VALUE-ADDED AND MARKETING SYSTEM ANALYSES OF THE PRODUCTS OF CORN AT UMKM KINAMANG IN HELUMO SUWAWA BONE BOLANGO

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ABSTRACT

This research is aimed at analyzing (1) the marketing system of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango, (2) the value-added of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango, and (3) factors affecting the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. This is quantitative research which uses primary data collected through interviews and observation sheets. The data analyses are marketing, value-added, and double regression using the Cobb Douglas approach. The results demonstrate that (1) The marketing system for the products of corn at UMKM Kimamang in Helumo Suwawa Bone Bolango is good. UMKM Kinamang has an efficient marketing channel and a small marketing margin. This attests to that it can afford interventions to the marketing system, either in a direct or indirect manner (hiring resellers). Corn stick products come with a higher marketing margin and as regards the efficiency of the marketing channel, are more efficient than *biji ketapang* products, (2) the products of corn (corn sticks) have a mean value-added of 66.31%. That is, in a competitive manner, these products are contributing to the business sustainability and economic value-added at UMKM Kinamang in Helumo Suwawa Bone Bolango, and (3) both partially and simultaneously, manufacturing overhead costs and direct material costs have a significant effect on the dependent variable the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. It is still possible to augment labor costs and direct material costs but manufacturing overhead costs are considered inefficient, and thereby needing minimization for bettering the cost of goods manufactured level.

Keywords: *Product of Corn, Value-added, Production, Marketing*

INTRODUCTION

Renowned for its corn production, Gorontalo Province is called the Province of Corn. Accordingly, the province is now consistent in endeavoring to achieve the "One Ton One Year" for the products of corn, as well as to advocate national food security. Corn today is not only produced for direct consumption purposes but also the target of activity elevating its value-added. Based on the data from the Department of Cooperatives, MSMEs, Industry, and Trade in Gorontalo Province, 2,664 units of MSMEs operating in Bone Bolango indicate an increase in development by 55.73%. It exhibits thriving MSME development in Bone Bolango after several approaches to entrepreneur empowerment, business training facilities, and equipment assistance conferred on MSME actors are made.

A direct product processing industry is another alternative form of business which may enhance the value-added of corn commodity. One of the products is

corn made from corn starch. Famed for a healthy value and affordable price, it is popular among the community. Corn is gaining increasing popularity and transforming into one of the alternative businesses which contribute to revenue escalation, especially in Gorontalo. Corn popularity is due to several factors, e.g., the community's ever-increasing demand for corn and easy processing. In this research, we are focusing on two products of corn, i.e., corn sticks and *biji ketapang*. Corn sticks are corn starch and sugar-based products molded using a stick form mold, from which they acquire the stick-like form. Meanwhile, *biji ketapang* is the name of the product and differently termed by region. Bearing the word "*ketapang* (*Terminalia catappa* L.)", the product is corn- rather than *ketapang* seed-based. The product name was derived from its *ketapang* seed-like form, which encourages the community to call it so. We are interested in carrying out further research and analyzing the value-added and marketing system of the products of corn at UMKM Kinamang.

RESEARCH METHOD

The research area is at UMKM Kinamang in Helumo Suwawa Bone Bolango. It was conducted in October-November 2020. It is quantitative research using primary data collected through interviews and observation sheets. Data analyses cover a marketing analysis, value-added analysis, and double regression analysis using the Cobb Douglas approach.

RESULT AND DISCUSSION

A. Marketing System of the Products of Corn at UMKM Kinamang

1. Products of Corn Channel at UMKM Kinamang

UMKM Kinamang applies both direct and indirect marketing channels, the definitions of which are as follows.

2. Direct Marketing Channel

Figure 1 depicts the direct marketing channel for the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango.

