

Priority strategy for increasing produced revenue of halal frozen food during the Covid-19 pandemic in Bogor, Indonesia

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ABSTRACT

Frozen food was first offered in United States supermarkets by Clarence Birdeye in 1930 and the trend of increasing consumption was experienced during the Covid-19 pandemic. Increasing demand for frozen food requires consumers to choose the best option. Consumers prefer to competitively produce make production efficient, introduce products, and gain wider market share. The biggest consumer preference in Indonesia is for halal-frozen food. In this context, PT XYZ is a halal frozen food manufacturer attempting to increase market share to ensure high revenue. This company plans to pasteurise egg raw materials and optimise digital marketing of halal frozen food using the TikTok application to increase revenue. Therefore, this study aimed to analyse the financial aspects of the pasteurise process for egg raw materials and optimising digital halal frozen food marketing using the TikTok application, as well as determine the best efforts to increase revenue. The analytical method used was graphical descriptive and quantitative tabulation, including profit, loss, and R/C ratio analysis. The result showed that efforts to optimise halal frozen food digital marketing using the TikTok application of Algore food digital marketing using the TikTok application of Algore food digital marketing using the TikTok application as well as determine the best efforts to increase revenue. The analytical method used was graphical descriptive and quantitative tabulation, including profit, loss, and R/C ratio analysis. The result an et profit of the IDR. 1,175,802,072 and an R/C ratio of 2.52.

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1 Introduction

Clarence Birdeye was the first to sell frozen food in a Springfield supermarket, Massachusetts, United States, in 1930. This frozen food included vegetables, fruits, seafood, and meat (Rika & Purba 2021). The consumption of frozen food has become a global trend in urban communities, with rapidly increasing sales because of the widespread ownership of domestic freezers and the frequent use of microwave ovens, due to the lack of time to prepare fresh meals (Cleland 2020). The socioeconomic conditions of urban communities are changing alongside the strategic environment in developing companies, leading to changes in consumer lifestyles, including shifts in food consumption patterns (Santoso 2018). A study in the Eastern Mediterranean Region found that most people perceive frozen foods as practical and easy to use, with easy access and product quality influencing purchasing decisions (Rattan & Ramaswamy 2014).

Frozen food has become an integral part of contemporary lifestyle, as evidenced by recent studies (Rahardjo 2016; Yunitasari *et al.* 2014). The COVID-19 pandemic further fuelled this trend, with a survey in Phoenix, Arizona, showing that the consumption of fresh food ingredients decreased by 3.8% during this period. Meanwhile, according to another study, frozen food consumption increased by 4.9% (Chenarides *et al.* 2020). Sales data from Boxes, the largest e-commerce platform in Taiwan, showed a 5.7% increase in sales during the pandemic, with frozen food products, grains, fruit, and vegetables, experiencing the highest demand (Chang 2020). According to a previous study conducted by (Isroni & Rudianto 2022), the pandemic caused people to consume various types of frozen food.

The benefits of frozen food include the ability to stay fresh for an extended period when stored and the capacity to endure chilly conditions (Putri *et al.* 2021). The important consideration for frozen food is the freezing process, which includes ensuring an accurately attained freezing temperature (Sula 2021). Frozen food is classified into two categories based on the freezing process, namely mechanical and cryogenic.

The frozen food market is continuously increasing, and the products are perceived as fresher and of higher quality, particularly in the meat, fruit, and vegetable sectors (Arora *et al.* 2023). Increasing consumer demand for frozen food meat impacts the increasing demand for beef and chicken

(Anggraeni *et al.* 2014). A previous study showed that humans need animal food to obtain protein (Gandhi & Purwana 2023). Frozen meat products include nuggets, meatballs, sausages, and bento variants such as mikado, mini keen, chicken katsu, and dim sum.

The demand for halal frozen food is growing due to the convenience and perceived quality, as stated by Arifeen (2019). As the demand for frozen food products increases and the options available grow, consumers must choose the best-processed food product. To remain competitive, producers attempted to introduce products and expand market share by catering to consumer preferences. In Indonesia, halal frozen food products are the most preferred by consumers. PT XYZ, a halal frozen food producer located in Bogor City, Indonesia, is attempting to increase market share and revenue.

