

Human Adaptation and Workplace Resilience in the Coffee Shop Industry: Exploring Operational Challenges Across Business Stages

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Abstract

Coffee has long been an integral part of Filipino culture, serving not only as a popular beverage but also as an important component of social interaction, economic activity, and community life. Beyond its cultural significance, coffee contributes to human well-being through its bioactive compounds, nutritional properties, and psychological effects, including enhanced alertness, cognitive performance, and social connectedness. The coffee industry also provides employment opportunities and supports the livelihoods of thousands of Filipino farmers, food service workers, and entrepreneurs, making it an important contributor to public health, food systems, and sustainable economic development. The rapid expansion of coffee shops in the Philippines has been driven by changing consumer lifestyles, increasing urbanization, and growing awareness of specialty coffee culture. However, operating a coffee shop extends beyond business management. It requires ensuring food safety, maintaining hygienic food handling practices, promoting employee health and well-being, managing occupational stress, adapting to changing consumer health preferences, and implementing environmentally sustainable practices. Coffee shop entrepreneurs must therefore balance business sustainability with the health, safety, and welfare of both employees and consumers while responding to evolving public health standards and market demands. This study seeks to explore the evolving challenges encountered by coffee shop entrepreneurs throughout the different stages of business development initiation, planning, execution, and control from a life sciences perspective. Specifically, it examines how operational challenges influence occupational health, workplace well-being, food safety practices, consumer health considerations, and sustainable resource management. Furthermore, the study investigates how entrepreneurs adapt to these multidimensional challenges while maintaining business resilience, protecting employee welfare, ensuring product quality, and promoting healthy and sustainable food service environments. The findings are expected to contribute to the growing body of knowledge on food service management, occupational health, sustainable business practices, and human well-being within the life sciences discipline.

INTRODUCTION

Coffee is one of the most widely consumed beverages worldwide and represents an important component of global food systems, human nutrition, and agricultural livelihoods. Beyond its role as a popular stimulant, coffee contains biologically active compounds such as caffeine, chlorogenic acids, diterpenes, and polyphenols that have been associated with improved cognitive performance, antioxidant activity, and reduced risks of several chronic diseases when consumed appropriately. Consequently, the coffee

industry extends beyond commercial value, influencing public health, food security, agricultural sustainability, and socioeconomic development.

The continuous expansion of coffee shops reflects changing consumer lifestyles, dietary preferences, and increasing demand for specialty beverages. However, coffee shops function not only as commercial enterprises but also as food service environments where food safety, occupational health, environmental sustainability, product quality,

and consumer well-being intersect. Their operations involve multiple life science dimensions, including safe food preparation, hygienic handling practices, nutritional quality, waste management, employee health, ergonomics, mental well-being, and compliance with public health standards. These factors directly influence customer safety, workforce productivity, and the long-term sustainability of food service businesses.

The COVID-19 pandemic further highlighted the biological and public health vulnerabilities of food service establishments. Coffee shop operators were compelled to implement enhanced sanitation protocols, infection prevention measures, physical distancing, improved ventilation, and strict food hygiene practices while ensuring uninterrupted business operations. At the same time, entrepreneurs faced increasing psychological stress, workforce shortages, supply chain disruptions, and changing consumer behaviors associated with health-conscious purchasing decisions. These interconnected biological, environmental, and operational challenges demonstrate that the sustainability of coffee shops depends not only on sound business management but also on effective health protection strategies and adaptive organizational practices.

From a life sciences perspective, coffee shop sustainability is closely associated with the health of workers, consumers, agricultural producers, and surrounding ecosystems. Occupational stress, prolonged standing, repetitive movements, exposure to heat, poor ergonomic practices, and psychosocial demands may affect employee well-being and work performance. Similarly, improper food handling, inadequate sanitation, and poor environmental management may compromise food safety and increase public health risks. Sustainable coffee shop operations therefore require integrating

biological safety, environmental stewardship, occupational health, and responsible resource utilization throughout the business life cycle. Despite the continued growth of the Philippine coffee industry, limited research has examined entrepreneurial challenges from an integrated life sciences perspective. Existing studies primarily focus on marketing, financial management, or consumer behavior, with less attention given to how biological, environmental, occupational, and food safety factors influence business sustainability across different stages of enterprise development. Understanding these multidimensional challenges is essential because the initiation, planning, execution, and control stages of business involve decisions that directly affect employee health, food quality, environmental performance, and consumer protection.

