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# Income Performance and Marketing Strategy of Moringa- and Sorghum-Based Processed Products at UMKM MoriGe in Kupang City

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**Abstract**

*UMKM MoriGe is a micro-enterprise in Kupang City that processes moringa and sorghum into three products: Sorghum Cookies, Moringa Cookies, and Moringa Tea. Because the products partly share raw materials, labor, and production facilities, the income of each product had not been known separately. This study aimed to determine the business income and the marketing strategy applied by UMKM MoriGe. A descriptive quantitative method supported by qualitative data was used, covering the January–June 2025 period. The internal sample consisted of 6 respondents (total sampling) and the consumer sample of 49 respondents (accidental sampling). Income was analyzed by allocating joint costs with the relative sales value method, while the marketing strategy was analyzed with the 7P marketing mix through consumer perceptions (Likert scale) and interviews with the owner. The results show a total revenue of IDR 154,976,000, a total production cost of IDR 90,116,151, and a total income of IDR 64,859,849. Moringa Tea generated the highest income (IDR 25,435,445), followed by Sorghum Cookies (IDR 21,390,951) and Moringa Cookies (IDR 18,033,453), because Moringa Tea had the lowest production cost. The overall 7P score was 3.98 (satisfied), with People scoring highest (4.20) and Promotion lowest (3.41). Promotion is the dimension most in need of improvement.*

**Keywords: income, joint cost, marketing strategy, 7P, MSME, moringa, sorghum.**

## INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs, locally known as UMKM) play an important role in the Indonesian economy, contributing more than 60% of Gross Domestic Product (GDP) and absorbing more than 97% of the national workforce (Ministry of Cooperatives and SMEs, 2022; BPS, 2023). In agriculture, agro-industrial MSMEs add



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value to farm products through processing while supporting food security and employment (BPS, 2023).

Moringa and sorghum are two local food commodities of East Nusa Tenggara (NTT) with potential for agro-industrial development. BPS data for NTT Province record the highest moringa production in Kupang City, at 58,700 kg (BPS, 2022), while sorghum is a potential staple alternative in dryland areas. This potential is used by UMKM MoriGe, a micro-enterprise in Oebufu Village, Oebobo District, Kupang City, established in 2020 as a Bank NTT-assisted business supporting stunting prevention through nutritious food products.

MoriGe produces three products: Sorghum Cookies, Moringa Cookies, and Moringa Tea. They are not produced entirely separately, because some raw materials, equipment, labor, and premises are shared. Costs arising from these shared resources are joint costs, which cannot be traced directly to individual products (Rahmadani & Aini, 2023). Without a proper allocation method, the cost and income of each product cannot be determined accurately, so the owner has no basis for evaluating each product's contribution to the business.

On the marketing side, MoriGe faces challenges in using digital channels amid increasingly intense competition in the healthy food market (Kotler & Keller, 2022). Applying the 7P marketing mix (*product, price, place, promotion, people, process,* and *physical evidence*) therefore needs to be examined as a basis for evaluation. Previous studies generally examined income or the marketing mix separately in different enterprises. This study complements them by describing the income of three moringa- and sorghum-based products through joint cost allocation, together with 7P practices in the same enterprise. The two aspects are described separately and are not intended to test a causal relationship between them.

The objectives of this study are (1) to determine the income of moringa- and sorghum-based processed products at UMKM MoriGe, and (2) to determine the marketing strategy applied by UMKM MoriGe for these products.

## RESEARCH METHOD

### Location, Time, and Data

The study was conducted at UMKM MoriGe, Oebufu Village, Oebobo District, Kupang City, selected purposively (Sugiyono, 2021) because of its proximity to raw material sources and markets. The business data analyzed cover January–June 2025. Primary data were collected through semi-structured interviews, observation, and questionnaires, while secondary data came from sales records and supporting business documents.


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**Population and Sample**

The internal sample was determined by total sampling, consisting of 6 people (1 owner and 5 employees). The consumer sample consisted of 49 people selected by accidental sampling, namely consumers who had purchased MoriGe products and were willing to respond during one week of data collection.

**Data Analysis**

This study used a descriptive quantitative method supported by qualitative data (Sugiyono, 2021). The income analysis began by allocating joint costs with the relative sales value method:

$$\text{Joint cost allocation} = (\text{sales value of the product} \div \text{total sales value of all products}) \times 100\%$$

Total cost (TC) is the sum of fixed cost (FC) and variable cost (VC), total revenue (TR) is the selling price (P) multiplied by the quantity sold (Q) (Mulyadi, 2021), and income (π) is the difference between them (Sari & Nugroho, 2018):

$$TC = FC + VC; \quad TR = P \times Q; \quad \pi = TR - TC$$

Fixed costs consist of equipment depreciation and electricity. Depreciation was calculated using the straight-line method with a 10% salvage value of the acquisition cost, then adjusted to the six-month period.

