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The Effect of Local Wisdom Product Design and Product Quality on Increasing Product Competitiveness of Bengkalis Batik Weaving (Case Study on Customers of BUMDes Langgam Sako)

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ABSTRACT

This study aims to determine the influence and effect of local wisdom product design and product quality on increasing product competitiveness of Bengkalis batik weaving on customers of BUMDes Langgam Sako. The variables used consist of 2 independent variables and 1 dependent variable. This study uses quantitative methods, using a non-probability sampling method with Snowball sampling. Data collection techniques were carried out using a questionnaire to 100 consumers who have worn Batik woven BUMDes Langgam Sako. Processing data using the SPSS IBM 27 application with multiple linear regression analysis testing which includes validity test, reliability test, T-test, F test, and coefficient of determination (R2). The results of simultaneous testing between all independent variables on the dependent variable, it can be concluded that a local wisdom product design and product quality simultaneously have a positive and significant effect on increasing product competitiveness of Bengkalis batik weaving, with the calculation of the coefficient of determination (R2) of 54.2% is a value that can explain product competitiveness from two independent variables, namely local wisdom product design and product quality.

Keywords: product design, product quality, product competitiveness

1. Introduction

Indonesia is a country that has various potentials, both natural and human resources. Many people in Indonesia have innovations and imaginative ideas to develop new products based on local culture or wisdom. According to Yusuf (2020), local wisdom is part of the culture of a community that cannot be separated from the language of the community itself. Local wisdom is usually passed down from generation to generation through word of mouth. Local wisdom exists in folklore, proverbs, songs, and folk games. Local wisdom as a knowledge discovered by certain local communities through a collection of experiences in trying and integrated with an understanding of the culture and natural conditions of a place. The form of local wisdom objects can be made into the design of a product.

Bengkalis Regency located in Riau Province, Indonesia, is an area rich in local wisdom and has a distinctive cultural heritage. One of the most valuable and nationally and internationally recognized cultural aspects is the art of Batik. Batik has become an inseparable part of the life of the local community and has been recognized as one of the traditional art forms that has its uniqueness and specialty.

One of the famous woven batik crafts in Bengakalis is at BUMDes Langgam Sako. BUMDes owned by Teluk Latak Village, Bengkalis. Bengkalis Regency is intended to accommodate community economic businesses, to be able to provide services to the community drive the village economy, and contribute to village income.

According to Effendi, S (2019) Village Owned Enterprises (BUMDes) is a village-owned business entity formed from Village assets to manage assets, services, and other enterprises for the benefit of the Village community. The establishment of BUMDes intends to stimulate local economic development at the village level. This village's local economic development is based on the village's requirements, potential, capacity, and capital engagement from the village government in the form of financing and village assets, to increase the village community's economic status.

This research was conducted at BUMDes Langgam Sako in Teluk Latak Village, BUMDes Langgam Sako Batik Weaving Business in Teluk Latak Village is a community business unit facilitated by the village to advance the community in developing its business in the production sector. Woven batik is very famous because the design of local wisdom products and the patterns of woven batik are very

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distinctive and reflect the cultural values of local wisdom, such as plant motifs, geometrics, or traditional symbols. This uniqueness makes Bengkalis woven batik a unique product and different from woven batik in other regions. In addition, woven batik is also an important part of social activities and traditional ceremonies. At certain events, such as weddings, circumcisions, or other traditional ceremonies, woven batik is often used as distinctive clothing and has a high symbolic value.

Despite its uniqueness and extraordinary cultural wealth, woven Batik products still face challenges in improving their competitiveness. Competition in the woven batik market is getting tougher, both from local producers and from other regions that also have distinctive batik art. Therefore, it is important to maintain the authenticity and uniqueness of Bengkalis woven batik, as well as develop appropriate strategies to improve the competitiveness of this product in local and international markets. Efforts to increase the visibility of MSME products in increasing brand awareness, product quality, and product innovation need to be made to attract consumer interest and decisions to buy MSME products (Arimurti and Raflah, 2023).

This research focuses on consumers of BUMDes Langggam Sako Teluk Latak. The author considers it important to examine the effect of local wisdom product design and product quality on increasing the competitiveness of batik weaving products. The reason for choosing the object of this research is because the number of Batik Weaving consumers is starting to increase.