Bogor City spans 11.850 hectares and is home to a population of 1.081.009 people, according to the Bogor City Statistics Agency in 2019 (BPS 2019). According to Bogor Gandhi *et al.* (2022a), as a key support area for Jakarta, has rapidly expanded territory. The proximity to Jakarta makes this area an attractive location for economic growth, services, trade, transportation, communication, and tourism, as reported by the Bogor City Statistics Agency in 2019. Furthermore, the booming economy has led many companies to choose Bogor City as the location. This includes PT XYZ, an agribusiness firm that processes halal beef, chicken, and fish at Bukit Panorama Blok M No.9 in Bogor City, West Java. Founded in 2015, PT XYZ is a prime example of the growth and development of the local economy.

PT XYZ produces various products such as halal nuggets, bento, and sausages, with a production rate of 500 to 600 daily. The products used hygienic ingredients, non-MSG, and preservatives. In PT XYZ, Halal Chicken nuggets are a favourite processed product due to affordability. The company planedvto pasteurize egg raw materials and optimize halal frozen food digital marketing using the TikTok application to increase revenue.

2 Methodology

The study was carried out at PT XYZ, situated in Bukit Panorama Blok M No.9, South Bogor District, Bogor City, West Java Province, from February 1 to April 30, 2021. The selection of the location was purposive,

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with the primary consideration being the vicinity of PT XYZ. The decision to limit the study to one city was motivated by the COVID-19 pandemic and the government's implementation of Restrictions on Community Activities (PPKM) and Large-Scale Social Restrictions (PSBB). Additionally, PT XYZ has been processing chicken meat into chicken nuggets since 2015.

This study used both primary and secondary data, collected using interviews and direct company observations. Interviews were conducted with company owners, employees, partners, potential customers, and customers. Direct observations were made to determine the general condition of the company, the organizational structure, procurement of raw materials, as well as production and marketing dates. Secondary data was obtained from textbooks, scientific journals, and websites.

The evaluation of financial feasibility was carried out to determine the viability of operating this company (Kasmir 2014). In this study, financial feasibility analysis includes an examination of cash flow, profit and loss analysis, as well as an assessment of company appropriateness. The cash flow analysis considers both costs and benefits incurred, according to (Gandhi *et al.* 2022b). Expenses comprise capital, fixed, and variable costs, while revenue is derived from the sale of products. The total revenue was calculated using the Equation 1:

$$TR = P \times Q \tag{1}$$

where:

TR: Total revenue (IDR),

P: Price (IDR),

Q : Total production output (IDR)

Operational expenses include all the costs associated with production, maintenance, and other incurred costs over a specific production activity period. The two components of operational expenses include fixed and variable. Fixed expenses are costs that remain constant, regardless of the changes in production or sales over a year or a unit of time. On the other hand, variable expenses are costs that change in proportion to the fluctuations in production or sales on an annual basis or per unit of time.

In addition to total revenue (TR), determining the total cost (TC) is necessary for a cost-benefit analysis. TC is often also called operational costs and are calculated using the Equation 2:

 $TC = TFC + TVC \qquad (2)$ where:

TC: Total cost (IDR),

TFC: Total fixed costs (IDR),

TVC: Total variable costs (IDR)

The total fixed costs (TFC) was added to the total variable costs (TVC) to determine the total costs incurred by the company in production. Furthermore, the profit or loss of a company can be calculated using the Equation 3:

 $\pi = TR - TC \qquad (3)$ where:

viicie.

