

Factors affecting the challenges faced by local bakeries in Calapan City relative to food price increase

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Abstract

This study examines the effects of increasing food prices on bakeries in Calapan City. The study investigates the extent of food price hikes (technological, food waste, and raw material factors) and the difficulties encountered by bakery businesses (such as production, pricing strategies, and profitability) through questionnaires conducted with 30 bakery owners. Bakery owners are aware of the significant financial challenges caused by increased raw material prices, but their specific difficulties are less related. The study found a negligible correlation between food price increases and bakery difficulties. The data suggests bakeries are using a range of methods to handle the situation. Some bakeries focus on innovation and value, while others change their prices or try new marketing approaches. With that, bakeries should implement a holistic strategy that addresses multiple concerns and stimulates creativity. Future studies could examine how successful bakeries are at handling rising food prices. This research could examine production process optimization, supplier agreements, and targeted marketing. Studying the psychological factors that drive bakery owners' pricing decisions could help overcome price aversion. Lastly, to fill the gaps in this study, the researchers proposed an infographic containing tips on how bakery owners deal with the food price increase.

Keywords: food price increase, production, pricing strategy, profitability, local bakeries

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1. Introduction

A food price increase is when the cost of food items rises over a specified period. It denotes an increase in the prices of a wide range of food products, including flour, sugar, and other baking ingredients. Food price increases can hurt consumers' wallets as well as some food establishments, such as bakeries. The bakery is a food business that sells baked goods such as biscuits, cakes, pies, and so on. Problems are going on everywhere, whether they're inside the establishment or outside it. The fact that inflation is now affecting all sectors of the economy constitutes one of the key challenges faced by the Philippines. The increase in the cost of baking materials is making baked goods more expensive. Inflation has led to a reduction in the employment of some bakeries. To survive, several bakeries have been forced to raise their prices. How bakery owners respond to the rising food prices that have a significant impact on their business needs to be investigated.

Business establishments like bakeries are common. Products from a commercial bakery are often offered to clients in bulk. In India, many small bakeries survive by providing their products to consumers immediately. Many families are supposed to live there. Industrial bakeries rarely provide customers with the safe, hygienic, and individualized products they desire. Home bakers can increase their popularity by actively promoting themselves on social media. Similar to the quality control of commercial bakeries in India, a commercial setup necessitates local governments, licenses, and health procedures to operate the firm as it grows. There are a lot of hurdles to jump through to keep up with the product's demand. High-quality goods are the priority at these smaller, less structured bakeries.

According to the article written by Crystal Futrell (2022), in Kansas City USA flour, the baking industry's main component, rose in price due to reduced output, which hit a nine-year low in 2021. US and worldwide wheat futures rose when Russia invaded Ukraine in late February. Bread and flour costs reached 14-year highs in April. Following Ukraine, Russia, Turkey, and the UN's humanitarian attempts to restore grain exports from Ukraine's beleaguered Black Sea ports, prices fell over the summer, but global tensions kept prices high. In 2022, the greatest HPAI outbreak in history devastated eggs, another baking mainstay. HPAI incidences began in February and haven't stopped, driving shell egg prices to five all-time highs. The USDA said that a dozen eggs in October cost \$2.64, up 59% from \$1.66 the previous year. Dried whole egg prices jumped 259% to \$13.65 a pound from \$3.80 in 2021. Sugar prices fluctuated in 2022. In April, one major beetroot sugar supplier announced force majeure, driving sugar prices to their highest level since 2011. Sugar imports were boosted during the summer to augment supplies because restricted supplies and rainy weather delayed beetroot planting in the Upper Midwest, yet prices rose to multi-decade highs. Butter prices rose this year. Demand and restricted supply drove CME Group butter prices to record highs near \$3.25 per pound in the autumn. Retail butter prices jumped 20% to \$4.32 a pound in October 2022 from \$3.61 in October 2021, according to the USDA. October CME Group wholesale butter was \$3.14, up 62% from \$1.94 a year earlier.

