Available online at:
https://jurnal.integrasisainsmedia.co.id/index.php/JIMS
Journal Integration of Management Studies
Volume 2 Number 2, 2024: 240-254
DOI: 10.58229/jims.v2i2.251

Financial Feasibility Study of New Product Line Healthy Children Food Business: Case Study of Lil'bites

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Abstract

Based on data from the Indonesian Nutrition Status Survey (SSGI) in 2022, 21.6% of Indonesian children suffer from wasting 7.7%. A disorder known as "wasting" in children occurs when their weight falls till it is higher than what is considered normal for their age. For children's growth and well-being, they must consume enough fruits. Although fruits provide vital vitamins and minerals that boost immunity and general health, many kids dislike them because of their flavor, texture, or inexperience with new meals. Lil'Bites, a startup focusing on children's health, sees this opportunity to create kid-friendly fruit jams as a viable approach to ensuring kids consume enough fruits. This research aims to assess the financial feasibility of developing a new product line, which is a healthy jam for kids, using a quantitative approach, utilizing company data as primary data and data from similar companies as secondary data. The study will evaluate the payback period, net present value (NPV), and internal rate of return (IRR) and assess risk through sensitivity analysis. The results based on the base scenario indicate that the Lil'Bites new product line project is financially feasible, resulting in a payback period of 1.9 years, an NPV of IDR401,807,628, and an IRR of 54.94%, which is significantly higher than the WACC of 9.36%.

Keywords: Wasting, Jam, Financial Feasibility, New Product Line

A. INTRODUCTION

Unhealthy eating habits are the root cause of many nutritional issues that affect children. Preschoolers who are malnourished may experience adverse effects on their behavior, cognitive development, academic performance, and other areas that will affect their lives in the future (Abdel-Rahman et al., 2017). Wasting is one of the dietary issues that still plague Indonesia today. A disorder known as "wasting" in children occurs when their weight falls till it is higher than what is considered normal for their age (Ministry of Health, 2022). Using data from the Indonesian Nutrition Status Survey conducted in 2022, it is explained that there has been a rise in the country's wasting rates, which increased from 7.1% in 2021 to 7.7% in 2022.

In the 2019 health minister's regulation regarding nutritional adequacy figures, the Indonesian Ministry of Health reports that to meet children's nutritional needs, they must meet their daily macronutrient requirements, which are as follows: 1350 kcal of energy, 20 grams of protein, 45 grams of fat, 215 grams of carbohydrates, 16 grams of fiber, and 1150 milliliters of water; additionally, children must meet their daily micronutrient requirements, which include calcium 650 mg, phosphorus 460 mg, magnesium 65 mg, sodium 800 mg, potassium 2600 mg, and iron 7 mg. Children can fulfill their nutritional needs by eating large meals and snacks. It is advised and can help to ensure that youngsters get enough nutrients from healthy snacks. The American Academy of Pediatrics, Committee on Nutrition (2013) states that children should consume three large meals and two snacks daily in a regular pattern. Thus, eating nutritious snacks can help kids get the most out of their diet.

For children's growth and well-being, they must consume enough fruits (Rasulov, 2023). Although fruits provide vital vitamins and minerals that boost immunity and general health, many kids dislike them because of their flavor, texture, or inexperience with new meals. Animated treatments, which highlight the value of goal-setting, parental involvement, and rewards for achievement, have been suggested as innovative solutions to this problem to boost fruit consumption among kids (Ifeoluwa et al., 2022). Through creative tactics and customized dietary recommendations, parents and healthcare professionals may help kids overcome their fruit aversion and guarantee they get the essential nutrients fruits offer.

Creating kid-friendly fruit jams can be a viable approach to addressing the problem of making sure kids consume enough fruits. Children are more likely to appreciate and frequently consume nutrient-rich fruits when transformed into a more enticing and adaptable form, such as jams (Pramod et al., 2023). These jams provide a

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simple approach to increasing daily fruit consumption by mixing them with bread, crackers, yogurts, or oatmeal (Ika et al., 2023). Fruits are a great source of vital vitamins, including C, A, and B vitamins, as well as minerals, dietary fiber, potassium, magnesium, and antioxidants that are important for maintaining general health and preventing disease (Heather et al., 2023). Long-term improved health outcomes can be achieved by encouraging youngsters to consume these nutrient-dense fruit jams, which can help close the gap in their fruit intake (Ifeoluwa et al., 2022).

Because of its nutritional advantages and culinary diversity, jam, a popular semi-solid snack derived from fruits and Sugar, offers a significant opportunity for entrepreneurs and parents in the market (Jayed et al., 2023). Growing knowledge of the value of a balanced diet and the need to cut back on consuming processed and sugary foods has sparked an interest in creating better jam substitutes, particularly for kids, to address this problem (Lemea et al., 2022). Wholesome jam can be important to kids' diets because it provides vital nutrients and antioxidants that promote their health and well-being. Fruit jams can be strengthened with components like soybeans, sweetened with natural sources like dates, and enhanced with antioxidants from tomatoes and acerola (Lemea et al., 2022). These additions can also provide essential vitamins, minerals, and fiber that are good for heart health, the immune system, and controlling weight.

With that opportunity, Lil'Bites, a children's food business, prioritizes the well-being of its customers and wants to develop healthy jam for kids. Lil'Bites notices that the ingredients in the snacks that are now on the market make them unsuitable for children, so Lil'Bites wants to develop a sugar jam with 100% fruit in the jam to ensure the quality remains the same as the normal fruit. At this point, Lil'Bites is ready to start selling its snack foods. Launching a new product line with healthy MPASI Jam is one of the methods Lil'Bites aims to pursue to capture the MPASI stage child phase and grow the market. Therefore, the best way to determine whether or not this technique is workable is to do a feasibility study. This study will ascertain whether creating a nutritious jam for children is a feasible business opportunity by examining the market demand, competition, and prospective revenue sources.