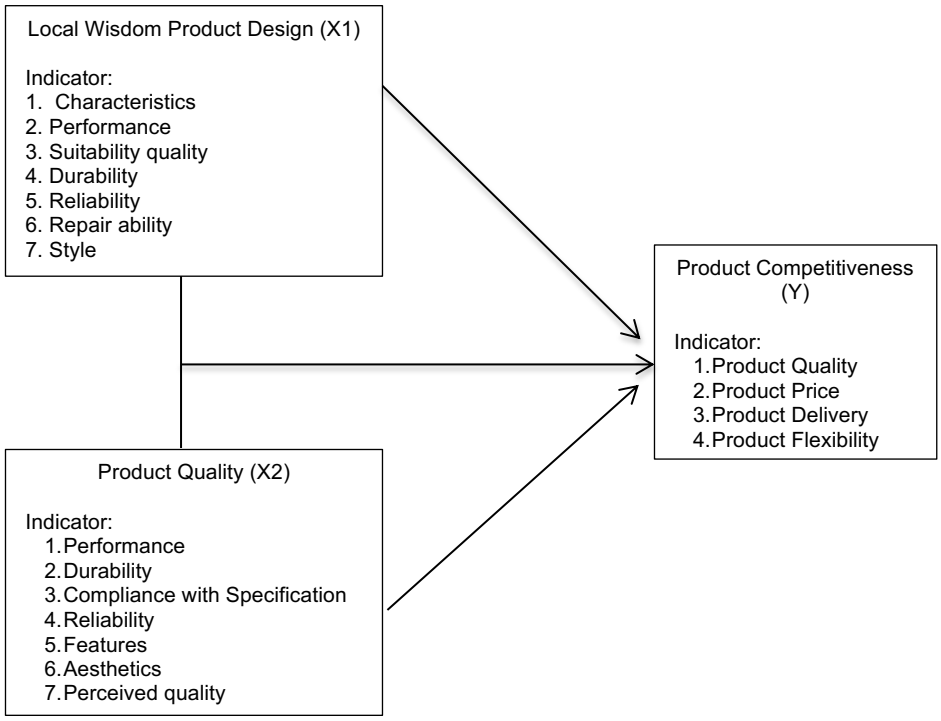

Figure 1. Framework of the Research
Source: *Processed Data 2023*

2. Research Method

The location of this research is at BUMDes Langgam Sako. The object of the study is customers BUMDes Langgam Sako, Teluk Latak Village. The type of data used in this research is quantitative data. Source of the data used for this study namely Primary data and secondary data sources. The population in this study is customers who have experience buying products from BUMDes Langgam Sako. The research population consists of as many as 100 Customers of Batik weaving BUMDes Langgam Sako. This study uses a quantitative method, using a non-probability sampling method with Snowball sampling. Data collection was carried out by handing out a questionnaire. The scoring technique used by the author in this research questionnaire is the Likert scale technique. Data analysis methods are descriptive statistics, classic assumption test, normality test, heteroscedasticity test, autocorrelation test, regression analysis, T-test, F test, and test of the coefficient of determination. The research model uses two independent variables X1 and X2 with one dependent variable Y.

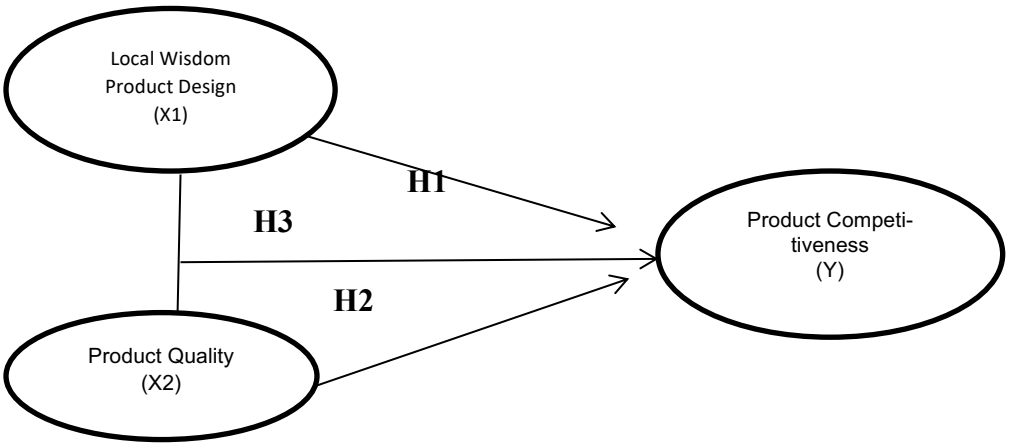

Figure 2. Framework of the Research with Hypotheses
Source: Processed Data 2023

These hypotheses of this research are there is H1 Local wisdom product design influences increasing the competitiveness of Bengkalis woven batik products, H2 Product quality influences increasing the competitiveness of Bengkalis woven batik products, H3 Local wisdom product design and product quality influence increasing the competitiveness of Bengkalis woven batik product.

