



**DIAGNOSIS AND BUSINESS ACTION PLAN IN TIMES OF CRISIS: AN
ACTION RESEARCH IN A FOOD INDUSTRY**

***DIAGNÓSTICO E PLANO DE AÇÃO EMPRESARIAL EM MOMENTOS DE
CRISE: UMA PESQUISA-AÇÃO EM UMA INDÚSTRIA DE ALIMENTOS***



Bethania SCHIMIDT¹

e-mail: schimidtbethania6179@gmail.com



Helen de Fátima de Oliveira FIN²

e-mail: helen.fin@aluno.ifsc.edu.br



Victoria Marcela Pedroso CARNIEL³

e-mail: victoria.pedrozo@aluno.ifsc.edu.br



Emanuele NAISSER⁴

e-mail: emanuele.naissier@aluno.ifsc.edu.br



Larissa dos ANJOS⁵

e-mail: larissa.dosanjos@aluno.ifsc.edu.br



Kauany Amabili CORRÊA⁶

e-mail: kauany.amabili@aluno.ifsc.edu.br



Pedro NOGATZ⁷

e-mail: pedro.nogatz@aluno.ifsc.edu.br



Jefferson TREML⁸

e-mail: jefferson.treml@ifsc.edu.br



Jésica Suzana RIBEIRO⁹

e-mail: jessica.suzana@ifsc.edu.br



Luciano Heusser MALFATTI¹⁰

e-mail: luciano.heusser@ifsc.edu.br

¹ Federal University of Santa Catarina.

² Federal Institute of Santa Catarina.

³ Federal Institute of Santa Catarina.

⁴ University Positivo.

⁵ Federal Institute of Santa Catarina.

⁶ Federal Institute of Santa Catarina.

⁷ Federal Institute of Santa Catarina.

⁸ Federal Institute of Santa Catarina.

⁹ Federal Institute of Santa Catarina.

¹⁰ Federal Institute of Santa Catarina.

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ABSTRACT

Objective: This study aims to analyze the challenges faced by a food industry located in the Northern Plateau of Santa Catarina in the context of the economic crisis triggered by the COVID-19 pandemic. It proposes viable strategic solutions to mitigate the impacts of the crisis, with an emphasis on organizational sustainability and cost minimization applicable across different sectors and organizational contexts. **Theoretical Framework:** The study of strategy implementation to mitigate the impacts of economic crises on small businesses has proven particularly important in the food industry, given its relevance to the national economic context and its demonstrated resilience. **Methodology/Approach:** The research was conducted through action research, employing the SWOT analysis management tool to support the development of a business diagnosis, followed by the design of an action plan to mitigate the problems identified in the analyses. **Results:** The main difficulties identified were the decline in product consumption, reduced investment capacity, and challenges in pasta production. In response, strategies were proposed to increase brand visibility, including the use of social media for marketing campaigns and partnerships. Consultancy services, report development, and the application of different management tools contributed to improving the management of the homemade pasta industry, underscoring the importance of adopting measures to strengthen companies' resilience in times of crisis. **Originality/Value:** The findings of this study can serve as a foundation for future research, supporting the development of effective crisis management strategies for small industries across different sectors—particularly in the food industry—and contributing to local economic development.

Keywords: Action plan. Business diagnosis. Crisis impacts. Food industry.

RESUMO

Objetivo: O objetivo deste estudo é analisar os desafios enfrentados por uma indústria do setor alimentício localizada no Planalto Norte do estado de Santa Catarina, dentro do contexto de crise econômica desencadeada pela pandemia de covid-19, propondo soluções estratégicas viáveis que contribuam para a mitigação dos impactos da crise, com ênfase na sustentabilidade organizacional e na minimização de custos aplicáveis a diferentes setores e contextos organizacionais. **Referencial Teórico:** O estudo da implementação de estratégias para mitigação de impactos advindos de crises econômicas sobre pequenas empresas tem se mostrado muito importante, especialmente em indústrias do ramo alimentício, em decorrência de sua relevância no cenário econômico nacional, bem como de sua capacidade de resiliência. **Metodologia/Abordagem:** A pesquisa foi conduzida por meio de uma pesquisa-ação, utilizando a ferramenta de gestão matriz SWOT como subsídio para a elaboração de um diagnóstico empresarial, seguido do desenvolvimento de um plano de ação para mitigação dos problemas identificados nas análises prévias. **Resultados:** As principais dificuldades identificadas incluíram a queda no consumo dos produtos, a redução da capacidade de investimento e desafios na produção das massas comercializadas. Como resposta, foram propostas estratégias para ampliar a visibilidade da marca, como o uso de mídias sociais para campanhas de marketing e parcerias. A realização de consultorias, bem como o desenvolvimento de relatórios e a aplicação de diferentes ferramentas de gestão, possibilitaram melhorias na gestão da indústria de massas caseiras, destacando a importância da adoção de medidas para garantir a resiliência de empresas diante de crises. **Originalidade/Valor:** Os resultados obtidos por meio do presente estudo podem servir como base para pesquisas futuras, auxiliando na formulação de estratégias eficazes para a gestão de crises em pequenas indústrias de diferentes áreas, especialmente do setor alimentício, e contribuindo para o desenvolvimento econômico local.

Palavras-chave: Plano de ação. Diagnóstico empresarial. Impactos de crise. Indústria de alimentos.