The marketing strategy was analyzed with the 7P marketing mix approach (Kotler & Keller, 2022). Consumer perceptions were measured with a 21-indicator questionnaire (three indicators per dimension) on a 1–5 Likert scale (1 = very dissatisfied, 5 = very satisfied). Mean scores were interpreted as follows: 1.00–1.79 very dissatisfied; 1.80–2.59 dissatisfied; 2.60–3.39 fairly satisfied; 3.40–4.19 satisfied; and 4.20–5.00 very satisfied. The questionnaire results were then compared with the owner's practices obtained through interviews.

## RESULTS AND DISCUSSION

**Overview of the Business and Respondents**

UMKM MoriGe is led by an owner who is also the main manager, assisted by five employees in the production, marketing, and finance divisions. Products are marketed through Bank NTT offices, the NTT Provincial Industry and Trade Office, El Tari Airport, souvenir shops in Kupang and Labuan Bajo, and modern retail outlets. Of the 49 consumer respondents, 51.0% were female and 49.0% male, aged 20–45 years (mean 30 years). In total, 40.8% of respondents said they buy MoriGe products often, 38.8% sometimes, and 20.4% rarely, so most respondents were repeat buyers.

The internal respondents were aged 24–40 years, with senior high school (4 people) and bachelor's (2 people) education. Mean experience in managing the business was 2.5 years: 5 years for the owner (since the business was established in 2020) and


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1–3 years for the employees. According to Foster (2001), work experience is measured not only by length of service but also by knowledge and skills and mastery of the job and equipment. In this framework, the employees' 1–3 years can be understood as an early stage of skill formation in repetitive production work, as explained by the learning curve concept (Wright, 1936) and human capital theory (Becker, 1964). Business decisions still rest mainly with the owner, who has longer experience.

**Joint Cost Allocation**

The costs shared by the three products were electricity (IDR 1,200,000), labor (IDR 27,300,000), the press machine (IDR 3,250,000), the building (IDR 25,000,000), and employee meals (IDR 33,500,000). Labor cost came from a monthly wage of IDR 910,000 per person for five employees over six months. Based on sales value, the joint cost allocation proportions were 36.20% for Sorghum Cookies, 29.92% for Moringa Cookies, and 33.88% for Moringa Tea (Table 1). For equipment and materials used only for the cookies (mixers, oven, trays, dough utensils, water, and gas), allocation was made between the two products at 54.74% for Sorghum Cookies and 45.26% for Moringa Cookies.

**Table 1. Sales Value and Joint Cost Allocation Proportions, January–June 2025**

| Product | Sold (packs) | Price (IDR/pack) | Sales value (IDR) | Allocation (%) |
|---|---|---|---|---|
| Sorghum Cookies | 2,550 | 22,000 | 56,100,000 | 36.20 |
| Moringa Cookies | 2,108 | 22,000 | 46,376,000 | 29.92 |
| Moringa Tea | 1,500 | 35,000 | 52,500,000 | 33.88 |
| **Total** | **–** | **–** | **154,976,000** | **100.00** |

*Source: Processed primary data, 2025*

**Production Cost**

Fixed costs consist of equipment depreciation and electricity. Six-month depreciation was IDR 2,378,019 for Sorghum Cookies, IDR 1,965,829 for Moringa Cookies, and IDR 861,303 for Moringa Tea. After adding the electricity allocation, fixed costs became IDR 2,812,408, IDR 2,324,925, and IDR 1,267,818, respectively. Variable costs include raw materials, supporting materials, fuel, water, transportation, labor wages, packaging, and employee meals. For both cookies, the largest components were employee meals and labor wages, while for Moringa Tea they were employee meals, labor wages, and packaging. Moringa Tea had the lowest total production cost (Table 2).