π : Profit (IDR),

- TR: Total revenue (IDR),
- TC : Total cost (IDR)

Analysis of the R/C ratio (revenue cost ratio) is a comparison between total revenue and total costs. This analysis is used to determine a feasible company, and is calculated using the Equation 4:

 $R/Cratio = \frac{\text{Total Revenue (TR)}}{\text{Total Cost (TC)}} \qquad (4)$

where:

R/Cratio : Revenue to cost ratio,

TR: Total revenue (IDR),

TC : Total cost (IDR)

An R/C ratio > 1 shows that the company is profitable or feasible to develop. However, when the R/C ratio is < 1, the company suffers a loss or is not feasible to develop. When the R/C ratio = 1, the company is at the break-even point. Therefore, the indicators of company feasibility in this study include profit and loss analysis, as well as the R/C ratio.

The study design explains and answers the main objectives, which analyses the financial aspects of the pasteurization process for egg raw materials and the financial aspects of optimizing digital halal frozen food marketing using the TikTok application. The analysis will help decide the most important method of increasing revenue.

3 Result

3.1 The The financial aspect increases PT XYZ's income by pasteurizing raw egg ingredients

Financial planning in company development increases the selling value of processed chicken nuggets using the egg pasteurization process, based on actual conditions assumption. These assumptions include the following 1). The capital used in planning company development is personal, 2). Input prices are appropriate based on market prices, 3). Increased revenue based on an increase in the number of products following the average product sales for 2019-2020.

3.1.1 Operational Costs

Operational costs are incurred by the company during company activities and consist of two types, namely fixed and variable. The operational costs before and after company development are shown in Table

Table 1: Operational costs at PT XYZ

Indicator	Before development (IDR)	After development (IDR)
Total fixed costs	85,245,942	87,465,942
Total variable costs	26,121,030	24,933,330
Operational costs	111,366,972	112,399,272

Source: Primary data processed (2021)

3.1.2 Revenue

Revenue earned by PT XYZ from company development is based on the number of chicken nugget sales. The assumption of a 10% increase in sales of chicken nuggets was obtained based on total production from 2019 to 2020. Therefore, the number of sales after company development was assumed to be 5.250 pcs. The acceptance planning of the company is shown in Table 2.

Table 2: Revenue reports at PT XYZ

Indicator	Before development	After development
Number of products	4,710	5,250
(Pack)		
Product price (IDR)	30,500	30,401.33
Total receipts (IDR)	143,655,000	160,125,000

Source: Primary data processed (2021)

3.1.3 R/C ratio analysis

Based on Table 3, the value of the R/C ratio before company development was 1.29, showing that every cost incurred by the company of IDR. 1 will provide a revenue of 1.29. Meanwhile, the value of the R/C ratio after company development was 1.42, which shows that every IDR 1 cost incurred will provide revenue of 1.42, suggesting that the company is feasible to run. The R/C ratio was more significant after development suggesting a feasible implementation of the company is feasible.

Table 3: Analysi	s of the R/C ratio before and afte	er business development
Indicator	Before development (IDB)	After development (IDR)

TR	143,655,000	160,125,000
TC	111,366,972	112,399,272
R/C ratio	1.29	1.42

Source: Primary data processed (2021); TR (total revenue), TC (total cost), R/C (revenue/cost)

3.1.4 Profit and loss

Profit and loss analysis was used to compare the receipts from the cost before and after the increase in the selling value of chicken nuggets through the egg pasteurization process. Table 4 shows changes in the revenue, as well as profit and loss analysis of PT XYZ after development by increasing the selling value of chicken nuggets through the egg pasteurization process. **Table 4:** Income statement before and after business development

Indicator	Before development (IDR)	After development (IDR)
Income	143,655,000	160,125,000
Cost :		
Fixed cost	85,245,942	87,465,942
Variable Cost	26,121,030	24,933,330
Total cost	111,366,972	112,399,272
Interest EBIT	32,288,028	47,725,728
Interest	-	-
EBT	32,288,028	47,725,728
Tax :		
Property Tax	1,515,413	1,515,413
EAT	27,172,615	46,210,315
R/C	1.29	1.42

Source: Primary data processed (2021); EBIT (earnings before interest and taxes), EBT (earnings before taxes), EAT (earnings after taxes), R/C (revenue/cost)

After company development, the net profit earned by the company increased by IDR. 160.125.000 with an R/C ratio of 1.42. Based on

a comparison of profit reports losses before and after the company's development, the company's profits have increased, as evidenced by the high R/C ratio.