Introduction

The coronavirus disease 2019 (COVID-19) pandemic has caused global economic shocks, triggering the most severe worldwide economic crisis in more than a century (World Bank, 2022). The resulting impacts have established a new social and economic context, requiring significant changes in the routines of individuals and companies across various sectors, including the food industry.

The severe global economic disruption caused by the pandemic has significantly affected the cash flow and financial liquidity of manufacturing companies. According to Kubatko et al. (2023), this is largely due to reduced production capacity, restricted market access, declining remittances, rising unemployment, and unexpected healthcare expenses. In this context, small and medium-sized enterprises have been disproportionately affected, highlighting their heightened vulnerability to supply and demand shocks.

With the outbreak of the disease caused by the SARS-CoV-2 coronavirus in Brazil and worldwide, many companies reduced their standard production levels, resulting in lower investment capacity. The imbalance in the circular flow of the economy between its main agents (companies and households) produced harmful economic consequences for both. The decline in household consumption led to reduced production and sales of certain products, job losses, and, consequently, diminished purchasing power, perpetuating this cycle. In this context, restarting production and services was essential to support economic recovery.

According to Nakat (2021), the global health crisis severely impacted the food industry, demanding rapid adaptations in operational, sanitary, and logistical processes while underscoring the need to strengthen the sector's resilience to crises. At the resource supply stage, the primary challenges included disruptions in international value chains due to transportation restrictions and limitations on essential services, along with price volatility and currency depreciation. At the production stage, major issues involved reduced production volumes, potential declines in product quality, and decreased domestic and foreign capital investment.

The food industry comprises companies dedicated to the production, processing, and marketing of food products and is therefore considered one of the most resilient sectors of the economy (Connor et al., 1985). In general, the sector has managed to remain operational by reinventing business models, for instance, through delivery services, while simultaneously reducing production and workforce levels. However, challenges persisted, particularly regarding production costs such as raw materials and inputs. This context highlighted the need

for strategies to improve the administrative and production routines of the industry examined in this study.

The aim of this study was to support a local food company during the crisis caused by the COVID-19 pandemic without generating additional costs for the organization. The actions undertaken sought to assist the company under study by readjusting production and management processes to mitigate negative impacts and improve economic indicators during the crisis. According to Sun (2023), the effectiveness of business strategies in times of crisis is directly linked to information management. Companies that establish structured data collection and analysis processes are better equipped to implement faster and more assertive responses in both prevention and mitigation phases, thereby enhancing their resilience and adaptive capacity. This study focused exclusively on mitigating the impacts of the crisis caused by the coronavirus disease pandemic. Accordingly, the project promoted local trade, work initiatives, and mutual support among members of the community in the Northern Plateau of Santa Catarina, a region located in southern Brazil.

Literature Review

According to Chiavenato (2002), although there are several nonprofit organizations, the general concept of a company refers to profit-oriented entities, understood as social organizations formed through the collective work of a group of people. In this context, companies can be classified as:

1. By type of production: primary (or extractive), secondary (or manufacturing), or tertiary (service provider);
2. By size: large, medium, or small companies;
3. By ownership: public or private companies.

According to the author, a company can also be defined as a public, private, or mixed institution whose primary objective is to generate profit for its shareholders through the sale of products or services that meet and satisfy consumer needs.

Characteristics of the food industry

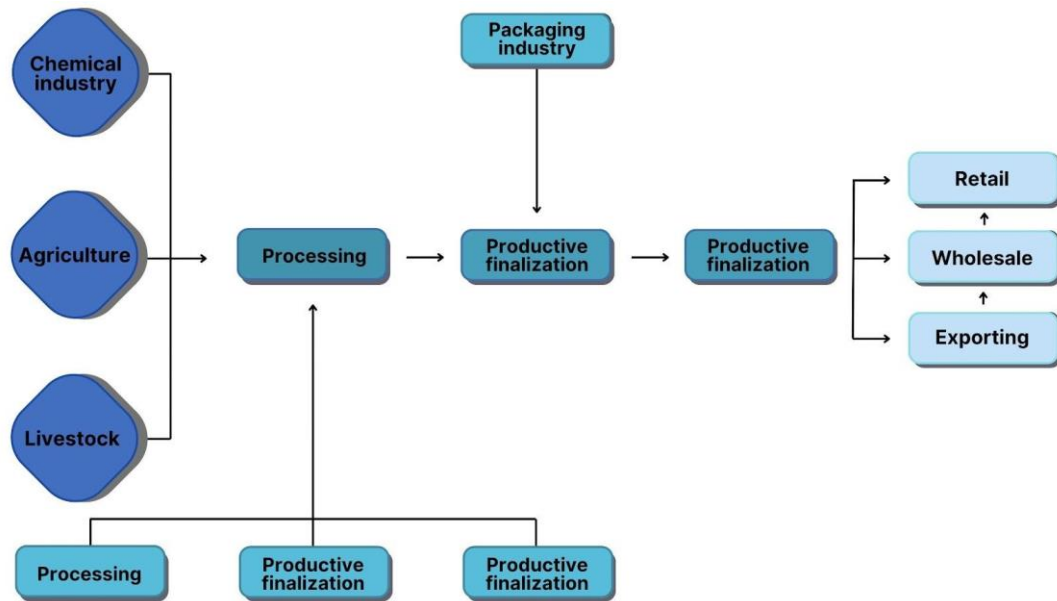
The Brazilian food industry is one of the most resilient and significant sectors of the national economy, maintaining close ties with other key activities such as livestock, agriculture, and the chemical industry (Figure 1). These interconnections, combined with the high export rate of Brazilian food products, position the food industry as the country's largest source of employment (ABIA, 2024). According to the Brazilian Food Industry Association (ABIA), in 2020, the sector's turnover grew by 12.8%, reaching R\$789.2 billion and accounting for 10.6% of Brazil's Gross Domestic Product (GDP). In addition to its close ties with Brazilian agricultural production, the food industry is also interconnected with other sectors, such as the packaging and machinery industries, as well as distribution channels (Viana, 2021).

