



## **Growth Dynamics and Challenges of MSME based Bakery Industries in India: A SWOT Analysis**

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### **ABSTRACT**

This paper presents a comprehensive SWOT analysis examining the growth and competitiveness of MSME-based bakeries in India, with a specific focus on the North East region. While the sector benefits from robust government support, high technical efficiency, and significant potential for innovation, it is significantly hampered by weaknesses such as outdated equipment, limited access to finance and technology, and a pervasive digital divide. These deficiencies critically impact operational efficiency, product quality, and overall market competitiveness.

The analysis underscores the urgent need for enhanced technology integration within North East MSME bakeries, particularly through the adoption of semi-automatic and fully automatic production operations. Such technological advancements are crucial for addressing current operational inefficiencies, mitigating material wastage, and improving product consistency and safety standards. By embracing modern technology, these bakeries can achieve substantial gains in operational efficiency, leading to higher productivity and reduced costs. Furthermore, technology integration fosters greater competitiveness by enabling faster innovation, better product quality, and improved market access. Critically, it also supports the development of more sustainable practices, from optimized resource utilization to reduced environmental impact. This study employs a descriptive research methodology, primarily utilizing secondary data from official reports and research papers, to conduct a SWOT analysis. The growing domestic production of bakery machinery is helping MSME bakeries cut costs, access easier maintenance, and build skills, enabling stronger growth and competitiveness. This paper argues



that strategic investment in technology is paramount for the long-term viability, sustainable growth of MSME bakeries and ensuring competitiveness in wider markets.

**Keywords:** *MSME Bakeries, North East region, Technology Integration, SWOT Analysis, Operational Efficiency, Sustainability, Competitiveness.*

## INTRODUCTION

India's food processing sector has emerged as a key driver of economic prosperity, job creation, and diversified exports over the past decade. This sector significantly contributed to the nation's Gross Value Added, accounting for nearly 20.2% in 2022–23, thereby highlighting its essential function in connecting agriculture with industrial development. Within this broad sector, the bakery industry has shown remarkable vitality, propelled by increasing urbanization, shifts in dietary habits, and a rising consumer demand for convenient and affordable food options. Bakery items such as bread, biscuits, cakes, and pastries have transformed from supplementary goods into daily staples, particularly for the burgeoning middle-class population.

The contribution of Micro, Small, and Medium Enterprises to this transformation is especially noteworthy. According to the Ministry of MSME's annual report, approximately 29% of food processing MSMEs operate in bakery-related activities. This trend is attributed to the subsector's low entry barriers, robust local demand, and flexible production capabilities. Governmental support, such as the PM Formalisation of Micro Food Processing Enterprises scheme, introduced in 2020, has further bolstered the ecosystem by facilitating unit modernization, brand building, and cluster-based development. Moreover, the export performance of processed foods, including bakery products, has improved considerably, with their share in agri-food exports growing from 13.7% in 2014–15 to 23.4% in 2023–24.

Despite these advancements, bakery MSMEs continue to face enduring challenges, including limited automation, insufficient capital investment, and intense competition from larger, established producers. These prevailing dynamics position the bakery industry as an excellent focus for studying technology integration within MSMEs, which is paramount for boosting competitiveness, ensuring consistent product quality, and meeting the demands of a rapidly evolving consumer market.



## **STATEMENT OF PROBLEM**

To identify how MSME based Bakery industries despite their crucial role in meeting local demands, generating employment, and fostering entrepreneurship, are grappling with significant challenges. These include issues like low mechanization, limited access to finance, and intense competition from larger, more organized players. In India's Northeast region, these existing problems are intensified by infrastructural deficiencies, weak supply chains, and restricted market access. While new opportunities are emerging, a systematic SWOT analysis is critically needed to develop effective strategies for these businesses to enhance their competitiveness and ensure their long-term sustainability.

## **LITERATURE REVIEW**

Identifying enablers of technological innovation for Indian MSMEs using best–worst multi criteria decision making method. Gupta and Barua conducted a study to identify and prioritize factors enabling technological innovation within Indian Micro, Small, and Medium Enterprises. Recognizing the pivotal role of MSMEs in economic development and their inherent challenges, the authors utilized the Best–Worst Multi-Criteria Decision Making Method. Their analysis, based on insights from 16 industry and academic experts, revealed that "project resources and capabilities," "technical know-how of entrepreneurs," and "government policies" are the most critical enablers for technological development among Indian MSMEs (Gupta & Barua, 2016). These findings underscore the importance of comprehensive resource availability—encompassing knowledge, infrastructure, capital, and skilled labor—alongside the technical acumen of business leaders and supportive governmental frameworks. Conversely, factors such as "collaborations between industry and academia," "entrepreneur education," "financial support by government for research initiatives," and "SME networks" were found to have a comparatively lesser impact on innovation in this context. While the study's primary focus is on broader MSME technological innovation rather than specific sectors like bakeries, its framework for identifying crucial enablers provides a valuable lens for understanding the systemic challenges and opportunities faced by MSME-based bakery industries in India, particularly when considering their structural features and strategic options within a SWOT analysis.



## **SME Transformation for Meeting the SDGs in ASIA**

The report by Kapoor underscores the significant and growing role of Indian MSMEs in the national economy. This sector is a major employer, second only to agriculture, providing livelihoods for over 110 million people, with micro-enterprises dominating this landscape (Kapoor, 2023). It contributes approximately 26% to India's GDP and nearly 50% to total merchandise exports, demonstrating its economic importance.

Key challenges for Indian MSMEs include limited access to finance, market information, quality human capital, and affordable technology (Kapoor, 2023). A prevalent issue is the sector's informality, which hinders formal growth and scaling. In response, the Indian government has implemented various policies, streamlined processes and promoted digitalization to support MSME growth and resilience, especially after the pandemic.

