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DEVELOPING LOCAL PURPLE SWEET POTATO COMMODITIES THROUGH PRODUCT INNOVATION AND MARKETING STRATEGY AT PURPLE CRISPY ROLL SME IN NORTH SULAWESI

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Abstract

Purple sweet potato (Ipomoea batatas L.) is a nutritious local commodity in North Sulawesi, rich in anthocyanins, fiber, and vitamins, yet its utilization as economically valuable processed products remains limited. This study aims to analyze the development strategy of purple sweet potato through product innovation in the form of Purple Crispy Roll snacks, and to evaluate the effectiveness of a 4P marketing mix strategy in penetrating the market of Mapanget District, Manado City. A descriptive quantitative method with a case study approach was employed, encompassing business plan analysis, demand-supply projection, and marketing mix identification. Results indicate that potential market demand reaches 1,209,600 units in 2026, growing ±5% annually to 1,470,276 units in 2030. With competitor supply totaling 846,000 units per year, a market opportunity of 363,600 units is available. Targeting a 20% market share, Purple Crispy Roll projects sales of 72,720 units (IDR 363,600,000) in 2026, rising to 103,620 units (IDR 518,100,000) in 2030. The marketing strategy encompasses competitive pricing at IDR 5,000 per unit, integrated digital and conventional promotion, and multi-channel distribution. This study concludes that local purple sweet potato product innovation combined with an integrated marketing strategy holds substantial potential for developing food micro-enterprises in North Sulawesi.

Keywords: Local Commodity Development; Product Innovation; Marketing Strategy; Purple Sweet Potato; Micro Enterprise; North Sulawesi

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INTRODUCTION

Indonesia possesses an abundance of local food commodities that have not been fully utilized as economically high-value processed products. One such commodity with significant potential yet still largely untapped in North Sulawesi is the purple sweet potato (Ipomoea batatas L.). Purple sweet potato contains anthocyanin compounds as natural antioxidants, high dietary fiber, vitamin C, vitamin B6, and various essential minerals beneficial for human health (Nurdjanah, Yulifianti, & Jusuf, 2019). These bioactive compounds make purple sweet potato highly relevant to the rapidly growing trend of functional food consumption in Indonesian society. Shifts in consumer behavior increasingly oriented toward healthy food products have created significant market opportunities for processed goods made from local raw materials (Kotler & Keller, 2016). This trend is particularly noticeable in growing cities like Manado, where public awareness of nutritious food consumption continues to rise. However, without proper product innovation and marketing strategy, the potential of this local commodity cannot be optimally absorbed by the market.

In response to this challenge, Purple Crispy Roll emerges as an innovative breakthrough by transforming purple sweet potato into a crispy risole filled with cheese and chocolate. This product is a concrete manifestation of local commodity development through market-oriented food innovation. This micro-enterprise based in Mapanget District, Manado City, aims not only to produce quality snack products but also to contribute to increasing the added value of local agricultural commodities and empowering the surrounding community economically (Ginting, Utomo, & Yulifianti, 2018). The success of local commodity-based product development depends greatly on a carefully designed marketing strategy. The marketing mix encompassing product, price, promotion, and place (distribution) is a strategic framework that must be synergistically integrated to achieve the targeted market (Kotler & Armstrong, 2018). In today's digital era, the integration of conventional and digital marketing has become a key success factor for SMEs in penetrating competitive markets (Wardhana, 2015).

This study aims to: (1) analyze the potential for developing purple sweet potato as a raw material for innovative snack products in North Sulawesi; (2) evaluate demand-supply projections and market share opportunities for Purple Crispy Roll in Mapanget District; and (3) identify the optimal marketing mix strategy for business development. The findings of this research are expected to provide practical contributions for local food SME operators and academic references for further research on local commodity-based product development.

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LITERATURE REVIEW

Local Food Commodity Development

Local food commodity development is a systematic effort to increase the added value of regional food materials through a planned series of innovation, processing, and marketing processes (Rangkuti, 2016). In the SME context, local commodity development is not only economic in dimension but also touches on social aspects such as employment generation and income improvement for local farmers as raw material providers. North Sulawesi, with its agricultural resource wealth, has great potential to develop competitive local commodity-based food industries (Ginting et al., 2018).