Nosratabadi et al. (2020) argue that food industry supply chains are highly complex and vulnerable to disruption, requiring companies to rethink their business models by incorporating technological innovation, digitalization, sustainability, and resilience strategies to remain competitive in today's market.

Galanakis (2020) further observes that the food industry has undergone significant transformation, driven by the adoption of sustainable practices, waste-reduction initiatives, and growing consumer demand for healthier products developed with innovative and environmentally responsible Technologies.

Figure 1

Flowchart of food industry relations.



Note. Adapted from Serasa Experian, 2014.

Management tools

Management tools are technical resources or models commonly used by organizations to enhance their management systems (Moraes, 2015). Among the tools frequently applied in industry are 5W2H, SWOT analysis, and the fishbone diagram—techniques that support the monitoring and improvement of processes and projects across different sectors. The selection and effective implementation of such tools are essential for organizations to navigate the complexities of modern business environments (Rigby & Bilodeau, 2007, p. 3).

Chiapello and Gilbert (2019) note that traditional management tools, such as control charts, Pareto diagrams, and flowcharts, were originally developed to optimize industrial processes by structuring information and standardizing operations. These tools remain essential for defining performance parameters, even in dynamic organizational environments.

SWOT analysis

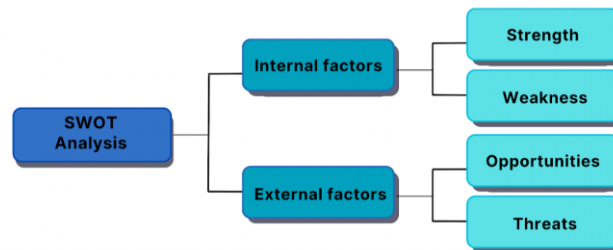
The SWOT analysis, also known as the SWOT matrix (Strengths, Weaknesses, Opportunities, and Threats matrix), is a management tool designed to identify the positive and negative characteristics of a company (Figure 2). Its application supports the characterization

of internal and external organizational environments, serving as a basis for the definition and implementation of other management tools, such as business diagnoses and action plans (Cruz, 2021).

According to Helms and Nixon (2010), SWOT analysis remains one of the most widely used tools in strategic planning, both in academia and in business practice. It enables organizations to align internal capabilities with external opportunities and threats, thereby supporting the formulation of more effective strategies.

Figure 2

Elements of the SWOT analysis.



Note. Adapted from de Souza and Rocha, 2024.

5W2H

5W2H is a management tool based on seven guiding questions (“What?”, “Why?”, “When?”, “Where?”, “Who?”, “How?”, and “How much?”) used to define activities aimed at solving organizational problems in internal or external environments, ensuring maximum clarity for employees (Cruz, 2021). The technique organizes how each activity will be executed, specifying who is responsible, how it will be performed, its cost, the area of implementation, and the underlying rationale, making it applicable to any type of company.

According to Luo et al. (2024), 5W2H directly supports strategic planning by transforming complex information into organized and targeted actions. In economic and strategic contexts, it helps define clear objectives, identify bottlenecks, and develop operational plans aligned with company strategy, thereby enhancing organizations’ capacity to respond to changes and challenges in the business environment.

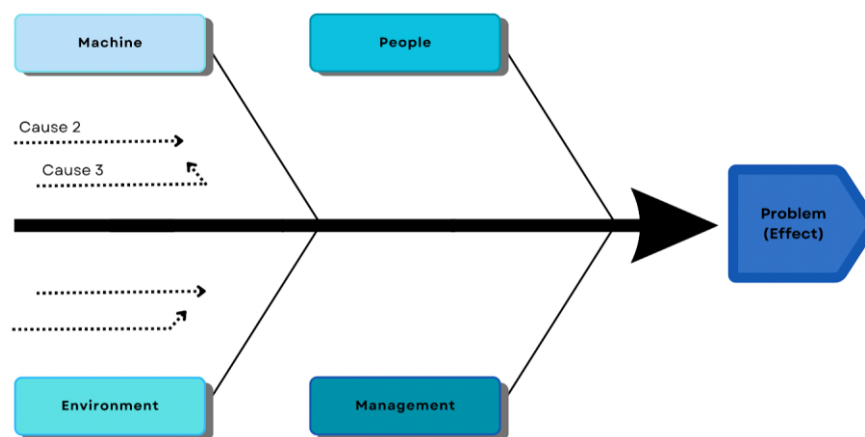
Fishbone diagram

Within an industry, it is essential to visualize all the possible causes and effects of a problem. The “cause-and-effect diagram,” also known as the “fishbone diagram” or “Ishikawa diagram,” is a widely used technique that illustrates the relationship between an effect and the factors contributing to its occurrence (Figure 3). Particularly in the checking stage of a management system, this model helps reveal how process-related causes may, for various reasons, influence the final outcome (Moraes, 2015).