## **Productivity Growth in India's Bakery Manufacturing Industry**

This paper aims to investigate the Total Factor Productivity (TFP) and its constituent components—technological change, technical efficiency change, scale change, and allocative change—within the Indian bakery industry (Kumar et al., 2022). The study utilizes panel data collected from 35 Indian states, covering the period between 2009-2010 and 2012-2013. To estimate productivity growth, the researchers employed a stochastic frontier function. The findings indicate that TFP in the Indian bakery industry is primarily propelled by technological progress, followed by improvements in technical efficiency and scale efficiency. The research implies that the bakery industry needs to strategically define its innovation approaches, as these are crucial for achieving diverse outcomes that depend on the effective management of resources dedicated to generating and implementing innovations (Kumar et al., 2022)

## **Draft Detailed Project Report of Karnal Bakery Cluster**

The Indian bakery industry represents a significant portion of the global market, with a considerable valuation and a projected growth trajectory. This sector is largely characterized by the dominance of the unorganized segment, encompassing numerous micro and small-scale units, many of which are registered under the Udyog Aadhar Memorandum (Ernst & Young



LLP, 2017). The demand for bakery products has surged over the past two decades, influenced by factors such as globalization, evolving cultural exposures, and dynamic lifestyle changes within the Indian populace. A detailed analysis of these Micro, Small, and Medium Enterprises in the bakery sector reveals a complex interplay of strengths, weaknesses, opportunities, and threats. While these units demonstrate adaptability to local market demands, they often grapple with challenges like outdated equipment, insufficient training infrastructure, and limited access to broader markets. Understanding these internal and external factors is crucial for assessing the growth an

### **MSMEs in Food Appliance Manufacturing and Broader Implications**

The manufacturing of domestic electric appliances, specifically food mixers, wet grinders, and food processors, is a critical area for import reduction and domestic growth in India. These appliances are essential in both domestic and commercial food processing sectors, including hotels and restaurants. MSMEs play a vital role in this manufacturing domain, with government initiatives like the Production-Linked Incentive Scheme and support for clusters aiming to boost local production, generate employment, and achieve "Aatmanirbhar Bharat" (self-reliant India). Such policies, while focused on appliance manufacturing, signal a broader supportive environment for MSMEs involved in food-related industries. The report (Govindaraj, 2021) also highlights challenges for MSMEs, such as cost-effectiveness in manufacturing components due to low-capacity utilization.

### **Manufacturing Food Processing Equipment - Industry and Mines Department Government of Gujarat**

The manufacturing of food processing equipment is essential for transforming agricultural raw materials into consistent, hygienic food products, supporting the Indian food processing sector which is largely comprised of MSMEs (Manufacturing Food Processing Equipment Industry and Mines Department Government of Gujarat, 2024). The global market for this equipment is projected to grow at a 6.6% CAGR (2023-2027), with India's market seeing a 7.5% CAGR (2021-27) (Manufacturing Food Processing Equipment Industry and Mines Department Government of Gujarat, n.d.). Despite slow mechanization due to labour-intensive processes, it is crucial for quality, waste reduction, and scalability in MSMEs. Policies like the Gujarat Industrial Policy 2020 recognize industrial machinery and equipment manufacturing as a core



sector, aiming for growth and self-reliance. The Aatmanirbhar Gujarat Scheme further assists MSMEs in manufacturing with capital and interest subsidies, fostering a supportive environment for the food processing equipment industry and related food MSMEs.

### **From Farm to Retail: Make in India's push for Food Processing Excellence**

The "Make in India" initiative, spearheaded by the Ministry of Food Processing Industries, is transforming India's food processing landscape, prioritizing the sector's growth and positioning India as a global food leader (From Farm to Retail: Make in India's Push for Food Processing Excellence Empowering Farmers, Enhancing Value, Expanding Markets, 2025). Key schemes like the Pradhan Mantri Formalisation of Micro Food Processing Enterprises and the Production Linked Incentive scheme are explicitly designed to support Micro, Small, and Medium Enterprises, including those in the bakery sector. These initiatives provide crucial financial, technical, and marketing assistance, fostering innovation, enhancing competitiveness, and expanding market access for MSMEs. The overarching goals include boosting farmer incomes, generating employment, reducing food wastage, and increasing exports, thereby strengthening the entire food value chain and contributing to national food security.

### **Productive Performance of Indian Food Manufacturing Industry: A Sub-Sectoral Analysis in a Stochastic Frontier Framework**

Jai Ram Meena's study delves into the productive performance of the Indian food manufacturing industry, analyzing the technical efficiency of its 13 organized sub-sectors using a Stochastic Frontier Analysis framework. The research, based on 2017–2018 data, revealed that the industry as a whole achieved 92% TE, but with significant variation among sub-sectors, ranging from 74% to 100% (Meena, 2023). Notably, modern sub-sectors such as fruits and vegetables, edible oils, and bakery and beverage products demonstrated frontier-level efficiency. This indicates a strong productive capability within these segments, providing crucial information for targeted policy interventions and understanding the differential growth potential within India's diverse food processing landscape.



## **OBJECTIVES**

- a) To analyze the primary drivers contributing to the growth and productivity of MSME based bakeries across India, including an examination of regional disparities.
- b) To conduct a comprehensive Strengths, Weaknesses, Opportunities, and Threats analysis for the Indian bakery MSME sector, assessing its current state regarding innovation capabilities, scalability potential, and formalization challenges, with a specific focus on the Northeast of India.
- c) To investigate the implications of the identified SWOT factors on the long-term sustainability and competitiveness of the Indian bakery MSME sector.