Purple sweet potato, as one of North Sulawesi's leading local commodities, holds strong comparative advantages: relatively easy cultivation, affordable raw material prices, and high nutritional value. Research by Nurdjanah et al. (2019) shows that anthocyanin content in purple sweet potato reaches 110–210 mg/100g fresh material, far higher than other sweet potato varieties, making it an ideal raw material for high-value functional food products.

Product Innovation in SME Food Industry

Product innovation is the key to SME food competitiveness in facing increasingly intense market competition. Tjiptono (2015) defines product innovation as the development of new products or modification of existing products to meet continuously evolving consumer needs. In the food industry, innovation encompasses not only formulation and taste aspects but also packaging design, brand identity, and the overall consumption experience.

The healthy snack consumption trend in Indonesia provides opportunities for product innovation based on nutritious food materials. Products that successfully combine high nutritional value with consumer-preferred flavors have been proven to have better market absorption (Kotler & Keller, 2016). Purple Crispy Roll embodies this innovation by combining the nutritional benefits of local purple sweet potato with a cheese-chocolate flavor profile that appeals across age segments.

Marketing Mix Strategy (4P Marketing Mix)

The 4P marketing mix — Product, Price, Promotion, and Place (Distribution) — is a strategic framework developed by McCarthy (1960) and popularized by Kotler and Armstrong (2018) as a holistic marketing planning tool. These four elements must be designed in an integrated and consistent manner to create a strong value proposition in the minds of target consumers. For

SMEs with limited resources, precision in managing the marketing mix becomes the determining factor for successful market penetration.

Digital marketing through social media has proven to be an equalizer for SMEs competing against larger businesses. Wardhana (2015) found that SMEs integrating digital marketing with conventional strategies experienced an average 30% higher sales growth compared to those relying on only one channel. This makes the integrated marketing approach highly relevant for new businesses like Purple Crispy Roll.

Demand, Supply, and Market Share Analysis

Demand and supply analysis forms the foundation of accurate business planning. Market demand is influenced by the size of the potential consumer population, purchase frequency, and consumption growth trends (Assauri, 2017). Market share, as the ratio of a product's sales to the total similar market, is a crucial indicator of competitive position for new businesses (Kotler & Keller, 2016). Setting realistic market share targets based on production capacity and competitor analysis is the key to business plan feasibility.

RESEARCH METHOD

This study uses a descriptive quantitative research design with a single case study approach on the Purple Crispy Roll micro-enterprise, located in Mapanget District, Manado City, North Sulawesi. This approach was chosen because it allows for in-depth analysis of product development phenomena and marketing strategies in the actual operational context of the business (Yin, 2018).

Primary data was obtained through: (1) structured observation of the production process and business activities; (2) in-depth interviews with the owner and business manager; and (3) analysis of a comprehensively prepared business plan document. Secondary data includes population data for Mapanget District from the Central Statistics Agency of Manado City, market survey results from two main competitors, and a review of relevant literature from accredited journals.

Data analysis was carried out in stages: (1) descriptive analysis of the product profile and the innovation offered; (2) calculation of demand projections assuming ±5% annual growth based on healthy food consumption trends; (3) competitor supply projections assuming ±3% annual capacity growth; (4) calculation of market opportunity as the gap between demand and supply; (5) determination of market share targets based on actual production capacity (6

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working days/week, 3 workers); and (6) comprehensive 4P marketing mix analysis. All projections cover a five-year period (2026–2030).

RESULTS AND DISCUSSION

Purple Crispy Roll Product Innovation Profile

Purple Crispy Roll is a concrete manifestation of developing local purple sweet potato into a high-value-added snack product. This product is a crispy-textured risole made primarily from purple sweet potato with fillings of cheese spread and chocolate filling, forming a unique savory-sweet-creamy flavor combination. In terms of innovation, Purple Crispy Roll successfully brings together three elements of strength: the nutritional superiority of local ingredients, a flavor that appeals to modern consumers, and attractive visual presentation thanks to the natural purple color of the sweet potato.