3.1.5 Partial budget analysis

Table 5 shows the results of calculating the partial budget analysis at PT XYZ after a company development that generated an additional profit of IDR 17,502,300. A positive profit was obtained suggesting that the development is feasible.

Table 5: Partial budget analysis at PT XYZ

Loss	Amount (IDR)	Profit	Amount (IDR)			
Additional cost	111,366,972	Saved costs	112,399,272			
Lost income	143,655,000	Additional income	160,125,000			
Total loss	255,021,972	Total profit	272,524,272			
Additional advantage	17,502,300					

Source: Primary data processed (2021)

3.2 The financial aspect of increasing PT XYZ's revenue by optimizing halal frozen food digital marketing using the Tiktok application

Revenue and cost analysis was used to evaluate the financial situation before and after employing the Tiktok application for product marketing. Optimizing digital marketing activities using the Tiktok application was based on fundamental assumptions that consider current market conditions. These assumptions include1) The capital used for company development comes from personal funds, 2) The income tax rate is 15% based on Law No. 36 of 2018 on corporate income tax, 3) After expansion, net income will rise by IDR 212.056.850, 4) According to the journal published by Inayah & Fitri (2021), sales are expected to increase by 10% when using the TikTok application. The analysis in this study was conducted using British English, adhering strictly to spelling, specific terms, and phrases.

 Table 6: The investment and depreciation costs before efforts to optimize digital marketing using the TikTok application

	Description		unt Unit cost	Total cost	Depreciation	
1	Refrigerator	4	1,850,000	7,400,000	1,480,000	
2	Freezer	4	9,600,000	38,400,000	7,680,000	
3	Meat grinder	1	775,000	775,000	155,000	
	machine					
4	Bio mixer	1	1,595,000	1,595,000	319,000	
	machine		.,,	.,,	,	
5	Bowl cutter	2	9,200,000	18,400,000	3,680,000	
•	machine	_	-,,	,,	-,,	
6	Vacuum sealer	2	499,500	999,000	249,750	
Ŭ	machine	-	100,000	000,000	210,700	
7	Steaming	1	1,885,000	1,885,000	377,000	
	machine	•	.,000,000	1,000,000	0.1,000	
8	Philips food	2	399,000	798,000	159,600	
0	processor	-	000,000	700,000	100,000	
	machine					
9	Sausage filler	1	5,000,000	5,000,000	1,000,000	
0	machine	'	3,000,000	3,000,000	1,000,000	
10	Gas	5	22,000	110,000	55,000	
11	Scales	4	48,990	195,960	39,192	
12	Pan	32	20,500	656,000	218,667	
13	Teflon/pan/frying	5	133,500	667,500	333,750	
14	Pot	5	82,500	412,500	206,250	
14	Basin	3		204,000	102,000	
16	Sealware	8	68,000 10,300	82,400	41,200	
10	storage	0	10,300	02,400	41,200	
	container					
17	Stainless oil	3	22,000	66,000	22,000	
17	filterr	3	22,000	00,000	22,000	
18	Stove	3	185,000	555,000	111,000	
19	Gallon	12	19,000	228,000	45,600	
20	Grater	2	10,761	21,522	21,522	
20	Knife	2	15,000	105,000	35,000	
22	Cutting board	2	16,500	33,000	6,600	
23	Spoon	12	1,083	12,996	6,498	
23	Fork	12				
	Mini containers	3	1,083	12,996	6,498	
25 26	Tick	3 12	184,000	552,000	552,000	
20 27	Paintbrush	12	3,900	46,800	23,400	
		1	1,200	14,400	7,200	
28 29	Rack	2	2,875,000	2,875,000	575,000	
	Rubbish bin	2	650,000	1,300,000	260,000	
30	Table		15,809,000	94,854,000	18,970,800	
31 32	Thermometer	1	123,899	123,899	30,975	
	Office phone	3	325,000	975,000	195,000	
33	Printer	2	1,312,000	2,624,000	874,667	
34	Air conditioning	4 6	1,695,000	6,780,000	1,695,000	
35	Laptop		3,499,000	20,994,000	4,198,800	
36	Scissors	4	33,800	135,200	135,200	
37	Chair	15	439,000	6,585,000	1,317,000	
38	Plate	12	50,583	606,996	303,498	
39	Bowl	12	10,000	120,000	60,000	
40	CCTV	2	195,000	390,000	78,000	
Sourc	Source: Primary data processed (2021), CCTV (closed-circuit television)					