B. RESEARCH METHODS

This research starts by identifying the business issue: the opportunity to develop a new product line targeting a growing market. After that, the researcher developed an analysis of the internal and external factors in Lil'Bites' company and industry. This involves conducting an internal analysis using SWOT and TOWS frameworks and an external analysis using PESTEL, Porter's Five Forces, and TAM SAM SOM. A root cause analysis will follow this. Choosing the proper financial evaluation techniques, such as Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period, and Profitability Index (P.I.), is the next step after finishing the literature review. After the approach is established, the procedure proceeds to data collection, which entails obtaining the required data. Assumptions must be made; information must be gathered regarding assets, operating expenses, revenue, and sales model costs.

Following data collection, a Sales Volume Projection is created in Data Calculations to estimate projected sales. Pro Forma Financial Statements, such as the Pro Forma Income Statement, Cash Flow Statement, and Free Cash Flow Statement, are prepared based on this projection. After discovering the financial statement, the researcher conducts scenario analysis with tornado analysis to know the risk of the price, quantity, and COGS making a negative or positive swing. The tornado analysis for the risk assessment with the base scenario shows that the price, quantity, and COGS are 100%. For the price and quantity swing, the researcher used the 10% swing increase and -the 15% swing decrease; for the COGS, use the 15% swing increase and -10% swing decrease. The financial feasibility of the company is then evaluated using the previously established procedures (NPV, IRR, Payback Period, P.I.) using these assertions. Following the completion of the financial Analysis, an Implementation Plan is created to put the findings into practice. A Conclusion and Recommendation follow, summarizing the findings and offering practical suggestions based on the financial Analysis. This thorough procedure guarantees that every pertinent aspect is considered when assessing the company issue's financial feasibility.

C. RESULTS AND DISCUSSION

Analysis of Product

Lil'Bites Healthy Jam for Kids is a tasty and nutritious spread perfect for kids. It has three delectable flavors: peanut butter, strawberry, and blueberry. Every variety is made with premium ingredients and a focus on health to give kids a satisfying and healthy option. Fresh blueberries, lemon juice, vanilla, and stevia sweetener are combined in the Blueberry taste, while ripe strawberries, lemon juice, vanilla, and stevia are combined in the Strawberry version. The Peanut Butter variety is produced with roasted peanuts, Himalayan salt, sunflower oil, and stevia for sweetness. This jam is not only delicious but also complies with diets that prioritize health because it is gluten-free, vegan, non-GMO, and contains no added sugar. In response to growing concerns about excessive sugar intake and its link to health problems like heart disease, stroke, obesity, diabetes, high blood cholesterol, cancer, and cavities, Lil'Bites seeks to offer a healthier substitute for traditional sugary spreads. With Lil'Bites Healthy Jam for Kids, parents can serve their kids a tasty spread that confidently promotes their general well-being.

Figure 1. Lil'Bites Healthy Jam for Kids
Source: Research Data, 2024

Internal Analysis

Internal Analysis analyzes the internal attributes of the Lil'Bites; SWOT and TOWS will be the tools to make the internal Analysis. SWOT will analyze the strengths, weaknesses, opportunities, and threats for Lil'Bites. After conducting a SWOT analysis for developing alternative strategies, the TOWS matrix combines factors that relate to internal strengths and weaknesses and external opportunities and threats.

SWOT Analysis

One of the frameworks that can be used for strategic planning in the evaluation of a business activity, a plan, or a project is SWOT Analysis. (Learned et al., 1969) explained that the SWOT analysis enhances the decision-making process by decreasing the quantity of information for complex strategic issues. The SWOT Analysis also can be a tool for managers to help identify the organizational and environmental factors. SWOT Analysis has two areas, which are internal and external. The internal area suits the organizational factor with strengths and weaknesses, and the external area suits the environmental factor with opportunities and threats.

Table 1. SWOT Analysis of Lil'Bites

Strengths	Weakness
• No Sugar Added: This product is excellent for diabetics and users who avoid Sugar because it employs stevia as a natural sweetener. • Low Carb: People on a ketogenic diet or controlling their carb consumption will find this product appealing due to its low-carb composition. • Vegan: In keeping with the expanding plant-based dietary movement, the jam is entirely vegan. • Ingredient Quality: This product is made from real blueberries packed with nutrients and a natural, fresh taste.	• Price: The increased cost compared to ordinary jams can be a deterrent for budget-conscious customers. • Niche Market: This product may not be as appealing to the broader public because it is more suited for health-conscious consumers with gluten sensitivities.
Opportunities	**Threat**
• Health Trends: The market is expanding due to the rising demand for sugar-free and healthful food products. • Market Expansion: Growing domestically and abroad into wider consumer groups or geographical areas is possible. • Government Programs: There is a great chance of reducing Indonesia's high malnutrition rates through ongoing	• Competition: Keeping market share may be difficult given the abundance of rival brands selling comparable goods. • Market Saturation: Given the abundance of options available, the market for gluten-free health products may reach saturation and become more competitive.

government initiatives. Our contribution to this endeavor can be the provision of wholesome snack items. • Product Development: Adding new tastes or complementary goods could increase sales and clientele.	•

Source: Research Data, 2024

Lil'Bites' SWOT analysis shows that although the brand has several advantages, like providing a vegan, low-carb, and sugar-free product with premium ingredients. It also has difficulties with pricing and appealing to a certain market. Given the expanding health trends and market expansion opportunities, there is much room for growth, especially when complementing government initiatives. Nonetheless, the business must manage the risks of fierce rivalry and market saturation in the gluten-free health product industry. To prosper, Lil'Bites must solve its flaws and minimize possible dangers while utilizing its advantages to seize chances.