In addition, according to an article written by Adeline Tan et al. (2022), it is becoming increasingly difficult for food vendors and bakers in Singapore to maintain reasonable prices for their wares in the face of rising pressure on their overall operating costs. In the most recent few months, not only have the prices of raw commodities such as cooking oil skyrocketed, but also the prices of other things, such as labor or utility bills, have dramatically increased. The price of Brent crude oil has increased by 33 percent, while the price of natural gas has increased by 80 percent so far this year as a direct result of the war. In addition to being a big worldwide exporter of grains and edible oils, Russia is also one of the world's top exporters of natural gas and oil. Ukraine is also one of the world's main exporters of these two commodities. After being negatively impacted by the increasing costs of commodities such as eggs, local bakeries are likewise finding it difficult to keep their prices

stable. However, the sharp increase in the price of wheat that has occurred ever since India restricted the export of its wheat has had very little to no effect on bakeries. Mr. Alfred Chan, proprietor of the Clementi bakery Fredo's, stated that the price of flour has increased by around 60 cents per kilogram, but that this will have little effect on him because flour can be purchased in large quantities and held for a considerable amount of time provided it is properly stored. Mr. Chan noted that the cost of a tray of eggs has increased from its previous level of approximately \$3.80 to approximately \$5. There has been a general upward trend in the prices of most basic materials, including butter.

Moreover, according to an article in the Phil Star Global, as the conflict in Ukraine drives up wheat prices and a weaker peso raises the price of imported edible oil, many Philippine bakers are reducing the size of a popular breakfast roll to combat higher inflation. The slightly sweet, pillow-soft "pandesal" that Filipinos frequently dunk in coffee or load with cheese used to weigh 35 grams at Matimyas Bakery, a bread manufacturer in Manila's suburbs. Inflation reaches a new three-year high in June, prompting calls for a larger interest rate increase. Increasing food prices pose a challenge for content creators. In recent months, however, as the price of local and imported ingredients increased, co-owner Jam Mauleon progressively reduced the size of the roll known as "poor man's bread" due to its low price — to around 25 grams to avoid increasing the P2.50 price (Mikhael Flores, 2022).

Furthermore, according to the Philippine Statistics Authority (2023), Oriental Mindoro had higher inflation rates for the following food items in 2023: maize, 20.8% from 19.5%; milk, other dairy products, and eggs, 22.6% from 21.9%; fruits and nuts, 15% from 11.3%; and vegetables, tubers, plantains, cooking bananas, and pulses, 26.0% from 25.0%. Lower year-over-year growth rates were observed for the indices of oils and fats at 9.9 percent, down from 11.7 percent the previous month; sugar, confectionery, and desserts at 32.3 percent, down from 34.3 percent; and ready-made food and other food products not otherwise classified at -2.6 percent, down from -2.0 percent. The index for flour, bread, and other bakery products, pasta, and other cereals remained unchanged at 8.6 percent in March 2023.

Few studies have been done on how the rising cost of ingredients affects bread management in other places. The changing prices of key products like flour, sugar, and butter have a big effect on how profitable bakeries are and how they set their prices. The research aims to identify the relationship between the challenges faced by local bakeries in Calapan City and the food price increase. The study intends to contribute to knowledge enhancement in bakery management and maintain contact with the market even if food prices rise through quantitative research methods. This research, which was done by students in the hospitality industry, is useful, has to do with giving good service, and backs up the researchers' chosen career path. The results of this study will help improve the performance of local bakers and give people a better idea of how to deal with the rising cost of food.

2. Theoretical Support

The Theories that serve as the foundation of the study are (1) The Mark-up Theory of Inflation proposed by A.W. Phillips (1958) (2) The Demand-pull Theory proposed by John Maynard Keynes (1930) and (3) the Theory of Inventory Management proposed by Whiting, T. M (1957)

The Mark-up Theory of Inflation proposed by A.W. Phillips (1958) was developed by Professor Ackley but Holzman and Duesenberry have produced formal models. Workers and businesses discuss pay and prices to set them. Product administration pricing includes direct material and labor costs and a predetermined markup that includes the profit margin. Labor also supports salaries based on a predetermined percentage rise over the cost of living. The inflation model can result in a stable, rising, or falling price level, depending on enterprise and labor markups. If both parties use percentage markups, inflation will accelerate faster than if they use fixed monetary markups. Each participant setting prices based on their payments will cause significant and persistent inflation. If a firm raises prices to maintain its profit margin, other firms will pay more. Thus, these firms will boost their

pricing, creating a cycle of rising costs and prices that affect other firms. When people buy rising-priced goods, their cost of living rises. This raises wages, contributing to inflation. If job efficiency and productivity improve, the inflationary spiral can stop.