According to Andersen and Fagerhaug (2006), the cause-and-effect diagram is essential for teams seeking to collaboratively identify the root causes of complex problems, thereby contributing to continuous improvement and effective fault resolution.

Figure 3

Fishbone diagram.



Note. Adapted from Moraes, 2015.

Business diagnosis and planning in management

Rennó (2013) emphasizes that strategic diagnosis is one of the main phases of corporate planning. This stage involves a detailed analysis of the internal and external environments to define strategies by identifying organizational strengths and weaknesses (internal environment), as well as threats and opportunities (external environment).

Planning is the stage in which research data are evaluated and a progression strategy is defined for the company. In industries—particularly large ones—there are divisions and

subdivisions, each with specific methods and functions that contribute to corporate progress and can be adjusted according to organizational needs and constraints.

Within these divisions, three stand out with fully applicable characteristics: strategic planning, tactical planning, and operational planning. Strategic planning is aimed at the long-term growth of the company and may extend over years or even decades. It involves the initial design of a plan that can be adapted in the short, medium, or long term as often as managers deem necessary, considering both internal developments and external environmental factors (Chiavenato, 2017).

Tactical planning is generally applied in the medium term, addressing potential problems and variations, and is developed according to the company's hierarchical structure. In this process, the executive, manager, coordinator, or owner (referred to as the "planner") is responsible for developing the theoretical framework while respecting the previously established strategic plan. The company's sectors (such as production, human resources, marketing, and finance), along with their employees, ensure that the tactical plans are implemented once they have been structured (Guissoni et al., 2015; Chiavenato, 2017).

Operational planning, in turn, is highly detailed, encompassing the methods, tools, materials, and functions assigned to each employee. It represents the endpoint or "subdivision" of institutional planning and typically consists of short-term, often simultaneous, plans.

Methodology

The object of this study was a homemade pasta company located in the municipality of Canoinhas, Santa Catarina, which has been operating in the market for over twenty years. The research method adopted was action research, characterized by fieldwork within the company. This methodology was chosen due to the practical and interventional nature of the study, which seeks not only to understand the challenges faced by the organization in a crisis context but also to propose and implement solutions that contribute effectively to improving its processes and organizational performance.

Thiollent (2011) argues that action research is particularly appropriate in contexts where there is simultaneous interest in generating scientific knowledge and transforming the reality under investigation through the active participation of those involved. It enables the collaborative construction of diagnoses, action plans, and strategies, thereby promoting solutions aligned with the company's actual demands.

Coughlan and Coughlan (2002) emphasize that action research is particularly appropriate when the aim is to solve organizational problems while generating knowledge applicable to both practice and academia. This is especially relevant in the context of economic crises, where companies require quick, effective, and low-cost interventions developed through continuous interaction between researchers and managers.

Wenzel et al. (2020) identify four types of strategic responses to crises: exit (closure of activities), retrenchment (cost and operations reduction to minimize losses), perseverance (maintaining operations with minimal adjustments), and innovation (strategic transformation and renewal to adapt to new contexts). Given the company's financial conditions, this study focused on measures supporting the perseverance response. The research was conducted within the company from January 2021 to January 2022.

This study included a bibliographic survey of books and periodicals to provide a stronger theoretical foundation. For journal searches, the online databases Scopus (Elsevier) and Web of Science were used. The query combining the terms "BUSINESS DIAGNOSIS," "ACTION PLAN," and "CRISIS" was applied to retrieve studies related to internal company management. To obtain data on the impacts of COVID-19 on the global scenario and on small food companies, we used the query "COVID-19" and ("FOOD SECTOR" OR "FOOD INDUSTRY" OR "FOOD MANUFACTURE" OR "FOOD").

This study is characterized as exploratory, which, according to Aaker, Kumar, and Day (2009), is employed to understand the general characteristics of a company's problems, possible alternative hypotheses, and relevant variables to be considered. Its nature is qualitative, relying on data collection through questionnaires, interviews, observations, and direct contact, which makes it possible to analyze both the internal and external characteristics of the company (Gil, 2017).

To obtain the data for the business action plan, two approaches were applied to the industry. The first was a business diagnosis, which aimed to collect data using the SWOT matrix to analyze the company's internal and external environments. The identification of strengths and areas for improvement corresponded to the internal analysis, while the assessment of market opportunities and threats referred to the external analysis. Data for the business diagnosis were gathered through interviews, in which the company manager freely answered the proposed questions. As Gil (2017) notes, among the various questioning techniques available for developing a business diagnosis, the interview is the most flexible, which justifies its use in this study.

