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Entrepreneurial Challenges of the Food Processing Industry in Kerala

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ABSTRACT

The food processing industry in Kerala is a vital contributor to the state's economy, driving employment, agricultural value addition, and rural development. Despite the state's rich agricultural diversity and growth potential, food processing units face numerous entrepreneurial challenges that hinder their competitiveness and development. This study aims to identify and analyze these challenges faced by food processing units in Kerala, focusing on both sole traders and partners. Using a quantitative research approach, a structured questionnaire was administered to 90 respondents selected through cluster sampling. The data collected were analyzed using statistical tools such as SPSS, with descriptive statistics and Discriminant analysis applied to explore the challenges. The findings reveal that for sole traders, the most significant challenges include the need for ongoing worker training, inefficient supply chain management, and limited marketing strategies. For partners, the critical issues are financial difficulties, particularly limited access to credit, regulatory burdens, and intense competition from multinational corporations. The study highlights a stark contrast in the challenges faced by sole traders and partners, with financial and regulatory issues more pronounced for partners, while sole traders struggle with operational inefficiencies and labor-related problems. The results underscore the need for targeted interventions to address these challenges and enhance the competitiveness of Kerala's food processing sector.

Keywords: Food processing industry, Entrepreneurial challenges, Sole traders, Partners, Kerala, Discriminant analysis

INTRODUCTION

The food processing industry in Kerala plays a vital role in the state's economy, contributing significantly to employment generation, agricultural value addition, and rural development. As one of India's key agricultural hubs, Kerala is poised to become a global leader in food processing, leveraging its unique agricultural resources. The state is home to a diverse range of food processing units that cater to both domestic and international markets. These units specialize in the processing and export of spices such as black pepper, cardamom, and vanilla; edible oils; seafood products like fish, shrimp, and crab; dairy products including ghee, butter, and curd; value-added products from fruits and vegetables, such as jams, juices, pickles, and dehydrated foods; and tropical fruit products like canned jackfruit, pineapple, and banana chips. Additionally, Kerala's food processing units are also involved in producing ready-to-eat meals, snacks, and organic food items, highlighting the state's strong focus on leveraging its agricultural and marine resources for added value.

Despite the growth potential and strategic advantages offered by Kerala's agricultural diversity, the food processing sector faces significant entrepreneurial challenges that impede its development and competitiveness. These challenges range from limited access to credit, intense competition from multinational corporations, and shortages of skilled labor to inefficiencies in supply chain management and inadequate

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infrastructure. Regulatory burdens, environmental compliance issues, and volatile raw material prices further complicate the operational landscape. This research aims to explore these challenges in-depth, offering insights into the key obstacles faced by food processing units in Kerala.

Need and Significance of the Study:

The food processing industry in Kerala holds immense potential for driving economic growth, rural development, and agricultural diversification. As a state renowned for its agricultural output, particularly in tropical fruits, spices, and coconut-based products, Kerala's food processing sector has the capacity to become a key player in both the national and international markets. However, the sector remains underdeveloped and faces numerous entrepreneurial challenges that limit its full potential. The food processing industry in Kerala is at a crossroads. While the state boasts rich agricultural resources, there is a substantial gap in terms of the adoption of modern processing technologies, workforce skill development, infrastructure, and access to financial resources. Local food processors, particularly small and medium-sized enterprises (SMEs), are hindered by limited access to finance, intense competition from multinational corporations, fluctuating raw material prices, and regulatory challenges (Jayaraman, 2016; Varghese, 2018). Moreover, the lack of innovation and research and development (R&D) investment has resulted in an underutilization of the state's agricultural produce, limiting the creation of value-added products that could cater to both domestic and international markets (Kochi, 2021).

This study is crucial in identifying and understanding these challenges, as it will provide valuable insights that can inform policies and strategies for overcoming the barriers to growth in the sector. In addition, the findings will be valuable for industry players looking to navigate the competitive pressures and operational challenges that are crucial for the long-term success and profitability of food processing units in Kerala.

Statement of the Problem:

The food processing industry in Kerala, despite its significant potential to enhance the state's economy through value addition to agricultural products, faces numerous entrepreneurial challenges that hinder its growth and global competitiveness. These challenges include limited access to finance, high competition from multinational corporations and cheaper imports, a scarcity of skilled labor, and volatile raw material prices. Additionally, the lack of innovation and research and development (R&D) capabilities, coupled with stringent environmental regulations and insufficient infrastructure, further exacerbates the difficulties faced by local food processors. These barriers not only impede the productivity and sustainability of small and medium-sized food processing units but also limit the industry's ability to scale and diversify its products for both domestic and international markets. As a result, Kerala's food processing sector is unable to realize its full economic potential, and there is a pressing need to understand and address these challenges to foster a more competitive, sustainable, and growth-oriented food processing industry in the state.