TOWS Analysis

TOWS was developed by Weihrich (1982) for the next step of SWOT analysis for developing alternative strategies. TOWS matrix combines factors that relate to internal strengths and weaknesses and external opportunities and threats. TOWS matrix identifies four conceptually distinct strategic groups, Strength-Opportunity (SO), Strength-Threats (S.T.), Weaknesses-Opportunities (W.O.), and Weaknesses- Threats (W.T.), for creating the alternative strategies.

Table 2. TOWS Analysis of Lil'Bites

Strengths+Opportunities	**Weaknesses+Opportunities**
• Leverage Health Trends: By emphasizing the product's health benefits in marketing efforts, use its low-carb and sugar-free qualities to attract health-conscious customers. • Extend Product Line: To appeal to a wider clientele and accommodate a range of taste preferences, add new flavor variations that are also low-carb and vegan. • International Market Expansion: To enter areas with a strong demand for health and specialist diet products, use vegan certifications and premium natural components.	• Pricing Strategy: To allay price concerns and add business, provide bundling packages or discounts for large orders. • Educate Customers: To raise awareness and demand, educate customers about the product's health benefits through social media and digital marketing. • Partnerships and Collaborations: Work with diet influencers and health communities to promote the product and increase its market reach.
Strengths+Threats	**Weaknesses+Threat**
• Differentiation through Quality: To set the product apart from rivals, stress the use of premium components such as real blueberries and stevia, a natural sweetener. • Creating customer loyalty programs to maintain a devoted clientele and lessen the influence of rivals is known as brand loyalty programs. • Testimonials from Happy Customers: Using positive customer reviews to advertise the product and build confidence in potential buyers.	• Niche Marketing: Concentrate on highly focused marketing tactics for customer segments that are most likely to buy the product, such as keto diet adherents and vegan communities. • Continuous Improvement: To stay relevant and competitive in a crowded market, continuously innovate and improve the quality of your products based on customer input. • Keep an eye on rivals: Keep a close eye on rivals and industry developments to spot fresh opportunities and promptly adjust to shifting conditions.

Source: Research Data, 2024

External Analysis

In the external Analysis, Lil'Bites will analyze the external attributes of Lil'Bites. PESTEL analysis will analyze the key drivers of change in the company environment. Porter's Five Forces is how managers and entrepreneurs analyze their competitive environment by examining specific forces driving industry competition. Also, the TAM SAM SOM is for the roadmap to understanding the market landscape. Dive into who the audience is, the value perception, and the size of the opportunity – before launch. With the external Analysis, Lil'Bites can prevent threats and weaknesses for companies in the industry environment.

PESTEL Analysis

PESTEL Analysis originated from ETPS (Economic, Technical, Political, and Social) introduced by (Aguilar, 1967). PESTEL Analysis can be used to analyze the key drivers of change in the company environment. The PESTLE Analysis is one of the tools used to identify and analyze the key drivers of change in the organizational environment.

Table 3. PESTEL Analysis of Lil'Bites

Factors	External Situation
Political	In a 2023 article, the Kementerian Koordinator Bidang Pembangunan Manusia dan Kebudayaan Republik Indonesia (Kemenko PMK) reported that the Indonesian government is now agitating to implement policies aimed at resolving the country's existing child nutrition issues. The three triple-burden malnutrition issues in Indonesia that the government is currently focusing on are adult obesity, wasting, and stunting. Lil'Bites is, therefore, here to assist with this issue using the items we offer, emphasizing assisting with the wasting problem.
Economic	Total revenue in baby snacks and others in Indonesia is expected to show an annual growth rate (CAGR 2024-2029) of 5.60%, resulting in a projected market volume of US$39.36m by 2029 (Statista 2024).
Sociocultural	These days, individuals are more worried about their health than ever, particularly during a pandemic. Furthermore, parents are becoming more conscious of whatever their children will eat due to technological advancements that have made it easier to absorb and disseminate various information. Parents today are more conscious of their children's physical and mental health thanks to recent advancements and easy access to information, such as viewing many media campaigns or getting guidance from other family members (Nasrin et al., 2021). This helps Lil'Bites continue to operate. To be current, Lil'Bites must continue to monitor emerging trends and consumer preferences.
Technological	Digital technology can help open up new avenues for increasing corporate productivity, particularly in the food and beverage industry. Some of these include standardizing products and production processes, facilitating decision-making with greater accuracy, producing more accurate cost estimates, and selling prices. The efficient operation of food and beverage enterprises can be aided by recent technological advancements (Rifai et al., 2023). This demonstrates how Lil'Bites may benefit from recent technology advancements in the food and beverage sector to operate more profitably in marketing and operations.
Environment	The research findings indicated how crucial eco-friendly consumption practices are to modern civilization. Individual and corporate attempts to favor eco-friendly products are accompanied by people's awareness of the state of the environment today (Bhardwaj et al., 2023). Lil'Bites may take this into account and use it as a future strategy to offer more ecologically friendly items, one of which is packaging. To create new value for Lil'Bites and draw customers to the company and its products, the operations of the Lil'Bites business might also pay more attention to the environment.
Legal	To continue selling food, the food industry must comply with several legislative standards, some of which include P-IRT, BPOM, and Halal. Lil'Bites must abide by all rules to stay out of trouble and keep its good reputation. Lil'Bites has been granted permission to run its company and sell its goods by granting a P-IRT number and an NIB (Business Identification Number). However, in the future, Lil'Bites will need other business licenses, such as a BPOM and a Halal certificate, to grow its market significantly and geographically.

