

A feasibility study on the viability and market potential of “Suman Kalabasa” (Squash sticky rice cake) in San Jose, Occidental Mindoro

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Abstract

This feasibility study explores the viability and market potential for introducing Suman Lalabasa to San Jose, Occidental Mindoro. With a growing interest in healthier food choices and the love of Filipinos in consuming native delicacies, there is a significant opportunity to capitalize on the market for suman kalabasa. The business aims to strategically position Suman Kalabasa in various distribution channels, including the OEMCO canteen, school canteens, terminals, public markets, and night market stalls. The business will also use online platforms to reach a wider audience and adapt to modern consumer behaviors. Findings indicate a promising market for suman kalabasa in San Jose, fueled by the growing preference for nutritious snacks. Financial analysis projects promising returns on investment with potential sustained profitability. Notably, the proposed business does not need a high capital requirement, and its operation can be efficiently managed by a single proprietor with minimal staff, where the business model is both economically feasible and socially impactful. Primary raw material sourcing from local farmers in San Jose, Occidental Mindoro, supplemented by neighboring municipalities in Occidental Mindoro or Oriental Mindoro, if necessary, not only ensures a reliable supply chain but also contributes to local economic development by generating employment and income opportunities for farmers. Overall, the study's results in different aspects proved the financial viability, feasibility, and market potential of introducing suman kalabasa in San Jose, Occidental Mindoro. Based on the critical analysis, results of the study, and justifications discussed herein, this business undertaking is highly recommended for implementation.

Keywords: suman kalabasa, native delicacy, market potential, healthier food, local economic development

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1. Introduction

Filipinos enjoy celebrating and typically focus on their families. Many occasions are celebrated and paired with food to make the gathering more joyous and significant. At every family get-together, various delicacies are always on the menu. In Filipino delicacies, squash is one of the main ingredients in many Filipino recipes, and it is used traditionally in savory dishes like pinakbet and ginataang kalabasa. Squash (*genus Cucurbita*), locally known as “*kalabasa*,” is a flowering plant in the gourd family, widely cultivated as vegetables. It is frequently cultivated in regions with tropical and subtropical climates, such as the Philippines. Streit (2023) stated that squash is available year-round and commonly served with different foods or as an additional ingredient in some vegetable dishes. It is usually planted between October to December and May to July, making it more available year-round since it can be planted in wet and dry seasons (Miranda, 2021). With the improvement in agricultural technology today, seasonal plants like squash and others can now be produced in any year, so the supply will no longer pose a problem to the researcher.

Squash provides various health benefits as it contains Vitamins A, B1, B3, B5, C, and beta-carotene. The vitamin C and beta-carotene found in squash help people reduce poor eyesight, which slows down macular degeneration and lowers the risk of associated vision impairment (WebMD Editorial Contributors, 2022). While commonly known as a vegetable, squash is botanically categorized as a fruit. Streit (2023) explains that this is because it grows from the part of the plant that produces flowers and has seeds inside. While they are more savory than sweet, most people cook and prepare them like vegetables. Squash can be used and cooked in various dishes, such as incorporated into soup or ravioli, prepared by roasting, braising, or grilling, tossed in stir-fries, or conveniently cooked in a microwave (Bittman, 2021). Aside from its use as a viand, squash can also be made into a dessert delicacy like suman.

Suman (sticky rice cake) originates from the Philippines. It is a popular Filipino rice cake delicacy made from simple and easily sourced ingredients such as glutinous rice, coconut milk, and sugar wrapped in buri palm leaves or banana leaves and traditionally cooked by steaming (Ganzon, 2014). Different provinces in the Philippines have their versions of a Filipino native delicacy, suman, depending on what province you are in. Like in Iloilo, there is a variety called suman latik. It is cooked by boiling sticky rice in coconut cream and sugar, then topped with coconut (Flavours of Iloilo, 2023). In Tacloban, they make moron, a native delicacy commonly found in this province. It is similar to suman but made with a twist by adding cocoa to the ingredients. Moron has a smoother texture than suman and has a chocolate swirl when unwrapped (Faicol, 2019). It shows that in different parts of the Philippines, we will find various types of suman that highlight the creativity of Filipino cooking. It is a big part of Filipino festivals, symbolizing our vibrant history and culture. It is prominently featured during festivities and special occasions, embodying the traditional roots and the inventive spirit of Filipino cooking.

Suman na kalabasa (squash sticky rice cake) is a type of rice cake the researcher would like to introduce in the market of San Jose, Occidental Mindoro. This version transforms the traditional Filipino rice cake by using squash as the main ingredient in the traditional recipe of a suman. This type of suman aims to provide consumers with a distinctive and healthful alternative to a regular suman. This study seeks to showcase Filipino culinary traditions' rich flavors, creativity, and local ingredients, expanding the food offerings available in the market. In this study, the researcher introduces a new product to the market of San Jose, Occidental Mindoro called “*suman kalabasa*” – a variation of suman made from squash, featuring unique additions like yema filling or flavored with spice options to enhance the product’s distinctiveness. It offers flavors that consumers would not typically experience in regular suman. It also provides natural nutritional advantages of squash, such as its rich vitamins

A feasibility study on the viability and market potential of “Suman Kalabasa” in San Jose, Occidental Mindoro and minerals, giving it a unique and attractive ingredient.

Objectives of the Study - The study aimed to assess the viability and market potential of producing and selling suman kalabasa (Squash sticky rice cake) in San Jose, Occidental Mindoro. The key objectives of the study include Introducing a healthy type of suman that satisfies consumer preferences. Specifically, to identify the market demand for the proposed business; to calculate the cost needed for the proposed business; to identify the best location for the proposed business; to contribute to the sustainability of local agriculture and to contribute to the socio-economic aspect of the study.