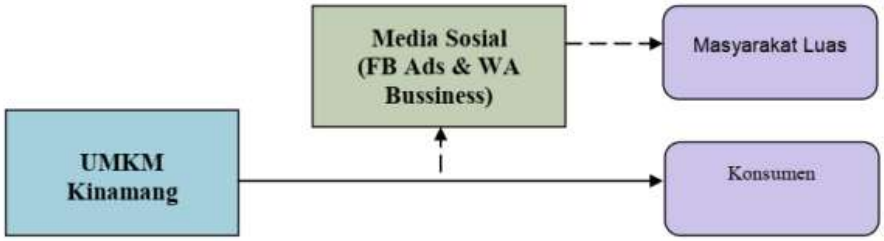

Figure 1. Direct Marketing Channel

In the direct marketing channel, UMKM Kinamang in Helumo Suwawa Bone Bolango executes a direct sale to consumers. Additionally, in the channel, UMKM Kinamang also uses social media, which act as an intermediator, eliminating any unnecessary marketing margins. This channel is considered more auspicious as sellers can determine the ideal fixed rate, and consumers can be satisfied due to the discount. However, the product existence level might decline

and there would be fewer purchases from new consumers.

3. Indirect Marketing Channel

Figure 2 illustrates the indirect marketing channel for the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango.

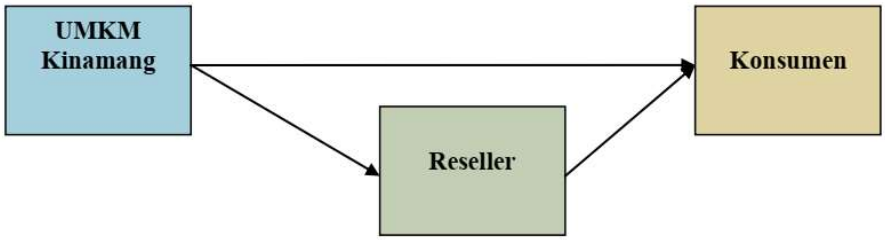

Figure 2. Indirect Marketing Channel

As indicated in Figure 4.3, this indirect marketing channel allows a larger marketing margin by virtue of some critical posts which should be passed before reaching end consumers. This channel enables resellers to earn the highest. Attributed to UMKM Kinamang, the indirect marketing channels formed are (1) UMKM Kinamang – consumers and (2) UMKM Kinamang – resellers – consumers.

4. Marketing Margin of the Products of Corn at UMKM Kinamang

A marketing margin may be best described as a rate difference at an institution level within a marketing system, or the difference between the amount paid by consumers and that received by producers for an agricultural product sold at the same time, volume, and quality. The result of the marketing margin analysis is manifested in Table 1.

Table 1. Result of the Marketing Margin Analysis of the Products of Corn at UMKM Kinamang

Tahun	HPP Full Costing	Harga Tingkat Reseller	Harga Tingkat Konsumen	Margin Pemasaran Reseller		Margin Pemasaran Konsumen		Total Margin Pemasaran
				Rp	%	Rp	%	
Ketapang								
2016	7,800	10,000	11,000	2,200	22.00	1,000	3109	3,200
2017	7,500	10,000	11,000	2,500	25.00	1,000	34.09	3,500
2018	8,300	10,000	12,000	1,700	17.00	2,000	33.67	3,700
2019	8,400	10,000	12,000	1,600	16.00	2,000	32.67	3,600
2020	8,400	10,000	12,000	1,600	16.00	2,000	32.67	3,600
Rata-rata	**8,080**	**10,000**	**11,600**	**1,920**	**19.20**	**1,600**	**32.84**	**3,520**
Stik Jagung								
2016	11,000	15,000	16,000	4,000	26.67	1,000	32.92	5,000
2017	10,300	15,000	16,000	4,700	31.33	1,000	37.58	5,700
2018	10,300	15,000	17,000	4,700	31.33	2,000	43.10	6,700

2019	11,200	15,000	17,000	3,800	25.33	2,000	37.10	5,800
2020	11,300	15,000	17,000	3,700	24.67	2,000	36.43	5,700
Rata-rata	**10,820**	**15,000**	**16,600**	**4,180**	**27.87**	**1,600**	**37.43**	**5,780**

Source: Processed Data, 2021

As pointed out in Table 1, the selling price set by the producer for corn stick products is not significantly different from the market price (the general price). The producer sets a selling price of IDR15,000, whereas the market price is IDR16,000-IDR17,000. Using the direct marketing channel, the marketing margin is 27.87%, the percentage of which increases by 37.47% when the indirect marketing channel is implemented. Nevertheless, concerning the trend of the marketing margin of the products of corn at UMKM Kinamamang, it has been declining for the last three years. The condition is contradictory with that of *biji ketapang* products, the marketing margin of which is stable, for resellers find it difficult to raise the price of corn stick products.