Accordingly, this study explores the evolving challenges encountered by coffee shop entrepreneurs during the initiation, planning, execution, and control stages of business development through a life sciences lens. Specifically, it seeks to understand how entrepreneurs manage issues related to occupational health and safety, food hygiene, consumer health protection, environmental sustainability, workforce well-being, and operational resilience while maintaining business viability. By identifying these challenges and the competencies required to address them, the study contributes to the development of a comprehensive entrepreneurial competency framework that integrates business management with public health, food safety, and sustainable food service practices. Such evidence can support policymakers, educators, health practitioners, and entrepreneurs in strengthening resilient, health-promoting, and environmentally sustainable coffee shop operations within the Philippine food service industry.

Business Stages

Initiation Stage

Starting a business often begins with a spark—an idea or a moment of inspiration that motivates an entrepreneur to explore possibilities. This marks the initiation stage, where creativity and opportunity-seeking take center stage¹⁹. Also known as the discovery phase, this is when potential business opportunities are assessed, and the foundational needs of the venture are identified in preparation for planning.

However, this early stage is not without its challenges. One common issue is failing to identify the right opportunity or misjudging its potential²⁰. Another is misunderstanding what the business truly needs to succeed. Emotional resilience, managing uncertainty, handling technical complexities, and building meaningful long-term relationships are all crucial during this phase, as emphasized by Dinnar and Susskind²⁰.

These early decisions and reflections lay the groundwork for the business's future, making it essential for entrepreneurs to approach this stage with clarity, adaptability, and a strong support system.

Planning Stage

After the initial spark of inspiration and opportunity recognition, entrepreneurs move into the planning stage—a phase that involves structured thinking and the use of strategic tools to map out the next steps for the business²¹. This stage is critical for laying down a clear and systematic approach to guide future actions.

However, even the best plans can face obstacles. Common planning challenges include time constraints, insufficient funding, and technical issues. Time constraints refer to the limited window available to launch and

stabilize the business. In the case of coffee shop owners, this often leads to rushed decisions, where entrepreneurs dive into the business without thoroughly assessing whether it fits the local market and environment. As Sarker²¹ points out, time limitations can significantly hinder effective planning.

Another major hurdle is inadequate financing. Many aspiring coffee shop owners struggle with securing enough capital to get their business off the ground. This often forces them to seek external funding sources with high interest rates, which can derail even the most well-thought-out plans²³.

Technical problems also pose serious challenges during the planning phase. These can range from hardware failures to software issues, such as system bugs or virus attacks. For entrepreneurs who lack technical expertise, these problems can be overwhelming. Sarker²¹ notes that such issues often lead to ineffective planning and poor execution, especially when entrepreneurs are unable to leverage technology or manage the technical aspects of their business.

Execution Stage

Another critical phase where entrepreneurs often encounter challenges is the execution stage. In this study, the key issues identified during this phase include unaligned strategies, supplier-related problems, and customer concerns.

Unaligned strategies can disrupt the internal ecosystem of a business, leading to confusion and inconsistent actions across the organization. These misalignments often trigger a chain reaction of issues that affect overall performance. Addressing such challenges requires strong entrepreneurial

competencies to realign goals and strategies effectively.

Supplier issues are another major concern. These are often unpredictable events that disrupt the relationship between coffee shop owners and their suppliers, threatening the stability of the supply chain. In this study, supplier issues are defined as disruptions that ripple through the entire supply chain, affecting operations at multiple levels²⁴. To mitigate these disruptions, businesses must adopt proactive and resilient strategies that can absorb external shocks and maintain supply continuity²⁵.

Customer issues also play a crucial role in the success or failure of a business. Since customers are the lifeblood of any enterprise, their satisfaction is paramount. In this study, customer issues refer to the powerful influence of word-of-mouth—where a single positive or negative experience shared by a customer can quickly spread and shape public perception of the business²⁶. This highlights the importance of consistently delivering quality service and maintaining strong customer relationships.

Controlling Stage

The controlling stage is the phase where managers or business owners monitor whether the objectives they set during planning are being effectively carried out and achieved. In this study, several challenges have been identified at this stage, including limited knowledge in market development, competition-related issues, and poor understanding of coffee shop management.

While promotion and innovation are key drivers of business success, a lack of market development knowledge can hinder growth. This refers to the failure to continuously innovate or adapt products to

meet changing consumer preferences. Coffee shop owners must be aware of shifting trends, especially the transition from traditional business models to digital platforms. In this study, market development challenges are defined as the inability to gather and apply insights about the market, community, and business alliances to better understand customer preferences²⁷.

Competition issues arise when entrepreneurs fail to monitor and respond to competitors entering the market. Staying informed and agile is essential to maintaining a competitive edge²⁷.