## **RESEARCH GAP**

Existing literature indicates substantial progress in the productivity and technological efficiency of MSME-based food and bakery enterprises. However, these entities continue to face persistent structural and institutional hurdles that impede their scalability and formalization. Key analyses have explored technological facilitators, sectoral efficiency (Meena, 2024; Kumar et al., 2022), relevant policy frameworks, and localized cluster studies, collectively illustrating the dynamic evolution of this sector. Despite these contributions, a notable scarcity exists in empirical investigations that specifically target the Indian bakery MSME sector, particularly those that integrate productivity, innovation, and a comprehensive SWOT analysis.

## **SCOPE OF THE STUDY**

This study will concentrate on bakery businesses that are classified as Micro, Small, and Medium Enterprises throughout India, with a particular focus on the Northeast region. We'll look at their organizational structures, the problems they face, the opportunities available to them, and potential strategic choices, all within a SWOT framework. To gain insights into how these businesses can improve their performance and become more resilient, we will use both original data collected by us and existing information.



## LIMITATIONS OF THE STUDY

This study offers a descriptive overview, examining the growth and competition among MSME bakeries in India, particularly from the perspective of the Northeast region, through a SWOT analysis. However, due to time limitations, this research relies solely on secondary data. Furthermore, given the highly consolidated nature of food processing activities within micro and small-scale MSME food processing industries operating in the remote North Eastern region, more in-depth primary investigation is needed.

## RESEARCH METHODOLOGY

This study employs a descriptive research methodology, primarily utilizing secondary data from official reports and research papers, to conduct a SWOT analysis. The objective is to examine the expansion and competitive standing of MSME bakeries in India, with a specific focus on the North East Region.

## ANALYSIS AND FINDINGS

This SWOT analysis integrates findings from various sources to provide a nuanced understanding of the landscape for MSME bakeries, explicitly addressing the gaps related to productivity, innovation, and pathways to scalability and formalization.

## STRENGTHS

**Robust Government Support & Policy Frameworks:** The Indian government has significantly prioritized the food processing sector, a key area for MSMEs. Initiatives like the Pradhan Mantri Kisan SAMPADA Yojana initially allocated ₹6,000 crore and has been further extended with an allocation of ₹4,600 crore until March 2026, sanctioning 1,608 projects including 41 Mega Food Parks and 394 Cold Chain projects (From Farm to Retail: Make in India's Push for Food Processing Excellence Empowering Farmers, Enhancing Value, Expanding Markets, 2025, n.d.). The Pradhan Mantri Formalisation of Micro Food Processing Enterprises scheme, launched in June 2020 with a total outlay of ₹10,000 crore, aims to benefit 2 lakh enterprises through credit-linked subsidies and an "One District One Product" approach. Furthermore, the Production Linked Incentive scheme directly supports 70 MSMEs, with



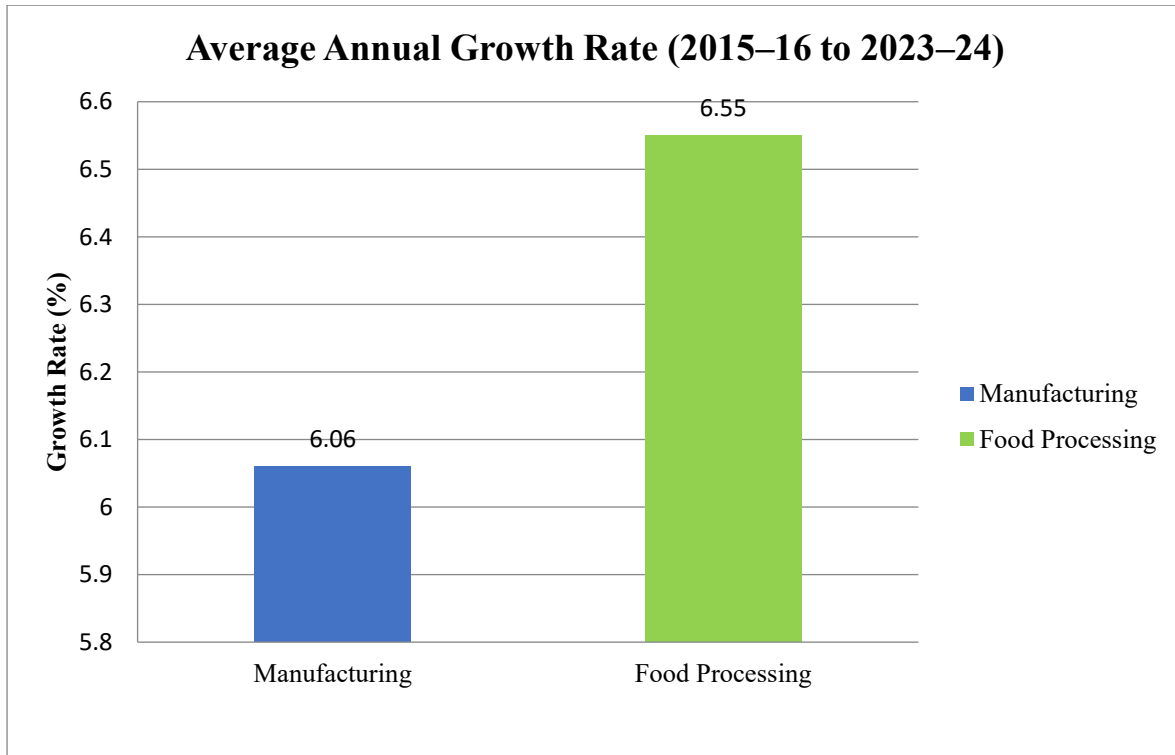
another 40 contributing as contract manufacturers for larger companies. These policies foster innovation, enhance competitiveness, and expand market access, contributing to the sector's formalization and scalability (Gupta & Barua, 2016).