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**Table 2. Production Cost per Product, January–June 2025 (IDR)**

| Cost type | Sorghum Cookies | Moringa Cookies | Moringa Tea | Total |
|---|---|---|---|---|
| Fixed cost | 2,812,408 | 2,324,925 | 1,267,818 | 6,405,151 |
| Variable cost | 31,896,641 | 26,017,622 | 25,796,737 | 83,711,000 |
| **Total cost** | **34,709,049** | **28,342,547** | **27,064,555** | **90,116,151** |

*Source: Processed primary data, 2025*

**Revenue and Income**

The highest revenue came from Sorghum Cookies (IDR 56,100,000) because it had the largest sales volume, 2,550 packs. Moringa Tea ranked second (IDR 52,500,000) despite selling only 1,500 packs, because its price is higher (IDR 35,000 per pack). Moringa Cookies earned IDR 46,376,000. Total revenue of UMKM MoriGe in January–June 2025 was IDR 154,976,000. After deducting total production cost of IDR 90,116,151, income was IDR 64,859,849 (Table 3).

**Table 3. Revenue, Cost, and Income of UMKM MoriGe, January–June 2025 (IDR)**

| Product | Revenue | Production cost | Income |
|---|---|---|---|
| Sorghum Cookies | 56,100,000 | 34,709,049 | 21,390,951 |
| Moringa Cookies | 46,376,000 | 28,342,547 | 18,033,453 |
| Moringa Tea | 52,500,000 | 27,064,555 | 25,435,445 |
| **Total** | **154,976,000** | **90,116,151** | **64,859,849** |

*Source: Processed primary data, 2025*

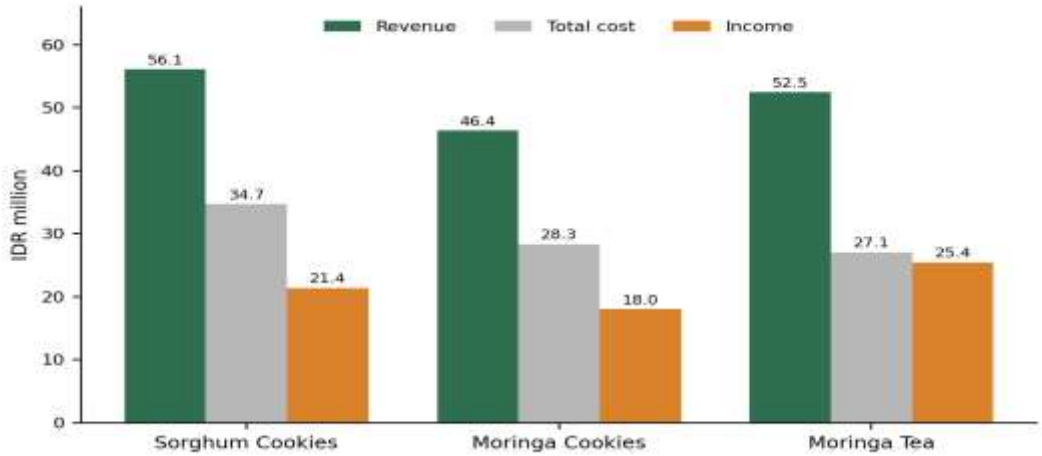



**Figure 1. Revenue, Total Cost, and Income per Product (IDR Million)**


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Moringa Tea generated the highest income (IDR 25,435,445) even though its revenue was not the largest. This is because income is the difference between revenue and cost ($\pi = TR - TC$), and the production cost of Moringa Tea was the lowest (IDR 27,064,555). Its process is simpler, consisting of weighing and packing moringa powder into tea bags without supporting materials, gas, or process water. This finding is consistent with Ginting et al. (2023), who concluded that agricultural processing businesses are feasible and profitable, and with Salamah (2021), who found that products with more efficient production costs tend to generate higher income. Compared with the fish-floss enterprise studied by Nursinar et al. (2024), which had limited production frequency, MoriGe's revenue was larger owing to its more diverse products and regular production.

**Marketing Strategy: The 7P Marketing Mix**

The perceptions of 49 consumers on the 7P marketing mix produced an overall mean score of 3.98, categorized as satisfied (Table 4). People scored highest (4.20; very satisfied), followed by Product (4.16) and Process (4.08), while Promotion scored lowest (3.41).