This theory will be applied to this study to provide some insights into business strategies for local bakeries that are confronting issues related to inflation. The theory will be applied to provide a framework to understand the driving forces behind inflation, and it will be of assistance to the researchers in their efforts to think of and create a solution based on the outcomes of the data that will be collected. According to Maddy Osman (2023), rising productivity indicates that you can do more work and produce more goods in the same amount of time. If you want to finish the same amount of work in the same period, increasing your efficiency means using fewer resources (or less overall input). To summarize, the Mark-up Theory is useful for this study since it suggests that the inflationary spiral can be broken if there is an increase in work efficiency as well as productivity.

The demand-pull theory proposed by the renowned British economist John Maynard Keynes (1930) and cited by Jeff White (2022) asserts that alterations in aggregate demand serve as the primary catalysts for oscillations in economic activity. According to the aforementioned idea, an escalation in consumer spending or investment engenders a resultant upward pressure on the aggregate demand for goods and services. The subsequent rise in demand catalyzes firms to expand their production, resulting in heightened output, employment opportunities, and overall economic expansion. On the contrary, a reduction in expenditure generates downward pressure on demand, leading to a decline in production and an economic deceleration. The demand-pull theory, which serves as a fundamental principle in Keynesian economics, has exerted significant influence in influencing economic policies, particularly in times of economic downturns.

The purpose of this study is to apply this theory in order to shed light on the factors that are impacting the success of the local bread business. In accordance with the demand-pull theory, a rise in the quantity of goods and services that consumers require will result in an increase in the cost of those products and amenities. This theory makes reference to a number of aspects, one of which is the dynamics of the present market. It is possible that the substantial price increase can be attributed to the severe competition that occurs within the baking industry. It is possible that if multiple bakeries experience an increase in demand at the same time, this could result in price wars between the bakeries or the use of demand-based pricing strategies to get a larger market share. Both of these scenarios would add further to price increases. The goal for which this theory was formed was to serve as a guide for discovering the elements that influence the local bakeries. In a nutshell, this theory will work as a guide for determining those factors. Additionally, this will be of assistance to businesses in the process of formulating strategies to deal with challenges that are associated with an increase in the cost of food.

The theory of inventory management” which was proposed by Whitin T.M. (1957) and cited by Shirajul Islam Ukil et al., (2016), is a collection of guiding concepts, models, and processes for the administration of inventories in a manner that is both effective and efficient. Back in 1957, Whitin was the one who initially put up this notion. It encompasses a wide range of strategies and procedures for the purpose of maintaining and controlling the levels of inventory that are present within an organization, as well as for the purpose of keeping track of such levels. Achieving a balance between decreasing expenses associated with having inventory (such as storage costs, obsolescence, and spoilage) and optimizing customer service levels (such as preventing stock outs and assuring timely delivery) is the primary goal of this theory. This theory hopes to accomplish this balance by minimizing costs associated with having inventory. In order to attain this equilibrium, this theory aims to find a compromise between lowering the expenses associated with retaining inventory (such as storage costs, obsolescence, and spoilage) and maximizing the potential for profit. Businesses are provided with the ability to determine the appropriate quantity of inventory to order or make, the ideal time to order or generate it, as well as the capability to control and monitor the quantities of inventory that they have on hand. In addition to this, it strives to achieve the highest possible level of customer satisfaction while simultaneously attaining the lowest possible expenses, the highest possible operational efficiency, and the highest possible inventory levels. These theories and models can be utilized by organizations in order to build efficient inventory management strategies

that are matched to their specific requirements as well as the standards of their industry. This can be accomplished by employing these theories and models.

In the framework of this study, this theory is going to be utilized in order to provide assistance to local bakeries in addressing issues that have arisen as a result of an increase in the cost of food. In order to aid local bakers in overcoming the challenges that have been brought about by the increase in the cost of food, it is of the utmost significance. It is possible for bakeries to successfully manage the effects of rising food prices and maintain their profitability by managing their expenses, accurately anticipating demand, rotating their stock, forming partnerships with their suppliers, and making the satisfaction of their customers their first priority. Bakeries in the surrounding area will be provided with a methodical approach to address the issues that are associated with pricing increases once this idea is put into effect. A strategy of this kind will be made available as a consequence of this.

