0.706. The regression coefficient value of the product quality variable is 0.314. Suppose the product quality variable increases by one unit. In that case, the income value of porang farmers will also increase by 0.314, provided that the value of the other variables used in this study is constant or zero. The regression

coefficient value for the cost variable is 0.476. Suppose the cost variable increases by one unit. In that case, the income value of porang farmers will also increase by 0.476, provided that the value of the other variables used in this study is constant or zero. The regression coefficient value of the distribution variable is 0.215, meaning that if the distribution variable increases by one unit, then the income value of porang farmers will also increase by 0.215, provided that the value of other variables used in this study is constant or zero.

Hypothesis

Hypothesis testing in this study carries the t-test or partial test and the F test or simultaneous test.

1. T-test or partial

The t-test study tests the effect of the independent variable (X) on the dependent variable (Y) partially, namely to test the first hypothesis, second hypothesis, and third hypothesis. The results of the t-test can see in the following table:

Table 4. Partial test results of

Model		Unstandardized		Standardized		
		Coefficients		Coefficients		
		Std.				
		B	Error	Beta	t	Sig.
1	(Constant)	.706	.482		1.463	.155
	X1	.326	.126	.314	2.590	.016
	X2	.509	.120	.476	4.225	.000
	X3	.227	.100	.215	2.283	.031

Effect of product quality (X₁) to income (Y)

Based on partial testing, as shown in Table 4 above, the results show that the significance value of the product quality variable is 0.016. When compared with the alpha value (0.05), the value of 0.016 is smaller than 0.05, so based on the decision-making criteria, it can conclude that the first hypothesis (H₁) was accepted. This result shows that the product quality variable has a significant positive effect on the income of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency. This study proves that the porang or itchy sweet potato produced by farmers in Kuifana Village, Abad Selatan District, Alor Regency is an essential element with various meanings and meanings. Still, in general, a product is anything that can

offer to the market for attention, purchase, use, and consumption. Therefore, consumers will feel more satisfied if the product's quality exceeds their expectations. Therefore the company must provide the characteristics of the product to attract consumer interest to increase revenue.

The effect of costs (X₂) on income (Y)

Based on partial testing, as shown in Table 4 above, the results show that the significance value of the cost variable is 0.000. Compared with the alpha value (0.05), the value of 0.000 is smaller than 0.05, so the second hypothesis (H₂) is accepted based on the decision-making criteria. This result shows that the cost variable has a significant positive effect on the income of porang (itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, and Alor Regency. This study means that the cost factor affects the income of porang farmers in Kuifana Village. This study implies that in carrying out their business, porang farmers in Kuifana Village, South Abad Subdistrict, and Alor Regency must always try to reduce the costs incurred in producing porang or itchy sweet potatoes.

The more significant the costs incurred, the farmers' income will decrease. On the other hand, the lower the costs, the higher farmers' income.

The effect of distribution (X₃) on income (Y)

Based on partial testing, as shown in Table 4 above, the results show that the significance value of the distribution variable is 0.031. When compared with the alpha value (0.05), the value of 0.031 is smaller than 0.05, so based on the decision-making criteria, it can conclude that the third hypothesis (H₃) is accepted. This result shows that the distribution variable has a significant positive effect on the income of porang (itchy sweet potato) farmers in Kuifana Village, Abad Selatan District, and Alor Regency. This activity shows that distribution has an essential role for producers because these activities can distribute goods produced by producers to the community. Goods or services will be helpful if they are in the hands of consumers. Therefore, producers try to distribute these goods or services to consumers. If the goods or services did not spread to consumers, the production results would only accumulate in the warehouse so that producers would experience losses.

2. F_{test} or simultaneous

Test F_{test} aims to determine the independent variable (X) 's effect on the dependent variable (Y). The results of the F test are as follows:

Table 5. Simultaneous test results of

		Sum of		Mean		
Model		Squares	Df	Square	F	Sig.
1	Regression	335,200	3	111,733	409,140	,000 ^b
	Residual	7,100	26	,273		
	Total	342,300	29			

Based on the simultaneous test as shown in table 5 above, the result is that the significance value of the F test is 0.000 when compared to the alpha value (0.05), then 0.000 is smaller than 0.05 so that based on the decision-making criteria, it can conclude that the fourth hypothesis (H4) is accepted. This result shows that, simultaneously or simultaneously, all the independent variables in this study, namely product quality, cost, and distribution have a significant positive effect on the income of porang farmers in Kuifana Village, Abad Selatan District, Alor Regency. This activity shows that if product quality, cost, and distribution are improved together, the income of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency will also increase.

CONCLUSION

Based on the results of the study, the researcher will draw several conclusions as follows:

1. The product quality variable has a significant positive effect on the income variable of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency.
2. Partially, the cost variable has a significant positive effect on the income variable of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency.
3. Partially, the distribution variable has a significant positive effect on the income variable of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency.
4. Simultaneously, the variables of product quality, cost, and distribution significantly affect the income variable of porang farmers in Kuifana Village, Abad Selatan District, and Alor Regency.

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