Significance of the Study - The study's result will benefit the following: Consumers; this study will introduce consumers to a unique and nutritious delicacy called suman kalabasa. By assessing its viability, consumers can anticipate consistent availability and quality, ensuring satisfaction with their purchase. It will empower consumers to support local industries and contribute to the community's economic growth, leading to diverse and healthier food options that meet their preferences. This study can benefit local farmers by providing additional markets for their produce by utilizing locally grown squash in the production of suman kalabasa (Squash sticky rice cake), thereby diversifying their income sources and reducing dependency on a single crop. The local government can make informed decisions about supporting local agriculture by encouraging local farmers to cultivate kalabasa and reduce dependency on single crops through facilitating partnerships or collaborations with farmers and entrepreneurs. The local government can also generate revenue through taxes and fees, strengthening the municipality's financial resources. This study can generate job creation, boost tourism, and enrich the cultural identity of San Jose, thereby contributing to community development and livelihood sustainability. To future researchers, this study will provide insights into the product's market potential and help make informed decisions about investment, production processes, and marketing strategies, as well as identify risks and opportunities for the successful introduction and acceptance of *suman kalabasa* in the target market.

Sources of data - The sources of data were obtained from the identified native delicacy producers. Using observations, surveys, and interviews, they randomly selected 160 out of 271 OMECO employees in San Jose, Occidental Mindoro. Also, a review of books, journals, a thesis, a feasibility study, and other materials greatly helped the conduct of the study. Another source of information that helped this study was from the twenty (20) producers of native delicacies in San Jose, Occidental Mindoro. The sample size was computed using Slovin's formula with a 5% margin of error and a 95% confidence level. The study focused on the feasibility study of assessing the viability and market potential of *Suman Kalabasa* (Squash sticky rice cake) in San Jose, Occidental Mindoro. The study gathered information through actual observations, surveys, and interviews with consumers and producers of native delicacies using in-person and online platforms such as Messenger with a guided questionnaire. The target market concentrates on OMECO Employees Multi-Purpose Cooperative (OEMCO) Canteen consumers, particularly Occidental Mindoro Electric Cooperative (OMECO) employees and the producers of native delicacies in San Jose, Occidental Mindoro. The data collected from the respondents were limited to San Jose Occidental Mindoro and focused on marketing, technical, management, financial, and socio-economic aspects of the business.

2. Methodology

A descriptive research design was applied through a researcher-made questionnaire and key informant interviews. The survey questionnaire was validated by the experts in the field of business at Divine Word College of San Jose. It was done through face and expert validation. The validated questionnaires were distributed to the respondents from San Jose, Occidental Mindoro, using a combination of in-person and online interviews with the help of a survey questionnaire and key informant interviews. The online interview was conducted to follow up on the answers to the questionnaire and interview guide. The one-on-one interview was done with the producers of different delicacies. While the proponent wants their influence over the discussion, there is still a need to make the conversation light and, with no pressure, ensure the interviewee remains on the subject and discusses related and important topics (Galindo and Lewis, 2018).

The participants of this feasibility study were 160 OMECO employees and native delicacy producers from San Jose Occidental Mindoro, and they were randomly selected to evaluate the market. Furthermore, interviews were conducted with the native delicacy producers to get essential information that would help improve product offerings to meet the preferences of our target consumers.

3. Market Study

3.1 Market Description

San Jose derives its name from the patron saint, St. Joseph, the husband of Mary. It is known as the first-class municipality in the province of Occidental Mindoro. It has a land area of 446.70 square kilometers, equivalent to 172.47 square miles, constituting 7.63% of Occidental Mindoro’s aggregate territory. San Jose has a total population of 153,267 as determined by the 2020 Census (PhilAtlas, 2024). San Jose is also known as the center of entertainment and businesses in the province of Occidental Mindoro because of its significant export activities and the presence of most banking, commercial enterprises, dining venues, and other business establishments. Additionally, the principal office of the province’s electric power distribution utility, the OMECO, is situated in San Jose. In this study, the target market was the OEMCO canteen's customers, primarily OMECO employees. The OEMCO canteen is a strategic location to offer the proposed business as it is located near financial institutions such as PNB and Landbank, and its proximity to the Municipality of San Jose makes it easily accessible to potential consumers. Its advantageous location makes it ideal for promoting and selling suman kalabasa. Additionally, recognizing the importance of online platforms in reaching a wider audience and adapting to modern consumer behaviors, the business will also be selling through online platforms to expand its reach and accessibility further.

3.2 Demand Analysis

Table 1

Consumers’ Willingness to Patronize Suman Kalabasa (Squash sticky rice cake) (n=160)

Respondents	Frequency	Percentage
Yes	160	100
No	0	0
Consumers’ Preferred Native Delicacies		
Bibingkan kanin	38	24
Ibos	33	21
Puto	47	29
Sapin-Sapin	19	12
Pichi-Pichi	23	14

Demand analysis is a process of analyzing the target marketers’ demand or product. Demand analysis is done to calculate successfully how to enter the market and make the product profitable (Goodwin et al., 2019). Demand analysis helps to understand the factors affecting the product so the producers can formulate strategies on pricing, marketing, and sales forecasting. The most important determinants of demand are consumer income and preferences. Based on the survey, 160 respondents show interest and willingness to buy *suman kalabasa*, representing a significant one hundred percent (100%) of the surveyed population, as shown in Table 1. Moreover, the above table displays the distribution of native delicacies and the consumers’ preferences based on the survey results from the 160 respondents. Among consumers who preferred native delicacies was puto with twenty-nine percent (29%), followed by bibingkan kanin, and the last was sapin-sapin. Since the consumers had given 100% assurance of purchasing *suman kalabasa*, as shown in Table 1, the researcher still opted to get only a 10% initial market share, a conservative estimate as a beginner in the market.

3.3 Supply Analysis

Supply analysis is a study done to identify the evolving demand and output. Supply analysis requires the production, cost, raw materials, and worker’s compensation (Mohammed, 2022). The raw materials, such as squash, will be directly available from the local farmers in San Jose, Occidental Mindoro. If the local farmers in San Jose, Occidental Mindoro, cannot supply the squash, it will be sourced from the neighboring municipalities in Occidental Mindoro or Oriental Mindoro. Another way is collaborating with the Department of Science and Technology – Provincial Science and Technology Center Occidental Mindoro (DOST PSTO) through technology assistance, the Municipal Agriculture Office (MAO) of San Jose through a production guide, and a partnership with Mangyan Education Center (MEC) for cultivating squash.