Lastly, poor knowledge of coffee shop management can be a major barrier to long-term success. This includes a lack of understanding of the evolving coffee culture and the strategies needed to sustain growth in a competitive market²⁷. Without this knowledge, entrepreneurs may struggle to maintain customer interest and adapt to industry changes.

METHODS

This study adopted a mixed-method research design, combining both quantitative and qualitative approaches. While data from each method was collected and analyzed separately, the findings were interpreted together to provide a richer and more comprehensive understanding of the issues at hand. This approach allowed for a more nuanced exploration of the research topic, as it required careful integration of data collection, analysis, and interpretation techniques²⁸. By using triangulation, where one set of results is cross-validated with another, the study enhanced the depth of understanding and strengthened the validity of its conclusions²⁸.

For the qualitative aspect, a descriptive research design was used, involving interviews with novice entrepreneurs. These interviews aimed to uncover the evolving challenges they face in the coffee industry, with the goal of developing an entrepreneurial competency framework tailored to their needs.

The research was conducted in Region 2, specifically in the provinces of Cagayan, Isabela, Nueva Vizcaya, and Quirino. The province of Batanes was excluded due to accessibility limitations. Region 2 was chosen as the study site because of its growing coffee shop industry, which is gaining traction in the global market. The study aimed to explore the entrepreneurial competencies of established coffee shop owners in the region to help guide and support novice entrepreneurs.

Participants were purposively selected, with an initial minimum sample size of 10 respondents. However, following Patton's²⁸ recommendation to increase the sample size until data saturation is reached, the final number of participants was set at 26.

To be included in the study, respondents had to meet the following criteria:

1. They must be actively managing or owning a coffee shop business.
2. They must have been in the industry for at least one year.
3. A one-year operation was considered sufficient to classify a start-up as an established enterprise.

As Salkind²⁹ explains, inclusion criteria are predefined characteristics used to determine who qualifies to participate in a research study.

The distribution of respondents across the four provinces was as follows:

Province	Number of Respondents (coffee shop owners/managers)
Cagayan (Tuguegarao City)	10
Isabela (Cauayan, Santiago, and Ilagan City)	13
Quirino	6
Nueva Vizcaya	7

All respondents were actively involved in managing their coffee shop businesses and were considered established entrepreneurs.

Coffee shops were selected based on these characteristics:

1. Located in major towns or cities
2. Employing at least three staff members
3. Independently owned (not franchised)

The study focused on interviewing the owners of these coffee shops, as they were best positioned to share insights on the challenges they encountered and the entrepreneurial competencies they applied to overcome them. The data gathered from these interviews served as the foundation for developing a competency framework aimed at supporting new and aspiring coffee shop entrepreneurs.

The instrument used for gathering data is a two-part, self-constructed survey questionnaire. The questionnaire was validated and tested for reliability. Part 1 of

the questionnaire finds out the age, how long the coffee shop has existed, number of employees, the start-up capital, and the respondent's position in the business. Part 2 finds out how the evolved challenges of the coffee shops are addressed by the entrepreneurial competencies of the respondents. They are those who are engaged in leading the coffee shop business in the region and have been established entrepreneurs

In addition to the questionnaire, an interview guide consisting of open-ended questions was used to conduct interviews to determine how the challenges encountered by the entrepreneurs in the coffee shop business was addressed by the different entrepreneurial competencies. The guide contains essential questions and follow-up questions was added to clarify the context of the answers in order to ensure that the data reach the saturation point. According to Kabir³⁰, interviews are valuable since detailed questions may be asked; further probing can be done to provide rich data.

The reliability test was determined and validated by the reliable Business Management and Certified Public Accountant and PhD holders of Isabela State University. They have also their various research published both in Scopus and refereed journals.

The research analyzed two types of data, quantitative and qualitative. The quantitative data used inferential statistics to collect the data in the first part of the questionnaire. Measurement of central tendency, specifically mean and standard deviation, were computed for the data gathered in the second and third parts of the questionnaire.

Part 2 of the questionnaire was processed with the use of statistical measures of central tendency such as mean and standard deviation. These were ranked to identify the evolved challenges of the coffee

shop business. On the other hand, thematic analysis and coding technique were utilized in the qualitative data analysis. The responses of the respondents in the study were transcribed. The transcribed data were then coded and analyzed according to themes. Glesne³¹ defined coding as "a progressive process of sorting and defining the collected data that are applicable to the research purpose. It consists of re-reading the transcripts and identifying recurring words, ideas, or patterns generated from the data. Also, Braun and Clarke³³ defined thematic analysis as a qualitative research method that can be widely used across a range of epistemologies and research questions. It is a method for identifying, analyzing, organizing, describing, and reporting themes found within a data set. Braun and Clarke³³ and King³⁴ argued that thematic analysis is a useful method for examining the perspectives of diverse research respondents, emphasizing similarities and differences, and generating unanticipated insights. Thematic analysis is also useful for summarizing key features of a large data set, as it forces the researcher to take a well-structured approach to handling data, helping to produce a clear and organized final report³⁴.