Scheme	Value	Description
PMKSY	₹10,600 crore	Includes ₹6,000 crore initial + ₹4,600 crore extension till 2026
PMFME	₹10,000 crore	Supporting 2 lakh micro food units (ODOP approach)
PLI Supported MSMEs	70 units	Direct beneficiaries under Production Linked Incentive
Budget Increase	30.19%	MoFPI 2024–25 budget hike

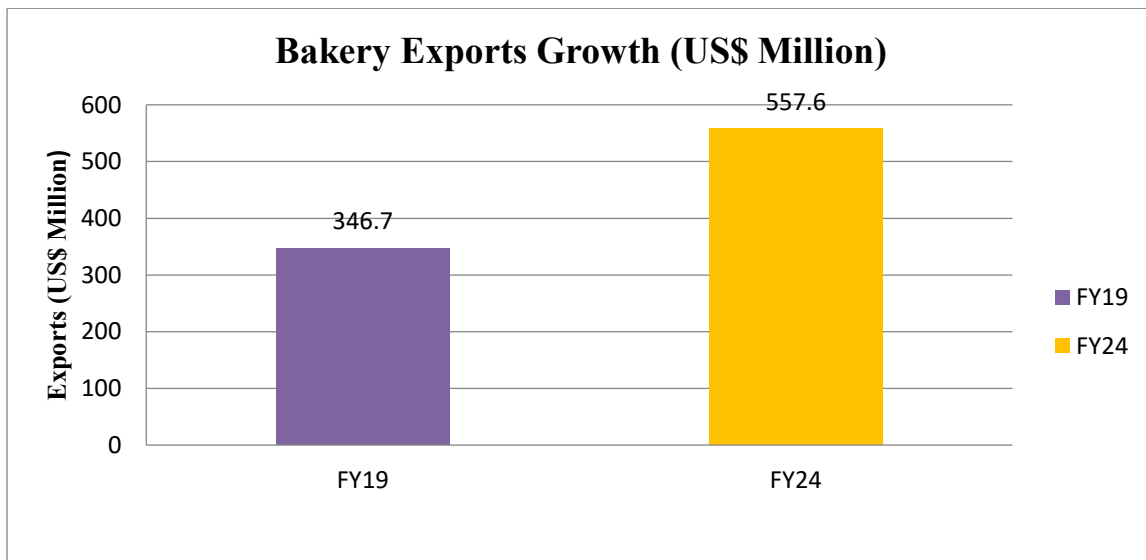
**Table 1:** Depicting government support for MSME-Based Food Processing industries (2020–2025)

*Source: Author's own compilation*

**High Technical Efficiency in Bakery Sector:** The bakery and beverage products sub-sector demonstrates "frontier-level efficiency" within the Indian food manufacturing industry, indicating strong productivity (Meena, 2023). The Indian food processing industry as a whole has witnessed remarkable growth, with an Average Annual Growth Rate of approximately 6.55% between 2015-16 and 2023-24, surpassing the 6.06% in manufacturing at 2011-12 prices (FOOD PROCESSING Towards Sustainable Growth Opportunities Sector Profile Bakery, 2024). The bakery manufacturing sector contributes 1.14% to India's Gross Domestic Product and directly employs over 1.6 million people, with an additional 120 million jobs supported indirectly through its supply chains (Kumar et al., 2022). India's baked goods exports surged by a Compound Annual Growth Rate of 10%, from US\$346.7 million (₹2,426.9 crore, using 70 INR approx. against USD) in FY19 to US\$557.6 million (₹4,630.08 crore, using 83 INR approx. against USD) in FY24, signalling its growing presence in the international market



(FOOD PROCESSING Towards Sustainable Growth Opportunities Sector Profile Bakery, 2024).



**Fig 1:** Highlighting Performance and Export growth of India’s Bakery sector

*Source-Source: Author’s compilation*



Hence, a strong **CAGR of 10%** in bakery exports reflects India's rising global competitiveness and increasing adoption of automation and technology by MSMEs.

**High Potential for Innovation and Product Quality Improvement:** Innovation is a critical driver for competitiveness in developing countries like India (Ahmed et al., 2022). Small enterprises primarily focus on improving product performance and quality, directly impacting productivity and competitiveness (Gupta & Barua, 2016). The government actively supports Research and Development and skill development for baked goods, recognizing its potential to meet evolving consumer demands for healthier and more convenient products (FOOD PROCESSING Towards Sustainable Growth Opportunities Sector Profile Bakery, 2024).

**Strategic Economic Contribution of MSMEs:** MSMEs are pivotal to India's economic development, contributing approximately 26% to the national GDP and nearly 50% to total merchandise exports (Gupta & Barua, 2016). This sector is a major employer, providing livelihoods for over 110 million people, second only to agriculture (Gupta & Barua, 2016). The broader food processing industry itself generates nearly US\$40 billion (approximately ₹3,32,000 crore, using ~83 INR/USD for FY24) in export earnings from agricultural and processed food products (From Farm to Retail: Make in India's Push for Food Processing Excellence Empowering Farmers, Enhancing Value, Expanding Markets, 2025). Its employment intensity is notable: for every ₹1 million invested in the organized food processing industry, 18 direct and 64 indirect jobs are created (Rais et al., 2013). The food sector's economic multiplier effect is estimated at 2 to 2.5, meaning every rupee of revenue generates 2 to 2.5 rupees for the broader economy (Rais et al., 2013).