The product packaging is designed using transparent clamshell containers that allow consumers to see the product directly, complemented by a logo sticker as a professional brand identity. This packaging design decision aligns with the principle of packaging as an effective marketing communication element (Tjiptono, 2015). Compared to conventional risoles that generally use meat fillings, Purple Crispy Roll offers clear differentiation through the use of local purple sweet potato rich in anthocyanins and fiber, making it a more functional snack alternative for health-conscious consumers.

Purple Sweet Potato's Potential as a Strategic Raw Material

The choice of purple sweet potato as the primary raw material is based on two strategic considerations: availability and nutritional value. In terms of availability, purple sweet potato is a commodity that can be easily obtained from local North Sulawesi farmers at affordable prices (IDR 15,000/kg), allowing the supply chain to be managed efficiently. The guaranteed availability of local raw materials also contributes to production cost stability and supports long-term business resilience (Ginting et al., 2018).

In terms of nutritional value, the high anthocyanin content of purple sweet potato provides functional value that can be used as a marketing appeal. Anthocyanins are known to act as antioxidants that help neutralize free radicals, reduce inflammation, and potentially lower the risk of chronic diseases (Nurdjanah et al., 2019). This functional value serves as a powerful marketing argument in reaching increasingly health-conscious consumer segments — a segment that according to Kotler and Keller (2016) is growing as one of the most significant market forces today.

Demand Projection Analysis

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The potential demand estimate is built based on population data for Mapanget District, which reaches approximately 70,000 people. With the conservative assumption that 3% of the total population (2,100 consumers) are active potential consumers, and each consumer purchases 2 units per day for 6 working days per week (576 units/consumer/year), total potential demand in 2026 reaches 1,209,600 units. The five-year demand growth projection assuming ±5% annual growth is presented in Table 1.

Table 1.
Purple Crispy Roll Demand Projection 2026–2030

Indicator	2026	2027	2028	2029	2030
Number of Potential Consumers	2.100	2.205	2.315	2.431	2.553
Consumption/Consumer/Year (units)	576	576	576	576	576
Total Demand (units)	1.209.600	1.270.080	1.333.584	1.400.263	1.470.276
Growth (%)		+5%	+5%	+5%	+5%

Source: Purple Crispy Roll Business Plan Data, processed (2026)

Table 1 shows stable and consistent demand growth from 1,209,600 units in 2026 to 1,470,276 units in 2030, with a cumulative increase of 21.5% over five years. The 5% annual growth assumption is considered conservative and realistic given the increasing trend of health-conscious food consumption in Manado City and the growth of population and middle-class purchasing power in North Sulawesi (Rangkuti, 2016).

Supply Analysis and Competitive Landscape

A market survey identified two main competitors in the risole segment of Mapanget District: Smoked Beef Cheese Mayo Risol and Hanief Kitchen, each with a production capacity of 423,000 units/year, bringing total competitor supply to 846,000 units/year. Both competitors offer conventional risoles with meat-based fillings, which positions Purple Crispy Roll in a distinct competitive position (differentiator) owing to the uniqueness of its purple sweet potato base and functional value. The competitor supply projection assuming 3% annual capacity growth is presented in Table 2.

Table 2.
Competitor Supply Projection 2026–2030

Year	Total Supply (units)

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2026	846.000
2027	871.380
2028	897.521
2029	924.447
2030	952.180

Source: Purple Crispy Roll Market Survey Results (2026)

Although competitor production capacity grows 3% per year, this growth is well below the rate of demand growth (5%), creating a market gap that widens each year. This situation indicates a very conducive entry window for Purple Crispy Roll as a new entrant in the local-based snack segment.

Market Opportunity and Market Share Determination

Market opportunity is calculated as the difference between total demand and total competitor supply. A 20% market share target was set based on actual production capacity considerations: with 3 workers, 6 working days per week (24 days/month), 253 units per production session, and 6 sessions per week, annual production capacity reaches 72,720 units. A complete calculation of opportunities and sales plans is presented in Table 3.