In addition, to make this study easy to understand, attract, and sustain the interest of readers, and efficiently present the data, tables and texts were used. According to In et al.³⁵, methods of data presentation was determined according to the data format, the method of analysis was used, and the information was emphasized. Inappropriately presented data fail to clearly convey information to readers and reviewers. Data which was gathered in questionnaire and the interview was presented in tables and explained in text. The tables showed systematic presentation of information, and the texts were served as the principal method for explaining the findings and providing contextual information.

RESULTS AND DISCUSSION

The following sections present the data gathered and the analyses and other processes that the data have gone through. The data will be shown according to the statement of the problem of the research.

This section of the study presents entrepreneurial challenges and the extent of entrepreneurial challenges that evolved in the coffee shop during the initiation stage, planning stage, execution stage and

controlling stages in the four provinces of Cagayan Valley.

Starting up a coffee shop business is rife with challenges. The coffee shop industry is a competitive market, where they continually face various challenges to stay viable and profitable. Issues with product quality, service consistency, and supply chain management are just a few of the obstacles that coffee shop owners often encounter. As a result, understanding these common problems can help individuals navigate through them and create a successful business venture³⁶.

The Evolution of Entrepreneurial Challenges in the Coffee Shop Business

Table 1 Stage When the Challenges Started

No.	Challenges	Initiation Stage		Planning Stage		Execution Stage		Control Stage	
		No.	Rank	No.	Rank	No.	Rank	No.	Rank
1	Unrecognized opportunities for the business,	13	1 st	4	3 rd	7	2 nd	2	4 th
2	Unidentified needs for the business during the initiation stage	8	2 nd	6	3 rd	9	1 st	3	4 th
3	Inability to manage time	10	1 st	7	2 nd	5	3	4	4 th
4	Inability to solve problems	7	3 rd	8	1 st	8	1 st	3	4 th
5	Inability to align strategies to accomplish goals.	12	1 st	4	3 rd	4	3 rd	6	2 nd
6	Inability to resolve suppliers' issues	11	1 st	8	2 nd	5	3 rd	3	4 th
7	Inability to resolve customers' issues.	9	1 st	8	2 nd	6	3 rd	3	4 th
8	Inability to improve knowledge in market development	7	2 nd	4	3 rd	14	1 st	1	4 th
9	Inability to solve competition issues.	6	3 rd	8	2 nd	10	1 st	2	4 th
10	Inability to improve knowledge in coffeshop management	9	1 st	7	3 rd	9	1 st	1	4 th
	Total	92	1 st	64	3 rd	77	2 nd	28	4 th

Table 1 presents the distribution of the major challenges encountered by coffee shop entrepreneurs across the four stages of business development: initiation, planning, execution, and control. From a life sciences perspective, these stages represent not only business processes but also periods that influence occupational health, workplace safety, employee well-being, food safety practices, consumer protection, and the sustainability of food service operations. The frequency and ranking of the identified challenges illustrate how biological, environmental, and human factors interact throughout the development of a coffee shop enterprise.

The initiation stage emerged as the most critical phase, recording the highest number of reported challenges ($n = 90$, Rank = 1st). The most frequently cited concerns were unrecognized opportunities (13 reports) and the inability to align strategies with business goals (12 reports). While these findings appear managerial, they also have important life sciences implications. Decisions made during business initiation determine the establishment of food safety systems, sanitary facility design, occupational health policies, sourcing of safe food ingredients, and environmentally responsible operations. Failure to recognize these requirements at the outset may compromise employee safety, consumer health, regulatory compliance, and long-term operational sustainability. Similarly, difficulties in developing relationships with suppliers and customers may affect the quality, traceability, and safety of food products served to consumers.

The execution stage ranked second in terms of overall challenges ($n = 77$, Rank = 2nd), reflecting the transition from planning to actual service delivery. The predominant concerns included unidentified business needs, problem-solving, market competition, and knowledge gaps in coffee shop

management. From a life sciences standpoint, this stage represents the period during which entrepreneurs must simultaneously manage food preparation, sanitation procedures, occupational hazards, ergonomic demands, employee fatigue, customer safety, and compliance with food service regulations. Deficiencies in operational knowledge may increase the likelihood of food contamination, workplace injuries, inefficient waste management, and reduced employee well-being, ultimately affecting service quality and consumer satisfaction. Consequently, execution requires not only managerial competence but also the integration of health, safety, and environmental management principles.