5. Marketing Efficiency

We assess marketing efficiency by referring to Ratnasari et al. (2018): 0%-33% = efficient, 34%-67% = less efficient, and 68-100 = inefficient. In the indirect marketing channel, we can identify the extent of the efficiency of each product.

Table 2. Marketing Channel Efficiency

Tahun	Efisiensi Saluran 1				Efisiensi Saluran 2			
	BP1	**NP**	**Efisiensi (%)**	**Ket**	**BP2**	**NP**	**Efisiensi (%)**	**Ket**
Ketapang								
2016	817	10,000	8.17	Efisien	1,017	11,000	9.24	Efisien
2017	240	10,000	2.40	Efisien	440	11,000	4.00	Efisien
2018	339	10,000	3.39	Efisien	939	12,000	7.82	Efisien
2019	337	10,000	3.37	Efisien	937	12,000	7.81	Efisien
2020	526	10,000	5.26	Efisien	1,226	12,000	10.22	Efisien
Rata-rata	**452**	**10,000**	**4.52**	**Efisien**	**912**	**11,600**	**7.82**	**Efisien**
Stik Jagung								
2016	820	15,000	5.47	Efisien	1,020	16,000	6.38	Efisien
2017	241	15,000	1.60	Efisien	441	16,000	2.75	Efisien
2018	339	15,000	2.26	Efisien	939	17,000	5.53	Efisien
2019	347	15,000	2.31	Efisien	947	17,000	5.57	Efisien
2020	471	15,000	3.14	Efisien	1,171	17,000	6.89	Efisien
Rata-rata	**443**	**15,000**	**2.96**	**Efisien**	**903**	**17,000**	**5.42**	**Efisien**

Source: Processed Data, 2021

In Table 2, in Marketing Channels 1 and 2, *biji ketapang* products come with efficiency values of 4.52% and 7.82%, respectively. As such, both marketing channels are considered effienct, and Marketing

Channel 1 is more efficient than the other. Meanwhile, associated with corn the products come with efficiency values of 2.96% and 5.42%, respectively. Hence, both marketing channels are considered efficient, and Marketing Channel 1 is more efficient than the other. Moreover, corn stick products have more efficient marketing channels than the other products.

This marketing channel has an implication for a high marketing margin, which that being so, departs from the normative economy. Responding to the high marketing margin, a well-distributed margin does not breed a significant issue. Nonetheless, our research shows that the margin share is not significant and thereby bringing about no harm for UMKM Kinamang. At certain points, these prices can improve the production and sale outputs of UMKM Kinamang in Helumo Suwawa Bone Bolango.

The result is aligned with Kotler (2013), that marketing costs are in connection with the rate of return from factors of production, whereas marketing charges are in relation to the amount received by processors, collectors, and trading agencies. Germane to a marketing margin, by the price theory, it is assumed that the seller and buyer make a direct encounter, in which price will be determined based on aggregate demand and bargain.

B. Value-added of the Products of Corn at UMKM Kinamang

1. Analysis of UMKM Kinamang Revenue

Table 3 showcases the result of UMKM Kinamang revenue analysis for the products of corn in Helumo Suwawa Bone Bolango.

Table 3. UMKM Kinamang Revenue

Year	Revenue	Cost	R/C Ratio
2016	52,760,000	27,679,008	1.91
2017	179,920,000	50,911,185	3.53
2018	176,545,000	49,660,513	3.56
2019	191,340,000	66,603,703	2.87
2020	60,560,000	26,866,263	2.25
Mean	**132,225,000**	**44,344,134**	**2.82**

Source: Data Processing, 2021

The R/C ratio, based on Table 4.3, is 2.82 so every IDR1 spent will bring on revenue of IDR2.82. In regard to the trend of the revenue, UMKM Kinamang shows off a good trend of revenue for the products of corn in Helumo Suwawa Bone Bolango although in 2020, there came about a decline in revenue by above 60% in light of the pandemic situation and its impacts, namely consumers' declined purchase power and decreased revenue.

