The potential development of diversification of food products from sago

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Abstract. Diversification of food products in the global era, such as today, requires the right strategy so that consumers can accept products. This study aims to (1) analyze the potential of the development of diversification of bagea, kapurung, and dange products in home industries in Wara District of Palopo City, and (2) Analyze the strategy used to develop the diversification of bagea, kapurung and dange product in home industries in Wara District of Palopo City. The research conducted in Wara District of Palopo City, South Sulawesi Province, using purposive informants. The data were analyzed using descriptive qualitative analysis. The results of the research indicate that the potential of the development of diversification of bagea, kapurung and dange products in home industries in Wara District of Palopo City as local food products made from sago are very dependent on the condition of availability of raw materials, equipment resources, human resources, and production processes. The strategies used to develop the diversification of bagea, kapurung, and dange products in home industries in Wara District of Palopo City are (1) to increase the product quality, to innovate the product, to maintain the product characteristics, and to design interesting product for bagea industry (2) to increase the technology of product manufacture, to promote the product as training for kapurung and dange industries.

1. Introduction

Product diversification in the current era of globalization requires the right strategy so that consumers can accept products. Mapping competitors and potential within the company are mandatory, so consumers can accept that product diversification. Consumer acceptance of a product is inseparable from the company’s tactics to make the market switch to primary products that processed into other variant products. Linkages between strategies and tactics must be appropriate so that the company’s objectives can be met.

Sago (Metroxylon spp.) is an agricultural commodity that has the potential as a source of carbohydrates. Sago carbohydrate levels are almost the same as carbohydrate levels found in rice flour, cassava, and potatoes. Also, sago can be used for agro-industrial raw materials as well as starch from other food plants. Sago starch can be used for various purposes, such as food industry raw materials and liquid sugar raw materials [1]. Market demand for sago both from outside and within the country continues to increase. Potential export markets are Japan, Canada, the United States, United Kingdom, Thailand, and Singapore. Domestic demand has also increased due to the development of
food, pharmaceutical, and other industries. National sago consumption is highest in Papua Province, then Southeast Sulawesi, Central Sulawesi, Maluku, South Sulawesi, North Sulawesi, and Riau.

Along with an increasing public interest in consuming sago-based comestible, the demand for sago flour has also increased. Public interest in consuming sago is relatively high. This is based on the demands of the community, both personally, retailers, collectors, and home industry players that are quite high. This triggers an increase in harvesting or cutting of sago, which means the shrinkage of the sago area. Without protection and crop cultivation business plus the rate of land conversion, the area of sago land will shrink so that there will be a shortage of raw material stock from sago, both for household consumption needs and for the industry. Even taking into account the tendency of shrinking sago plant area in recent years, it is estimated that in less than ten years, the area of sago plants in Palopo City will be exhausted.

Small businesses and households found in all sectors of the economy are businesses that capture a large workforce without having to have a level of education or particular expertise. This small and household industry, has four essential benefits: 1) creates job opportunities with relatively cheap financing; 2) plays a role in increasing the mobility of domestic savings; 3) have a complementary position to large and medium industries because they can produce cheap and simple goods, which are usually not produced by large and medium enterprises; and 4) can provide products that reach consumers at low prices because the location of small industries and households spreads and is close to consumers. The purpose of this study is 1) to analyze the potential development of diversification of bagea, kapurung and dange products in the home industry in Wara District, Palopo City and 2) analyze the strategies adopted to develop the diversification of bagea, kapurung, and dange products in the home industry in Wara District Palopo City.

2. Methodology

2.1. Research Location
The location of the study was carried out intentionally (purposive), where the location was chosen by considering the obvious reasons from the study area. Based on this method the location of the study was determined intentionally (purposive sampling) with the consideration that in that area is one of the centers of home-based food processing industries in sago in Wara District, Palopo City. This research was conducted for more or less two months, from May 2018 to July 2018.

2.2. Population and sample
The population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions [2]. The population of this study was three types of industry/businesses based on sago and consumers who consumed all three types of processed sago products with a population of 199 people who consumed three types of processed sago products. The number of research samples was 50 respondents in Wara Kota District Palopo.

2.3. Data analysis
Descriptive qualitative analysis to describe the potential of the industry/business making cake based on sago (raw materials, human resources, equipment resources, production processes, products, marketing and partnership patterns of industry/business) and analyze consumer tastes and then described in the table. After knowing the potential of the sago-based industry/business, then a strategy for developing sago-based product diversification was made in the home industry in Wara District, Palopo City.
3. Results

3.1. Industrial/Business Potential Based on Sago

Land and building resources owned by the sago processing business in Wara Subdistrict, Palopo City can be seen in Table 1. Land resources and industrial buildings/businesses based on sago. In the bagea industry/business area of 5 x 15 m of land, the economic value is IDR 520,000,000. Industry/business kapurung land area of 8 x 15 m the economic value of the land is IDR 585,000,000 while bagea industry/business land area of 5 x 10 m where the economic value of land is IDR 240,000,000.