Research Questions - The research study will specifically aim to answer the following research questions:

- What is the level of manifestation of food price increase in terms of technological factors, food waste and loss factor, and raw material cost factor?
- What are the challenges faced by local bakeries in terms of, production, pricing strategy, and profitability relative to food price increase?
- What is the relationship between the food price increase and challenges faced by local bakeries in Calapan City?

3. Literature review

3.1 Food Price Increase Technological Factors, Food Waste and Loss Factor and Raw Material Costs Factor

Technology improvements, food waste and loss, and raw materials cost factors like utilization of resources and operational costs all affect how rising prices there are in bakeries. As stated by Robert Ayres et al. (2013), increasing energy imposes physical substitution constraints. They assert that energy is more essential than its small cost share indicates. Since peak oil and environmental laws will lead to higher energy prices, sustained economic development along with previous patterns cannot be assumed. In addition, Shukalovych (2013) examines food marketing chain pricing fluctuations and bakery product price trends. The study indicates that rising food prices, high operating costs, and advancements in technology may influence bakeries' food price increases. Moreover, Okimoto (2015) implies that economic expansion, population increase, wealth gap, and food safety may increase food prices. Furthermore, Shahraki (2021) explores the technical efficiency of bakeries and finds that variables such as wheat and manpower have a positive impact on the average technical efficiency of bakeries. Besides that, as stated by Ervin (2017), the use of automation continues to rise throughout several businesses, including the bread industry. Implementing automatic control systems (ACS) while providing adequate priority to effectively organize production in a bakery business can have a positive impact on the overall quality of products as well as the increase in profits.

The technology could raise food consumption and prices. According to Sharif (2018), food product development has led to new, innovative, and high-value goods to meet consumer wants and enhance food consumption. In addition, bakeries are likely dealing with bread cost difficulties due to rapid inflation and growing raw material costs. About this, Sitorus et al. (2021) evaluate bakeries' target cost readiness. They found that bakery readiness can be determined by setting selling prices to compete with competitors, setting profit targets, and reducing inefficient production costs or value engineering. According to Nwanya (2015), too many operational costs are adversely affecting the bakery industry by bringing up bread prices and providing inadequate earnings to bakers. Osipova (2020) argues that increasing the use of innovative technology in the baking industry may boost performance while reducing expenses. Meanwhile, the research conducted by

Brancoli, et al. (2021), the study found areas of concern in households and retail, especially the supplier-retailer interface. No-cost "take-back agreements," where shops pay for unsold bread, increased waste. A sustainable bread supply chain may require business model changes.

The mass balance method is suggested as the most suitable way of assessing food losses in the bakery and confectionery business by Goryska-Goldmann's (2021) study. For more on food waste and loss, Lebersorger (2014) quantifies food loss rates in Austrian retail outlets involving bread and pastry and indicates waste prevention measures including refusing returns and boosting social service contributions. Finally, Capone (2016) highlighted the high bread waste in selected Mediterranean Arab nations and the need for immediate consumer awareness activities. To sum it up, automation and efficiency can raise profits. Innovation in food products increases prices and demand. Pricing must be guided by reducing operating expenses and food waste.

3.2 Challenges Faced by Local Bakeries Production, Pricing Strategy, and Profitability

Production is the process of turning raw materials into a new product. According to Satya Shah, E. N. Ganji (2017), emphasizes the need for senior management to support the transformation and for employees to receive ongoing training to boost motivation and productivity. Its groundbreaking study examines lean's implications on the entire supply chain, not just bread. These insights can help food firms convince suppliers to adopt lean principles, especially Just-in-Time, Value Stream Mapping, and 5S. Production will run more smoothly and efficiently. In addition, COVID-19 devastated food establishments worldwide, making it hard to manufacture bread, sell commodities, and satisfy consumers. Rising ingredient prices, unreliable suppliers, and late deliveries damage product quality, service, and sales. Despite the issue, bakery operators solved it by streamlining manufacturing, putting up online sales platforms, and enhancing sanitation to protect customers. This study intends to help bakery owners improve service, output, and resilience after COVID-19 by providing these crucial findings and solutions, (Carl Dominic Virginio, et al., 2022). As stated by (R. Berruto et al., 2021), European bakeries waste food and use lots of electricity, thus Pro4Bake helps. Inefficient scheduling and planning cost bakeries money and hurt the environment. An AI-optimized flow-shop model powers Pro4Bake's smart production-planning tool. The tool reduces production costs and environmental impact by minimizing idle time and maximizing machine performance. The device decreases food waste by considering user preferences and product availability. An easy app, Pro4Bake helps SME bakers optimize output, save energy, and be green. This benefits bakeries and could become a sustainable European agri-food production model. Hamilton's (2020) study emphasizes bakery pricing's complexity and the necessity for strategy. It recognizes consumer whimsy and the complicated relationships between bakeries, retailers, and food makers. These insights allow bakeries to create pricing strategies that reflect customer value, market competition, and the changing industrial landscape to ensure long-term profitability. By comprehending these complex elements, bakeries may create lucrative and customer-pleasing pricing structures. Bob Sims (2015) states that it is acceptable that businesses would be reluctant to raise prices in case the change had an unexpectedly negative impact on revenue, but doing so for the wrong reasons might end up affecting profits. However, Parker Jones (2021) states that to determine the right price for a good or service, a business must have a thorough knowledge of its product, their target market, and their competitors.