Indicator	Value
MSME Contribution to GDP	26%
MSME Share in Exports	50%
Employment Generated	110 Million People
Export Earnings (Food Processing)	₹3,32,000 Crore
Jobs per ₹1M Investment	82 including direct and indirect jobs
Economic Multiplier Effect	2–2.5 times

**Table 2:** Economic Contribution of MSMEs and Food Processing Sector in India

*Source: Authors own compilation*

## WEAKNESSES

**Outdated Equipment & Insufficient Training:** Many bakery MSMEs utilize outdated machinery, leading to the production of substandard products and hampering quality (Shankar, 2017). A significant challenge is the lack of training facilities for workers, with most training being on-the-job, which can result in material wastage and production delays. These technological deficits impede competitiveness and the ability to meet food safety standards.

**Limited Access to Finance, Market Information, Human Capital, & Affordable Technology:** Indian MSMEs face significant hurdles, including limited access to finance, market information, quality human capital, and affordable technology (Gupta & Barua, 2016). For instance, insufficient credit and a lack of skilled labor are identified as primary causes of inefficiency in the unorganized food processing industry. The difficulty in securing capital and technology prevents these businesses from modernizing and scaling effectively (Bongarala & Maddala, 2022).



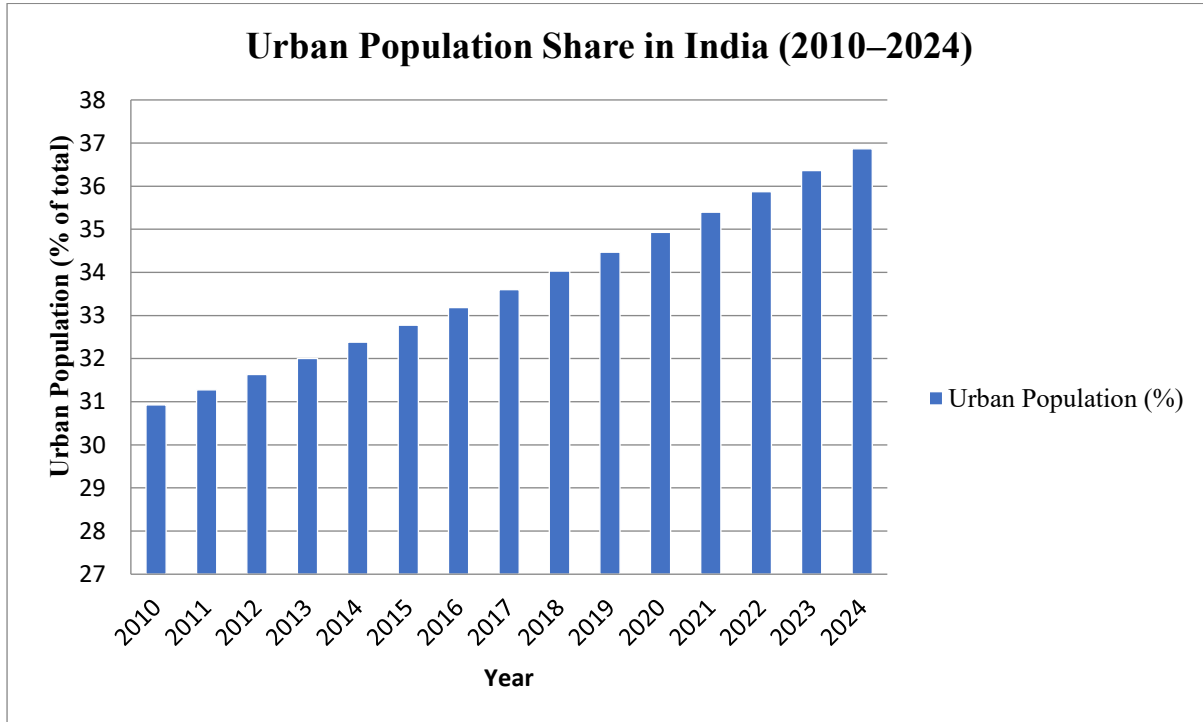
**Prevalence of Informality:** The Indian food processing industry is highly fragmented and predominantly characterized by its unorganized sector, which accounts for approximately 42% of the total output and commands about 75% of the market share (Rais et al., 2013). Furthermore, a substantial 82% of the total workforce in the food processing industry is employed by the unorganized sector (Rais et al., 2013). This informality hinders formal growth and scalability, limiting access to formal credit and government benefits (Gupta & Barua, 2016).

**Digital Divide & Inadequate Digital Integration:** The adoption of Information and Communication Technologies in informal microenterprises is largely restricted to mobile phones, with minimal application to core business activities. Structural barriers, such as reliance on walk-in customers, cash transactions, and a lack of electricity, further impede the positive impact of ICTs on productivity or growth.

**Poor Sustainability Practices & Infrastructural Deficiencies:** Inadequate infrastructural facilities represent a critical challenge, with a weighted response of 44.25% in industry surveys (Rais et al., 2013). This includes issues with packaging, storage, and fragmentation, contributing to substantial post-harvest food losses, estimated at around 74 million tonnes annually in India (Gupta & Barua, 2016). Such inefficiencies not only lead to waste but also impact profitability and sustainability.

## **OPPORTUNITIES**

**Rapid Urbanization & Shifting Dietary Habits:** Rapid urbanization, coupled with evolving dietary patterns and an increasing demand for convenient and affordable food options, drives significant growth for the bakery industry (Gupta & Barua, 2016; National Institute of Nutrition, 2021). The consumption of bakery products is expected to rise due to population growth, increasing incomes, and a preference for convenience (FOOD PROCESSING Towards Sustainable Growth Opportunities Sector Profile Bakery, 2024). On average, an Indian household allocates about 50% of its expenditure to food items (Sarangi, n.d.).