Table 1. Land and building resources industry/business for Sago Processing in Wara Village, Palopo City, 2019

| Industry/business Sago Processing Product | Land Area (m²) | Land Economical Value (Rp) |
|------------------------------------------|---------------|---------------------------|
| Industry/business Bagea                  | 5 x 15        | 520,000,000               |
| Industry/business Kapurung               | 8 x 15        | 585,000,000               |
| Industry/business Dange                  | 5 x 10        | 240,000,000               |

Human resources owned by the sago processing business in Wara Subdistrict, Palopo City can be seen in Table 2. Industrial/business-based human resources. Industry/business kapurung has the number of workers with eight people and a monthly salary of IDR 9,600,000 industries/businesses bagea the number of workers with five people and a monthly salary of IDR 6,000,000 and dange has a workforce of 1 person with a monthly salary of IDR 1,200,000.

Table 2. Human Resources of Industry/business for Sago Processing in Wara Village, Palopo City, 2019

| Industry/business Sago Processing | Workers (person) | Salary (IDR/Month) |
|----------------------------------|------------------|--------------------|
| Industry/business Bagea          | 5                | 6,000,000          |
| Industry/business Kapurung       | 8                | 9,600,000          |
| Industry/business Dange          | 1                | 1,200,000          |

Sago processing household industry/business in Wara District obtains equipment from household appliance stores and traditional markets. In this bagea industries/business, equipment needed such as gas stoves 1, ovens 2, large trays 2, tongs 2, large basins 2, small basins 2, trays 3, sieves one and mixer 1 is all obtained from household appliance stores. In kapurung industrial/business equipment such as gas stove 2, pan 4, large basin 5, medium basin 3, thermos 5, cutting board 2, tray 4, knife 2, 21 dozen small bowls, 21 dozen tablespoons, eight dozen vegetable spoons all obtained from a household appliance store. In the dange industry/business equipment such as clamp 1, tray 2, filter 1, basin 1 are obtained from household appliance stores while equipment such as furnace 1 and dange 2 mold are obtained from traditional markets.

The number of raw materials for the three industries/businesses varies; bagea industry/amount of sago per month 312 Kg at a price of IDR 3,125 from farmers as much as 262 Kg percentage 83.98%, from traders 50 Kg price of Rp 3,500 percentage 16.02%, industry/business kapurung the amount of sago per month is 400 kg at a price of IDR 3,125 350 kg 87.50% of sago farmers and 50 kg 12.50% of sago traders at a price of IDR 3,500, while the bagea industry/business amounts to 64 kilograms of sago per month at a rate of IDR 3,125 from sago farmers.

Bagea production process unloading sago, drying, sifting, mixing raw materials with supplementary materials, roasting, and packaging. The method of producing kapurung is making kapurung, making cooked fish, making spices, preparing vegetables, supplementing, and serving. The production process of dange; sago drying, filtering, mold heating, dange printing, and packaging.
The marketing process carried out by the industry/business of sago processing can be seen in Tables 3 and 4, the marketing mix of 1950 bagea products, which are divided into three types of packaging; small, medium and large packaging. For kapurung products 6,900 servings which are divided into two types; small portions and large portions. Small portions consisted of 5,175, a large portion of its production is 1725. Dange products have two types of packaging; 229 small packagings and 591 large packagings. Bagea price is Rp. 12,000 to Rp. 35,000, Kapurung Price Rp.10,000 to Rp. 50,000 and dange are Rp. 5,000 to Rp.10,000. Bagea industrial/business location is located at Jalan Latamacelling Block 1 No. 1 Dangerakko in the Wara village. Kapurung industrial/business located on Jl. Islamic Flashlight No. 1 Binturu Kelurahan/Desa Wara Selatan is in the same direction as Palopo High School 5, while Dange Industry/business is located on Jl. Ahmad Yani Pontap Wara Timur Village Wara District Palopo City. Types of promotions used by industries/household businesses based on sago are types of promotions used by word of mouth. Bagea, Kapurung, and Dange processing industries/household businesses in the research area have established partnership relationships with sago farmers and traders to obtain raw materials and supplementary materials for the production process. In the kapurung industry/business, high market demand.