According to Cadillo-Hidalgo (2021), Peruvian bakery SMEs face high production costs and unmet growth potential due to low efficiency and obsolete procedures. This study introduces a new approach that combines systematic layout planning (SLP) with work-study to maximize resource use and efficiency. In a bakery, the model increased production from 1.22 to 1.45. This success story encourages Peruvian bakery SMEs to adopt new practices, save money, and create a brighter future. In Portugal's agri-food industry, the bakery and pastry sector is crucial, and Morais (2019) found a strong correlation between wealth development, productivity, and efficient processes, technologies, and quality. The study characterizes energy and technology use in this sector to identify and execute competitiveness and sustainable growth strategies. In addition, Kardinasari's (2023) study goes into Pinnamon's difficulties, figuring out flaws in their marketing mix, particularly pricing. Customers find Pinnamon's cost to be expensive in comparison to the value provided, according to survey data and in-depth

interviews. This disparity between price and perceived value must be addressed to attract and maintain customers. Moreover, Kumar and Tapar (2021) examine FMCG product distribution and business-type franchising. Kanwar had to decide whether to franchise for geographic expansion or build brand awareness through product distribution when investors expected a precise plan within days. A quickly developing retail bakery must choose a growth strategy between timing and efficiency. Furthermore, Gabriela Trnková (2021) examines the intricate relationship between profit and social impact. Greyston's objective requires profit, but the research shows that prioritizing ethics and social responsibility may attract customers, improve collaborations, and contribute to long-term financial success. Grayson's story shows how companies can succeed financially and improve the community.

In the bakery industry, production, pricing strategy, and profitability are impacted by the food price increase. Fritz Nelson (2022) states that businesses deal with rising costs for materials and the chance of raising customer pricing during prolonged inflation. Companies may go out of business if growing costs and customers' refusal to pay more pressure them. Smart companies study inflation's effects and seek ways to take advantage of or work around them to improve their market position. Matthew Gillman (2021) states that most bakeshop managers suffer from making a profit because they are reluctant to raise prices when the cost of raw materials rises. Most think costing lengthy buyers more would turn them off or that they wouldn't get any clients. That is not consistently accurate. Business owners must charge affordable prices to earn money. They should be just right for sustaining customers and increasing revenue. Josh Sosland (2022) believes that while households with lower incomes are consuming inexpensive baked goods, an ongoing trend toward premium baked goods is expected to last. Even while households with lower incomes eat inexpensive baked goods, there is an impulse to buy higher-quality and premium bread products. This means that families with smaller incomes may eventually buy premium bread.

3. Methods

Table 1

Reliability Analysis Table using Cronbach Alpha

Variable	Cronbach α	Description	Interpretation
Food Price Increase	0.92	Excellent	Very Reliable
Challenges Faced by Local Bakeries	0.88	Good	Reliable

Data Collection - The researchers will use survey methods where printed questionnaires will be distributed to the respondents who will be asked to fill them out in person at their establishment. The researchers will give respondents a chance to ask any questions they might have while filling out the survey and to add their comments at the end of the survey if they wish. The fieldwork will take place over a half-month period.

Ethical Consideration - Before the conduct of the study, the respondents were properly informed and the vital concepts of customer experience design were explained. The respondents signified their consent and voluntarily participated in the conduct of the study, wherein the data gathered were treated with confidentiality. Before the study was conducted, the respondents received briefings from the researchers' and the purpose of the study was detailed and properly explained. Through informed consent, the respondents willingly decided to take part in the study. Data privacy is urgent and complex, to guarantee anonymity, secrecy, and the avoidance of potential harm, all information was handled by RA 10173, known as the Data Privacy Act with the utmost confidentiality.