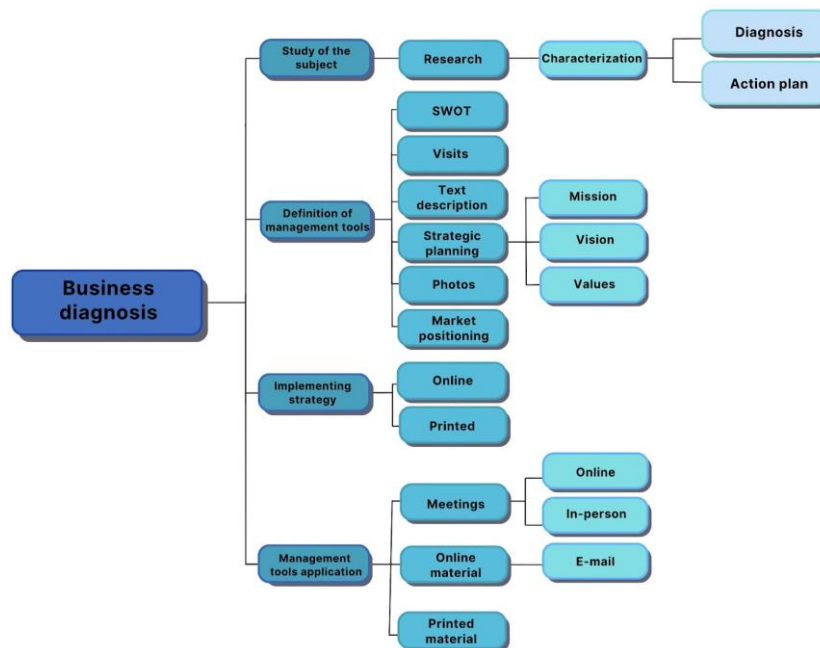
The second approach focused on developing and implementing a plan to address the identified areas for improvement, based on the previously conducted diagnosis. This involved cross-analyzing the business diagnosis to design action plans that considered the company's strengths, the interplay between threats and opportunities, and the ways in which weaknesses could amplify threats or hinder the incorporation of opportunities.

The application of management tools involved meetings and site visits to the company, primarily to define the sequence of stages for the diagnosis and action plan to be followed by its managers. Weekly online activities were also conducted for contact and data collection. In compliance with the social isolation measures established by the Ministry of Health (Ordinance No. 356, March 11, 2020), instructions on the use of management tools were sent via email. The materials were then completed by those responsible for the company, identifying strengths, weaknesses, opportunities, and threats, and returned to the study collaborators for analysis. Additional discussions were held with company managers to refine the understanding and organization of the information collected.

At the beginning of the project, an email was sent to the company's managers with supporting materials (two videos and a SWOT analysis model), introducing the concepts addressed in the study and guiding the first stage of data collection. The business diagnosis followed sequential steps: a review of the subject matter, the definition of management tools to be applied, the selection of an application strategy, and, finally, the implementation of the chosen tools (Figure 4).

Figure 4

Conceptual map of the business diagnosis.



Note. Authors’ own work.

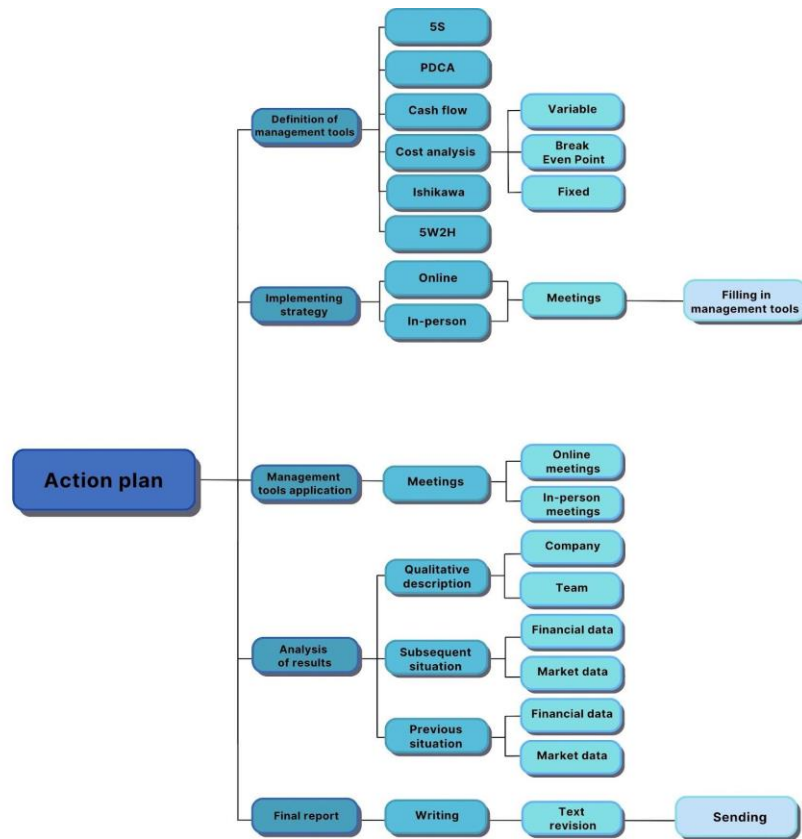
The choice of management tools for implementing the action plan was guided by the company’s SWOT analysis. The 5W2H method and the fishbone diagram were applied to structure tasks in an organized manner, facilitating management and execution. Efficient communication with company managers was ensured through face-to-face visits to the factory and the use of online forms.

The action plan involved applying the results of the business diagnosis, analyzing the outcomes of this application, and subsequently preparing a final report on the processes (Figure 5). It was structured into three main stages: (1) strategic planning, aimed at defining the company’s long-term vision; (2) tactical planning, focused on translating strategic goals into specific medium-term actions and targets; and (3) operational planning, responsible for ensuring the efficient execution of daily activities necessary to achieve the tactical objectives and, ultimately, the strategic ones.

The action plan was developed using PDF materials, journals, videos, and spreadsheets derived from visits and interviews with company members, focusing on the main difficulties identified in the SWOT matrix: marketing, production, and finance.

Figure 5

Conceptual map of the action plan.



Note. Authors' own work.