**Fig 2.:** Rise in Urban Population in India (2010–2024)

*Source: Author's compilation from World Bank report, 2024*

**Low Entry Barriers, Robust Local Demand, & Flexible Production:** The sector benefits from relatively low entry barriers and strong local demand, encouraging new entrepreneurial ventures (CHOUDHURY, 2024; Gupta & Barua, 2016). This allows MSMEs to exhibit flexible production capabilities, enabling them to respond effectively to niche demands and localized preferences (Gupta & Barua, 2016).

**Increased Consumer Awareness for Nutritional & Ecological Benefits:** Growing consumer awareness regarding the nutritional and ecological advantages of traditional ingredients, such as millets, presents a significant opportunity. Millets are recognized for being nutrient-dense and resilient crops, even in challenging climates (Al-Khusaibi et al., 2019). This trend, coupled with policy efforts to promote these grains, allows entrepreneurs to explore alternative ingredients and develop health-conscious and sustainable bakery products (Shah et al., 2022).



**Growing Appreciation for Traditional & Healthy Ingredients:** New national dietary recommendations and health research underscore a growing return to traditional and whole-grain foods, including millets like jowar, bajra, and ragi, as well as chakki atta, in Indian eating habits (National Institute of Nutrition, 2021). These whole grains are now acknowledged for their nutritional density and high fiber content, which help in lowering the risk of obesity, diabetes, and cardiovascular diseases. According to Misra, Rastogi, and Joshi (2009), consumers in Asian India are showing an increasing preference for food products made with whole grains, such as multigrain bread and millet-based baked goods. This consumer behavior aligns with government policies that promote indigenous cereals for improved nutrition and food security. This presents an opportunity for MSME bakeries to innovate their product ranges, focusing on traditional, millet-based, and whole-wheat items. Doing so could boost their competitiveness while meeting the demands of health-aware urban and semi-urban populations.

## THREATS

**Intense Competition:** The Indian bakery sector faces intense competition from both organized players and numerous unorganized local businesses (De et al., 2018). The industry is largely dominated by the unorganized segment, with a production capacity of 3 million tonnes, creating a crowded and competitive landscape (Shankar, 2017). Without continuous innovation and quality improvements, MSMEs risk losing market share to more agile or better-resourced competitors (Ali et al., 2021).

**Risk of Losing Market Share Due to Lack of Innovation:** A sluggish adoption rate of new technology within the food processing equipment sector can lead to MSMEs being outpaced by more technologically advanced competitors (Gupta & Barua, 2016). This technological lag can result in a loss of market share for MSMEs that fail to innovate and improve product quality (Ali et al., 2021).



**Unpredictable Market Conditions & Evolving Regulations:** The food processing sector is complex, governed by multiple acts across nine ministries and 13 central orders, in addition to various state-level regulations (Rais et al., 2013). Such an intricate and evolving regulatory environment, coupled with unpredictable market conditions and rising maintenance costs, can create instability, making it difficult for resource-limited MSMEs to adapt and maintain long-term operational stability (De et al., 2018).

**Increasing Pressure for Sustainable Practices & Eco-Consciousness:** There is growing pressure for adopting sustainable practices and eco-consciousness within the industry (Shaposhnikov et al., 2023). The Indian food processing industry's reliance on labor-intensive processes often leads to slow mechanization, despite its importance for consistency, quality, and scalability (Gupta & Barua, 2016). Moreover, a high import dependency for food processing equipment adds another layer of vulnerability, potentially increasing costs and hindering efforts toward greater sustainability (Gupta & Barua, 2016).

Strengths	Weaknesses
<ul style="list-style-type: none"><li>• Growing domestic production of bakery equipment, leading to cost reductions.</li><li>• Robust government backing through policies like PMFME, CEFPPC, and NEIDS.</li><li>• Rising consumer demand for bakery and confectionery goods.</li><li>• Development of a skilled workforce and fostering</li></ul>	<ul style="list-style-type: none"><li>• Research, development, and innovation in indigenous equipment design are limited.</li><li>• Rural MSMEs heavily rely on manual or semi-automatic production methods.</li><li>• Remote regions lack adequate cold chain and packaging infrastructure.</li></ul>



<p>entrepreneurship via institutions like IIE and NIFTEM.</p> <ul style="list-style-type: none"><li>•</li><li>• Enhancement of quality through mechanization and standardized processes.</li><li>• Improved preparedness for export markets, demonstrated by certifications such as EHEDG and ISO for MSMEs</li></ul>	<ul style="list-style-type: none"><li>• Accessing affordable financing for modernization remains a challenge.</li><li>• Quality control and food safety compliance are inconsistent.</li><li>•</li><li>• Brand visibility is low beyond regional markets.</li></ul>
<b>Opportunities</b>	<b>Threats</b>
<p>Increased Bakery Consumption</p> <ul style="list-style-type: none"><li>• Growth of Domestic Equipment Clusters</li><li>• Expanding Digital Sales Channels</li><li>• Export Opportunities</li><li>• Training and Incubation Support</li><li>• Sustainable Local Sourcing</li></ul>	<p>Import dependency for advanced machinery components</p> <ul style="list-style-type: none"><li>• Competition from large industrial bakery chains</li><li>• Price fluctuations in raw materials</li><li>• Technological lag and low digital adoption</li><li>• Regulatory challenges for export product standardization</li><li>• Climate-related risks impacting local ingredient availability</li></ul>