Source: Research Data, 2024

Analyzing external factors through the PESTEL framework reveals several opportunities and considerations for Lil'Bites. Politically, government initiatives to reduce stunting support the demand for nutritious products. Economically, the baby snacks market is projected to grow, indicating a favorable market environment. Socioculturally, increasing health awareness among parents enhances the potential market for Lil'Bites, although staying updated with trends is essential. Technological advancements offer ways to improve operational and marketing efficiency. Environmentally, a growing preference for eco-friendly products suggests that adopting sustainable practices could attract more customers. Compliance with food industry regulations is legally necessary, and obtaining additional certifications will facilitate market expansion.

Porter Five Forces Analysis

The five forces are the threat of new entrants, the bargaining power of buyers and suppliers, the threat of substitute products or services, and the rivalry among existing competitors (Porter, 1979). The first four forces determine the fifth force, competitive rivalry, which can be minimal or intense depending on the number and strength of competitors. The strength of each of the forces negatively impacts profitability. Importantly, Porter assumed these five forces applied to every industry, regardless of its level of technology, whether in a developed or emerging economy and with or without government interventions (Porter, 2008). These assumptions are now coming under threat or at least being vigorously discussed once again.

Table 4. Porter Five Forces Analysis of Lil'Bites

Force	Factors Affecting The Force	Degree of Force
Threat of New Entrants	1. Capital Requirements: A substantial initial expenditure is needed to begin large-scale manufacture of specialty food products, though not unduly costly. 2. Regulations: Strict verification procedures and a significant amount of time are needed for certifications like sugar-free and vegan.	Moderate

Force	Factors Affecting The Force	Degree of Force
	3. Brand Loyalty: Since consumers of health products are frequently devoted to their brands, new brands may find it difficult to alter their habits. 4. Distribution Channels: It can be difficult for new businesses to access efficient distribution channels, particularly if more established brands control them.	
Threat of Substitutes	1. Availability of Substitutes: You may replace this product with various low-calorie or sugar-free spreads, honey, and peanut butter, among others. 2. Cost of Switching: Consumers find it very inexpensive to switch to substitute items, which raises the possibility of substitution. 3. Relative Cost and Quality: Customers are inclined to select alternatives if they are more affordable or of similar quality. 4. Health Trends: As people become more conscious of their health, they may continue to look for less expensive and healthier options.	Moderate
The Bargaining Power of Buyers	1. Product Availability: Customers have a lot of negotiating power because there are so many healthy spread options on the market. 2. Price Sensitivity: Consumers may be very price-sensitive when comparable products are offered at a lower cost. 3. Quality and Brand Perception: Companies who want to cater to health-conscious consumers must ensure their products live up to the high standards set by these consumers. 4. Information Availability: It is simple for customers to evaluate and select the best products based on their needs because they have easy access to product information and reviews.	High
The Bargaining Power of Suppliers	1. Number of Suppliers: Low supplier negotiating strength is caused by abundant suppliers of raw ingredients like blueberries and natural sweeteners. 2. Switching Costs: Due to the widespread availability of certain raw materials, switching costs between suppliers are typically minimal. 3. Input Differentiation: Should Freshmax decide to use premium or organic components, it may become more dependent on particular vendors who provide these products. 4. Supplier Integration: Suppliers may have more negotiating leverage if they enter the healthy food-producing industry directly.	High
Industry Rivalry	1. Number of rivals: There is fierce competition in the market for sugar-free and healthful foods due to the large number of rivals. 2. Product Differentiation: Through creativity, excellence, and successful marketing, brands must strongly try to differentiate their products. 3. Market Growth: As an industry expands quickly, new competitors are drawn in, heightening competition. 5. Consumer Loyalty: It may be more challenging to overtake rivals for market share when there is a high level of consumer loyalty to a particular product.	High

Source: Research Data, 2024

According to Lil'Bites' Porter Five Forces analysis, the competitive landscape is fairly difficult. Because of the substantial capital needs, stringent rules, and difficulties in breaking into existing distribution channels, there is a moderate danger from new entrants. Since consumers have access to various substitute products, which are frequently more affordable and conveniently accessible, the threat of substitutes is also modest. Due to the large number of products accessible, price sensitivity, and the ease with which customers may obtain product information and reviews, buyers have significant bargaining power. Similarly, suppliers have significant bargaining leverage because of the accessibility of raw materials and the possible requirement for premium or organic components, which may lead to an increased reliance on particular suppliers. Additionally, the market has much competition due to the large number of competitors and minimal distinction. Lil'Bites has to deal with a competitive environment that includes intense pressure from suppliers and customers and the possibility of new competitors and replacement items.

TAM SAM SOM Lil'Bites

In the context of the potential market for Lil'Bites, the Total Addressable Market (TAM) is the age group of 0 to 4 years old in Indonesia, which consists of 22 million children, according to BPS data from 2022. Narrowing this down, the Serviceable Available Market (SAM) for Lil'Bites is the same age group but specifically in West Java, amounting to 3.57 million children based on Open Databooks data from 2021. Further refining this, the Serviceable Obtainable Market (SOM) for Lil'Bites is the 0 to 4-year-old demographic in Bandung City, which is 181,000 children, according to BPS data from 2021.