2. Analysis of Value-added at UMKM Kinamang

Table 4 demonstrates the result of UMKM Kinamang value-added

analysis for corn stick products in Helumo Suwawa Bone Bolango.

Table 4. Corn Stick Value-added at UMKM Kinamang

No.	Keterangan	2016	2017	2018	2019	2020
Input, Output, dan Harga						
1	Output (kuantitas) (kg)	2,414	8,905	6,049	8,280	2,876
2	Input (kuantitas) (kg)	2,100	8,000	5,400	7,500	2,000
3	Tenaga kerja (HOK1 tahun)	900	1,215	900	900	900
4	Faktor konversi	1.15	1.11	1.12	1.10	1.44
5	Koefisien tenaga kerja	0.43	0.15	0.17	0.12	0.45
6	Harga output (Rp seluruh)	24,140,000	89,050,000	60,490,000	82,800,000	28,760,000
7	Upah rata-rata (Rp seluruh)	6,714,545	12,874,000	6,850,435	15,580,955	6,579,837
Nilai Tambah dan Keuntungan						
8	Harga input (Rp seluruh)	2,517,395	9,142,173	7,211,400	10,181,640	3,152,400
9	Nilai input lain (Rp seluruh)	12,235,587	18,755,187	12,131,862	22,866,681	10,674,148
10	Nilai output (Rp seluruh)	27,749,505	99,123,781	67,760,002	91,411,200	41,356,880
11	a. Nilai tambah (Rp seluruh)	12,996,522	71,226,422	48,416,740	58,362,879	27,530,332
	b. Rasio nilai tambah (%)	46.84	71.86	71.45	63.85	66.57
12	a. Imbalan tenaga kerja (Rp seluruh)	6,714,545	12,874,182	6,850,435	15,580,955	6,579,837
	b. Bagian tenaga kerja (%)	51.66	18.08	14.15	26.70	23.90
13	a. Keuntungan (Rp seluruh)	6,281,977	58,352,240	41,566,305	42,781,924	20,950,495
	b. Tingkat keuntungan (%)	48.34	81.92	85.85	73.30	76.10
14	Tingkat keuntungan dari penerimaan (%)	26.02	65.53	68.72	51.67	72.85

Source: Data Processing, 2021

Table 5 demonstrates the result of UMKM Kinamang value-added analysis for *biji ketapang* products in Helumo Suwawa Bone Bolango.

Table 5. *Biji Ketapang* Value-added at UMKM Kinamang

No.	Keterangan	2016	2017	2018	2019	2020
Input, Output, dan Harga						
1	Output (kuantitas) (kg)	1,908	6,058	7,737	7,236	2,120
2	Input (kuantitas) (kg)	1,800	5,600	6,300	6,300	1,600
3	Tenaga kerja (HOK/Proses)	900	1,215	900	900	900
4	Faktor konversi	1.06	1.08	1.23	1.15	1.35
5	Koefisien tenaga kerja	0.50	0.22	0.14	0.14	0.56
6	Harga output (Rp seluruh)	28,620,000	90,870,000	116,055,000	108,540,000	31,800,000
7	Upah rata-rata (Rp seluruh)	5,285,455	8,725,818	8,749,565	13,219,045	5,420,163
Nilai Tambah dan Keuntungan						
8	Harga input (Rp seluruh)	3,294,600	10,302,000	14,822,100	14,155,050	4,246,850
9	Nilai input lain (Rp seluruh)	9,631,425	12,711,826	15,495,150	19,400,332	18,616,698
10	Nilai output (Rp seluruh)	30,337,200	98,301,868	142,526,593	124,665,943	42,135,000
11	a. Nilai tambah (Rp seluruh)	17,411,175	75,288,042	112,209,342	91,110,561	19,271,452
	b. Rasio nilai tambah (%)	57.39	76.59	78.73	73.08	45.74
12	a. Imbalan tenaga kerja (Rp seluruh)	5,285,455	8,725,818	8,749,565	13,219,045	5,420,163
	b. Bagian tenaga kerja (%)	30.36	73.25	89.15	71.76	43.56
13	a. Keuntungan (Rp seluruh)	12,125,720	66,562,224	103,459,777	77,891,516	13,851,289
	b. Tingkat keuntungan (%)	69.64	88.41	92.20	85.49	71.87
14	Tingkat keuntungan dari penerimaan (%)	42.37	73.25	89.15	71.76	43.56

Source: Data Processing, 2021

The value-added of both products is compared. The result of the comparison is presented in Table 6.