Review of Related Literature:

The food processing industry in Kerala faces a multitude of challenges that hinder its growth, spanning financial, operational, and regulatory domains. A recurring issue is access to finance, with studies by Jayaraman (2016) and Bansal *et al.* (2019) highlighting the reluctance of financial institutions to extend credit to small and medium-sized enterprises (SMEs) due to risks associated with perishability, high competition, and market volatility, thereby limiting investment in technology, research, and marketing. Additionally, Kerala's food processing units contend with intense competition from multinational corporations (MNCs) and cheaper imports, as noted by Varghese (2018), which undermines local price competitiveness and intensifies market pressures, particularly in areas like quality, packaging, and marketing where MNCs hold an advantage (Sharma, 2020). The shortage of skilled labor, identified by Subramanian (2017) and Rajeev (2021) exacerbates operational challenges, as there is a significant skills gap in advanced processing and quality control, compounded by migration trends and inadequate training programs. Raw material price fluctuations, driven by climate changes and global supply chain disruptions, further destabilize the industry (Menon, 2019; Kumar and Sharma, 2018), while the limited focus on research and development (R&D) restricts innovation and product diversification (Nair, 2020; Kochi, 2021). Environmental regulations, particularly around waste management and emissions, present additional barriers, with high compliance costs and administrative complexity, especially for SMEs (Anwar *et al*., 2022; Sreenivasan,

2021). Operational inefficiencies, particularly in supply chain management—exemplified by inadequate transportation infrastructure and lack of cold storage—further hinder the sector's growth, as emphasized by Joseph and George (2020) and Sujatha (2022). Furthermore, unethical business practices by MNCs, such as predatory pricing and unfair competition, have raised concerns about market monopolization and exploitation of local resources and labor (Kannan, 2019). Together, these challenges significantly impact the competitiveness and sustainability of food processing units in Kerala, impeding their ability to thrive in both domestic and global markets.

Objective:

To identify the Entrepreneurial Challenges of Food Processing Units in Kerala.

Hypothesis:

There is no significant discriminating ability among the variables onEntrepreneurial Challenges of Food Processing Units

METHODOLOGY

This study employs a descriptive research design to explore the entrepreneurial challenges faced by food processing units in Kerala. The research methodology involves quantitativeapproaches to collect comprehensive data from Sole Traders and Partners of the food processing units in Kerala. A structured questionnaire is administered to Sole Traders and Partners of the food processing units in Kerala. Statistical toollike SPSS is used to analyze the survey data. Descriptive statistics andDiscriminant analysis are applied to understand the various challenges of the food processing units. The total sample includes 90 respondents, selected on the basis of Cluster sampling method.

RESULTS AND DISCUSSION

From the analysis, both categories report high levels of concern regardinglimited access to credit from financial institutions**,** with sole traders (mean = 3.782, SD = 0.9249) perceiving it as slightly more significant than partners (mean = 3.525, SD = 1.0659). This indicates that sole traders may face greater financial constraints or have more difficulty accessing external funding compared to those in partnerships. Other high-effect challenges reported by both sole traders and partners include shortage of skilled labor (mean = 4.083 for sole traders, 3.703 for partners) and volatile raw material prices (mean = 4.109 for sole traders, 3.748 for partners), which are seen as major impediments to productivity and

Table 1 : Descriptive Analysis-Entrepreneurial Challenges of Food Processing Units