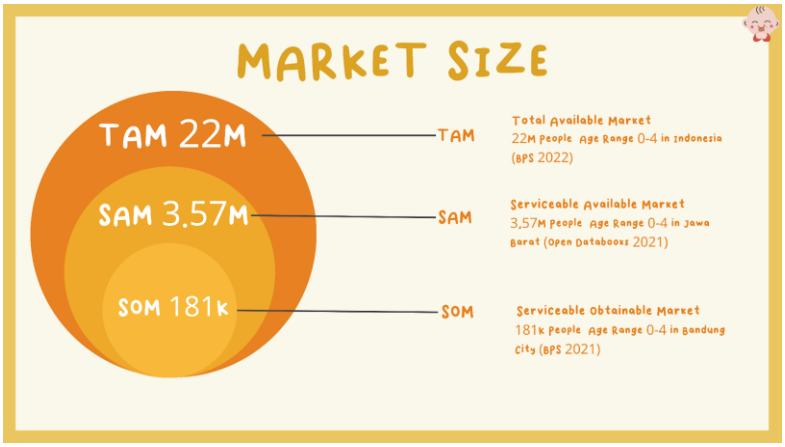

Figure 2. Market Size of Lil'Bites
Source: Research Data, 2024

Analysis of Root Cause

There are several different ways to perform a root cause analysis. One method is the 5 Whys technique. The 5 Whys is attributed to Sakichi Toyoda, the founder of the Toyota Motor Corporation. The 5 Whys method asks five times 'why' to every cause to remove the layers of symptoms that cover up the root of a problem (Serrat, 2017).

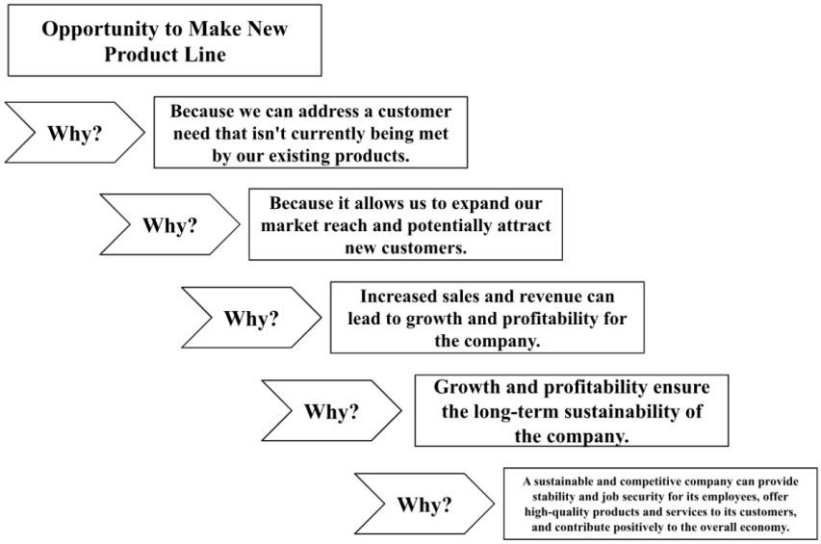

Figure 3. Analysis of Root Cause Using 5 Whys
Source: Research Data, 2024

The opportunity to develop a new product line presents a compelling path for the company's growth and sustainability. We can expand our market reach, increase revenue, and position ourselves for long-term success by addressing unmet customer needs. This success benefits all stakeholders, from employees and customers to

the broader economy. Therefore, exploring this opportunity further through detailed market research, product development, and financial Analysis is highly recommended.

Analysis of Alternative Business Solution

In this section, the researcher will describe the scenarios and Analysis that will be conducted. The researcher will conduct an annual calculation for five years when constructing the financial statement, consisting of assumptions, an income statement, a cash flow statement, and a free cash flow statement. The researcher also uses tornado analysis for the risk assessment, with the base scenario being that the price, quantity, and COGS are 100%. For the price and quantity swing, the researcher used the 10% swing increase and -15% swing decrease, and the COGS used the 15% swing increase and -10% swing decrease. After preparing the pro forma financial statement, the Capital Asset Pricing Model(CAPM) will be used to calculate the cost of capital. The feasibility of Lil'Bite's new product line is determined by utilizing the payback period, Net Present Value (NPV), and Internal Rate of Return (IRR). To minimize risk, the researcher uses tornado analysis to determine the swing from the base model. The swing is conducted using the NPV.

Initial Investment

Lil'Bites needs to make an initial investment to do this new product line. Because the production is still in the vendor, Lil'Bites doesn't need large capital in the equipment section. The initial investment will include the cost of goods sold (COGS), equipment (such as laptops and shelves), Distribution costs, legal expenses (BPOM and halal), and a rental building to store the goods. The initial investment will be for year one to run the new product line project. For the COGS, Lil'Bites will produce 10835 pieces to all jam variance; this is taken from the assumption that they are taken from the SOM in Bandung City, which is 180.579 population times the market share of Lil'Bites, which is 6%.