The materials used in this study were selected to provide a comprehensive and effective understanding of the stages involved in applying management tools, thereby promoting the training of the company's representatives. The resources included instructional videos, PDF documents, and practical examples presented to managers during meetings. The content covered consisted of Basic Excel (four video lessons), Good Manufacturing Practices ([GMP] one video lesson and one PDF document), Standardized Operational Planning (one video lesson), and Project Management with the Gantt Project tool (two video lessons).

Results and Discussion

Meetings and site visits were conducted to collect company data. Based on these observations, a SWOT analysis was developed using the information obtained (Table 1), followed by reports containing suggestions for the company. Gagić (2012) highlights that the use of traditional management tools, such as SWOT analysis, is fundamental in addressing food

waste issues in industry, enabling effective root cause analysis and fostering continuous process improvement.

Table 1

SWOT analysis of the company.

Aspects	Company data
S Strengths	Production; product; hygiene; team; prestigious brand; new management looking for specialization; experience; tradition; home-style production
W Weakness	Organizational problems; has been stagnant for 20 years; lack of qualified labor; low investment; low insertion in the digital environment
O Opportunities	Potential for growth; niche market to be explored; search for customers outside the city of origin; entry into the digital world; creation of benefits for customers
T Threats	Not having a differentiator; expensive final product; products easy to copy; not going digital; cheaper products, but inferior quality

Note. Authors' own work.

The analysis suggested several possibilities for addressing the identified problems, including: promoting products through social media; developing a marketing plan focused on homemade quality and taste; providing employee training in food handling; contracting regional communication channels such as radio, billboards, and newspapers; creating a portfolio with product images and descriptions; establishing partnerships for digital social marketing; exploring new points of sale (such as supermarket kiosks and delivery staff); expanding the industry to include a consumption area while maintaining food safety standards; considering cooperative purchasing to reduce costs (e.g., fuel type); adopting sustainable packaging solutions; and developing a website to strengthen brand visibility.

Due to the limitations imposed by COVID-19, which reduced the planned number of on-site visits, it was necessary to focus on specific aspects of the action plan to enhance the effectiveness of interventions in the company. The main emphasis was placed on production-related issues and suggestions for improving the layout of the production area, packaging, and product promotion, which explains the smaller number of actions implemented. In terms of promotion, the company's managers were presented with alternatives such as organizing prize draws via social networks, offering discounts, and modifying the company's facade to increase brand visibility.

Furthermore, as a consequence of adapting the company's actions, the initial plan to use indicators for result comparison was also modified. Instead, qualitative observations were

employed to assess changes within the company and the extent to which managers accepted the proposed suggestions.

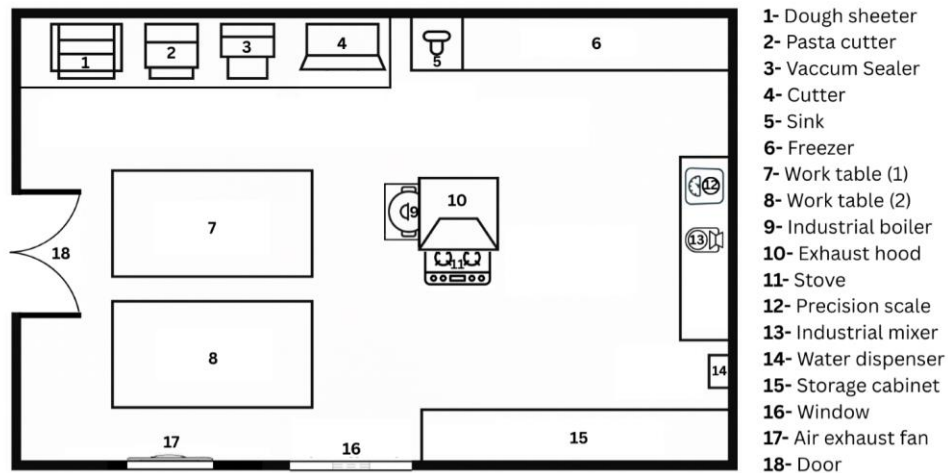
As an initial step in improving the company's visual identity, employee uniforms were updated, and the delivery vehicle was customized to promote the brand and increase sales. The suggested activities also included revitalizing the company's facade, highlighting the premises as a point of sale, and organizing online product draws, an initiative that continues to be carried out regularly on the company's social networks.

Corchuelo Martínez-Azúa et al. (2021) analyzed the impacts of the pandemic on the agri-food industry in Spain's Extremadura region, finding that companies heavily dependent on the HORECA sector (hotels, restaurants, and cafeterias) experienced significant sales declines, particularly for products associated with celebrations, such as sparkling wines. In response, these companies reorganized their activities, implemented stricter hygiene protocols, and adopted digital technologies for sales and communication, demonstrating strategic adaptation to new market conditions.

Given that the target company manages high demand with few employees and artisanal procedures, adaptations are required to save time and improve efficiency. This led to the suggestion of reorganizing the machinery layout to prevent workers from repeatedly crossing the production area while processing the same type of food. The current kitchen layout is shown in Figure 6. Recommendations included repositioning the industrial mixer (13) closer to the water dispenser (14) and sink (5) to facilitate preparation, and relocating the precision scale (12) next to the vacuum sealer (3), with both placed near the second work table (8). This table would be dedicated exclusively to packaging, avoiding overlap with earlier preparation stages. For storage, it was also suggested that the freezer (6) be positioned at the end of the workflow, adjacent to the second work table (8), which is not the case in the current layout.

Figure 6

Floor plan of the pasta industry kitchen.