Entrepreneurial Challenges of Food Processing Units	Sole Trader		Partner	
	Mean	S.D.	Mean	S.D.
Limited Access to Credit from Financial Institutions	3.782***	.9249	3.525**	1.0659
Intense Competition from Multinational Corporations and Cheap Imports	3.654***	1.0138	3.317**	1.1454
Shortage of Skilled Labor	4.083***	1.1414	3.703***	1.1679
Volatile Raw Material Prices	4.109***	1.1560	3.748***	1.1805
Limited Research and Development (R&D) Capabilities	3.686***	1.1291	3.391**	1.0606
Difficulty in Accessing Finance	3.583**	.9769	3.351**	1.0791
Burden of Environmental Regulations	3.776***	.9677	3.495**	1.0521
Inefficient Supply Chain Management	3.846***	.9098	3.475**	1.0798
Need for Ongoing Worker Training	3.808***	.9713	3.441**	1.0504
Market Saturation and Intense Competition	3.718***	1.0522	3.515**	1.0329
Limited Marketing Strategies	3.192*	.9845	2.980*	1.0171
High Energy Costs	3.301**	.9667	3.124*	.9302
Regulatory and Compliance Challenges	3.295**	.9382	3.079*	.9792
Outdated Technology and Equipment	3.282**	.9824	3.119*	.9853
Inadequate Transportation Infrastructure	3.179*	1.0191	2.985*	1.0147
Lack of Support from Government Agencies	2.968*	1.0681	2.881*	1.1089
Insufficient Cold Storage Facilities	2.673*	.9978	2.802*	.9977
Inadequate Waste Disposal Facilities	3.096*	1.0018	3.153*	1.0227
Unethical Business Practices by Multinational Companies	2.641*	.9768	2.718*	1.0993

(Source:- Primary data);*-Low Effect,**-Moderate Effect,***-High Effect

profitability in the food processing sector. Additionally, challenges related to inefficient supply chain management (mean = 3.846 for sole traders, 3.475 for partners) and the burden of environmental regulations (mean = 3.776 for sole traders, 3.495 for partners) also received high ratings, indicating significant operational constraints faced by food processors in Kerala, regardless of their business structure (Table 1).

While both sole traders and partners face similar high-impact challenges, there are also differences in the perceived moderateandlow-effect challenges. For example, limited research and development (R&D) capabilities (mean = 3.686 for sole traders, 3.391 for partners) and market saturation (mean = 3.718 for sole traders, 3.515 for partners) were seen as moderately significant, suggesting that innovation and market differentiation are key areas of concern. On the other hand, issues like insufficient cold storage facilities (mean = 2.673 for sole traders, 2.802 for partners) and lack of support from government agencies (mean = 2.968 for sole traders, 2.881 for partners) were perceived as lower in impact but still important. Interestingly, challenges such as unethical business practices by multinational companies (mean = 2.641 for sole traders, 2.718 for partners) were rated relatively low, indicating that while there may be concerns, they do not represent the most critical barriers faced by food processing units.

Based on Wilks' Lambda statistics and the associated significance values (p-value), challenges such as limited access to credit (p = 0.017), intense competition from multinational corporations and cheap imports (p = 0.004), shortage of skilled labor (p = 0.002), volatile raw material prices (p = 0.004), difficulty in accessing finance (p = 0.036), and burden of environmental regulations (p = 0.010) show significant differences in their perceived impact. These results suggest that food processing units, whether sole traders or partnerships, face substantial hurdles in terms of financial access, labor shortages, market competition, and regulatory compliance. Similarly, inefficient supply chain management (p = 0.001) and the need for ongoing worker training (p = 0.001) are significant challenges, highlighting operational inefficiencies and skill development as critical areas for improvement. On the other hand, challenges such as market saturation (p = 0.068), high energy costs (p = 0.079), and regulatory and compliance challenges (p = 0.036) are moderately significant, while issues like outdated technology (p = 0.121), inadequate infrastructure (p = 0.074), insufficient cold storage facilities (p = 0.226), inadequate waste disposal facilities (p = 0.596), and unethical business practices (p = 0.492) are not statistically significant, suggesting that these challenges are less impactful in comparison to others (Table 2).

The overall CVTS (Chi Square test) is 27.589, p

Table 2 : Tests of Equality of Group Means-Entrepreneurial Challenges of Food Processing Units