Table 6. Total Value-added Earned by UMKM Kinamang

Year	Value-added		Mean	Growth	
	Biji Ketapang	**Corn Stick**		***Biji Ketapang***	**Corn Stick**
2016	46.84%	57.39%	52.11%		
2017	71.86%	76.59%	74.22%	53.42%	33.45%
2018	71.45%	78.73%	75.09%	-0.56%	2.79%
2019	63.85%	73.08%	68.47%	-10.65%	-7.17%
2020	66.57%	45.74%	56.15%	4.26%	-37.42%
Mean	**64.11%**	**66.31%**	**65.21%**	**11.62%**	**-2.09%**

Source: Data Processing, 2021

In Table 6, corn stick products have a good value-added (66.31%). Thus, the products contribute to business sustainability and an increase in the economic value-added at UMKM Kinamang in Helumo Suwawa Bone Bolango. Notwithstanding this, in terms of the growth, it declines by -2.09%, while that of *biji ketapang* products grows by 11.62%. Accordingly, considering the high demand and good product durability, corn sticks should be inflated for their production value.

The result keeps pace with Hasanah (2015), that agricultural commodities, in general, are sold raw and thus prone to damage. As such, the commodities should be either immediately consumed or processed before consumed. Corn can also be processed into high economic value food products. It can be processed into various types of food using either simple or complex processing methods (Retnawati, E. et al., 2011:14). Baruwadi (2009) argues that the contribution of the revenue of IKM households from corn farm businesses in Gorontalo Province is 64.03%, proving the great dependency of IKM households on corn as an income source. Corn, besides catering to the Gorontalo community's daily needs, can also be processed into several products, e.g., corn pie, corn sticks, corn oil, cornflour or *maizena*, poultry fodder, fish fodder, and others. In addition, corn waste can be leveraged as *ruminansia* fodder and organic fertilizer. Corn cobs can be used as charcoal briquettes, and corn husks can be processed to make artificial flowers, *dodol* wraps, basic materials for cloths, table mats, and other unique products.

C. Factors Influencing the Production of the Products of Corn at UMKM Kinamang Helumo Suwuwa Bone Bolango

1. Result of Double Regression Analysis

Table 7 demonstrates the result of double regression analysis using SPSS 21.

Table 7. Double Regression Analysis Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.426	.084		-5.075	.000
	BTK	.014	.005	.007	2.984	.004
	BOP	.994	.003	.981	375.334	.000
	BBB	.049	.009	.016	5.329	.000

Source: Data Processing Using SPSS 21, 2021

Based on the analysis result (Table 4.6), we acquire the following regression model.

ln POJ = ln -0.426 + ln 0.014BTK + ln 0.994BOP + ln 0.049BBB + e

The interpretation of the result is as follows.

a. **Constanta of -0.426 (α = -0.426)**

The value is a constant value of the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango under the requirement of the absence of the effects of labor cost, manufacturing overhead cost, and direct material cost.

b. **Coefficient Value of the Labor Cost of 0.014 (β1 = 0.014)**

A coefficient value of the labor cost of 0.014 exhibits that a 1% increase in labor cost increases the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango by 0.014%, under one requirement that other independent variables are constant (*ceteris paribus*).

c. **Coefficient Value of the Manufacturing Overhead Cost of 0.994 (β2 = 0.994)**

A coefficient value of the manufacturing overhead cost of 0.014 denotes that a 1% increase in manufacturing overhead cost increases the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango by 0.994%, under the requirement that other independent variables are constant (*ceteris paribus*).

d. **Coefficient Value of the Direct Material Cost of 0.049 (β3 = 0.049)**

A coefficient value of the direct material cost of 0.049 denotes that a 1% increase in manufacturing overhead cost increases the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango by 0.049%, under the requirement that other independent variables are constant (ceteris paribus).

2. **Coefficient of Determination Interpretation**

The coefficient of determination value is culled from the adjusted r square as there are several independent variables in this research. Table 8 indicates the coefficient of determination of research variables.