Table 5. Lil'Bites Initial Investment for New Product Line Project

Investment	Amount
Cost of Goods Sold	196,986,408
Equipment	10,000,000
Distribution Cost	7,801,013
Legal	8,000,000
Rent Building	12,000,000
TOTAL	**234,787,421**

Source: Research Data, 2024

Construct Pro Financial Statement

The financial statements in this project are generated from assumptions that consist of income statements, cash flow statements, and free cash flow statements. The assumption is based on annual assumptions for the five years. These assumptions are important since they will be used for the pro forma financial statements. Therefore, the assumptions are made considering the current Lil'Bites financial conditions combined with secondary data such as the children's snacks industry overview from P.T. Indofood Sukses Makmur, benchmarking from a similar company for pricing and sales such as Pureeland and nourish, inflation and tax rate in Indonesia, the acceptable marketing expense and also the compound annual growth rate of the baby food industry in Indonesia which is generated from Statista resulting in 9.39% of growth annually.

Income Statement

In making the income statement, the researcher uses assumptions that have been made such as inflation rate and CAGR to measure the rise in prices and also COGS per year, the number of sales obtained from the total SOM once with market share is 6%; marketing expense is 10% of net sales per year and also tax rate to calculate the net profit from Lil'Bites, by using the assumption. It is found that Lil' Bites has a net profit of Rp112,610,810 in the first year, Rp138,479,204 in the second year, Rp165,169,124 in three years, Rp196,127,419 in the fourth year and Rp231,789,589 in the fifth year.

Cash Flow Statement

Lil'Bites' cash inflows and outflows are obtained from operating, investing, and financing activities on the cash flow statement. It is found that Lil'Bites has operating activity amounting to Rp106,610,810 in the first year, Rp142,479,204 in the second year, Rp169,169,124 for the third year, Rp200,127,419 in the fourth year and

Rp235,789,589 in the fifth year. For investing activities, Lil'Bites does not have investing activity because Lil'Bites does not have capital expenditure, so investing Activities Lil 'Bites for five years is Rp0. Lil'Bites only existed in the first year for financing activities, which amounted to Rp. 234,787,421, which was received from equity to pay the initial investment.

Free Cash Flow Statement

Lil'Bites performs free cash flow calculations to determine how much money is ready to use to continue operations the following year. Free cash flow itself is obtained by reducing cash inflow with cash outflow. Lil'Bites has free cash flow amounting to Rp106,610,810 in the first year, Rp142,479,204 in the second year, Rp169,169,124 for the third year, Rp200,127,419 in the fourth year and Rp235,789,589 in the fifth year.

Capital Asset Pricing Model (CAPM)

In this project, Lil' Bites will avoid debt financing and rely solely on equity to minimize financial risk and maintain control during the launch of the new product variant. Researchers will utilize the Capital Asset Pricing Model (CAPM) to determine the appropriate cost of this equity financing. CAPM considers both market risk and Lil'Bites' specific risk profile to estimate a fair cost of equity.

Table 6. Capital Asset Pricing Model Lil'Bites

Unlevered Beta	0.05427525682
Risk-Free Rate	9%
Market Return	15.66%
CAPM	9.36%

Source: Research Data, 2024

The Capital Asset Pricing Model (CAPM) of Lil'Bites is computed utilizing market return, risk-free rate, and unleveled beta. Assuming the business has no debt and is in line with Lil'Bites' capital structure, the unleveled beta eliminates the loan effect from the equation and isolates the inherent risk of the company's core business operations. The unleveled beta is derived from the unlevered beta of Indofood Sukses Makmur Tbk (INDF), the owner of "Promina," a comparable business that manufactures healthy kid-friendly snacks for the food sector. However, the risk-free rate is defined by government obligations FR0071 with a 9% interest rate and a five-year maturity tenor (2024–2029). Additionally, the Compounded Annual Growth Rate (CAGR) of the Indeks Harga Saham Gabungan (IHSG) daily return during the previous five years (2019–2024) is used to calculate the market return. Then, using the CAPM approach, these compositions, including unlevered beta, risk-free rate, and market return, are calculated, giving a value of 9.36%.

Feasibility Analysis

The discount rate in this financial feasibility analysis will be determined using CAPM and compared to IRR. According to the project's feasibility analysis calculations, the payback period, under the base scenario, is 1.9 years. If the payback period remains less than the project's period criteria (< 5 years), it will still be deemed acceptable. In addition, the new Lil'Bites product line, a healthy jam project, has an NPV value of Rp 401,807,628, which is positive or more than 0 for its healthy jam project. Additionally, it is known that the project's IRR of 54.94% is higher than its CAPM value of 9.36%. Based on the result, it may be seen that Lil'Bites' new project of healthy jam products meets the acceptance criteria. Based on the three feasibility approaches that have been used, Lil'Bites can accomplish our company goal and increase sales in the future with this project.

Table 7. Feasibility Analysis of Lil'Bites's New Product Line Project

Method	Value	Acceptance Criteria
Payback Period	1.9 years	Throughout Project's Lifetime (< 5 Years)
NPV	Rp401,807,628	Positive NPV (NPV > 0)
IRR	54.94%	Higher than CAPM (CAPM >9.36%)

Source: Research Data, 2024

Scenario Analysis

The scenario analysis that was conducted for this project is using tornado analysis. The tornado analysis for the risk assessment with the base scenario shows that the price, quantity, and COGS are 100%. For the price and quantity swing, the researcher used the 10% swing increase and -15% swing decrease, and the COGS used the 15% swing increase and -10% swing decrease.