**Table 4. Mean Consumer Perception Scores for the 7P Marketing Mix (n = 49)**

| 7P dimension | Mean score | Interpretation | Rank |
|---|---|---|---|
| *People* | 4.20 | Very satisfied | 1 |
| *Product* | 4.16 | Satisfied | 2 |
| *Process* | 4.08 | Satisfied | 3 |
| *Physical Evidence* | 4.04 | Satisfied | 4 |
| *Place* | 3.98 | Satisfied | 5 |
| *Price* | 3.96 | Satisfied | 6 |
| *Promotion* | 3.41 | Satisfied | 7 |
| **Overall mean** | **3.98** | **Satisfied** | **–** |

*Source: Processed primary data, 2025*

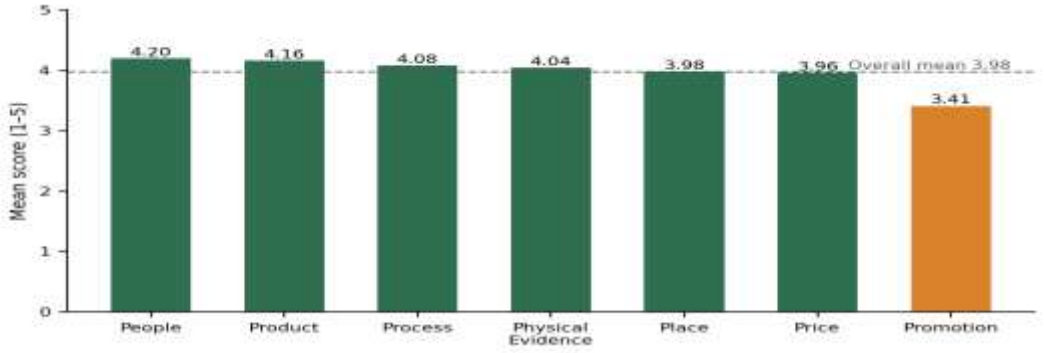



**Figure 2. Mean Consumer Perception Scores across the Seven Marketing Mix Dimensions**


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*People* and *product* were the main strengths. The owner gives product *testers* with friendly communication and deliberately selects communicative employees to serve customers in stores, exhibitions, and bazaars. On the product side, the owner maintains a soft, non-crumbly texture, with sorghum powder deliberately not ground completely as a distinguishing feature, and has added chocolate, *muesli*, and *cornflakes* variants following consumer requests. Both data sources, consumer perceptions and the owner's practices, agree.

The *process* and *physical evidence* dimensions were also rated well. Orders are placed by telephone with regular partners, transactions with souvenir shops are documented with invoices, and payment is made after the products are received. Packaging follows BPOM standards, with a design made by a professional service. However, the Instagram account has not been managed consistently, so digital promotional media under *physical evidence* can still be developed.

The *place* and *price* dimensions were slightly below the overall mean. Offline distribution is already broad, covering souvenir shops, modern retail, and government institutions, but online sales through Shopee and Tokopedia are not yet active because of limited human resources. Shipments to Labuan Bajo also depend on sea transport schedules. Selling prices still refer to the initial prices set under the stunting prevention program, with discounts given only situationally, for example at exhibitions. This stable pricing strategy should be reviewed periodically to remain competitive and sustainable (Widiastuti et al., 2025).

*Promotion* had the lowest score (3.41), consistent with the owner's practices. The owner has not prepared a new promotion strategy, relies mostly on existing partnerships, and in the current period focuses more on MSME competitions and on mentoring other MSMEs. A pattern of strength in product and service with weakness in promotion and digital channels was also found by Putri et al. (2023) at the UMKM Teh Nikmat Sidamanik, and is in line with Astuti et al. (2023), who found constraints in technology use. Hidayati et al. (2020) emphasized that applying the 7P comprehensively, including product and service quality, supports the feasibility of a micro enterprise. Thus, the achievements in *product* and *people* are MoriGe's main assets, while improving *promotion* should be the priority.

## CONCLUSION AND SUGGESTIONS

In January–June 2025, UMKM MoriGe earned total revenue of IDR 154,976,000 against total production cost of IDR 90,116,151, resulting in income of IDR 64,859,849, so the business is profitable. Moringa Tea provided the highest income (IDR 25,435,445), followed by Sorghum Cookies (IDR 21,390,951) and Moringa Cookies (IDR 18,033,453), because Moringa Tea's production cost was the most efficient. The 7P marketing strategy


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generally ran well with a mean score of 3.98 (satisfied); *people* (4.20) was the main strength, while *promotion* (3.41) needs the most attention.

UMKM MoriGe is advised to prepare a planned promotion strategy, manage Instagram consistently, and reactivate its Shopee and Tokopedia channels (Anggraini et al., 2022), review selling prices periodically, evaluate opportunities to increase Moringa Tea production, and explore additional courier partners for shipments outside the region. Local governments and related parties are advised to continue mentoring, especially in digital marketing literacy. Future research is advised to use a longer data period and a larger sample, and to complement the analysis with the Revenue Cost Ratio (R/C), Benefit Cost Ratio (B/C), and Break Even Point (BEP).

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