3.2.1 Investment costs

The startup costs incurred by the company are essential for initiating company operations. At PT XYZ, additional investment expenses are required before and after the company development phase to support growth, as shown in Table 7. The result showed that the investment and depreciation costs before and after company development at PT XYZ experienced and increased, as shown in Tables 6 and 8.

Table 7: Investment costs before and after business development					
Indicator Before development (IDR) After development (IDR					
Investment costs	216,661,169	218,701,069			
Shrinkage	41,596,991	42,060,466			

Source: Primary data processed (2021)

Table 8: The investment and depreciation costs after optimizing digital marketing
using the TikTok application

	Ising the Tik lok application					
	Description	Amount		Total cost	Depreciation	
1	Refrigerator	4	1,850,000	7,400,000	1,480,000	
2 3	Freezer Moot grinder	4 1	9,600,000	38,400,000	7,680,000	
3	Meat grinder machine	I	775,000	775,000	155,000	
4	Bio mixer	1	1,595,000	1 505 000	210.000	
4	machine	I	1,595,000	1,595,000	319,000	
5	Bowl cutter	2	9,200,000	18,400,000	2 690 000	
5	machine	2	9,200,000	10,400,000	3,680,000	
6	Vacuum sealer	2	499,500	999,000	249,750	
0	machine	2	433,300	333,000	243,750	
7	Steaming	1	1,885,000	1,885,000	377,000	
	machine		1,000,000	1,000,000	077,000	
8	Philips food	2	399,000	798,000	159,600	
Ũ	Processor	-	000,000		,	
	machine					
9	Sausage filler	1	5,000,000	5,000,000	1,000,000	
Ũ	machine	•	0,000,000	0,000,000	.,000,000	
10	Gas	5	22,000	110,000	55,000	
11	Scales	4	48,990	195,960	39,192	
12	Pan	32	20,500	656,000	218,667	
13	Teflon/pan/frying	5	133,500	667,500	333,750	
14	Pot	5	82,500	412,500	206,250	
15	Basin	3	68,000	204,000	102,000	
16	Sealware	8	10,300	82,400	41,200	
	storage					
	container					
17	Stainless oil	3	22,000	66,000	22,000	
	filter					
18	Stove	3	185,000	555,000	111,000	
19	Gallon	12	19,000	228,000	45,600	
20	Grater	2	10,761	21,522	21,522	
21	Knife	7	15,000	105,000	35,000	
22	Cutting board	2	16,500	33,000	6,600	
23	Spoon	12	1,083	12,996	6,498	
24	Fork	12	1,083	12,996	6,498	
25	Mini containers	3	184,000	552,000	552,000	
26	Tick	12	3,900	46,800	23,400	
27	Paintbrush	12	1,200	14,400	7,200	
28 29	Rack	1 2	2,875,000	2,875,000	575,000	
29 30	Rubbish bin Table	2 6	650,000	1,300,000	260,000	
30	Thermometer	1	15,809,000 123,899	94,854,000 123,899	18,970,800 30,975	
32	Office phone	3	325,000	975,000	195,000	
33	Printer	2	1,312,000	2,624,000	874,667	
34	Air conditioning	4	1,695,000	6,780,000	1,695,000	
35	Laptop	6	3,499,000	20,994,000	4,198,800	
36	Scissors	4	33,800	135,200	135,200	
37	Chair	- 15	439,000	6,585,000	1,317,000	
38	Plate	12	50,583	606,996	303,498	
39	Bowl	12	10,000	120,000	60,000	
40	CCTV	2	195,000	390,000	78,000	
41	Lighting	1	1,649,900	1,649,900	329,980	
	e: Primary data pro		<u> </u>			
	, , pro		,,	,	/	

3.2.2 Operational costs

Operational costs consist of fixed and variable costs before and after development PT XYZ. The table of operational costs can be seen in Table 9.