Table 1. Definition of Variable and Indicator

No	Variable	Definition	Indicator	Scale
1.	Local Wisdom Product Design (X1)	According to M. Rizqon Al Musafiri, S. U (2016). Local Wisdom has a role in reducing the impact of globalization by instilling positive values in adolescents. This value planting is based on the values, norms, and customs of each region.	1. Characteristics 2. Performance 3. Suitability quality 4. Durability 5. Reliability 6. Repair ability 7. Style	1-5
2.	Product Quality (X2)	According to Kotler and Armstrong in Slamet Heri Winarno, et al (2018) product quality is the product's ability to perform its functions, this includes the time of use of the product, reliability, ease of use, and repair, and other values.	1. Performance 2. Durability 3. Compliance with Specification 4. Reliability 5. Features 6. Aesthetics 7. Perceived quality	1-5
3.	Product Competi-tiveness (Y)	According to Dirgantoro in Mohamad, et. al (2020), competitiveness is a development of the value that can be created to buy it. Competitiveness is a crucial factor in the success of any business or industry.	1. Product Quality 2. Product Price 3. Product delivery 4. Product flexibility	1-5

Source: *Processed Data, 2023*

3. Result and Discussion

The calculation had been done with the value of df is 98. Therefore, in this research, the author used rtable of 0.1966. The results of the validity test were obtained by comparing the value of rcount with rtable. The details can be seen in Table 2 as follows:

Table 2. Result of Test Validity through Comparison of the Value of rcount with rtable

No	Variable	Indicator	r_{count}	Greater than	r_{tabel}	Explanation
1	Local Wisdom Product Design (X1)	Characteristics	0.689	>	0.1966	Valid
			0.726		0.1966	Valid
		Performance	0.758		0.1966	Valid
			0.692		0.1966	Valid
		Suitability quality	0.662		0.1966	Valid
			0.758		0.1966	Valid
		Durability	0.721		0.1966	Valid
			0.762		0.1966	Valid
		Reliability	0.741		0.1966	Valid
			0.706		0.1966	Valid
		Repair ability	0.592		0.1966	Valid
			0.686		0.1966	Valid
		Style	0.710		0.1966	Valid
			0.650		0.1966	Valid
2	Product Quality (X2)	Performance	0.826	>	0.1966	Valid
			0.780		0.1966	Valid
		Durability	0.604		0.1966	Valid
			0.644		0.1966	Valid
		Compliance with Specification	0.730		0.1966	Valid
			0.654		0.1966	Valid
		Reliability	0.666		0.1966	Valid
			0.759		0.1966	Valid
		Features	0.712		0.1966	Valid
			0.725		0.1966	Valid
		Aesthetics	0.678		0.1966	Valid
			0.788		0.1966	Valid
		Perceived quality	0.763		0.1966	Valid
			0.764		0.1966	Valid
3	Product Competitiveness (Y)	Product Quality	0.657	>	0.1966	Valid
			0.728		0.1966	Valid
		Product Price	0.764		0.1966	Valid
			0.763		0.1966	Valid
		Product Delivery	0.639		0.1966	Valid
			0.612		0.1966	Valid
		Product Flexibility	0.733		0.1966	Valid
			0.769		0.1966	Valid

Source: Processed Data, 2023

Based on Table 2, the use value of r count is 0.689, and the rtabel value of 0.1996 which means 0.689> 0.196, so the first item is suitability or valid. Likewise, for the next item, all items totaling 36 items have a value of rcount> rtable, so all items have suitability or validity.

Table 3. Result of Test Reliability

Variable	N of Items	Cronbach's Alpha	Information
Local Wisdom Product Design (X1)	14	0.919	Reliable
Product Quality (X2)	14	0.924	Reliable
Product Competitiveness (Y)	8	0.857	Reliable

Source: Processed Data, 2023

Table 3 shows that the results of the reliability test with variables have consistency or are reliable because the numerical value of Cronbach's Alpha is greater than 0.60.