Entrepreneurial Challenges of Food Processing Units	Wilks' Lambda	F	df1	df2	Sig.
Limited Access to Credit from Financial Institutions	.984	5.747	1	89	.017*
Intense Competition from Multinational Corporations and Cheap Imports	.977	8.413	1	89	.004*
Shortage of Skilled Labor	.974	9.522	1	89	.002*
Volatile Raw Material Prices	.977	8.402	1	89	.004*
Limited Research and Development (R&D) Capabilities	.982	6.428	1	89	.012*
Difficulty in Accessing Finance	.988	4.410	1	89	.036*
Burden of Environmental Regulations	.981	6.711	1	89	.010*
Inefficient Supply Chain Management	.968	11.886	1	89	.001*
Need for Ongoing Worker Training	.969	11.475	1	89	.001*
Market Saturation and Intense Competition	.991	3.348	1	89	.068
Limited Marketing Strategies	.989	3.936	1	89	.048*
High Energy Costs	.991	3.098	1	89	.079
Regulatory and Compliance Challenges	.988	4.428	1	89	.036*
Outdated Technology and Equipment	.993	2.422	1	89	.121
Inadequate Transportation Infrastructure	.991	3.217	1	89	.074
Lack of Support from Government Agencies	.998	.556	1	89	.456
Insufficient Cold Storage Facilities	.996	1.469	1	89	.226
Inadequate Waste Disposal Facilities	.999	.281	1	89	.596
Unethical Business Practices by Multinational Companies	.999	.473	1	89	.492

(Source:- Primary data);*-Significant

Value=0.092; Ho is accepted. That means there is no significant discriminating ability among the variables onEntrepreneurial Challenges of Food Processing Unitsand category wise classification. Wilks' Lambda value shows a high variance of the opinion about Entrepreneurial Challenges of Food Processing Units (Table 3).

Table 3 : Wilks' Lambda -Entrepreneurial Challenges of Food Processing Units

Test of Function (s)	Wilks' Lambda	Chi-square	df	Sig.
1	.923	27.589	19	.092

(Source:- Primary data);*-Significant

Finally group centroids shows that for the assigned weight to the standardized canonical discriminant functions evaluated above, Sole Trader respondents got a mean score of 0.327 and Partnerrespondents got a mean score of -0.252 (Table 4).

For sole traders, the top challenges include the need for ongoing worker training (coefficient: 0.471), which is ranked the highest, followed by inefficient supply chain management (coefficient: 0.435) and limited marketing strategies (coefficient: 0.333). These issues are indicative of operational inefficiencies and the critical need for skilled labor and robust logistical systems to remain competitive. Moreover, the limited access to credit and volatile raw material prices (ranked 4th and 7th respectively) suggest that financial and procurement challenges also significantly hinder the growth of sole traders in the food processing industry (Table 5).

Table 4 : Functions at Group Centroids -Entrepreneurial Challenges of Food Processing Units

Category	Function
Sole Trader	.327
Partner	-.252

(Source: -Primary data)

For partners in food processing units, the major challenges appear to revolve around difficulties in accessing finance (coefficient: -0.323), regulatory compliance (coefficient: -0.106), and the burden of environmental regulations (coefficient: -0.354). These negative coefficients reflect substantial financial and regulatory constraints that particularly impact partnerships. Challenges such as intense competition from multinational corporations, shortage of skilled labor, and limited R&D capabilities (all ranked lower) also affect partners but to a lesser degree compared to issues of capital access and compliance. Additionally, factors like the inadequate transportation infrastructure (ranked 9th for sole traders) and ethical issues related to multinational practices (ranked 6th for sole traders) appear to have

Table 5 : Standardized Canonical Discriminant Function Coefficients -Entrepreneurial Challenges of Food Processing Units

Entrepreneurial Challenges of Food Processing Units	Sole Trader		Partner	
	Coefficient	Rank	Coefficient	Rank
Limited Access to Credit from Financial Institutions	--	--	-.153	4
Intense Competition from Multinational Corporations and Cheap Imports	.220	5	--	--
Shortage of Skilled Labor	.247	4		
Volatile Raw Material Prices	.174	7		
Limited Research and Development (R&D) Capabilities	.171	8	--	--
Difficulty in Accessing Finance			-.323	3
Burden of Environmental Regulations			-.106	5
Inefficient Supply Chain Management	.435	2	--	--
Need for Ongoing Worker Training	.471	1	--	--
Market Saturation and Intense Competition			-.354	1
Limited Marketing Strategies	.333	3	--	--
High Energy Costs			-.021	
Regulatory and Compliance Challenges	.220	5	--	--
Outdated Technology and Equipment			-.078	7
Inadequate Transportation Infrastructure	.137	9	--	--
Lack of Support from Government Agencies	.185	6	--	--
Insufficient Cold Storage Facilities			-.306	
Inadequate Waste Disposal Facilities			-.352	2
Unethical Business Practices by Multinational Companies			-.088	6

(Source: - Primary data)

Table 6 : Classification Results-Entrepreneurial Challenges of Food Processing Units

Entrepreneurial Challenges of Food Processing Units		Category	Predicted Group Membership		Total
			Sole Trader	Partner	
Original	Count	Sole Trader	24	15	39
		Partner	20	31	51
	%	Sole Trader	61.5	38.5	100.0
		Partner	39.6	60.4	100.0

a. 60.9% of original grouped cases correctly classified.