Table 8. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000[a]	1.000	1.000	.00714

Source: Data Processing Using SPSS 21, 2021

Building on Table 8, the coefficient of determination value of adjusted R^2 is 1.000. The value manifests that 100.00% of the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango can be set forth by labor cost, manufacturing overhead cost, and direct material cost. Such great influences are plausible considering that labor cost, manufacturing overhead cost, and direct material cost are three key components of production cost or main cost in production. It is congruent with Mulyadi (2015:14), that production costs cover costs spent on processing direct materials into ready-to-sell products. Production costs are classified into direct material cost, direct labor cost, and manufacturing overhead cost. In brief, improving the quality of the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango greatly depends on labor cost, manufacturing overhead cost, and direct material cost.

3. Hypothesis Test

a. Simultaneous Test (F-test) Result

Table 9 points out the result of the (simultaneous) regression model test.

Table 9. Simultaneous Test (F-test) Result

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.255	3	8.752	171550.534	.000[b]
	Residual	.003	55	.000		
	Total	26.258	58			

Source: Data Processing Using SPSS 21, 2021

As presented in Table 9, the F_{count} is 171,550.534 at a significance level (probability value) of 0.000, which is smaller than an alpha value of 0.05. Accordingly, in general, the independent variables (labor cost, manufacturing overhead cost, and direct material cost) have a simultaneous significant effect on the dependent variable the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango.

b. Partial Test (t-test) Result

The partial test result is shown in Table 10.

Table 10. Partial Test (t-test) Result

No.	Variable	B	t-count	p-value	Desc.
1	Constant	-0.426	-5.075	0.000	***
2	Labor cost	0.014	2.984	0.004	***
3	Manufacturing overhead cost	0.994	375.334	0.000	***

4	Direct material cost	0.049	5.329	0.000	***

[ns] not significant
*. Significant at the 0.1 level (2-tailed).
** Significant at the 0.05 level (2-tailed).
***. Significant at the 0.01 level (2-tailed).

Source: Data Processing Using SPSS 21, 2021

Predicated on Table 10, we put descriptions of the following matters.

1) Labor Cost Effect on the Production of the Products of Corn

The elasticity of the production for labor costs is 0.014 and has a positive effect on the production of the products of corn. Based on the t-test, the production input for labor cost is 2.984, and the cost is at a 0.004 significance level, which is smaller than the probability value of 0.05. That being so, labor costs have a positive significant effect on the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango.

2) Manufacturing Overhead Cost Effect on the Production of the Products of Corn

The elasticity of the production for manufacturing overhead costs is 0.994 and has a positive effect on the production of the products of corn. Based on the t-test, the production input for manufacturing overhead cost is 375.334, and the cost is at a 0.000 significance level, which is smaller than the probability value of 0.05. Thus, manufacturing overhead costs have a positive significant effect on the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango.

3) Direct Material Cost Effect on the Production of the Products of Corn

The elasticity of the production for direct material costs is 0.049 and has a positive effect on the production of the products of corn. Based on the t-test, the production input for direct material cost is 5.329, and the cost is at a 0.000 significance level, which is smaller than the probability value of 0.05. Thus, direct material costs have a positive significant effect on the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango.

4. Efficiency of the Production

Table 11 showcases the result of the measurement of the efficiency of the factors/input of the production of the products of corn in Gorontalo District.

Table 11. Efficiency of the Production

No.	Input	Elasticity	Description	Criteria	
1	Labor	3.861	EP > 1	Not efficient yet (*IRS)*	Adding the production factors

2	Manufacturing overhead	0.174	EP < 1	Inefficient (*DRS)*	of labor and direct material costs breeds a higher increase in production.
3	Direct material	3.037	EP > 1	Not efficient yet (*IRS)*	

Source: Data Processing Using SPSS 21, 2021

Based on Table 11, we interpret the result of the efficiency analysis as follows:

a. Labor Cost Factor

The mean technical efficiency value of labor cost is 3.861. It is considered not efficient yet as it is higher than the cut-off value of 1. Accordingly, the labor cost factor is increasing returns to scale, signaling that adding the factor will increase the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. In other words, adding certain labor costs will promote the production level. It highlights the need for optimizing input from labor costs to augment the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. The need is signified by the high demand for the products of corn.