Table 8. Scenario Analysis of Lil'Bites

	Scenario					
Price Adjusted	Scenario 1 (Quantity 100%, Price 85%)	Scenario 2 (Quantity 100%, Price 90%)	Scenario 3 (Quantity 100%, Price 95%)	**Base Scenario (Quantity 100%, Price 100%)**	Scenario 4 (Quantity 100%, Price 105%)	Scenario 5 (Quantity 100%, Price 110%)
Quantity Adjusted	Scenario 6 (Quantity 85%, Price 100%)	Scenario 7 (Quantity 90%, Price 100%)	Scenario 8 (Quantity 95%, Price 100%)	**Base Scenario (Quantity 100%, Price 100%)**	Scenario 9 (Quantity 105%, Price 100%)	Scenario 10 (Quantity 110%, Price 100%)
COGS Adjusted	Scenario 11 (COGS 115%)	Scenario 12 (COGS 110%)	Scenario 13 (COGS 105%)	**Base Scenario (Quantity 100%, Price 100%)**	Scenario 14 (COGS 95%)	Scenario 15 (COGS 90%)

Source: Research Data, 2024

Based on the 16 scenarios, including the base scenario, Lil'Bites can accomplish our company goal and increase sales in the future with this project. Because no payback period is higher than five years, the NPV is negative or less than 0, and the IRR is below the CAPM value of 9.46%. Based on the result, it may be seen that all the scenarios of Lil'Bites' new project of healthy jam products meet the acceptance criteria.

	Scenario 1 (Quantity 100%, Price 85%)	Scenario 2 (Quantity 100%, Price 90%)	Scenario 3 (Quantity 100%, Price 95%)	Scenario (Quantity 100%, Price 100%)	Scenario 4 (Quantity 100%, Price 105%)	Scenario 5 (Quantity 100%, Price 110%)	
Net Present Value	154,525,016	236,952,554	319,380,091	401,807,628	484,235,166	566,662,703	Price Adjusted
Payback Period	2.90	2.46	2.18	1.90	1.69	1.52	
Internal Rate of Return	28.49%	37.70%	46.48%	54.94%	63.16%	71.19%	
Profitability Index	1.658	2.01	2.36	2.71	3.06	3.41	

	Scenario 6 (Quantity 85%, Price 100%)	Scenario 7 (Quantity 90%, Price 100%)	Scenario 8 (Quantity 95%, Price 100%)	Scenario (Quantity 100%, Price 100%)	Scenario 9 (Quantity 105%, Price 100%)	Scenario 10 (Quantity 110%, Price 100%)	
Net Present Value	298,069,331	332,648,763	367,228,196	401,807,628	436,387,061	768,431,975	Quantity Adjusted
Payback Period	2.24	2.11	2.00	1.90	1.81	1.73	
Internal Rate of Return	44.43%	47.99%	51.49%	54.94%	58.33%	77.31%	
Profitability Index	2.27	2.42	2.56	2.71	2.86	4.27	

	Scenario 11 (COGS 115%)	Scenario 12 (COGS 110%)	Scenario 13 (COGS 105%)	Scenario (Quantity 100%, Price 100%)	Scenario 14 (COGS 95%)	Scenario 15 (COGS 90%)	
Net Present Value	263,616,033	309,679,898	355,743,763	401,807,628	447,871,493	493,935,359	COGS Adjusted
Payback Period	2.36	2.23	2.05	1.90	1.77	1.66	
Internal Rate of Return	40.41%	45.34%	50.17%	54.94%	59.63%	64.27%	
Profitability Index	2.12	2.32	2.52	2.71	2.91	3.10	

Figure 4. Result of Scenario Analysis of Lil'Bites

Source: Research Data, 2024

For the sensitivity analysis to selling price, quantity sold, and COGS at a 5% swing, resulting in sensitivity analyses as follows:

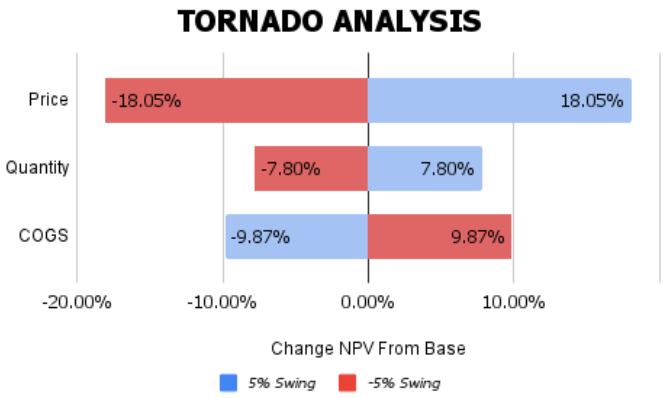

Figure 5. Tornado Analysis of Lil'Bites

Source: Research Data, 2024

Based on the Tornado Graph above, it is concluded that for every increase in the price and quantity variables by 5%, the NPV rises by 18.05% and 7.8%. For every increase of the COGS variable by 5%, NPV decreases by 9.87%. For each decrease in the prices and quantities of the variables of 5%, NPV falls by 18.0% and 7.8%; for every decrease in the COGS variable of 5%, NPV rises by 9.87%. This data showed that Lil'Bites still can manage this project; although there is a 5% swing reduction, Lil'Bites must be careful in the price swing because it gives the Lil'Bites swing quite high, which is 18.05% for a 5% swing.

Implementation Plan

The researcher explains the planned activities Lil'Bites will undertake over the next five years (2025–2029) to help answer business challenges and assumptions derived from the success of Lil'Bites' new line of healthy jams for kids in this implementation plan. These strategies serve as guidelines for how Lil'Bites will operate in the future. The marketing, operations, finance, and executive divisions of Lil'Bites are responsible for carrying out this implementation strategy. More information on the implementation planning for Lil'Bites' ongoing work may be found in Table 8.