Table 3.
Market Opportunity Analysis and Purple Crispy Roll Market Share Plan 2026–2030

Year	Demand (units)	Supply (units)	Market Opportunity (units)	Sales Plan (units)	Market Share
2026	1.209.600	846.000	363.600	72.720	20%
2027	1.270.080	871.380	398.700	79.740	20%
2028	1.333.584	897.521	436.063	87.213	20%
2029	1.400.263	924.447	475.816	95.164	20%
2030	1.470.276	952.180	518.096	103.620	20%

Source: Purple Crispy Roll Business Plan Data, processed (2026)

Table 3 shows that the unfulfilled market opportunity continues to grow from 363,600 units (2026) to 518,096 units (2030), as the gap between demand and supply growth widens. Setting a target of 20% of available market opportunity is

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a conservative but measured strategy, taking into account the limited production capacity of a micro-enterprise. This market share strategy aligns with Rangkuti's (2016) recommendation that new businesses should set realistically achievable targets before expanding capacity.

Marketing Mix Strategy (4P Marketing Mix)

Product Strategy

Purple Crispy Roll is positioned as a premium healthy snack at an affordable price, combining three dimensions of product value: functional benefit (antioxidant content of purple sweet potato), sensory experience (crispy-melting texture, savory-sweet-creamy taste), and brand identity (attractive packaging with a distinctive purple color). This product strategy implements the total product concept developed by Kotler and Armstrong (2018), where product value transcends its basic function and encompasses the overall experience received by the consumer.

The product development plan includes the addition of flavor variants in the second and third years of operation, in line with the business objective of increasing capacity and expanding consumer segments. This strategy represents continuous innovation that is crucial for long-term product competitiveness (Tjiptono, 2015).

Pricing Strategy

The selling price of IDR 5,000 per unit is set using a cost-plus pricing approach that considers three components: raw material cost per unit (IDR 526,000 production capital for 253 units ≈ IDR 2,079/unit), operational costs, and targeted profit margin. This price is also calibrated against the purchasing power of target consumers in Mapanget District and competitor product prices in the same segment. This competitive pricing strategy with an affordable price position is an effective implementation of market penetration pricing for building an initial customer base for a new product (Kotler & Keller, 2016).

Promotional Strategy

Purple Crispy Roll's promotional strategy adopts an Integrated Marketing Communication (IMC) approach that synergistically integrates digital and conventional channels. On the digital side, promotion is carried out through Instagram and Facebook with content highlighting the visual uniqueness of the product and the health benefits of purple sweet potato, as well as WhatsApp Business for personal and responsive order services. The conventional marketing approach includes product sampling, first-purchase discounts, and word-of-mouth marketing stimulation. An initial promotional budget of IDR 250,000 for

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creating banners and social media content demonstrates very good marketing cost efficiency. Wardhana (2015) affirms that consistent digital promotional strategies have been proven to significantly increase SME brand awareness at minimal cost.

Distribution Strategy

Distribution channels are designed with a multi-channel approach to maximize product accessibility without a heavy infrastructure investment burden. The four established distribution channels are: (1) direct sales at the production location to serve consumers who visit in person; (2) consignment at souvenir shops to reach the tourist market and premium segment; (3) event orders as a stable recurring revenue source; and (4) online ordering through social media to expand geographic reach without additional distribution costs. The use of a privately owned production location at Jl. Politeknik, Perumahan Poligria Indah, Block D No. 18 eliminates the rental cost component that often burdens new SMEs (Assauri, 2017).

Revenue Projection and Financial Feasibility

Based on the sales plan and established selling price, Table 4 presents the gross revenue projection for Purple Crispy Roll over the first five years of operation.

Table 4.
Purple Crispy Roll Sales Revenue Projection 2026–2030

Year	Sales Volume (units)	Price/unit (IDR)	Gross Revenue (IDR)	Growth (%)
2026	72.720	5.000	363.600.000	
2027	79.740	5.000	398.700.000	+9,6%
2028	87.213	5.000	436.065.000	+9,4%
2029	95.164	5.000	475.820.000	+9,1%
2030	103.620	5.000	518.100.000	+8,9%

Source: Purple Crispy Roll Business Plan Data, processed (2026)

Data in Table 4 shows consistent revenue growth averaging ±9% per year, higher than the market demand growth assumption (5%). This difference reflects the planned production capacity increase as the business grows. With relatively manageable annual operational costs — raw material production costs of IDR 526,000/session × 288 sessions = IDR 151,488,000/year, direct labor costs of IDR

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43,200,000/year, and general costs of IDR 1,200,000/year — this revenue projection indicates adequate profit margins for business sustainability and development.