Table 9: Operational costs before and after business development					
Indicator	Before development (IDR)	After development (IDR)			
Total fixed costs	747,743,965	806,600,759			
Total variable costs	103,427,216	117,827,216			
Operational costs	851,171,181	924,427,975			

Source: Primary data processed (2021)

3.2.3 Revenue

Revenue represents the total income generated from the sale of products produced by the company. It is a critical metric for assessing the performance of a business and evaluating the effectiveness of various strategies. For PT XYZ, a comparison of revenue before and after the optimization of digital marketing using the TikTok application provides valuable insights into the impact of this strategy on the company's financial performance. able 10 illustrates the total revenue generated by PT XYZ before the implementation of digital marketing optimizations through TikTok. The revenue before optimization was IDR 2,120,304,500. This amount reflects the aggregate income from sales of 15 different product types over the course of the year. The breakdown of revenue by product is detailed in the table, showing the selling price, the number of units sold, and the income generated for each product. The largest contributors to revenue included Dori Fish Nuggets and Cheesy Melt Nuggets, each of which generated substantial income due to high sales volumes.

Table 10: Total Revenue before optimizing digital marketing using the TikTok application

No.	Commodity	Selling price	Sales	The income per year
1.	Dori fish nuggets	36,000	8,091	291,276,000
2.	Chicken katsu	41,000	366	15,006,000
3.	Mini kekean	45,000	1,119	50,355,000
4.	Beef meatball	75,000	1,138	85,350,000
5.	Cheesy brocarrot chicken nuggets	34,000	8,880	301,920,000
6.	Chicken meatball	43,000	2,080	89,440,000
7.	Cheesy melt nuggets	39,000	9,673	377,247,000
8.	Chicken sausage	55,000	1,980	108,900,000
9.	Chicken shrimp roll	36,500	2,633	96,104,500
10.	Original chicken nuggets	30,500	4,710	143,655,000
11.	Shrimp dim sum	51,000	1,857	94,707,000
12.	Egg chicken roll	32,500	6,603	214,597,500
13.	Beef nuggets	44,000	2,304	101,376,000
14.	Ekado	44,000	1,209	52,932,000
15.	Carrot chicken nuggets	29,500	3,303	97,438,500
	Total			2,120,568,500

Source: Primary data processed (2021)

After optimizing digital marketing using the TikTok application, total revenue was IDR 2.333.225.350. The detailed revenue after the company development is described in Table 11.

Table 11:	Total	Revenue	after	optimizing	digital	marketing	using	the	TikTok
application									

No.	Commodity	Selling price	Sales	The income per year		
1.	Dori fish nuggets	36,000	8,900	320,403,600		
2.	Chicken katsu	41,000	403	16,506,600		
3.	Mini kekean	45,000	1,231	55,390,500		
4.	Beef meatball	75,000	1,252	93,885,000		
5.	Cheesy brocarrot chicken nuggets	34,000	9,768	332,112,000		
6.	Chicken meatball	43,000	2,288	98,984,000		
7.	Cheesy melt nuggets	39,000	10,640	414,971,700		
8.	Chicken sausage	55,000	2,178	119,790,000		
9.	Chicken shrimp roll	36,500	2,896	105,714,950		
10.	Original chicken nuggets	30,500	5,181	158,020,500		
11.	Shrimp dim sum	51,000	2,043	104,177,700		
12.	Egg chicken roll	32,500	7,263	236,057,250		
13.	Beef nuggets	44,000	2,534	111,513,600		
14.	Ekado	44,000	1,330	58,515,600		
15.	Carrot chicken nuggets	29,500	3,633	107,182,350		
	Total			2,333,225,350		
0	a . Duine and shake music					

Source: Primary data processed (2021)

3.2.4 R/C ratio analysis

Table 12 shows the R/C ratio analysis before and after company development at PT XYZ. Based on Table 8, the value of the R/C ratio before company development was 2.4, showing that every IDR. 1 cost incurred will provide a revenue of 2.4. While the value of the R/C ratio after company development is 2.5, every cost incurred by the company of IDR. 1 will provide revenue of 2.5, showing that the company is feasible to run.