Table 8. Implementation Plan of Lil'Bites

Division	Activity	Details	Frequency
Marketing	Create a Marketing Strategy Plan	Create detailed marketing strategies that can increase AIDA(Awareness, Interest, Desire, and Action)	Quarterly
	Collaborate with KOL	Collaborate with KOL relevant to the product; the collaboration could be sending a P.R. package from Lil'Bites products to the KOL and endorsing or even collaborating with the KOL.	Quarterly
	Participate in Exhibition	Participate in exhibitions, especially in mom and kids exhibition	Quarterly
	Content Creation	Make engaging content on Lil'Bites social media to increase the awareness and desire to buy the product.	Daily
Operation	Dealing contracts with suppliers and partners	Handling and dealing with vendors about productions and payment terms.	Per 6 months
	Quality Control	Make sure that the product is in good quality	Weekly
	Inventory Stock	Make sure the inventory stock	Monthly
	Research and Development	Research and development for the product existing and new products based on customer feedback	Monthly
Finance	Financial planning and budgeting	Make financial and budget planning for each division at Lil'Bites	Annually
	Lil'Bites financial records	Accurate and timely financial recording is essential for Lil'Bites to manage finances effectively.	Daily
	Evaluation and updating of financial performance	Monitor product sales for each flavor innovation released	Monthly
	Determine pricing strategy	Make a pricing strategy based on customer feedback and competitor	Quarterly
Executive	Fulfill the legal requirements	Fulfill the legal requirements such as BPOM, Halal, etc.	One time
	Evaluate the work of each division.	Evaluate the work of all divisions at Lil'Bites	Monthly

Source: Research Data, 2024

CONCLUSION

Lil'Bites is a company that specializes in addressing children's nutritional needs. Lil'Bites offers sugar-free cookies free of artificial coloring and preservatives, focusing on satisfying the sweet tooth and caloric requirements of kids ages 1 to 12. Currently, children older than five are allowed to eat this snack. Lil'Bites recognizes the potential to reach the MPASI level 6–12 months with a sugar-free, gluten-free jam. Lil'Bites wants to know if this new initiative is financially feasible to pursue or not. Before beginning the project, the financial viability must be determined to determine its value and the appropriate course of action for risk assessment. The data used in this study is split into two categories: primary data, which came from internal reports at Lil'Bites, and secondary data, which came from businesses in the children's food industry. The cost of equity is the only factor considered in the company's capital computation because Lil'Bites does not employ debt to finance or cover its

initial investment in the business venture. Lil'Bites' risk assessment scenarios, comprising 16 scenarios in total, including the base scenario, are required to determine the viability of the new product line. This situation is known as the "tornado analysis," when the price, quantity, and COGS are all 100% in the base scenario for the risk assessment.

Additionally, the researcher employed a 10% swing increase and a 15% swing decrease for the pricing and quantity swings, as well as a 15% swing increase and a 10% swing decrease for the COGS swings. Lil'Bites needs IDR 234,787,421 for the initial investment to run this new product line dubbed Healthy Jam for Kids. This money is expected to come from funding for each Lil'Bites founder and efforts to secure extra grant monies from outside sources. In the base case, the researcher used a sales objective of 6% of the SOM of the total number of children in Bandung between the ages of 1-4 to compute the pro forma financial statement. The researchers' findings regarding the feasibility of the project include NPV, Payback Period method, IRR, and P.I. For the base case, Lil'Bites' NPV is IDR 401,807,628 with a payback period of 1.9 years, an IRR of 54.94%, and a profitability index of 2.71. The NPV is positive, the payback period is less than five years, the IRR is more than the 9.39% CAPM, and the profitability index is more than one, indicating that the new product line project is feasible.

Additionally, the NPV increases by 18.05% and 7.8% for every 5% increase in the price and quantity variables in the sensitivity analysis utilizing tornado graphs. NPV falls by 9.87% for each 5% rise in the COGS variable. NPV decreases by 18.0% and 7.8% for every 5% decrease in the prices and quantities of the variables, respectively, whereas NPV increases by 9.87% for every 5% decrease in the COGS variable. According to the statistics, Lil'Bites can still manage the project even with a 5% swing reduction. However, Lil'Bites must exercise caution regarding price swings since these can generate a very large 5% swing of 18.05%. Lil'Bites must adhere to an implementation plan developed over five years, from 2025 to 2029, and split into four divisions, marketing, operations, finance, and executive, to fulfill this feasibility project. The implementation plan is carried out daily, weekly, monthly, quarterly, or annual, depending on the time allotted. To boost sales of Lil'Bites items, Lil'Bites should concentrate on appropriate marketing techniques like growing consignment stores, participating in kid-friendly events and exhibitions, and working with other relevant parties like KOLs and even current schools. Thus, it is hoped that Lil'Bites' development will be in line with the pro forma by properly executing the implementation plan that has been developed.

Business Implications

The results of the financial Analysis for Lil'Bites, a children's healthy snack company that hopes to create a new product line of kid-friendly jam for the business project, as previously mentioned in this research, indicate that Lil'Bites should move forward with the project because it is doable based on calculations and projections. This project has the potential to bring in money for Lil'Bites, which would help this business turn a profit. Furthermore, the researchers created sixteen distinct price and quantity swing scenarios. For the price swings, they utilized 10% and 15% swing increases and decreases, respectively, and for the costs of goods sold, they used 15% and -10% swing increases. As a result, the company was still profitable even with a 15% swing in both price and quantity and a 15% increase in COGS. The research findings presented in this report may be applied to future financial divisional Analysis of Lil'Bites, including capital budgeting, product development, and marketing outreach. In the end, this research would benefit.

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