Table 2

Producers of Native Delicacies

Producers	Frequency	Percentage
Different native delicacies	20	80%
Seasonal producers	5	20%
TOTAL	25	100%

Table 2 shows the results and tabulations of the survey conducted among producers of different native delicacies in San Jose, Occidental Mindoro. The researcher has identified twenty-five (25) native delicacy producers in San Jose, Occidental Mindoro, and only twenty (20) producers whose primary source of income relies on the preparation of different native delicacies included in the survey since the five (5) producers, constituting twenty percent (20%), are seasonal producers and hence excluded from the survey.

Table 3

Respondents’ Preference for Native Delicacies (n=160)

Respondents	Frequency	Percentage
Yes	160	100%
No	0	0%

Table 3 shows that all of the respondents included in the survey expressed a preference for native delicacies, constituting 100% of the total participants. It shows that all of the 160 respondents enjoy consuming native delicacies. The researcher captures a conservative estimate of ten percent (10%) market share for *suman kalabasa (Squash sticky rice cake)*, considering the survey result in Table 6, where one hundred percent (100%) or 160 respondents expressed their willingness to patronize the product. This conservative estimate of ten percent (10%) market share shows the target portion of the market the researcher intends to serve with the product. The conservative estimate of ten percent (10%) for the target market share is a safe and cautious approach to forecasting. Applying the ten percent (10%) market share from this sample size could provide a preliminary indication of potential demand.

Table 4 shows the commonly prepared native delicacies by the producers. Among the surveyed producers, the most prepared delicacies were puto and bibingka kanin, followed by ibos, pichi-pichi, and sapin-sapin. Some producers prepared three (3) kinds of delicacies, and others stuck to solo producing their specialty. Not one among them preparing *suman*. Based on the survey, the total number of native delicacies produced is 2,595, with varying percentages attributed to each delicacy. A conservative estimate of ten percent (10%) will be the target market share of the researcher. Moreover, the researcher also shows the respective market share of other native delicacies based on the conducted survey, wherein forty-one percent (41%) for puto, twenty-six percent (26%) for bibingka kanin, eleven percent (11%) for pichi-pichi, seven percent (7%) for sapin-sapin, and five percent (5%) for ibos.

Table 4*Producers' Commonly Prepared Native Delicacies*

Producers	Native Delicacies	Average Value	F	%	F	%
10	Bibingka kanin	50 x 5 = 250 100 x 5 = 500	750	29	675	26
3	Ibos	50 x 3 100 x 2 = 200	150	6	135	5
15	Puto	80 x 4 = 320 75 x 9 = 675	1,195	46	1,075	41
2	Sapin-Sapin	100 x 2	200	7	180	7
3	Pichi-Pichi	100 x 3	300	12	270	11
-	Suman Kalabasa	260 x 1	-	-	260	10
20				100	2,595	100

3.4 Demand- Supply Analysis

Table 5*Five-Year Projected Population, Market Share Demand and Supply for Suman Kalabasa (Squash sticky rice cake)*

Year	Projected Population	Projected Demand (10%)	Projected Supply	Gap	Willingness to Purchase "Suman Kalabasa" (100%)	Market Share (%)	Suman Kalabasa
2025	164,379	94,900	58,400	36,500	100%	11%	10,439
2026	166,696	104,390	64,240	40,150	100%	12%	12,527
2027	169,046	114,829	70,664	44,165	100%	13%	14,928
2028	171,429	126,312	77,730	48,582	100%	14%	17,684
2029	173,846	138,943	85,503	53,440	100%	15%	20,841

Table 5 illustrates the five-year projected population and market share for *Suman Kalabasa*. The projected population is based on the population of San Jose as determined by the 2020 Census and using the annual population growth rate of 1.41%. The projected market share yearly indicates that the market share of Suman Kalabasa (Squash sticky rice cake) is forecasted to be captured annually. It is calculated based on the conservative estimate of ten (10%) of the total number of native delicacies produced as determined by the interview conducted multiplied by the total number of days in a year. The projected supply is determined using the total number of target consumers multiplied by the total number of days a year. The GAP Yearly is the difference between the demand and supply. The above table shows the projected daily yield for the *suman kalabasa*. Moreover, the market share consumption was computed based on the assumption that the market share will increase by 1% annually.

Demand and supply, in economics, is the relationship between the quantity of a product that suppliers intend to sell at different costs and the quantity that buyers wish to buy (Goodwin et al., 2020). It is the primary concept of price inflation used in economic theory. A commodity's price is determined by a market's relationship between demand and supply (Sellars, 2019). Moffat (2019) defines demand as a relationship between the quantity of goods supplied by producers in equilibrium equal to the quantity that consumers demand. Notice that as prices increase, consumers buy less, so prices decrease, and consumers buy more. However, as well as the price, demand depends on other factors (Goodwin et al., 2020).

3.5 Marketing Strategies

The following marketing strategies based on the marketing mix will be used to ensure and make the proposal feasible and viable.

Products. The product will consist of clean and quality ingredients. The researcher will use fresh and quality kalabasa, glutinous rice flour, sugar, and coconut milk, ensuring it is not skimmed on in terms of flavor to guarantee its quality. Each suman is carefully prepared to provide a delicious taste and consistent quality. The product offers various flavor fillings, including yema or flavored with spice options, to enhance the product’s distinctiveness. The product can be sold in different shapes, sizes, and packaging options that accommodate different occasions, such as individual servings for daily consumption or larger packs for gatherings and celebrations.

Price. The researcher will sell the product at a reasonable price to ensure accessibility for everyone while also considering the welfare of low-income earners. The researcher will use the survey results to determine and set the price of suman kalabasa.