The planning stage ranked third ($n = 64$, Rank = 3rd), with problem-solving, time management, and interpersonal relationships identified as the most common challenges. Although often perceived as a preparatory phase, effective planning plays a crucial role in establishing preventive measures that support healthy and sustainable workplace environments. Strategic planning determines staffing patterns, workflow design, sanitation schedules, procurement systems, inventory management, and emergency preparedness. Poor planning may contribute to excessive workload, occupational stress, employee burnout, inefficient food handling, and reduced operational resilience. Thus, comprehensive planning serves as a preventive strategy that protects both employee health and consumer welfare while promoting organizational efficiency.

The control stage was identified as the least challenging ($n = 28$, Rank = 4th), suggesting that entrepreneurs encountered fewer new concerns once operational systems had been established. Nevertheless, this stage remains essential from a life sciences perspective because it focuses on continuous monitoring, quality assurance, and performance

evaluation. Activities such as food safety inspections, hygiene audits, occupational risk assessments, customer feedback analysis, waste management monitoring, and compliance with health regulations are critical for maintaining safe and sustainable coffee shop operations. Although fewer challenges were reported, failure to continuously evaluate these systems may increase biological, chemical, and occupational risks that could compromise both public health and business sustainability.

Hence, the findings indicate that entrepreneurial challenges within coffee shops extend beyond financial and operational concerns to encompass important

life sciences dimensions, including food safety, occupational health, employee well-being, environmental sustainability, and consumer protection. The high frequency of challenges during the initiation and execution stages suggests that strengthening entrepreneurs' competencies in health and safety management, food hygiene, sustainable resource utilization, ergonomic workplace design, and preventive risk management is essential. Integrating life sciences principles into entrepreneurial training and business development programs can improve operational resilience, promote healthier workplaces, ensure safer food service environments, and contribute to the long-term sustainability of the coffee shop industry.

Table 2 Stage When the Challenges Worsened

No.	Challenges	Initiation Stage		Planning Stage		Execution Stage		Control Stage	
1	Unrecognized opportunities for the business,	10	1 st	9	2 nd	5	3 rd	2	4 th
2	Unidentified needs for the business during the initiation stage	9	2 nd	11	1 st	5	3 rd	1	4 th
3	Inability to manage time	12	1 st	8	2 nd	3	3 rd	3	3 rd
4	Inability to solve problems	15	1 st	7	2 nd	2	3 rd	1	3 rd
5	Inability to align strategies to accomplish goals.	8	2 nd	8	2 nd	9	1 st	1	3 rd
6	Inability to resolve suppliers' issues	13	1 st	5	3 rd	6	2 nd	2	4 th
7	Inability to resolve customers' issues.	10	1 st	8	2 nd	4	3 rd	4	3 rd
8	Inability to improve knowledge in market development	13	1 st	7	2 nd	4	3 rd	2	4 th
9	Inability to solve competition issues.	14	1 st	6	2 nd	3	3 rd	3	3 rd
10	Inability to improve knowledge in coffeeshop management	9	1 st	7	2 nd	6	3 rd	4	4 th

Table 2 complements the preceding analysis by illustrating not only the stages at which entrepreneurial challenges emerged but also the stages during which these challenges intensified and became more difficult to manage. From a life sciences perspective, the escalation of these challenges has important implications for occupational health, food safety, employee well-being, consumer protection, environmental sustainability, and organizational resilience. As operational demands increase, unresolved managerial issues may compromise safe food handling practices, increase workplace stress, reduce employee productivity, and affect the quality of services delivered to consumers.

The initiation stage remained the most vulnerable phase, recording the highest frequency of worsening challenges. The most severe concerns included the inability to solve problems (15 reports), supplier-related issues (13 reports), knowledge gaps in market development (13 reports), competition-related challenges (14 reports), and the inability to manage time effectively (12 reports). These findings indicate that deficiencies during the earliest phase of business development extend beyond entrepreneurship and directly influence the establishment of healthy and safe food service systems. Failure to develop effective operational strategies at this stage may delay the implementation of food safety protocols, sanitation programs, employee training, occupational safety measures, and sustainable resource management. Consequently, poor preparation may increase the risk of food contamination, employee fatigue, psychological stress, inefficient workflow, and reduced organizational resilience.

The planning stage emerged as the second most affected phase, with worsening challenges primarily involving unidentified business needs (11 reports), strategy

alignment (8 reports), and customer- and time-management issues. From a life sciences standpoint, planning is a preventive stage where decisions regarding workplace ergonomics, employee scheduling, food procurement, sanitation systems, waste management, and infection prevention are established. Inadequate planning may contribute to excessive workload, occupational burnout, inefficient food handling procedures, poor hygiene compliance, and increased exposure to biological and environmental hazards. These shortcomings may compromise both employee health and consumer safety, ultimately affecting the sustainability of coffee shop operations.