Respondent data obtained will be tested with the classical assumption test, The classical assumption test used in research is the normality test using SPSS above, the research variable instrument can be stated as normality distributed. The data significance value of 0.056>0.05 means that the data is normally distributed. Based on the Heteroscedasticity test it can be concluded that there is no heteroscedasticity problem. This value can be seen from the Durbin Watson table with n=100 where k=2 is the number of independent variables. So, 1.7152<1.747<4-1.7152=2.2848 (DU<DW<4-DU) means that there is no autocorrelation.

$$Y = 6.182 + 0.299X1 + 0.177X2 + e$$

Based on the result obtained, it can be explained about multiple linear regression analysis:

1. The constant value is 6.182, meaning that if there is no change in the variable of local wisdom design product and product quality (the values of X1 and X2 are 0), then product competitiveness is 6.182.
2. The value of the local wisdom product design regression coefficient (X1) is 0.299, meaning that if the variable local wisdom product design (X1) increases by 1% with the assumption of variable product quality (X2) and the constant (a) is 0 (zero), then product competitiveness by 29,9%. This shows that the local wisdom product design variable has a positive effect on product competitiveness.
3. The value of the product quality regression coefficient (X2) is 0.177, meaning that if the variable product quality (X2) increases by 1% with the assumption of variable local wisdom product design (X1) and the constant (a) is 0 (zero), then product competitiveness by 17,7%. This shows that the product quality variable has a positive effect on product competitiveness.

Table 4. T-test Product Quality (X1) and Local Wisdom Product Design (X2) on Product Competitiveness (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.182	2.657		2.327	.022
	Local Wisdom Product Design	.299	.084	.482	3.540	.001
	Product Quality	.177	.086	.279	2.053	.043
a. Dependent Variable: Product Competitiveness						

Source: Processed Data, 2023

Based on Table 2 by observing rows, columns t, and sig. can be explained as follows: The effect of the Local Wisdom Product Design variable on Product Competitiveness (H1), Local Wisdom Product Design (X1) has a positive and significant effect on Product Competitiveness. This can be seen from the significant Local Wisdom Product Design (X1) 0.001<0.05, and the value of ttable= t (α/2;nk-1 = t (0.05/2;100-2-1) = (0.025;97) 1.985. It means that the value of t is greater than the t table (3.540>1.985), so Ho is rejected and H1 is accepted. so that the hypothesis that says there is a Local Wisdom Product Design (X1) has a significant effect on the Product Competitiveness.

The effect of the Product Quality variable on Product Competitiveness (H2) Product Quality (X2) has a positive and significant effect on Product Competitiveness. This can be seen from the significant Product Quality (X2) 0.043< 0.05, and the value of ttable = t (α/2;nk-1 = t (0.05/2;100-2-1) = (0.025;97) 1.985. It means that the value of t is greater than the t table (2.053>1.985), so Ho is rejected and H2 is accepted. so that the hypothesis which says there is a Product Quality (X2) has a significant effect on the Product Competitiveness.

Table 5. F Test Product Quality (X1) and Local Wisdom Product Design (X2) on Product Competitiveness (Y)

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	625.365	2	312.683	57.422	.000[b]
	Residual	528.195	97	5.445		
	Total	1153.560	99			
a. Dependent Variable: Product Competitiveness						
b. Predictors: (Constant), Product Quality, Local Wisdom Product Design						

Source: Processed Data, 2023

Based on the table above, it can be seen that the value of Fcount is 57.422 with an Ftable value of 3.09, implying that Fcount>Ftable or 57.422>3.09, and a significant level of 0.000<0.05, Ho is rejected and H3 is accepted, implying that variable Local Wisdom Product Design (X1) and Product quality (X2) have a significant effect on product competitiveness.

Table 6. Coefficient of determination Product Quality (X1) and Local Wisdom Product Design (X2) on Product Competitiveness (Y)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736[a]	.542	.533	2.334
a. Predictors: (Constant), Product Quality (X2), Local Wisdom Design Product (X1)				
b. Dependent Variable: Product Competitiveness (Y)				

Source: Processed Data, 2023

Based on the table multiple correlation between X1, X2, to Y the coefficient of determination R2 = 0.542. This means that the variables local wisdom design product and product quality affect product competitiveness by 54.2% while the remaining 45.8% is influenced by other variables not used in this study.

From the result of the partial testing using SPSS in Table 4 above, This can be seen from the value of tcount (3.540) > ttable (1.985) with a significant level of 0.001<0.05. So the conclusion was accepted, and Ha and Ho were rejected. This means that the local Wisdom product design variable partially has a positive and significant effect on increasing product competitiveness.

Based on the test results that have been carried out, Batik Weaving has a good product design in terms of characteristics, performance, quality suitability, and style. This makes Batik Weaving very attractive to customers at BUMDes Langgam Sako. With so many competitors, Batik Weaving must be able to maintain and further improve the characteristics, performance, quality of fit, and style in terms of product design to continue to attract customers.