Overall, the combination of a local commodity development strategy through appropriate product innovation, competitive pricing, integrated digital-conventional promotion, and multi-channel distribution places Purple Crispy Roll in a strong position to capture and maintain market share in the healthy snack segment of Manado City. These findings are consistent with Kotler and Armstrong's (2018) argument that sustainable competitive advantage is built on a foundation of clear product differentiation and consistently executed marketing strategy.

CONCLUSION

This study concludes that the development of local purple sweet potato commodities through Purple Crispy Roll snack product innovation holds very promising prospects in the Manado City and North Sulawesi market. There are three main mutually reinforcing findings:

First, from a market perspective, potential demand reaching 1,209,600 units in 2026 and growing consistently at ±5% per year, combined with a significant gap between demand and competitor supply (363,600 units in 2026), creates a very conducive market entry opportunity for new products.

Second, from a product competitiveness perspective, differentiation based on local purple sweet potato rich in anthocyanins provides a unique and relevant value proposition aligned with the healthy food consumption trend, making Purple Crispy Roll a competitor difficult to replicate by existing players.

Third, from a marketing perspective, the 4P marketing mix strategy — affordable pricing (IDR 5,000/unit), digital-conventional IMC promotion, and multi-channel distribution — synergistically supports the 20% market share target with a revenue projection of IDR 363,600,000 in 2026 rising to IDR 518,100,000 in 2030.

Based on these findings, this study recommends: (1) consistent execution of digital promotional strategies from the start of operations as a long-term brand awareness investment; (2) flavor variant development starting in the second year to broaden market penetration; (3) formalization of partnerships with local purple sweet potato farmers to ensure raw material supply stability; and (4) strengthening of financial record-keeping systems as a basis for business expansion decisions. Further research using primary consumer survey methods

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and more comprehensive financial feasibility analysis is recommended to strengthen the validity of the projections developed.

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REFERENCES

Assauri, S. (2017). Manajemen Pemasaran: Dasar, Konsep, dan Strategi (Edisi ke-15). Jakarta: PT Raja Grafindo Persada.

Ginting, E., Utomo, J. S., & Yulifianti, R. (2018). Ubi jalar ungu sebagai bahan pangan fungsional: Potensi dan prospek pengembangannya. Buletin Palawija, 16(2), 1–12. https://doi.org/10.21082/bulpa.v16n2.2018

Kotler, P., & Armstrong, G. (2018). Principles of Marketing (17th ed.). London: Pearson Education.

Kotler, P., & Keller, K. L. (2016). Marketing Management (15th ed.). New Jersey: Pearson Education.

McCarthy, E. J. (1960). Basic Marketing: A Managerial Approach. Homewood, IL: Richard D. Irwin.

Nurdjanah, S., Yulifianti, R., & Jusuf, M. (2019). Kandungan antosianin dan aktivitas antioksidan ubi jalar ungu pada berbagai kondisi pengolahan. Jurnal Penelitian Pascapanen Pertanian, 16(1), 45–56. https://doi.org/10.21082/jpasca.v16n1.2019

Purple Crispy Roll. (2026). Rencana Bisnis Usaha Mikro Purple Crispy Roll. Kota Manado: Dokumen Perencanaan Internal.

Rangkuti, F. (2016). Analisis SWOT: Teknik Membedah Kasus Bisnis (Edisi Revisi). Jakarta: PT Gramedia Pustaka Utama.

Tjiptono, F. (2015). Strategi Pemasaran (Edisi ke-4). Yogyakarta: Penerbit Andi.

Wardhana, A. (2015). Strategi digital marketing dan implikasinya pada keunggulan bersaing UKM di Indonesia. Prosiding Seminar Nasional Keuangan dan Bisnis IV, 327–337. Universitas Pendidikan Indonesia.

Yin, R. K. (2018). Case Study Research and Applications: Design and Methods (6th ed.). Thousand Oaks, CA: SAGE Publications.