The execution stage exhibited a moderate level of challenge escalation. The most prominent concerns included strategy alignment, supplier-related issues, and management knowledge gaps. During this stage, entrepreneurs translate business plans into daily operations while simultaneously ensuring compliance with food safety regulations, occupational health standards, quality assurance procedures, and customer service expectations. Weaknesses in supplier management may affect the quality and microbiological safety of raw materials, while insufficient managerial knowledge may reduce compliance with sanitation protocols, increase workplace accidents, and diminish employees' capacity to respond effectively to health-related risks. These findings emphasize that operational competence should integrate not only business management skills but also principles of food hygiene, occupational safety, and environmental health.

The control stage recorded the lowest frequency of worsening challenges, suggesting that businesses gradually develop greater operational stability through continuous monitoring and accumulated

experience. Nevertheless, this stage remains essential for maintaining quality assurance, food safety surveillance, employee health monitoring, environmental compliance, and continuous improvement. Regular evaluation of sanitation practices, occupational risk management, customer feedback, and operational performance enables entrepreneurs to identify emerging biological, environmental, and workplace hazards before they compromise consumer health or business sustainability. Continuous monitoring also supports evidence-based decision-making and strengthens resilience against future operational disruptions.

Overall, the findings indicate that entrepreneurial challenges become progressively intertwined with life sciences concerns as businesses evolve. The Table 3 Stage When the Challenges were Resolved

pronounced escalation of challenges during the initiation and planning stages underscores the importance of integrating occupational health, food safety management, environmental sustainability, ergonomic workplace design, stress management, and preventive risk assessment into entrepreneurial preparation programs. Early investment in these life sciences principles can minimize biological and occupational risks, promote healthier working environments, safeguard consumer well-being, and strengthen the long-term sustainability and resilience of coffee shop enterprises. Such an integrated approach supports not only business success but also the broader goals of public health, sustainable food systems, and responsible entrepreneurship.

No	Challenges	Initiation Stage		Planning Stage		Execution Stage		Control Stage	
1	Unrecognized opportunities for the business	3	4 th	7	3 rd	8	1 st	8	1 st
2	Unidentified needs for the business during the initiation stage	2	4 th	5	3 rd	10	1 st	9	2 nd
3	Inability to manage time	5	2 nd	5	2 nd	5	2 nd	11	1 st
4	Inability to solve problems	1	4 th	6	3 rd	7	2 nd	10	1 st
5	Inability to align strategies to accomplish goals.	5	3 rd	8	1 st	5	3 rd	8	1 st
6	Inability to resolve suppliers' issues	4	4 th	7	2 nd	8	1 st	7	2 nd
7	Inability to resolve customers' issues.	4	3 rd	4	3 rd	9	1 st	9	1 st
8	Inability to improve knowledge in market development	6	3 rd	4	4 th	8	1 st	8	1 st
9	Inability to solve competition issues.	3	4 th	6	3 rd	7	2 nd	10	1 st
10	Inability to improve knowledge in coffeeshop management	4	4 th	7	2 nd	6	3 rd	9	1 st

The findings indicate that the control stage is the most effective phase for resolving entrepreneurial challenges, with the highest frequency of resolved issues, including time management, problem-solving, customer relations, competition, and coffee shop management. From a life sciences perspective, this stage reflects the successful implementation of food safety systems, occupational health practices, quality assurance, and continuous operational monitoring. Through accumulated experience and feedback mechanisms, entrepreneurs are better able to maintain hygienic food service operations, improve employee well-being, and ensure consumer safety while sustaining business performance.

The execution stage ranked second in challenge resolution, particularly in addressing customer concerns, supplier relationships, market development, and business opportunities. Practical experience enables entrepreneurs to strengthen food handling procedures, improve supply chain quality, minimize occupational risks, and enhance customer satisfaction through evidence-based operational adjustments. This stage demonstrates how adaptive management contributes to healthier workplaces and safer food service environments.

The planning stage showed moderate effectiveness in resolving strategic alignment, supplier management, and time management. Effective planning facilitates preventive measures, including workforce scheduling, sanitation protocols, ergonomic workplace design, and resource allocation, thereby reducing occupational stress and improving operational efficiency.

Conversely, the initiation stage was the least effective in resolving challenges, as entrepreneurs are still developing the

competencies required to establish safe, sustainable, and resilient food service operations. Limited experience during this stage may delay the implementation of food safety standards, employee health programs, and risk management strategies.