Table 3. Production Total Average in Monthly for Industry/business Bagea in Wara Village, Palopo City, 2019

| Industry/business Bagea | Total | Percentage (%) |
|-------------------------|-------|----------------|
| Direct Consumer         |       |                |
| Big                     | 147   | 7.53           |
| Medium                  | 439   | 22.51          |
| Small                   | 292   | 14.97          |
| Souvenirs Shops         |       |                |
| Big                     | 179   | 9.18           |
| Medium                  | 536   | 27.49          |
| Small                   | 357   | 18.31          |
| Total                   | 1950  | 100.00         |
| Industry/business Kapurung|      |                |
| Direct Consumer         |       |                |
| Big                     | 1725  | 25.00          |
| Small                   | 5175  | 75.00          |
| Total                   | 6900  | 100.00         |
| Industry/business Dange |       |                |
| Direct Consumer         |       |                |
| Big                     | 191   | 23.29          |
| Small                   | 96    | 11.71          |
| Souvenirs Shops         |       |                |
| Big                     | 400   | 48.78          |
| Small                   | 133   | 16.22          |
| Total                   | 820   | 100.00         |

industry/business Sago Processing

| Workers (person) | Salary (IDR/Month) |
|-----------------|---------------------|
| Industry/business Bagea | 5 | 6,000,000 |
| Industry/business Kapurung | 8 | 9,600,000 |
| Industry/business Dange | 1 | 1,200,000 |
Table 4. Price List (per pack/portion) in Industry/business Sago Basic Ingredients in Wara Village, Palopo City, 2019

| Industry/business of Sago Basic Ingredients | Packaging | Price Per Pack/Portion (IDR) |
|----------------------------------------------|-----------|-------------------------------|
| Industry/business Bagea                      |           |                               |
| Direct Consumers                             | Big       | 35.000                        |
|                                               | Medium    | 22.000                        |
|                                               | Small     | 12.000                        |
|                                               | Big       | 30.000                        |
| Souvenirs Shops                              | Medium    | 20.000                        |
|                                               | Small     | 10.000                        |
| Industry/business Kapurung                   |           |                               |
| Direct Consumers                             | Big       | 50.000                        |
|                                               | Small     | 10.000                        |
| Industry/business Dange                      |           |                               |
| Direct Consumers                             | Big       | 5.000                         |
|                                               | Small     | 10.000                        |
| Souvenirs Shops                              | Big       | 5.000                         |
|                                               | Small     | 10.000                        |

The income obtained by the sago processing business in Wara Subdistrict of Palopo City can be seen in Table 5. The profits obtained by the sago processing industry/company in the Wara Subdistrict of Palopo City: in the kapurung business IDR. 10,931,000.00; in the bagea business IDR. 6,058,500.00; and the dange operating profit is IDR. 2,237,500.

Table 5. Monthly Profit Analysis of Industry/business for Sago Processing in Wara Village, Palopo City, 2019

| Description       | Bagea   | Kapurung | Dange   |
|-------------------|---------|----------|---------|
| Receipt (Rp)       | 20.700.000 | 69.000.000 | 4.100.000 |
| Total Cost (Rp)    | 14.641.500 | 58.069.000 | 1.862.500 |
| Revenue (Rp)       | 6.058.500 | 10.931.000 | 2.237.500 |

3.2 Basic Sago Business Development Strategy

Development strategy of 3 types of industries/businesses based on sago in Wara District, Palopo City. In the bagea industry/business namely: (1) guaranteeing product quantity, (2) always innovating on products, (3) maintaining product quality and, (4) choosing more attractive packaging designs. In the kapurung industry/business: (1) technology improvement, (2) promotion of kapurung products through exhibitions and, (3) management training. Dange industry/business strategies, namely: (1) technology improvement, (2) promotion, and (3) management training.

4. Discussion

This research shows the potential for developing diversified products of bagea, kapurung and dange in the home industry can be developed to increase business income through natural resources that have been carefully managed by human resources where the potential can become a unified link in the implementation of development in the District City of Palopo City.

Adequate land and building resources owned by industrial/business owners based on sago. Human resources industry/business based on sago. Kapurung industry/business number of workforce eight people, industry/business bagea the number of workers is five people, and dange has a workforce of 1 person. Labor is one of the important factors of production in running a business because the success or failure of achieving company goals and work efficiency and suppression of production costs are
influenced by this factor. The ability of companies to attract and retain workers who have capabilities is very important to be done so that companies can survive and thrive [3]. In industries/businesses based on sago which is bagea, kapurung and dange all the tools used are traditional which are used manually to carry out the process of making products in the manufacturing process using a long time.