**Fig 3.** SWOT analysis of MSME-based bakeries in India

*Source: Author's own compilation based on the above detailed SWOT analysis*



Category	Description
<b>Strengths</b>	<p>The government is strongly supporting this sector through initiatives like the Ministry of Food Processing Industries' North East Mega Food Park Scheme, PMFME, and NEIDS, which provide significant financial incentives such as up to 70% capital subsidies and tax benefits. The region also boasts a plentiful supply of raw materials, including locally grown wheat, rice, and millets, which are essential for bakery production. Growing urban areas like Guwahati, Agartala, and Shillong are consistently driving demand for bread and other bakery items. Furthermore, micro and small bakery units offer substantial job creation opportunities, particularly for women and young people.</p>
<b>Weaknesses</b>	<p>Most bakery units primarily depend on manual production methods, indicating low levels of automation. The region also faces challenges with an underdeveloped supply chain infrastructure, leading to high transportation costs due to difficult geographical conditions. Products often have a short shelf life, compounded by insufficient cold storage and packaging facilities. Furthermore, a high degree of informality exists within the sector, with approximately 70% of bakery units operating without the necessary FSSAI certification (NEDFi, 2022).</p>
<b>Opportunities</b>	<p>Consumers are increasingly aware of nutritional benefits, leading to a higher demand for products like brown bread, multigrain options, and items made from millets. There's also an expansion of MSME support schemes, particularly under PMFME and MoFPI, which are targeting bakery clusters in regions such as Cachar, West Tripura, and East Khasi Hills NEIDS (2017). A significant opportunity exists for adding value through the development of organic and gluten-free bread varieties, utilizing local</p>



	grains like ragi and bajra. Additionally, subsidies and tax exemptions provided by NEIDS are stimulating increased entrepreneurship and investment in the sector.
<b>Threats</b>	The bakery sector faces significant competition from well-established national brands and cheaper imported products from neighboring regions. High costs associated with transportation and energy further restrict profitability and growth potential. There's also a notable shortage of skilled labor, compounded by the absence of specialized bakery training institutions in the area. Additionally, climatic conditions, particularly humidity, pose challenges by negatively impacting product quality and shelf life.

**Table 3:** SWOT analysis of MSME based bread industry in the North Eastern Region of India

*Source: Author's own compilation based on data and NEDFi (2022), and MSME Annual Report (2024–25). insights from MoFPI (2019, 2024)*

The long-term health and competitive standing of India's bakery MSME sector are profoundly influenced by the interplay of its inherent strengths and weaknesses, alongside external opportunities and threats. Governmental support, including significant initiatives for financial aid and market access, provides a solid foundation for growth, fostering innovation and contributing to formalization and sustained investment. The sector also exhibits a notable efficiency in its bakery and beverage segments, yielding cost advantages that allow businesses to maintain competitive pricing and profitability, which are crucial for enduring operations.

However, the sector faces substantial internal vulnerabilities that can impede its progress. Many bakery MSMEs struggle with outdated equipment, inadequate training, and limited access to both broader markets and essential resources such as finance, market intelligence, skilled labor, and advanced technology. These deficiencies collectively hinder modernization,



technological adoption, and workforce development, making it difficult for these businesses to innovate and compete effectively against larger entities. The widespread informality within the sector further complicates growth, restricting access to formal credit and benefits. Additionally, a significant digital divide persists, with many small businesses lacking internet connectivity and facing organizational challenges that undermine operational efficiency, limiting their ability to leverage digital marketing, streamline supply chains, or engage in e-commerce. Furthermore, resource constraints in an emerging economy often lead to suboptimal sustainability practices, resulting in inadequate infrastructure, packaging, storage, fragmentation, and a lack of transparency, all contributing to significant waste.

Despite these challenges, external opportunities offer a pathway to sustainable growth. Rapid urbanization, evolving dietary patterns, and a growing demand for convenient and affordable food products act as powerful stimulants for the bakery industry. Businesses that can adapt to these trends stand to gain from market expansion, product diversification, and increased revenues. The sector benefits from low entry barriers and robust local demand, which encourage new entrepreneurship and provide flexible production capabilities to meet specialized and local preferences. A rising consumer awareness regarding the nutritional and ecological benefits of traditional grains, particularly millets, coupled with supportive policies, opens new avenues for developing healthy, sustainable, and innovative products. Yet, these opportunities are tempered by significant external threats. Intense competition from both organized and unorganized players poses a constant risk, requiring continuous innovation and quality improvements to avoid market share erosion. Unpredictable market conditions, evolving regulations, rising operational costs, and increasing demands for sustainable and eco-conscious practices further challenge the sector. The ability to strategically identify and prioritize these factors is critical; a failure to do so could render MSMEs ineffective in responding to market dynamics, ultimately jeopardizing their long-term survival and competitiveness.

The North East Indian bakery MSME sector operates within a distinctive environment where the typical strengths, weaknesses, opportunities, and threats observed nationally are significantly amplified. The region benefits from substantial natural advantages, including



diverse agro-climatic conditions that provide an abundant supply of raw materials essential for food processing. There is also a valuable human resource base, with an educated workforce ready for engagement in the sector. Government support and the potential for cross-border trade further enhance entrepreneurial prospects and market expansion.

However, the familiar challenges confronting MSMEs across India—such as limited mechanization, restricted access to finance, and intense market competition—are often heightened in the North East. This intensification stems from pervasive infrastructural deficiencies, underdeveloped supply chains, and constrained market access, particularly in rural areas. Local assessments consistently identify specific impediments, including financial constraints, inadequate infrastructure, difficulties in labor and management, and problems related to market reach and input procurement. Additionally, businesses in this region must contend with fierce competition within relatively small consumer markets, coupled with elevated operational costs and often a lack of awareness regarding global market trends. The scarcity of large-scale processing units further limits value addition and scalability, impacting the overall agricultural value chain. Consequently, for bakery MSMEs in North East India to achieve lasting sustainability and competitiveness, it is imperative to develop strategic interventions that specifically address these magnified regional challenges while simultaneously capitalizing on the unique local opportunities available.