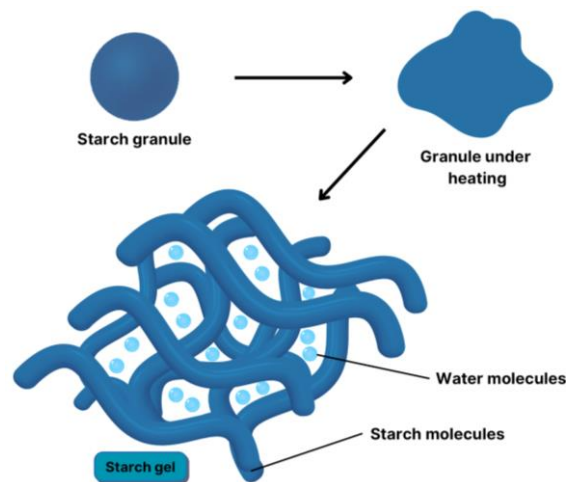
Note. Authors' own work.

During one of the visits, we observed the production of pierogi, one of the company's main products. Several opportunities for improvement were identified, including one of the owner's main concerns: dough cracking during the cooking stage, likely caused by inefficient starch gelatinization.

Gelatinization occurs when starch granules in flour are heated in the presence of water, causing hydrogen bonds to break (Figure 7). Souza and Andrade (2000) note that "starch granules swell and break more easily in the presence of water contents above 40%, whereas higher temperatures are required when the water content is lower." For gelatinization to occur effectively, cooking time must be sufficient to complete the process.

Figure 7

Starch gelatinization.

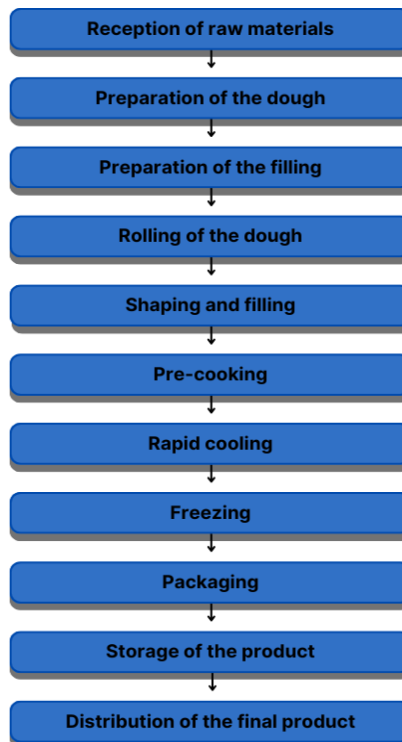


Note. Adapted from Ford *et al.* (2002).

An inspection conducted with the support of a food technology professional indicated that the problem originates in the production process, prior to storage and cooking. The pierogi production process is represented in the flowchart developed by the authors (Figure 8). It is suggested that the sequence of errors leading to dough breakage occurs between the stages of dough preparation, pre-cooking, and freezing.

Figure 8

Pierogi production flowchart.

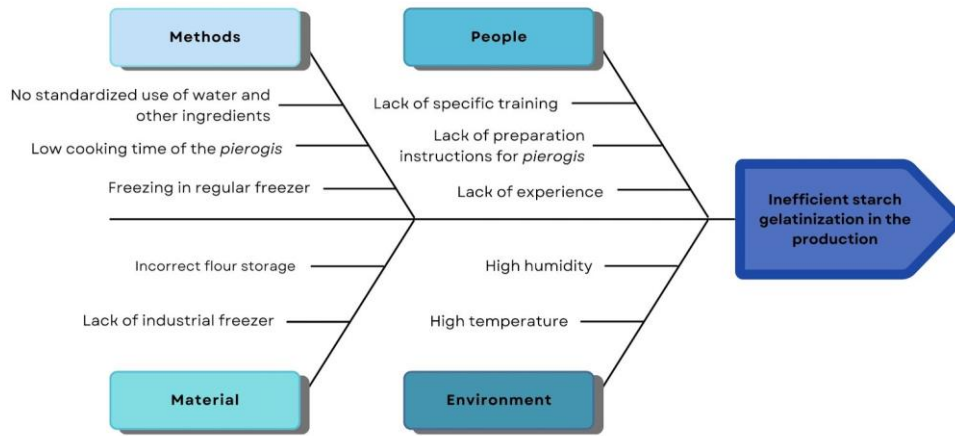


Note. Authors' own work.

During the inspection, several factors relevant to addressing the previously identified problem were mapped using a fishbone diagram (Figure 9). These included cooking time, techniques for sealing the pierogi, the use of a common freezer for freezing, high moisture content in both the flour and the environment, the amount of water in the dough, dough thickness, and the quantity of filling used.

Figure 9

Fishbone diagram for the problem of inefficient starch gelatinization.



Note. Authors' own work.

Sousa and Voss (2002) emphasize that the fishbone diagram is an effective tool for systematically identifying the causes of complex problems, enabling teams to visualize relationships between variables and facilitating the implementation of corrective actions.

Beyond the production process, factors such as consumers not following the preparation instructions on the packaging may also affect product quality, suggesting the need to revise the “How to Prepare” section. Once these issues were identified, a report was prepared with possible solutions to reduce or eliminate the problem (Table 2). Among the recommendations were: adjusting the time and temperature of both cold and hot water during pre-cooking to ensure starch gelatinization, standardizing the amount of filling, and controlling dough humidity and thickness. These suggestions were presented to and accepted by the company's managers.