(Source: - Primary data)

less of an impact in the context of partnerships.

The Classification Results shows that out of 39Sole Traderwho areEntrepreneurs of Food Processing Units, the observations of the 24 (61.5%) respondents have been correctly classified and included in the category of Sole Trader itself. The rest, 15 (38.5%) respondents have been included in Partnergroup. Likewise, out of 51Partners, who areEntrepreneurs of Food Processing Units, the observations of the 31 (60.4%) respondents have been correctly classified and included in the category of Partnersitself. The rest, 20 (39.6%) respondents have been included in Sole Tradergroup. Overall discriminating ability of the current model is 60.9%, which is comparatively low as the bench mark is 60% (Table 6).

Conclusion:

The entrepreneurial challenges faced by food processing units in Kerala, as revealed through the coefficients and rankings for both sole traders and partners, highlight a stark contrast in the factors influencing their operations and growth. For sole traders, the most pressing issues are the need for ongoing worker training, inefficient supply chain management, and limited marketing strategies, underscoring a significant gap in operational capabilities and competitiveness. Conversely, for partners, the critical challenges revolve around financial difficulties, particularly limited access to credit and the burden of regulatory compliance, along with market saturation and competition from multinational corporations. The striking divergence in rankings between sole traders and partners illustrates the multifaceted nature of the challenges, with financial and regulatory hurdles being more acute for partners, while operational inefficiencies and labor-related issues weigh heavier on sole traders. The research underscores that the food processing sector in Kerala, despite its immense potential, is beset by systemic barriers that hinder both growth and innovation, creating a pressing need for targeted interventions in finance, skill development, infrastructure, and regulatory support to ensure the industry's sustainability and global competitiveness. This research will provide valuable insights into the key challenges faced by food processing entrepreneurs in Kerala and offer recommendations to overcome these barriers. The findings will help policymakers and industry stakeholders create a more conducive environment for the growth of the food processing industry, enhancing its competitiveness both in domestic and international markets.

REFERENCES

Bansal, P., Kumar, S. abd Gupta, R. (2019). Financial constraints in small food processing units in India: A study of the SME sector. *J. Rural Development*, **38**(2) : 131-148.

Jayaraman, R. (2016). Challenges of financing small-scale food industries in Kerala: A case study. *Indian J. Agric. Econ.*, **71**(4) : 505-520.

Jayaraman, R. (2016). Financial constraints and their impact on the food processing industry in Kerala. *J. Rural Development*, **38**(2) : 131-148.

Joseph, S. and George, M. (2020). Supply chain inefficiencies in Kerala's food processing sector: Issues and solutions. *Internat. J. Food Sci. and Technol.*, **55**(3) : 763-775.

Kannan, R. (2019). Impact of multinational corporations on the local food industry in Kerala. *Business & Economics Rev.*, **41**(1) : 22-34.

Kochi, R. (2021). Innovation challenges in Kerala's food processing sector. *J. Food Innovation*, **14**(1) : 45-58.

Menon, P. (2019). Price volatility in the food processing sector: A study of Kerala's spice industry. *Agric. Econ. Res. Rev.*, **32**(3) : 245-259.

Nair, R. (2020). Research and development in Kerala's food processing sector: A need for investment. *J. Food Policy*, **52**(1) :100-113.

Rajeev, R. (2021). Skills gap in the Kerala food processing sector: An overview of training initiatives. *Skills Development J.*, **7**(2) :48-56.

Sharma, S. (2020). Competitive strategies in the food processing industry: A study of Kerala's small enterprises. *J. Business Strategy*, **39**(4) : 123-137.

Sreenivasan, S. (2021). Regulatory burdens on Kerala's food processing sector: Challenges and policy recommendations. *Indian J. Policy Studies*, **13**(2) : 89-102.

Subramanian, A. (2017). Labor issues in Kerala's food processing industry: A study on workforce challenges. *Kerala J. Business*, **29**(3) : 114-127.

Varghese, P. (2018). Globalization and its impact on the food processing industry in Kerala. *Kerala Econ. Rev.*, **31**(1) : 56-67.

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