Distribution Channel. The *suman kalabasa* (Squash sticky rice cake) can be purchased from the store located at OMECO Main Office, M.H. Del Pilar St., Barangay VI, San Jose, Occidental Mindoro. This distribution approach is effective since OMECO employees can conveniently visit the canteen during their break times, given its proximity to banks and the Municipality of San Jose, making it easily accessible to potential customers. In addition, individuals waiting in line to pay their electric bills can have a snack while waiting for their turn. Aside from that, the majority of people use Facebook and Instagram. The product will be listed online for sale, allowing for inquiries and transactions over Messenger and Instagram. The business will also offer wholesale, pick-up, and free deliveries. In addition, the researcher also distributes the product to school canteens, terminals, and stores in the San Jose public market and night market.

Promotion. The proposed business will be advertised through various online platforms by exhibiting visually captivating images and engaging content about the unique qualities and benefits of the product, highlighting the traditional methods of preparation, the quality of ingredients used, and customer feedback to build trust and meet consumer expectations. Additionally, tarpaulin will be displayed in front of stores, schools, and other conspicuous places for better exposure. The business will also utilize the strategy of “word of mouth” to promote and spread the word about the product. Furthermore, product-free tasting will be done as part of promotional efforts.

3.6 Product Description

The proposed business will offer suman kalabasa. The ingredients are carefully selected to ensure quality and flavor without compromising affordability. All ingredients will be measured and mixed to create a delicious and nutritious result. Suman kalabasa is a unique variation of the traditional and classic suman, featuring the nutritious kalabasa as the primary ingredient and unique additions such as yema or flavored with spice options to enhance the product’s distinctiveness. Aside from its delicious taste and quality ingredients that customers will be drawn to, the product also offers significant nutritional value compared to regular suman due to its main ingredient, kalabasa, which provides numerous nutritional benefits. It can attract customers interested in trying new and healthier food options. The availability of raw materials such as kalabasa, as confirmed by the researcher’s interview with the Municipal Agriculturist of San Jose, Occidental Mindoro, is sufficient. This supply of squash will be directly sourced from the local farmers of San Jose, thereby expanding their avenues to sell their produce and diversify their income sources. On the other hand, consumers can feel good about supporting local farmers and assuring that the main ingredients used for suman kalabasa are fresh and of quality. The product’s shelf life is five days if not refrigerated and one and a half weeks when refrigerated. It can serve as a dessert, snack, or main dish. It is a convenient and easily prepared food. Table 1 shows the actual picture of

Suman Kalabasa made by the researcher.



Figure 1. *Suman Kalabasa (Squash sticky rice cake)*

3.7 *Production process. The following ingredients and procedures must be considered:*

A. Ingredients for 100 packs of *suman kalabasa (Squash sticky rice cake)* :

- 2,500 grams squash (mashed)
- 1,200 grams glutinous rice flour
- 500 grams brown sugar
- 1 cup coconut milk
- 1 teaspoon vanilla extract
- 1/2 teaspoon salt

B. Ingredients for Yema Filling:

- 300 mL sweetened condensed milk
- 2 pieces eggs
- 1/2 tablespoon butter
- 1 teaspoon vanilla extract (optional)
- 1/2 teaspoon salt (optional)

Step 1: Procedures for producing *suman kalabasa (Squash sticky rice cake)* made by the researcher: (1) Wash, peel, and slice the squash into small, square pieces. Set aside. (2) In the pot, boil the squash until tender, approximately for ten (10) minutes. (3) Drain the water from the boiled squash and then mash until smooth. (4) Run the leaves over the stove with a low fire to make the leaves softer. (5) In a large bowl, combine the mashed squash, glutinous rice flour, brown sugar, and vanilla. Mix until well combined. (6) In a pan, cook the coconut milk until it reaches a thick consistency, then add the mixture. Stir until well combined. (7) Place a banana leaf on a flat surface, scoop approximately two (2) tablespoons of the mixture, and then put fillings within. (8) After you put the mixture and its filling on a banana leaf, gently wrap the mixture. Make sure there is no mixture sticking out by folding the leaf inward. (9) Put the wrapped *suman* in a steamer. Let it steam for thirty (30) to forty-five (45) minutes over medium heat. (10) 10. Remove the *suman* from the steamer and let it cool for five (5) to ten (10) minutes. (11) Ready to serve and store

Step 2: Procedures for producing yema filling: (1) Separate the egg white from the yolk. (2) Mix the egg yolks and condensed milk thoroughly, ensuring they are well combined, then set the mixture aside. (3) Heat the butter in a pot or pan until melted, then pour the egg yolk mixture into it. (4) Keep cooking until the mixture thickens to the desired consistency. (5) Move the mixture into a bowl and allow it to cool. Once cooled, it is

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3.8 Selling Process

The product's selling process starts from the production area and is distributed to various distribution channels. These channels include canteens, online platforms, and other stores, such as in the San Jose public market, night market, and terminal stalls. This process demonstrates how products will reach consumers using traditional physical outlets and modern online platforms.

Table 6

Equipment, Tools, Supplies, and Service Vehicles in Producing Suman Kalabasa (Squash sticky rice cake)