<b>SWOT analysis of NE region</b>	<b>Sustainability Implication</b>	<b>Competitiveness Impact</b>
Strengths: Local raw materials & cultural demand	Boosts local sourcing, rural income; resilient supply chains.	Cost advantage; unique local product differentiation.
Weaknesses: Limited tech & small scale	Restricts economies of scale; slows productivity growth.	Lower output & limited market reach unless modernised.
Opportunities: Govt policy & PMFME support	Enables upgrades, finance access & cluster development.	Improves efficiency, product quality and market access.



Threats: Logistics & large-brand competition	Higher costs and spoilage risk; distribution gaps.	Market share loss unless logistics, branding & e-commerce improve.
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**Table 4** - The impact of a SWOT analysis on the long-term viability and competitive standing of MSME based bakeries in Northeast India

*Source: Author's own compilation based on data from MoFPI (2024), PMFME Guidelines (2023), and NEDFi (2024)*

Also, there is huge impact of domestic equipment manufacturing on the growth of MSME based bakeries in India.

### **Local Manufacturing Capacity**

Domestic equipment manufacturing significantly influences MSME bakeries by fostering a robust local ecosystem. With 3,388 MSMEs producing bakery-related equipment across India, import dependency is reduced, ensuring a steady local supply and promoting regional entrepreneurship.

### **Cost & Accessibility**

The profitability of domestic manufacturers, evidenced by returns on investment up to 74.8% and 12.8% profit margins, translates into more affordable machinery. This in turn lowers entry barriers and accelerates the establishment of MSME bakeries, especially in the North-East, making essential equipment more accessible.

### **Trade Performance**

While India exported ₹299 crore in bakery equipment in 2019–20, a reliance on imported components (98% from China) suggests a potential opportunity for growth in domestic component manufacturing to further enhance overall competitiveness within the sector.



### Government Support

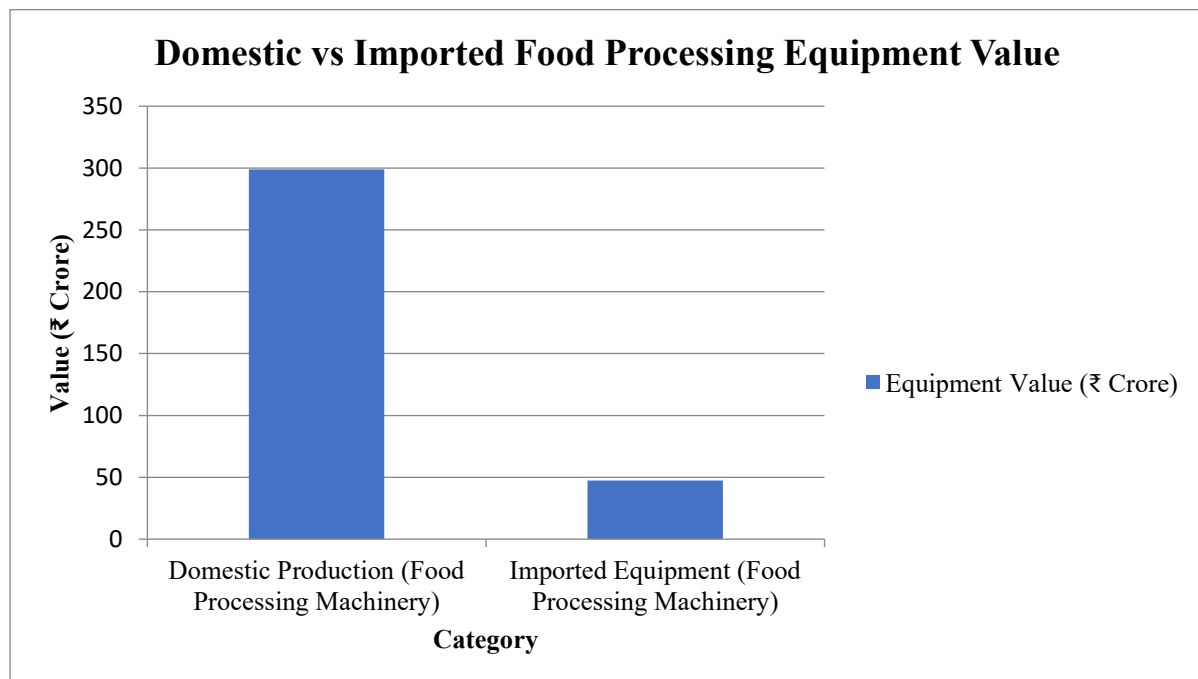
Government support, through schemes like PLI (4–6%), CLCS (15% subsidy), CGTMSE, MSE-CDP, and specific Northeast incentives, actively boosts modernization efforts and reduces capital risks for MSME bakeries investing in mechanization.

### Technology Clusters

Existing technology clusters in areas like Coimbatore and Maharashtra, with emerging bakery equipment hubs in Assam and Meghalaya, help reduce logistics costs and ensure the availability of authorized technicians.

### Skill Development

Initiatives like CSIR's development of over 300 food machinery designs and subsequent transfer of 1,600 licenses for commercial use, contribute to improving technical expertise and maintenance capacity for MSMEs, particularly those in remote areas.



**Fig 4.:** Trade Comparison Highlighting Growth of Domestic Food Processing Machinery in India

Source: Author's own compilation based on Ministry of Food Processing Industries (MoFPI) data (2024)



## **CONCLUSION**

The growth and competitiveness of India's MSME-based bakery sector are significantly boosted by the increasing availability of domestically manufactured bakery equipment. This development leads to lower equipment costs, localized maintenance services, improved skill development, and supportive government policies. As a result, MSMEs, especially those in the North-East, are better equipped to increase production, uphold product quality, and pursue export markets. To maintain this progress, it will be crucial to further strengthen local manufacturing clusters and enhance self-sufficiency in component production.

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