b. Manufacturing Overhead Cost Factor

The mean technical efficiency value of manufacturing overhead cost is 0.174. It is considered inefficient as it is lower than the cut-off value of 1. Accordingly, the manufacturing overhead cost factor is decreasing returns to scale, signaling that adding the factor will reduce the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. In other words, adding certain manufacturing overhead costs will not promote the production level. It highlights the need for reviewing various manufacturing overhead costs in the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. Financial austerity should be made in several manufacturing overhead cost aspects, and if needed, the producer should be more focused on the production of high-demand products instead of carrying out flavor diversification which is experiencing returns because of being expired.

c. Direct Material Cost Factor

The mean technical efficiency value of direct material costs is 3.037. It is considered not inefficient yet as it is higher than the cut-off value of 1. Accordingly, the direct material cost factor is increasing returns to scale, signaling that adding the factor will increase the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. In other words, adding certain direct material costs will promote the production level. It demonstrates the potential for

augmenting and optimizing the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango by elevating direct material costs. The higher the increase in direct material costs, the higher the production, calling for better marketing performance.

Building on the analysis result, both in partial and simultaneous, labor cost, manufacturing overhead cost, and direct material cost have a significant effect on the dependent variable the production of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango. It is in line with Sunarto (2012:4), that important elements of a production are possible to be enhanced through three cost elements necessary in a manufacturing enterprise. The three elements are (1) direct cost material: This cost is the product of the use of materials. This cost constitutes the cost for materials used in the production of certain goods. Direct material cost makes up an integral part of the cost of the goods about to be produced, (2) labor cost: This cost is needed for paying labor hired to process raw materials into finished goods. A direct labor cost is either salary or wage vested to labor directly engaged in goods processing, and (3) manufacturing overhead cost: this cost comes into existence primarily, by virtue of the use of facilities for processing goods. The facilities are engines, tools, workspaces, and so on. And yet, in practice, the manufacturing overhead cost constitutes all costs other than direct material and labor costs.

CONCLUSION

1. The marketing system of the products of corn at UMKM Kinamang in Helumo Suwawa Bone Bolango is considered good. It has two types of marketing channels, both of which are efficient, and an appropriate marketing margin value. As such, UMKM Kinamang is able to afford either direct or indirect interventions to the marketing system of its products. Corn stick products have a higher marketing margin but related to the efficiency of the marketing channel, is more efficient than *biji ketapang* products.
2. One of the products of corn (corn sticks) has an average value-added of 66.31%, hence in competitive, these products are contributive to the business sustainability and increases in the economic value-added at UMKM Kinamang in Helumo Suwawa Bone Bolango.
3. In partial and simultaneous, labor cost, manufacturing overhead cost, and direct material cost have a significant effect on the products of corn at UMKM Kinamang Helumo Suwawa Bone Bolango. Labor and direct material costs are not efficient yet and that being so, need improvement, whereas manufacturing overhead cost is considered inefficient and therefore, must be suppressed for the sake of a better production cost level.

SUGGESTION

1. In maintaining effective and efficient marketing, UMKM Kinamang in Helumo Suwawa Bone Bolango should build cooperation with resellers, as well as confer some rewards for resellers with sales exceeding the target predetermined. Furthermore, to maintain public trust, purchase through the social media account of UMKM Kinamang is directed to the nearest reseller, optimizing the recapitulation and performance of the products of corn marketing.
2. The products of corn of UMKM Kinamang in Helumo Suwawa Bone Bolango have a higher value-added than the other product, i.e., *biji ketapang*. Improving the products of corn is necessary by varying the products based on research on which variant is the most preferable, and thereby avoiding stacked production leading to a decline in profits earned by UMKM Kinamang.
3. UMKM Kinamang in Helumo Suwawa Bone Bolango should make reconciliation in various cost items, specifically manufacturing overhead costs, which have been ineffective and thus should be cut. UMKM Kinamang should also better the quality of direct materials, especially corn and flavoring spices, to make consumers satisfied with the quality of the products produced by UMKM Kinamang in Helumo Suwawa Bone Bolango, escalating customer loyalty and sales.

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