Table 12: Analysis	s of R/C ratios before and after bus	siness development
Indicator	Before development	After development

	noutor	Belore development	Anter development
TR	(IDR)	2,120,568,500	2,333,225,350
TC	(IDR)	851,171,181	924,427,975
R/0	Ratio	2.49	2.52
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Source: Primary data processed (2021); TR (total revenue), TC (total cost), R/C (revenue/cost)

3.2.5 Income statement

AAn income statement was used to compare income from before and after company development through the digital marketing application Tiktok. Profit and loss were made to determine the net profit before and after company development that has been carried out through the TikTok application. Table 13 shows the profit and loss analysis before and after PT XYZ's company development.

Indicator Before development (IDR) After development (IDR) Sale 2,120,304,500 2,332,625,35 Production cost:
Production cost:
Fixed cost 776,963,579 802,701,57
Variable costs 103,427,216 146,627,21
Total 880,390,795 949,328,79
production
costs
Earnings 1,240,177,705 1,383,296,55
before interest
and taxes
Interest costs 0
Profit before tax 1,240,177,705 1,383,296,55
Income tax 186,026,656 207,494,48
Net profit 1,054,151,049 1,175,802,07

Source: Primary data processed (2021)

After the company's development in optimizing digital marketing, the net profit increased by IDR 121.651.023. A comparison of the income statements before and after the company's development shows that the profits earned by the company increased, as evidenced by the increase in the R/C ratio. The company can optimize that way of marketing using digital marketing.

4 Discussion

The plan for optimizing digital halal frozen food marketing using the TikTok application generated a net profit of IDR 1,175,802,072 and an R/C ratio of 2.52. Meanwhile, the egg raw material pasteurization process generated a net profit of IDR 272,524,272 and an R/C ratio of 1.42 (table 14). Based on the comparison of the profit, loss, and the R/C ratio, the former had a greater net profit and R/C ratio. Therefore, optimizing digital halal frozen food marketing using the TikTok application is prioritized over pasteurizing raw egg ingredients.

Table 14: Table of	f profit and loss analysis cor	nparison and R/C ratio
Indicator	Egg pasteurization	Halal frozen food digital
		mayleating uning the Til/Tel/

	process	marketing using the Tik lok application
Net profit (IDR)	272,524,272	1,175,802,072
R/C ratio	1.42	2.52

Source: Primary data processed (2024), R/C (revenue/cost)

Conclusion

In conclusion, the result of this study showed that optimizing digital halal frozen food marketing using the TikTok application and pasteurizing raw egg ingredients to increase revenue are feasible. However, based on financial analysis, prioritizing digital marketing of halal frozen food on TikTok is recommended over pasteurizing raw egg ingredients to increase income.

This study has several limitations, such as using the assumption of additional capital in optimizing the sale of digital halal frozen food without taking bank loans. Furthermore, the study was conducted during the COVID-19 pandemic, when the economic situation was unexpected. Future studies need to be carried out using capital from bank loans made during the Covid-19 endemic period when the economy returns to normal. It was suggested that similar companies optimized digital marketing using the TikTok application. This study contributed academically to the scientific feasibility of digital marketing efforts using the TikTok application.

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Conflict of Interest

The authors declare no conflict of interest.

References

Anggraeni DA, Widjanarko SB, Ningtyas DW. The proportion of porang flour (amorphophallus muelleri blume) cornstarch on the characteristics of chicken sausages. Journal of Food and Agroindustry. 2014;2(3):214-223.
 Arifeen SR. Icepac Limited: Strategic Growth Choices for an SME in the Frozen Food

Industry. Asian Journal of Management Cases. 2019;16(1):86-99.