4. Results and Discussion

Food Price Increase - Table 2 explores the perspectives of local bakery owners in Calapan City regarding the impact of rising food prices on their businesses through three key factors: technological, food waste and loss, and raw materials cost.

In terms of technological factors, bakery owners perceive modern technology as important for improving operations (M = 3.80). This means that the owners of the bakery have a strong belief in the value of technology. However, through the use of technology, their bread production is effectively organized (M = 3.47), suggesting that some bakery owners may not yet fully experience the organizational benefits of technology. This is in line with Robert Ayres et al. (2013) who proposed that technological substitutes are necessary to keep up with growing energy costs. These data are consistent with that idea. The impact that energy has on bakery operations can be enormous, even though it may appear to be a very small investment. Furthermore, Shukalovych (2013) highlights the fact that technological developments are one of the elements that contribute to the rise in prices of bakery goods. Bakeries that want to maintain their competitive edge may need to make investments in technical advancements, which could result in increased prices.

The preference for practical solutions is highlighted by the fact that respondents are in complete agreement (M=3.60) that it is essential to lessen the amount of waste produced by bakeries by using accurate measurements and calculations. Goryska-Goldmann’s (2021) recommendation of the mass balance approach for accurate waste assessment, highlights the importance of utilizing strategies that are driven by data. On the other hand, the statement that was received (M= 3.37) indicated that there was less enthusiasm for this potentially time-consuming procedure. A statement was about periodically taking inventory to minimize overstocking. This discrepancy in attitude may be the result of perceived difficulties such as higher staff workload. Nwanya (2015) notes that excessive operational costs can be a burden for bakeries.

The fact that the mean score for the impact of raw material costs on profitability is (M = 3.73) illustrates that owners of bakeries are acutely aware of the significant impact that raw material expenses have on the financial well-being of their businesses. They will see a direct reduction in their profits if these costs continue to rise. On the other hand, the lower score of (M = 3.30) about negotiating with suppliers for lower costs implies that some bakery owners could not be actively engaging in supplier talks, which could result in them missing out on possibilities to save money. This suggests that they may be reluctant to actively manage this essential component of their organization or that they are not putting enough emphasis on doing so. According to Okimoto (2015), these findings are consistent with his hypothesis that factors such as economic expansion and population growth can be the driving force behind rising food prices. Because of the escalating prices of raw materials, bakeries that operate in such circumstances are under a tremendous amount of strain. Furthermore, Nwanya (2015) brings attention to the problem of high operational costs that are impacting the bakery business and causing an increase in the price of bread. When it comes to reducing the impact of growing raw material costs, bakeries that actively negotiate with their suppliers and implement cost-saving initiatives can lessen the impact.

To sum it up, the overall mean score of (M=3.57) represents a strong agreement across all factors, indicating a significant concern about the impact of rising food prices on local bakeries. The data reveals a complex interplay between various factors. Bakery owners are aware of the challenges and are trying to implement strategies to address them. However, there are still areas where improvement could be made, such as optimizing technology use, increasing negotiation efforts, and potentially strengthening inventory management practices.

Table 2

Level of manifestation of Food Price Increase Factors on Local Bakeries

Technological Factor	Mean	SD	VD
I believe it is important to use new baking equipment.	3.80	0.41	Strongly Agree
I think technology can improve customer experiences by enhancing food quality and availability.	3.63	0.49	Strongly Agree
I am aware that advancements in technology may influence our bakery’s food price increases.	3.67	0.48	Strongly Agree
I believe that using innovative technology can boost our performance while reducing expenses.	3.73	0.45	Strongly Agree
I believe that through the use of technology, our bread production is effectively organized.	3.47	0.51	Agree