Overall, the findings suggest that challenge resolution improves as entrepreneurs gain operational experience and strengthen health, safety, and quality management systems. Integrating life sciences principles particularly food safety, occupational health, environmental sustainability, and preventive risk management throughout the business lifecycle can enhance organizational resilience, protect employee and consumer well-being, and support the long-term sustainability of coffee shop enterprises.

Challenges in the different stages of coffee

shop business

Starting a coffee shop may sound exciting and promising, but it requires thorough preparation to ensure long-term success. Beyond branding, business registration, securing permits, and handling paperwork, entrepreneurs must anticipate potential challenges and develop strategies to address them early on.

Running a coffee shop whether at the start-up phase or during regular operations—comes with a variety of challenges. These include intense competition, menu planning, customer service, staff management, inventory control, pricing strategies, equipment needs, choosing the right location, building and maintaining a brand, financial management, growing the customer base, and retaining customer loyalty.

Before implementing solutions, it's essential to first identify and analyze these challenges. They should then be matched

with the entrepreneur's existing competencies. If certain skills are lacking, a plan for developing those competencies should be put in place. Based on the responses from participants in this study, the following challenges were highlighted:

1. Manpower

Human resources are vital to the smooth operation of a coffee shop. Tasks such as brewing coffee, cleaning, washing dishes, and sourcing ingredients all require reliable staff. Many respondents, especially from Isabela, cited manpower as a major challenge. One entrepreneur shared the difficulty of finding employees who are committed and willing to stay long-term. Another mentioned that many hires lacked professionalism, making retention difficult. Training new staff also demands time, effort, and financial investment.

2. Location

Choosing the right location is crucial to a coffee shop's success. Most respondents emphasized the importance of selecting a trendy and accessible spot, especially to attract younger customers like millennials and Gen Z. One entrepreneur faced challenges after relocating, while another struggled to find a location with sufficient foot traffic.

3. Vendors/Suppliers

Managing vendor relationships is another common hurdle. Entrepreneurs need reliable suppliers who offer quality products at fair prices. Building strong relationships with vendors ensures consistent service and support. Key strategies include regular communication, negotiating favorable terms, and staying updated on new offerings. One participant noted the difficulty of finding trustworthy suppliers for essentials like equipment and high-quality coffee beans.

4. Technical Problems

Keeping up with technological advancements can be overwhelming. Entrepreneurs must leverage technology to enhance customer service, streamline operations, and boost efficiency. This includes online ordering systems, mobile payments, delivery services, and digital marketing. A respondent from Cagayan shared struggles with electrical and plumbing issues, while another expressed the need for a robust inventory system.

5. Customer Issues

Customer-related challenges vary by establishment but often include unclear brand identity, high expectations, and menu preferences. In Isabela, one entrepreneur mentioned that customers demanded faster service, which was sometimes unreasonable. Meeting the evolving needs of today's coffee shop patrons is essential for success.

6. Competition

The coffee shop market is saturated, making it difficult for new businesses to stand out. Entrepreneurs must identify their target audience and offer something unique—or deliver existing offerings better than competitors. This could involve enhancing customer service, curating a distinctive menu, or adding features like games or books. One respondent noted that nearby cafés offered lower prices, making competition even tougher.

Interventions

To effectively address the challenges encountered by coffee shop entrepreneurs, a comprehensive approach that integrates business management, food safety, occupational health, and consumer well-being is essential. Establishing a clearly defined business identity enables

entrepreneurs to understand the needs and preferences of their target consumers and to design products and services that promote customer satisfaction while supporting healthy food service practices. Customer-centered operations, combined with the strategic use of digital technologies such as mobile ordering systems, electronic payment platforms, and customer feedback mechanisms, enhance operational efficiency, service quality, and public health responsiveness.

Menu development should be guided by market demand, nutritional considerations, product quality, and food safety standards. Offering diverse, high-quality beverages and food items at competitive prices improves customer satisfaction while ensuring compliance with food hygiene regulations. Regular market analysis also enables entrepreneurs to respond to changing consumer preferences, including the increasing demand for healthier and sustainably sourced products.

Human resources represent a critical component of sustainable coffee shop operations. Continuous employee training in food hygiene, occupational safety, sanitation protocols, customer relations, and emergency preparedness strengthens workforce competence and minimizes biological, chemical, and occupational risks. Likewise, implementing ergonomic workplace practices, effective scheduling, and supportive work environments contributes to employee well-being, productivity, and job satisfaction.