Production Equipment	Usage	Quantity	Unit Price (PHP)	Total Price (PHP)
Double Burner Gas Stove	For cooking the product	1 unit	1,000.00	1,000.00
Electric Fan	For ventilation	1 unit	549.00	549.00
Fire Extinguisher	For emergency fire	1 unit	800.00	800.00
Storage Cabinet	For storage of raw materials and ingredients	2 unit	797.00	1,594.00
Table and Chair	For staff	1 set	599.00	599.00
Total			3,745.00	4,542.00
Production Tools				
Apron	For hygiene and protection	3	50.00	150.00
Gloves		3	20.00	60.00
Mixing bowl	For mixing ingredients	2	80.00	160.00
Cutting board	For a clean and stable surface for cutting, chopping, and slicing	2	75.00	150.00
Knife	For cutting, chopping, and slicing	2	90.00	180.00
Measuring cup and spoon	For precise and accurate measurement of ingredients	2	70.00	140.00
Pan	For cooking	1	149.00	149.00
Pot	For cooking	1	550.00	550.00
Masher	For crushing or mashing ingredients	2	70.00	140.00
Spatula	For spreading ingredients	2	55.00	110.00
Strainer	To separate solids from liquids	2	85.00	170.00
Steamer, 3-Layer	For cooking	1	700.00	700.00
Tong	For gripping and lifting the product safely	2	50.00	100.00
Whisk	For mixing, beating, or whipping ingredients	2	95.00	190.00
Total			2,139.00	2,949.00
Office Equipment				
Cellphone (Techno)	For transactions and advertisements	1 unit	1,999.00	1,999.00
Office Supplies and Promotion				

Ballpen	For writing the transactions	1 box	168.00	168.00
Calculator	For computation	1 unit	650.00	650.00
Record Book	For recording the transactions	1 piece	135.00	135.00
Tarpaulin	For promotion	3 pieces	180.00	540.00
Whiteboard, wall mount, 2' x 4'	For orders and reminders	1 piece	355.00	355.00
Whiteboard marker	For writing	1 piece	49.00	49.00
Marker refill	For marker refill	1 piece	105.00	105.00
Total			1,642.00	2,002.00
Janitorial Supplies				
Broom	For maintaining the safety and cleanliness	1 piece	30.00	30.00
Dustpan		1 piece	30.00	30.00
Floor mop		1 piece	45.00	45.00
Garbage bag		1 pack	25.00	25.00
Liquid Detergent		4 bottles	60.00	240.00
Sponge		1 dozen	75.00	75.00
Steel wool		1 dozen	90.00	90.00
Trash can		1 piece	45.00	45.00
Total			400.00	580.00
Service Vehicle				
Service Vehicle (E-trike with backseat)	For delivery of the product	1 unit	30,000.00	30,000.00

Table 6 shows the production equipment, tools, supplies, and service vehicles used to produce *Suman Kalabasa (Squash sticky rice cake)* for the proposed business. The equipment listed above is necessary for the production of suman kalabasa. It facilitates the cooking process, ensures safety measures are in place, provides storage for ingredients, and creates a productive working environment for the staff. These production tools are necessary for the efficient production of suman kalabasa, ensuring consistency in quality and measurement, hygiene, and meeting the standards expected by consumers. Office equipment like a cell phone is essential for transactions and advertisements for the proposed business. This cellphone will serve purposes, including collecting orders, inquiries, and deliveries with customers and suppliers. On the other hand, in promoting, capturing visually attractive images, and posting the product for sale, the researcher will use her existing cell phone. . It is essential to procure office supplies such as a ballpen, calculator, record book, whiteboard, whiteboard marker, and whiteboard marker refill for accurate calculations, documentation of transactions, monitoring of stocks, and reminders. Furthermore, the tarpaulin for promoting *suman kalabasa* is necessary to attract attention, convey information, and create product recognition through visual display. The listed janitorial supplies in Table 6 are essential for maintaining the cleanliness and safety of the production area. Without proper cleanliness, there is a risk of contamination, which may compromise the quality and safety of the food. These janitorial supplies are necessary to maintain sanitation standards and ensure the production of quality *suman kalabasa*. Lastly, there will be 1 service vehicle will be used to deliver the product.

Location. As a beginner in the market, the proposed business will start by distributing the product to the OEMCO canteen located at OMECO Main Office, M.H. Del Pilar St., Barangay VI, San Jose, Occidental Mindoro, as well as school canteens, terminals, and other stores in San Jose public market and night market. The OEMCO canteen is a strategic site, providing convenient access for OMECO employees during their break times. It is near banks, the municipal hall of San Jose, and commercial and residential units. In addition, OMECO Member-Consumer-Owners paying their electric bill can grab a snack while waiting for their number. The school canteens are also the researcher's target location for distributing the product. It offers a convenient and

accessible location where students, teachers, and staff gather daily, providing a large and captive audience for introducing and promoting the product. It offers students, teachers, and staff a healthy snack option rich in vitamins and minerals that boost their energy. Moreover, distributing suman kalabasa in terminals is also strategic to maximize exposure and accessibility to potential customers. This initiative will provide travelers and commuters with a convenient snack option while on the go, serving as an ideal platform to introduce and promote the product to a broad audience. Lastly, the researcher also targets distributing suman kalabasa to stores at the San Jose public and night markets. In the Public Market, most shoppers are typically older individuals who have a natural inclination toward native delicacies. Introducing Suman kalabasa in this market can appeal to their preferences, and they may appreciate the health advantages of adding squash to their diet. Likewise, due to its nutritious qualities, it may attract health-conscious individuals. The night market, which attracts tourists, offers an excellent opportunity to showcase the suman kalabasa as a unique local delicacy of San Jose. This exposure can contribute to the cultural sense of pride and identity of San Jose, potentially attracting tourists who are interested in unique local products and making it a memorable destination that people will want to revisit.

The proposed business will be located in the researcher’s family residence at 0772 Mabini St. Corner Quirino St., Barangay VII, San Jose, Occidental Mindoro, which would serve as the production area. There is a designated area for the production of suman kalabasa and the proper storage of ingredients.

Figures 2 and 3 present the location map and floor plan of the production area for the proposed business.