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Food Waste and Loss Factor	Mean	SD	VD
I believe that it is important to use measurements and calculations for baked goods to reduce food waste.	3.60	0.50	Strongly Agree
I am in favor of refusing the return of baked products from customers without a valid reason to reduce food waste and loss.	3.43	0.63	Agree
I believe it is important for us to have a proper method of handling and re-innovating excess or unsold baked products.	3.50	0.51	Strongly Agree
I am a proponent of conducting inventory regularly to prevent overstocking.	3.37	0.49	Agree
I think it is vital to train our staff on how to handle and reduce food waste.	3.57	0.50	Strongly Agree
Raw Materials Cost Factor	Mean	SD	VD
I believe that the cost of raw materials significantly impacts my bakery's profitability.	3.73	0.45	Strongly Agree
I believe that it is important to regularly monitor the prices of raw materials to, ensure cost-effectiveness.	3.57	0.50	Strongly Agree
I actively negotiate with suppliers to lower the cost of raw materials.	3.30	0.47	Agree
I consider quality when selecting raw material suppliers.	3.53	0.51	Strongly Agree
I regularly review and monitor the prevailing market price of various bakery ingredients and am willing to change its brand to reduce materials costs.	3.67	0.48	Strongly Agree
Overall Mean	3.57		Strongly Agree

Challenges faced by local bakeries - The table below shows the perspective of bakery owners on the challenges that their businesses faced in terms of production, pricing strategy, and profitability relative to food price increases. The survey provides contrasting perspectives on the issues that are associated with bakery production. Respondents are in complete agreement ($M = 3.63$) that rising food prices have a major impact on production costs. This finding is in line with the concerns expressed by Satya Shah and E. N. Ganji (2017) regarding potential disruptions to entire supply chains caused by volatility in the prices of ingredients. On the other hand, the statement that the difficulties in production planning owing to rises in food prices obtained the lowest score ($M = 3.33$), which suggests that there is some uncertainty regarding the influence that it has on operational planning. According to Carl Dominic Virginio et al. (2022), who recorded bakery businesses altering production techniques and utilizing internet platforms to overcome COVID-19 interruptions, this variance could be due to bakeries implementing distinct coping mechanisms.

Bakery businesses that are dealing with rising food costs appear to place a higher priority on innovation than they do on simple price increases. Even though they are suffering rises in the cost of food, the respondents are in complete agreement that they should innovate value-added goods in their bakeries ($M = 3.70$). This is consistent with the point that Hamilton (2020) made about the complexity of bakery pricing and the significance of strategies that take into consideration the value that customers receive. As the findings of Kardinasari's (2023) research on Pinnamon's pricing problems reveal, bakeries can retain loyal customers by introducing items that are both distinctive and premium. Additionally, these products have the potential to fetch higher prices for their specialized offerings. It is interesting to highlight that the statement of offering bargains and explaining price hikes obtained ($M=3.40$), suggests that there is some uncertainty over the success of the strategy. A potential reason for this is that there are concerns about reducing profit margins through the use of discounts or that there is disagreement among customers about the reasons for increasing prices.

The growing rate of Inflation poses considerable issues for bakeries in terms of pricing. It was found that bakery owners highly agreed with the idea of raising the pricing of bakery products to prevent a loss of revenue ($M = 3.57$). This finding highlights the significant importance that price adjustments play in maintaining profitability during periods of inflation. The fact that this is happening demonstrates that the pricing strategies are willing to be modified and that the financial reality is recognized. Nevertheless, the fact that it is simple to modify prices to reflect increases in food production ($M = 3.30$) indicates that there may be challenges in putting into effect the necessary price adjustments. This could be due to fears about customer reaction or a lack of clear

pricing methods that make modifications easy and justifiable. Both of these factors combine to make this situation more likely. Cadillo-Hidalgo (2021) suggests a novel approach combining systematic layout planning with work-study to maximize resource usage and efficiency in Peruvian bakeries based on these findings. This can result in significant cost reductions, allowing bakeries to remain profitable in the face of rising food prices. In the Portuguese baking business, Morais (2019) emphasizes the importance of technology and efficient operations. Bakeries can increase production and profitability by implementing energy-saving technologies and optimizing operations.

To sum it up, the overall mean of ($M=3.49$), along with the dominant agree response across most statements, paints a clear picture of the significant challenges faced by local bakeries in Calapan City. Rising food prices are the common thread, impacting every aspect of their business, from production costs and planning to pricing strategies and ultimately, profitability.