Operational sustainability further depends on efficient inventory management, evidence-based pricing strategies, and investment in high-quality equipment that supports product

consistency, minimizes food waste, and improves workplace safety. Selecting accessible business locations and creating welcoming environments that comply with health and sanitation standards further enhance customer experience and operational resilience.

Financial sustainability requires proactive risk management through contingency planning for supply chain disruptions, equipment failure, and other unexpected events that may compromise business continuity. At the same time, strategic marketing initiatives including digital promotion, community engagement, and customer loyalty programs strengthen consumer relationships, encourage repeat patronage, and support long-term business viability.

Ultimately, successful coffee shop management requires entrepreneurs to integrate entrepreneurial competencies with life sciences principles, including food safety, occupational health, environmental sustainability, consumer protection, and quality management. Developing competencies in leadership, innovation, adaptability, communication, and evidence-based decision-making enables entrepreneurs to create healthier workplaces, deliver safe and high-quality food products, promote environmental stewardship, and build resilient coffee shop enterprises capable of sustaining long-term growth and contributing to public health and sustainable food systems.

The Entrepreneurial Framework for Business Challenges

An entrepreneurial framework for business challenges for a coffee shop business is developed by identifying the key competencies that are required for the success

of the business. These competencies include personal competence, interpersonal competence, business competence, and other competencies that are specific to the coffee shop business.

The development of an entrepreneurial framework for a coffee shop business also considered the specific needs of the business. This included factors such as location, target market, competition, and other factors that may impact the success of the business. The main consideration, however, are the challenges that the coffee shop business experienced, how these escalated, and their resolution.

Conclusion

The rapid transformation of the global food service industry, driven by digitalization, changing consumer behaviors, and increasing public health demands, has significantly reshaped the coffee shop sector. Beyond business competitiveness, coffee shop operations have become increasingly dependent on the integration of food safety, occupational health, environmental sustainability, consumer well-being, and organizational resilience. Consequently, entrepreneurs require competencies that extend beyond traditional business management to include knowledge and skills in hygiene management, risk assessment, workplace health, quality assurance, and sustainable resource utilization.

This study demonstrated that entrepreneurial challenges evolve differently across the four stages of coffee shop development initiation, planning, execution, and control with important implications for the health and sustainability of food service operations. The findings revealed that the initiation stage is the most vulnerable phase, where operational, organizational, and health-related challenges first emerge and intensify. Weaknesses during this stage may delay the

establishment of food safety protocols, occupational health measures, sanitation systems, and sustainable operational practices. In contrast, the control stage exhibited the highest level of challenge resolution, reflecting the positive effects of continuous monitoring, quality assurance, feedback systems, and evidence-based decision-making in maintaining safe, healthy, and resilient food service environments.

The demographic profile further indicates that the coffee shop industry is increasingly led by young entrepreneurs, most of whom are owner-operators. This highlights the growing need to strengthen their competencies not only in entrepreneurship but also in food hygiene, occupational safety, environmental management, customer health protection, and organizational resilience. Preparing entrepreneurs with multidisciplinary competencies can improve their ability to manage biological, environmental, and operational risks while promoting healthier workplaces and safer food service establishments.

The study likewise identified several interventions that can strengthen both business sustainability and public health outcomes. These include establishing a customer-centered business identity, utilizing digital technologies to improve operational efficiency, developing safe and nutritionally responsive menus, implementing effective inventory and quality management systems, investing in hygienic and ergonomically appropriate equipment, strengthening employee training in food safety and sanitation, promoting occupational health and well-being, developing contingency and emergency preparedness plans, adopting environmentally sustainable practices, and implementing customer engagement and loyalty strategies. Collectively, these interventions support healthier work environments, safer food products, improved

consumer confidence, and greater organizational resilience.

Conclusively, the findings emphasize that the sustainability of the coffee shop industry depends not only on entrepreneurial competence but also on the integration of life sciences principles throughout the business lifecycle. Embedding food safety, occupational health, environmental sustainability, public health protection, quality management, and human well-being into entrepreneurial practice enables coffee shop enterprises to adapt to evolving challenges, strengthen operational resilience, protect employees and consumers, and contribute to sustainable food systems. Such an integrated approach positions the coffee shop industry as an important contributor to public health, environmental stewardship, and sustainable economic development.

Recommendations

The study recommends that start-ups for a coffee shop business is a specialized task which will require specific business competencies. The output of this research is a big help to guide new entrepreneurs in the business. It is therefore recommended that this be used. It is also recommended that risk management be at the most active in the initiation stage because this is the most vulnerable stage in business.

Additional studies should be conducted with regards to different areas of the industry, such as the competencies needed to manage the full supply chain itself. Additional research is recommended in the value chain challenges within the same four stages of the coffee industry.

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