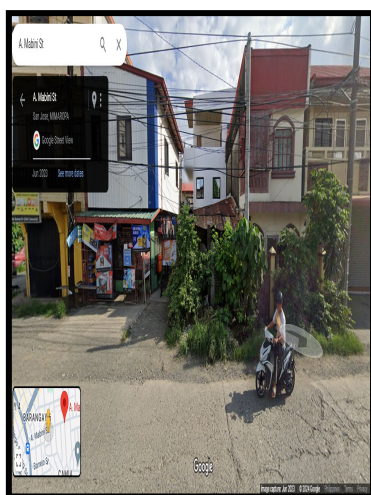


Figure 2. Location Map of the Production Area for the Proposed Business

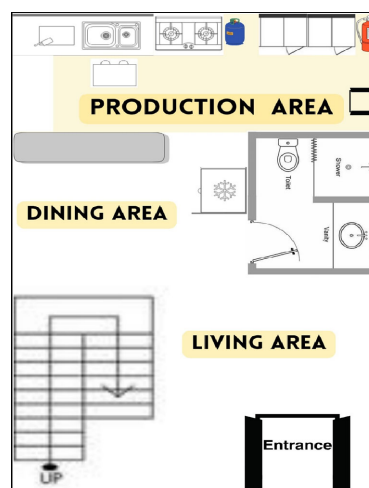


Figure 3. Location Map of the Production Area for the Proposed Business Floor Plan of the Production Area

4. Organization and Financial Study

4.1 Personnel requirements

The proposed business will hire two personnel, one assistant cook and one delivery man/helper. The organization chart shows the flow of the business operation.

4.2 Source of Financing

The initial investment is ₱ 106,811.30, and this amount will come from personal savings gained from salary from the owner's current employment. The initial needed capital is identified to start the business. Below is the

estimated project cost.

Table 8

Project Cost for Suman Kalabasa Business (Squash sticky rice cake)

Pre-Operating Expenses	
Permit and Licenses	₱ 2,500.00
Renovation Cost	<u>1,840.00</u>
Total Pre-Operating Expenses	₱ 4,340.00
Working Capital	
Purchases (raw materials)	₱ 7,722.00
LPG	1,000.00
Direct Labor	31,251.56
Production Tools	2,949.00
Production Equipment	4,542.00
Office Supplies and Promotion	2,002.00
Janitorial Supplies	580.00
Salaries	8,394.75
Premium and other benefits	9,831.99
Utilities	2,199.00
Office Equipment	<u>1,999.00</u>
Total Working Capital	₱ 72,471.30
Acquisition of Assets	
Service Vehicle	₱ <u>30,000.00</u>
Total Project Cost	₱ 106,811.30

4.3 Financial Assumptions

To formulate a robust financial plan and projections, it is necessary to establish key assumptions underpinning the financial model. These assumptions provide a basis for estimating revenues, costs, and, most of all, profitability. While subject to change based on evolving circumstances, the following major financial assumptions serve as foundational elements for financial planning. (1) Sales will increase by 10% annually. (2) Raw materials and factory overhead will increase by 6% annually. (3) Direct labor will increase by 6% annually. (4) All operating expenses will increase by 6% yearly. (5) Depreciation expense will be computed using a straight-line method for five years. In projecting financial assumptions, an average annual inflation rate of 6% based on last year's data has been factored in. This inflation rate is a critical consideration when estimating the increase in operating expenses over time.

4.4 Financial Projections

In projecting financial statements, the researcher meticulously analyzed various factors, including market dynamics, operational expenses, revenue streams, and regulatory considerations. These projections present a comprehensive overview of the business's anticipated performance over the forecast period, thereby serving as a strategic tool for informed strategic decision-making and efficient allocation of resources. The following projections are presented for five years:

An Income Statement is a crucial financial document summarizing the company’s revenues, expenditures, and net profit or loss over a specific period (Pinto Financial, 2023). It provides valuable insights in assessing the company’s financial performance and profitability by meticulously outlining its operational results. The projected income for Year 1 is ₱ 108,719.65, Year 2 is ₱ 139,814.03, Year 3 is ₱ 175,195.19, Year 4 is ₱ 215,362.45, and for Year 5 is ₱ 260,869.31. The Cash Flow Statement holds paramount significance, offering vital insights into a company’s capacity to generate cash, fulfill financial responsibilities, finance investments, and allocate cash to shareholders. The Cash balance, end for Year 1 is ₱ 191,530.95, Year 2 is ₱ 337,344.98, Year 3 is ₱ 518,540.17, Year 4 is ₱ 739,902.62, and for Year 5 is ₱ 1,006,771.93. The Balance Sheet is a financial document providing a financial picture of the company’s financial standing at a certain point in time (Schmidt, n.d.). The Total Assets or Total Liabilities and Owner’s Equity for Year 1 is ₱ 215,530.95, for Year 2 is ₱ 355,344.98, for Year 3 is ₱ 530,540.17, for Year 4 is ₱ 745,902.62, and for Year 5 is ₱ 1,006,771.93.

4.5 Financial Ratios and Analysis

$$(1) \text{ Net Profit Margin} = \frac{\text{Net Income}}{\text{Total Sales}}$$

Year 1:	108,719.65/624,000.00	=	17%
Year 2:	139,814.03/686,400.00	=	20%
Year 3:	175,195.19/755,040.00	=	23%
Year 4:	215,362.45/830,544.00	=	26%
Year 5:	260,869.31/913,598.40	=	29%

The net profit margin of the company has exhibited an ability to generate profit. In Year 1, the net profit margin stood at a healthy 17%, reflecting an ability to convert revenue into profit. This figure increased in Year 2 by 20%. It continued to increase in Year 3, with the net profit margin improving to 23%. Subsequently, in Year 4, the net profit margin increased to 26%, indicating continued progress in enhancing profitability. The most recent year, Year 5, improved as the net profit margin flowed to 29%, showing a notable efficiency in converting revenue into profit. Overall, the upward trend in the net profit margin over the years suggests a positive trajectory for the company’s profitability. Hence, this can provide the business with financial stability and efficiency and indicate an effective cost management practice to sustain the growth of the business (FasterCapital, 2024).

$$(2) \text{ Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Total Income}}$$

Year 1:	136,360.65/624,000.00	=	22%
Year 2:	169,862.29/686,400.00	=	25%
Year 3:	207,870.03/755,040.00	=	28%
Year 4:	250,903.83/830,544.00	=	30%
Year 5:	299,539.82/913,598.40	=	33%

The trend in gross profit margin over the five years indicates generally positive trajectory for the business’s financial performance. Starting good at 22% in Year 1, and an increase to 25% in Year 2. The subsequent years saw an upward trend, with Year 3 reaching 28%, Year 4 at 30%, and Year 5 peaking at 33%. This suggests that the company effectively managed its costs and improved its revenue generation strategies over time, leading to enhanced profitability. The consistent improvement shows a healthy gross profit margin. This upward trajectory benefits the company’s financial stability and long-term growth prospects. This positive trend indicates efficient and proper management of the supplies used in making suman kalabasa. As a result, the business may not experience future problems with its bottom line, given that the trajectory is continuously upward (Mcclure,

2023).