Ordinance CVS-6/99 of March 10, 1999, establishes specifications for freezing food products to ensure final product quality, requiring proper storage at controlled temperatures and adherence to a defined cooling pattern. To improve freezing conditions and, consequently, stock control, investment in a freezing chamber was also recommended.

In addition to evaluating pierogi production, the technical visit with a food professional also addressed issues such as organizing *calzoni* flavors during packaging, assessing packaging costs (with suggestions for options offering improved appearance, functionality, and sustainability), and updating product labels annually in compliance with current legislation.

Nosratabadi et al. (2020) argue that innovation in business models is essential for strengthening food supply chains, with technical consultancy playing a key role in guiding companies toward the adoption of digital technologies and sustainable practices.

During the technical visit, activities that did not comply with Resolution 216 of September 2004, which regulates food manufacturing practices, were identified. Non-compliance with this legislation may result in fines and, more critically, pose risks to consumer health. Accordingly, the necessary adjustments were communicated to the managers to ensure that processes remain aligned with legal requirements.

Table 2

Data from the report drawn up based on the problems observed during technical inspection.

Problems	Possible Solutions
Inefficient closing of pierogi	Standardize procedures under supervisor oversight, ensuring control of time, dough measurements, and moisture to avoid waste
Freezing pierogi at low temperature	Invest in a freezing chamber to improve storage conditions and stock control
Company facade	Apply the brand’s characteristic colors and install signage with the company’s name and products to strengthen visibility
Workspace layout	Reorganize machinery to reduce unnecessary movement of employees across the kitchen during production
Organizing flavors during packaging	Establish a method to avoid confusion, such as assigning each flavor to a designated area and using labels for identification
Amount of filling	Acquire weighing and measuring equipment (e.g., precision scales, crucibles, and digital weighing spoons)
Low moisture of pierogi dough	Standardize recipes by maintaining a fixed water volume for all batches
Pre-cooking time for pierogi	Adjust water temperature and cooking time to ensure proper starch gelatinization
Preparation instructions on packaging	Clearly specify cooking time, water quantity, and preparation stages
Cost of packaging	Compare the price and efficiency of cardboard packaging with current materials, considering cost, appearance, and production efficiency
Dough thickness	Standardize thickness by ensuring dough passes through the closing equipment consistently and is rolled uniformly
Updating packaging to legislation	Revise nutritional labeling in compliance with current regulations, providing clearer and more legible information
Breaking eggs during processing	Break eggs in a dedicated container to check suitability, or apply the water density method to reduce waste
Failures in pierogi closing	Ensure proper dough moistening, following the manufacturer’s guidelines for type 1 wheat flour (used in all products except pizza dough)

Note. Authors’ own work.

Given the constraints imposed by the crisis context during this study, it was recommended that the company hire a trainee from a food studies program to ensure compliance with legislation and monitor updates to relevant resolutions. This measure could also foster new

collaborative projects with the company. Additionally, the recommendation would provide valuable professional experience for the trainee, generating benefits for the student, the company, and, consequently, local commerce.

The initial business diagnosis, based on management tools and interviews with internal stakeholders (employees, managers, and a food technology professional), revealed weaknesses in standardization procedures, quality control, and the management of inputs and end products such as pierogi. These shortcomings negatively affected production scalability and the brand's competitive positioning. The consultancy that followed proposed interventions focused on restructuring operational flows, implementing GMP, providing technical training for the team, and redesigning the company's layout.

Following the implementation of these recommendations, the company repositioned itself in the local market with greater added value. Prospecting efforts began to adopt more robust market intelligence approaches, emphasizing geographical segmentation and product distribution analysis. This process also revealed opportunities to access alternative marketing channels, such as regional gastronomic fairs.

Conclusion

This study identified, through a business diagnosis, the main difficulties faced by a food company in the Northern Plateau of Santa Catarina during the economic context of the COVID-19 pandemic and contributed to its administrative development by designing an action plan based on the diagnostic analyses.

Given the company's financial conditions and the national economic scenario, some objectives were strategically adapted due to time constraints in order to address the company's needs more effectively. This adjustment gives rise to the prospect of a subsequent study that builds on and complements the present one. Thus, this research can be interpreted as an introductory and preparatory step for future studies within the target company.

By focusing on the company's main difficulty, qualitative results were obtained concerning its internal and external environments. These outcomes are also aligned with several Sustainable Development Goals (SDGs), including the promotion of sustained, inclusive, and sustainable economic growth; full and productive employment; sustainable production and consumption patterns; and enhanced food safety through standardized methods and strengthened GMP.

The company's restructuring and prospecting process demonstrates how consultancy actions can transform a craft-based enterprise into an organization with sustainable growth potential by improving and regulating practices while valuing its cultural and gastronomic identity. Enhancements in pierogi preparation not only elevated the quality standards of the final product but also contributed to the company's strategic redefinition, facilitating its entry into more profitable market niches.

Finally, the initial objective of the project was partially achieved by identifying areas for improvement within the company, implementing corrective measures, and providing suggestions for further development prepared by the research group.

The results of this study can support future research and serve as a foundation for managing crisis situations. By developing a theoretical framework on prevention and mitigation methods for the food industry in critical contexts, such as national or local economic crises, geopolitical risks, and epidemics, it becomes possible to enhance strategies for managing crises of different origins, benefiting companies across various sectors.

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