The quality of products such as bagea, kapurung, and dange from sago-based industries/businesses in Wara District, Palopo City is very high; this affects consumers’ decisions in consuming sago-based products. Product quality is the most dominant element influencing consumer decisions compared to other marketing mix elements [4]. The price set by the businessman/household industry of sago processing is included in the affordable category because the price of raw materials is relatively higher than farmers who are partners so that it affects the price of the marketed product.

The three locations where the sale of products from industries/businesses based on sago can be said to be a strategy because it is the center of each village in Wara Subdistrict, Palopo City. This is because the sales location of each industry/business of sago processing is easily accessed by customers. Ease of access is the distance between the sales location and the consumer’s residence considered near, easily accessible by using any type of transportation (motorbike and car). These results reinforce the research conducted by [5].

The type of promotion used by the sago processing industry/household business such as dange, bagea, and kapurung is still classified as traditional where the type of promotion used is only the type of word of mouth promotion. It is used because it does not require so much cost but word of mouth promotion obtain very high effectiveness. This is in accordance with [6] opinion where word of mouth promotion is a communication process in the form of providing recommendations both individually and in groups of a product or service that aims to provide personal information.

In connection with Bagea, Kapurung and Dange processing industries/household businesses in the research area, a partnership has been established with sago farmers and traders to obtain raw materials and supplementary materials for the production process. In addition to the partnership in terms of procurement of raw materials for industrial players/household businesses making dange, kapurung, and bagea, is by establishing relationships with street vendors by leaving the products in their stalls Industry/business Development Strategy Ensuring the quality of products offered to build the right image in the eyes of consumers According to [7] quality reflects all dimensions of product offerings that produce benefits for customers. The quality of a product in the form of goods or services is determined through its dimensions. The company offers the best quality products to create customer satisfaction in the market.

Promoting products through exhibitions to expand the marketing area Promotional strategies for introducing a product that is by participating in exhibitions. To expand the marketing area of dange products, it is necessary to step down as well as the local government by participating in exhibitions at both the local and national level. This exhibition activity can provide huge benefits for dange actors Management Training by the local government for Kapurung business operators According to [9] through training, all efforts are made in order to improve the performance of employees in the jobs they occupy now. Training is usually to help employees correct weaknesses in their performance.

5. Conclusion and Suggestions
Potential development of diversification of bagea, kapurung and dange products in the home industry in Wara Subdistrict, Palopo City as local food products made from sago is highly dependent on the conditions of the availability of raw materials, equipment resources, human resources, and production processes. The strategy of developing diversification of bagea, kapurung and dange products adopted in the home industry in Wara Subdistrict, Palopo City, namely: Strategy to maintain the existing
quality, improve the quality of product packaging, be innovative so that it has competitiveness. Strategies for industrial development/kapurung green business for technology improvement, promotion, and management training by the local government. Industry/business development strategies include technology upgrading, product promotion, participation in the PPKM program, and management training by the local government. Suggestions that can be given based on the results of this study are as follows: In the industry/business Bagea it is necessary to develop products with several types of variants and form attractive packaging so that it has an appeal to consumers. In the kapurung industry/business it is necessary to set prices and bookkeeping so that the flow of income and expenditure is more controlled, besides that there is also a need for promotion through social media, technology needs to be improved so that it is more efficient in the process of kapurung production. In dange industry/business product development by designing packaging to be more attractive, product promotion through social media adds labor in the dange production process and Provides management training and assistance from the local government related to the constraints faced by the bagea, kapurung, and dange industries/businesses.

References
[1] Harsanto P B 1986 Budidaya dan pengolahan Sagu (Penerbit Kanisius)
[2] Sugiyono M P K and Kualitatif Dan R D 2005 Bandung: Alfabeta
[3] Habib S 2008 Strategi Pengembangan Usaha Minuman Instan Jahe Merah (Zingiber officinale Linn. Var. rubrum) CV Hanabio Bogor (Skripsi) Jur. Manaj. Agribisnis, Inst. Pertan. Bogor
[4] Hidayat S 2002 Metode Penelitian (Bandung: Mandar Maju)
[5] Wahyunita N 2015 Pengaruh Lokasi Keragaman Produk dan Harga Terhadap Minat Beli Konsumen pada Giant Ekspress (Universitas Islam Makassar)
[6] Rahayu S M 2014 Strategi Komunikasi Pemasaran dalam Bisnis Kuliner Berbasis Mix Media
[7] Tjiptono F 2008 Strategi Pemasaran Edisi 3 Yogyakarta Andi
[8] Angipora M P 2002 Dasar-dasar pemasaran Ed. Kedua. PT. Raja Graf. Persada. Jakarta
[9] Simamora H 2004 Manajemen sumber daya manusia