From the result of the partial testing using SPSS in Table 4 above, This can be seen from the value of tcount (2.053) > ttable (1.985) with a significant level of 0.043<0.05. So the conclusion was accepted Ha and Ho were rejected. This means that the product quality variable partially has a positive and significant effect on increasing product competitiveness. Therefore, product competitiveness will increase if the quality of the offered product meets customer expectations.

The results of this study are in line with the results of research conducted by Hamzah R (2023) with the research title Influence of Product Design And Product Quality on Crafts Industries in Kecamatan Rajapolah Kabupaten Tasikmalaya (Survey on Craftsmen in Rajapolah District. The results of this test prove that simultaneously and partially product design and product quality have a significant effect on the competitiveness in craft craftsmen in Rajapolah District. Iqbal, M (2020) with the research title “The Influence of Product Design and Product Quality on Competitive Advantage (Survey on Batik Craftsmen in Tasikmalaya City)”. The results of the study it is known that the product design of Batik Craftsmen in Tasikmalaya City is included in the classification as quite good, the product quality of Batik Craftsmen in Tasikmalaya City is included in the classification as quite good, and the competitive advantage of Batik Craftsmen in Tasikmalaya City is included in the classification of good. Each variable of product design and product quality partially affects the competitive advantage of Batik Craftsmen in Tasikmalaya City. Simultaneously, product design and product quality also have a significant effect on the competitive advantage of Batik Craftsmen in Tasikmalaya City.

Based on the test results that have been carried out, product quality is proven to have a significant influence on product competitiveness in BUMDes Langgam Sako. Product quality is a key factor that influences consumer perceptions of the value and superiority of a product. Products that have good quality tend to be more attractive to consumers, provide satisfaction, and build trust. Therefore, the steps taken by BUMDes Langgam Sako should focus on improving product quality. Features, performance, compliance with specifications, aesthetics, and perceived quality meeting high standards can help increase product competitiveness in the market. By consistently maintaining and improving product quality, BUMDes Langgam Sako can build a good reputation with consumers, expand market share, and ultimately influence purchasing decisions at the local and regional levels.

The Effect of Local Wisdom Product Design and Product Quality on increasing Product Competitiveness of Bengkalis Batik Weaving (Case Study at Customer BUMDes Langgam Sako) is seen by conducting the F test. To see if the F test can use SPSS, it is necessary to have a numerator and denominator of degrees of freedom. Fcount value 57.422 and FTable value 3.09. Because the value of Fcount is greater than F Table, which is 57.422>3.09, then reject Ho and H3 accept, which means that the variables of Local wisdom product design and product quality simultaneously have a significant effect on increasing product competitiveness.

4. Conclusion

The results of descriptive statistical analysis, for the local wisdom product design variable, the grand mean is 4.23 with a very high category. Thus, this variable has a good effect on Product competitiveness. Moreover, the results of linear regression testing between product design variables on product competitiveness variables influence 29.9% and it can be concluded that Product design partially has a positive and significant effect on Product competitiveness at BUMDes Langgam Sako. Having a positive influence will certainly make customers more interested in making purchases and product design can influence product competitiveness Batik Weaving at BUMDes Langgam Sako. Batik Weaving has a good product design in terms of characteristics, performance, quality suitability, and style. This makes Batik Weaving very attractive to customers at BUMDes Langgam Sako. With so many competitors, Batik Weaving must be able to maintain and further improve the characteristics, performance, quality of fit, and style in terms of product design to continue to attract customers.

The results of descriptive statistical analysis, for the product quality variable, the grand mean is 4,23 with the very high category. Hence, this variable has a good effect on increasing product competitiveness. And from the results of linear regression testing between product quality variables on product

competitiveness variables influence 17,7% and it can be concluded that product quality partially has a positive and significant effect on increasing product competitiveness at BUMDes Langgam Sako. Product quality is also one of the factors that cause someone to be interested in making a purchase. The product quality of Batik Weaving will greatly influence consumers in making purchases. Features, performance, compliance with specifications, aesthetics, and perceived quality meeting high standards can help increase product competitiveness in the market. By consistently maintaining and improving product quality, BUMDes Langgam Sako can build a good reputation with consumers, expand market share, and ultimately influence purchasing decisions at the local and regional levels. Based on the results of simultaneous testing between all independent variables on the dependent variable, it can be concluded that a local wisdom product design and product quality simultaneously have a positive and significant effect on increasing product competitiveness of Bengkalis batik weaving, And with the calculation of the coefficient of determination (R2) of 54.2% is a value that can explain product competitiveness from two independent variables, namely local wisdom product design and product quality. The remaining percentage is explained on the variables that are not used in this study.

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