(3) Cash Flows = Cash Flow from Operation

	Total Income		
Year 1:	191,530.95/624,000.00	=	31%
Year 2:	337,344.98/686,400.00	=	49%
Year 3:	518,540.17/755,040.00	=	69%
Year 4:	739,902.62/830,544.00	=	89%
Year 5:	1,006,771.93/913,598.40	=	110%

The company's cash flow performance over the five years showcases a notable upward trend, reflecting a strengthening financial position and operational efficiency. Starting at 31% in Year 1, the cash flow increased steadily, reaching 49% in Year 2 and further climbing to 69% in Year 3. This consistent growth trajectory accelerated in subsequent years, with Year 4 witnessing a significant jump to 89% and Year 5 marking an impressive 110%. Such robust cash flow percentages suggest that the company effectively managed its liquidity, generating more cash relative to its operating expenses and investments. According to the study conducted by Anindita et al. (2019) this trend indicates improved profitability, efficient working capital management, and potentially successful revenue generation initiatives. The substantial increase in cash flow over the years underscores the company's ability to sustainably generate and grow cash reserves, providing a solid foundation for future investments, expansion, and resilience against unforeseen challenges.

(4) Return on Investment = Net Income

	Total Investment		
Year 1:	108,719.65/106,811.30	=	102%
Year 2:	139,814.03/106,811.30	=	131%
Year 3:	175,195.19/106,811.30	=	164%
Year 4:	215,362.45/106,811.30	=	202%
Year 5:	260,869.31/106,811.30	=	244%

The return on investment (ROI) for the company over the five years portrays a dynamic pattern of growth, demonstrating a positive trajectory indicative of effective capital utilization and profitability. Beginning at 102% in Year 1, and improved to increase in Year 2 to 131%. The ROI climbed in Year 3 to 164%, and continued its upward trend in subsequent years. Year 4 saw a notable surge to 202%, followed by a substantial increase to 244% in Year 5. These escalating ROI percentages indicate that the company efficiently deployed its resources, generating significant returns relative to its initial investment. The consistent improvement in ROI reflects the company's ability to adapt to market dynamics, seize opportunities, and augment shareholder value over time. Such impressive ROI figures underscore the company's sound financial performance and strategic decision-making, positioning it well for continued growth and success in the future. Thus, this result shows a positive return on investment due to higher profits being produced than the amount invested, which ensures the success of the company's financial standing (Birken and Curry, 2022).

5. SOCIO-ECONOMIC ASPECTS

The proposed business, Suman Kalabasa (Squash sticky rice cake), shows potential as a way to make income and boost the local economy and empower the community. Once the business is up and running, different community sectors will benefit. It provides a good opportunity for the local aspirants to be an entrepreneur. It will support our local farmers and create job opportunities. Even the government will benefit from its success. This proposed business will also help preserve and celebrate our local culture, which is important for everyone involved. The first recipient of the proposed business is the owner. The owner can

generate income and financial stability from this proposed business. In addition, hiring people can create job opportunities in the area and help build ties with the local community through product consumption. Running the business could also help the owner enhance her entrepreneurial and managerial capabilities and uplift the entrepreneur and the surrounding community through economic empowerment and social cohesion. The proposed business will help aid unemployment. Workers will receive fair wages and benefits that will help them support themselves and their families financially. They will also learn new skills in food preparation, customer service, and business running. This proposed business can lift people socio-economically by giving them stable jobs. In addition, they could make additional income by reselling the product. The proposed business will help the government generate funds through taxes, permits, and fees the owner must pay to run the business. The government usually uses these funds for infrastructure projects to develop the community.

Additionally, once the business gains popularity, it could attract tourists interested in trying unique local delicacies, therefore boosting tourism and contributing to the cultural sense of pride and identity of San Jose, which would make San Jose more famous and give people a reason to revisit the town, which would be good for the San Jose and make locals proud of their culture. The proposed business will provide local farmers with an additional source of income through selling their produce to the business. Meeting the demand for suman kalabasa (Squash sticky rice cake) can create a stable market for farmers, ensuring steady sales of their crops. It may also generate job opportunities within the community, such as hiring locals for farming and harvesting. By sourcing locally grown squash, the business supports local farmers and contributes to the growth of the agricultural sector. The proposed business will sell consumers a healthy and affordable snack option to promote healthier eating habits with squash's benefits. Consumers can enjoy a taste of traditional Filipino suman with a twist, using squash as the main ingredient, giving it a unique and attractive ingredient to try and patronize. With its eco-friendly packaging, the business encourages environmental responsibility among consumers. Additionally, this proposed business can attract customers with a growing interest in trying new and healthier food options. According to L.E.K. Consulting (2018), consumers increasingly seek a wide range of benefits from their food and beverage choices.