- Arora M, Kumar R, Bangwal D, Ahmad V, Negi S. An empirical study of cold chain
- Arora M, Kumar R, Bangwal D, Ahmad V, Negi S. An empirical study of cold chain issues and performance: Applying structural equation modelling. Journal of Food Process Engineering. 2023;46(12).
 [BPS] Central Bureau of Statistics for the City of Bogor. Bogor City in Numbers. Bogor City: Central Bureau of Statistics for the City of Bogor. 2019.
 Chang HH, Meyehfoer C. COVID-19 and The Demand for Online Food Shopping Services: Empirical Evidence from Taiwan. American Journal of Agricultural Economics. 2020;103(1).
 Chenarides L, Mark M, Timothy JR. COVID-19 and Food Supply Chains. Applied Economic Perspectives and Policy. 2021;43(1):270–279.
- Economic Perspectives and Policy. 2021;43(1):270–279. Cleland DJ. The history of food freezing. ASHRAE Transactions. 2020;126:616–621. Available at: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095445382& partnerID=40&md5=4eae0028d555a6f93ca1511c55b1fbe6.
- Bandhi P, Nindyantoro, Darmawan I. Multidimensional Analysis of Sustainable Food Agricultural Land Policy In Bogor City, West Java, Indonesia. Horizon: Journal of Policy RD. 2022;16(1):1-28.
 Gandhi P, Purwana IS. The Financial Feasibility of Establishing PT XYZ Beef Sausage Business in Bogor City, West Java, Indonesia. PETERPAN (Journal of Applied Animal Husbandry). 2023;5(1):30-40.
 Candhi P, Mayang O, Muhapamed K, Anima P, Einancial Feasibility Analysis of Efforts.
- Candhi P, Wawan O, Muhammad K, Aniisa R. Financial Feasibility Analysis of Efforts to Increase Strawberry Producers' Income During the Covid-19 Pandemic in Magelang, Central Java. Journal Of Management Small and Medium Entreprises (SME's). 2022;15(2):225-247. yah DS, Fitri A. Efektivitas Media Tiktok dan Influencer Mendongkrak Penjualan Lippie Serum Raecca Dipandemi Covid 19. Jurnal Ekonomi Dan Bisnis (EK&BI).
- Inayah

2021;4(1):345-353.

- Food Product Development Business at Umkm Indomitra Cipta Pangan. Familiar Champion: Journal of Social Sciences. 2022;7(1):300-310. Isroni
- GROUP; 2014. Kasmir.
- Putri SA, Tamami NDB. Factors Influencing Consumer Behavior in Purchasing Frozen Food at UD Mitra Abadi, Maduran District, Lamongan Regency. Journal of Agriscience. 2021;2(1):239–254.
- Rahardjo CR. Factors That Become Consumer Preferences In Buying Frozen Food Products. Journal of Business Management and Start-Up. 2016;1(1):32–43.
- HS. Radio-frequency thawing and tempering. Rattan NS. Ramaswamy Radio-Frequency Heating in Food Processing: Principles and Applications. CRC Press; 2014. p. 247 – 258.
- Rika D, Purba T. Consumers Buying Frozen Food in Batam City. Scientia Journal. 2021;3(4):1-7.
- Santoso I, Mustaniroh SA, Pranowo D. Product Familiarity And Interest In Buying Frozen Food: The Role Of Product Knowledge, Packaging And The Social Environment. Journal of Family and Consumer Sciences. 2018;11(2):133-140.
- la AE, Chamalida KN. Business Analysis and Consumption Trends in Bangkalan Regency Society for Frozen Food During the Covid-19 Pandemic. ACCOUNTABILITY: Scientific Journal of Economic Sciences. 2021;14(1):52–68. Sula
- Yunitasari FI. Bahruddin M. Dewanto TH. Diva Snack Frozen Food Promotional Media Design as an Effort to Improve Brand. Journal of Art Nouveau. 2014;2(1).