Table 3*Extent of Challenges Faced By Local Bakeries*

Production	Mean	SD	VD
I believe that increasing price of food ingredients significantly impact the production cost of baking.	3.63	0.49	Strongly Agree
I believe that food price increase make my production planning difficult for my bakery.	3.33	0.55	Agree
I experience delays in production due to food price fluctuations.	3.50	0.57	Strongly Agree
I analyze production costs regularly to reduce costs in my bakery.	3.43	0.57	Agree
I consider making the customer-requested products quickly and efficiently.	3.43	0.57	Agree
Pricing Strategy			VD
I always consider competitors' prices.	3.53	0.57	Strongly Agree
I am reluctant to raise prices if the sales negatively impact my business revenue to increase of production cost.	3.50	0.63	Strongly Agree
I innovate value-added products in my bakery while experiencing food price increase.	3.70	0.47	Strongly Agree
I offer deals and explained to regular customer's the reason in increasing of each baked product prices.	3.40	0.56	Agree
Increasing of bakery items due to rising of ingredients cost may put my bakery at risk.	3.60	0.56	Strongly Agree
Profitability			VD
I find it difficult to set competitive prices as food costs continue to rise.	3.40	0.67	Agree
I am unable to easily adjust our baked product prices to reflect food price increase.	3.30	0.60	Agree
I believe that utilizing marketing strategies will help boost profitability for my business.	3.53	0.51	Strongly Agree
I am seeking new products for my bakery in order to maintain profitability despite the rising food prices.	3.47	0.51	Agree
I believe that I need to increase the selling price of my bakery products in order to avoid losing of revenue due to inflation.	3.57	0.50	Strongly Agree
Overall Mean	3.49		Agree

Despite the "Strongly Agree" responses in both Table 2 highlighting bakery owners' acknowledgment of food price increases significantly impacting their operations and Table 3 underscoring the substantial challenges faced, the correlation matrix in Table 4 reveals a negligible link between food price increase and the specific challenges encountered by local bakeries ($r=0.029$). The findings of this study are consistent with Virginia et al. (2022) study, which emphasizes that rising costs can have a direct impact on production. Problems such as unreliable suppliers and late deliveries can have an impact on both product quality and sales. The second reason is that owners of bakeries are frequently reluctant to raise prices because they are concerned about losing consumers, which might result in pressures on the profit margin (Gillman, 2021). In the context of these findings, which show the interdependence of production, pricing, and profitability in the face of rises in food prices, it is possible that issues could arise differently depending on the method that each bakery takes to handle these

factors.

Relationship between food price increase and challenges faced by local bakeries

Table 4

Correlation Matrix of Food Price Increase and the Challenges Faced by Local Bakeries

Variables	Correlation (r-value)	Interpretation
Food Price Increase and Challenges Faced by Local Bakeries	0.029	Negligible Correlation

5. Conclusion and Recommendation

This study examined the Impact of digital marketing technologies—social media platforms, search engine optimization (SEO), and online advertising—on the destination branding efforts of local travel agencies in Calapan City, Oriental Mindoro. The results revealed significant correlations between these technologies and key branding components, including brand recognition, customer engagement, and perceived destination attractiveness. Social media platforms showed strong associations with brand recognition, customer engagement, and perceived destination attractiveness, demonstrating their ability to connect with target audiences and positively shape perceptions effectively. SEO also exhibited substantial influence on brand recognition, customer engagement, and perceived destination attractiveness, highlighting its importance in enhancing discoverability and engagement. Likewise, online advertising significantly contributed to brand recognition, customer engagement, and perceived destination attractiveness, underscoring its role in shaping consumer trust and favorable destination perceptions. These findings affirm that digital marketing technologies strengthen branding efforts and connect travel agencies with their target customers.

In light of these findings, it is recommended that local travel agencies optimize their social media strategies by identifying the platforms most frequented by their target audience and tailoring content to align with their preferences and interests. SEO should be prioritized to enhance the visibility of travel packages and attract potential customers through improved search engine rankings. Furthermore, online advertising campaigns should focus on creating visually engaging and trustworthy content to strengthen customer perceptions and drive purchasing intentions. By integrating these strategies into their marketing efforts, travel agencies can effectively leverage digital tools to boost brand recognition, foster customer engagement, and elevate the attractiveness of their destinations. his study provides valuable insights for educational institutions, particularly those offering programs in business, entrepreneurship, and hospitality management. Understanding the challenges faced by local bakeries due to rising food prices highlights the importance of incorporating real-world economic issues into the curriculum. Educators can use the findings to teach students about the practical impacts of inflation, supply chain disruptions, and cost management in small business operations.

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