6. SWOT and potential problem analysis

6.1 Strengths

Suman kalabasa (Squash sticky rice cake) offers a unique and traditional Filipino dessert option featuring squash as the main ingredient and fillings that make it different from a regular suman, which is potentially appealing and captures the interest of both locals and tourists. Moreover, by using locally grown squash, we can support our local farmers and ensure the freshness and quality of the product. Since the proposed business will directly buy squash from local farmers, it can keep prices affordable without sacrificing quality, making the product competitive. Furthermore, in today's rising trend of healthy eating, more people are looking for snacks that are good for them. Suman kalabasa is a great fit for this demand because it showcases the health advantages of squash, making it an attractive snack option, especially for those health-conscious. In terms of location, one of the distribution channels is the OEMCO canteen, which is near OMECO, financial institutions such as PNB and Landbank, and residential areas, as well as its proximity to the Municipality of San Jose, which makes it easily accessible for potential consumers. This strategic location makes it easy for potential customers to access the product. Additionally, distributing the suman kalabasa to school canteens, terminals, night markets, and public markets makes it accessible to more people. It promotes healthier eating options among students, teachers, staff, and other consumers. The business will also offer online ordering through platforms like Facebook, Instagram, and Messenger, with free delivery services to cater to modern consumers. Its social media presence showcases the product's story, ingredients, and customers' feedback, building trust and excitement among potential buyers in San Jose.

6.2 Weaknesses

The produced suman kalabasa (Squash sticky rice cake) may have a short shelf life, risking significant wastage or quality issues without proper storage and distribution channels. Therefore, it is essential to focus efforts on establishing efficient storage and distribution channels. Moreover, endeavoring to find ways with the use of food technology to extend the shelf life of this delicacy becomes an imperative and needs further research.

6.3 Opportunities

Collaboration with the DOST PSTO through technology assistance, MAO San Jose through production guide, and partnership with MEC offers access to expertise and ways for cultivating squash. Through the help of these institutions, it ensures a steady and reliable supply of fresh produce for suman kalabasa. It also strengthens our connections with local farmers and indigenous communities involved in crop cultivation. Moreover, with Suman Kalabasa, the business can experiment with different flavors to appeal to everyone's tastes within the local market. The business could introduce complementary items like dips or sauces specifically made for suman kalabasa to enhance the taste of the suman. The proposed business could also offer customization options such as personalized packaging or bulk orders for events like weddings or fiestas, potentially opening up new avenues for income while building strong relationships with customers.

6.4 Threats

The existing native delicacy producers can be considered a threat. These established businesses already have loyal customers and may offer similar products at competitive prices. Furthermore, preferences for native delicacies may shift over time, and if Suman Kalabasa fails to adapt or diversify its offerings, it may struggle to retain customers in the long run.

6.5 Potential Problem and Action Recourse

The main potential problem is getting the interest of the consumers to patronize the proposed product. Capturing the interest of consumers could be challenging, as consumers may already have established preferences for other types of native delicacies. Thus, convincing people to try something different might be challenging because they might be already satisfied with what they consume. Therefore, the proposed business would utilize Facebook and Instagram as platforms to exhibit visually captivating images and engaging content about the unique qualities and benefits of the product, highlighting the traditional methods of preparation, the quality of ingredients used, and customer feedback to build trust and meet consumer expectations, which may attract more attention from potential consumers. Additionally, conducting taste tests or offering samples at local events or markets while explaining its unique qualities in simple, relatable terms, such as its delicious flavor and health benefits, could create buzz. The “word of mouth” will also be utilized.

Another potential problem is the product's shelf life, which, without proper storage and distribution channels, may lead to considerable wastage or compromise in quality. Therefore, fresh kalabasa (squash), glutinous rice, coconut milk, and other ingredients must be of good quality to extend shelf life. Adhering to strict hygiene standards during preparation and packaging is imperative to prevent contamination and spoilage, thus extending the product's shelf life. Furthermore, it is essential to consistently monitor the quality of suman kalabasa throughout the distribution process to gauge its freshness and stability over time while also seeking customer feedback. In addition, educating distributors and consumers about proper storage and handling practices is vital for maximizing the shelf life of suman kalabasa. Clear instructions on storage temperature, shelf life, and reheating methods can help consumers enjoy the product for extended periods. Finally, the researcher will endeavor to find ways to use food technology to extend the life span of the delicacy further.

7. Conclusions

Results of the study in different aspects proved the financial viability, feasibility, and market potential of Suman Kalabasa in San Jose, Occidental Mindoro. By adhering to strict preparation standards and utilizing carefully selected ingredients, the produced suman kalabasa (Squash sticky rice cake) offers consumers a delicious yet nutritious option for their daily enjoyment that prioritizes consumer health and well-being, catering to their changing preferences and tastes. With 100% assurance from the consumers willing to patronize the Suman Kalabasa, it shows a market potential and acceptance for the Suman Kalabasa business. The business does not need a high capital requirement, and a single proprietor can operate the business. The identified locations are strategic sites to promote and sell the suman kalabasa. The business can contribute to the sustainability of local agriculture since the main ingredient will be sourced from local farmers, thus creating an additional avenue to sell their produce, diversifying their income sources, and reducing dependency on a single crop. The business can contribute to the socio-economic aspect by bringing employment and providing additional income for local farmers and the local government. It will boost our tourism and sustainability of local agriculture, contributing to San Jose’s cultural sense of pride and identity.

7.1 Recommendations

In light of the findings and conclusions discussed herein, the following recommendations have been formulated: Producers may prioritize maintaining the quality and nutritional value of suman kalabasa (Squash sticky rice cake) while emphasizing its health benefits in marketing promotions, may engage in consumer education about the advantages of consuming the product, and develop packaging that is not only visually appealing but also highlights the health benefits of suman kalabasa, may explore different preservation techniques or packaging materials that maintain freshness, such as utilizing vacuum sealing technology to package suman kalabasa (Squash sticky rice cake), which can help prolong its shelf life by removing air and reducing the growth of microorganisms that cause spoilage, explore additional distribution channels beyond the initially identified locations, such as partnering with local grocery stores and another online platform, regularly gather feedback and surveys to assess consumer satisfaction and adapt distribution strategies accordingly, continuously evaluate production costs and explore opportunities for cost optimization without compromising product quality, strengthen relationships with local farmers and suppliers to sustain a stable and reliable supply of ingredients for the suman kalabasa and implement initiatives to further support local agriculture and communities by exploring avenues for collaboration with government agencies for technical support and assistance.

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