

# Challenges Faced by Indian MSMEs: A Survey Analysis of the Corrugated Box Manufacturing Industry

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**Abstract:** This paper explores in detail the operational, internal, and external challenges of Indian Micro, Small, and Medium Enterprises (MSME), which contribute significantly to India's GDP and play a very important role in the country's economic growth, based on original survey responses from one of the essential and fast-growing Packaging sectors. The survey was carried out on more than 70 small and medium corrugated box manufacturers spread all over the country. Key areas investigated include shortages of skilled workforce, machine maintenance, retention, technological, and financial difficulties, and compliance. Relevant literature is cited, pointing out the challenges, and quantitative and qualitative data are used to show that these challenges are multidimensional. The actionable recommendations that emerge from this study will enhance the efficiency of MSMEs in India.

**Keywords:** Corrugated box, Indian MSME, Packaging industry.

## I. INTRODUCTION

The Indian economy has traditionally been based on distributed manufacturing, which can be compared with modern clustered MSMEs. Since long MSMEs have been the backbone of the economy, it still is, making significant contributions to the GDP, exports, technology innovations, and employment. However, MSMEs continue to face problems that affect productivity, competitiveness, and innovation. Recent studies on various aspects of MSMEs have underlined issues like outdated technologies, deficiencies of skilled workforce, lack of exposure to modern methods, limited access to finance, complicated governmental and legal procedures, taxation compliance, etc. The authors in [1] discuss existing studies related to MSME challenges globally and in India, focusing on issues such as technological gaps, competitive pressures, financial constraints, and regulatory complexities. The paper throws light on the effect of taxation policy, such as GST, impacting their compliance and liquidity. MSMEs have been the growth engine for developing

economies like India. Their contribution to the national GDP is also significant in the generation of employment and exports. In fact, MSMEs have been and are crucial for sustaining India's socio-economic fabric. Tambunan, 2018, has also indicated that the lack of access to credit certainly has the most devastating impact on the sustainability and scaling up of MSMEs. This has further been exacerbated through bureaucratic hurdles and stringent collateral requirements, which pushed MSMEs into a vicious cycle of financial exclusion, lack of innovation, and operational inefficiency.

Recent studies prove that the pandemic of 2019 aggravated these financial losses. According to [5], it is observed that this pandemic-driven liquidity crisis vastly impacted MSMEs in income loss, job cut, and ultimately the shutdown of business for some. Though the government supported MSMEs through measures such as the Emergency Credit Line Guarantee Scheme (ECLGS), this provided only temporary relief. In fact, paper [6] has noted that the reach and efficacy were actually very limited due to an implementation gap and a lack of awareness among MSME owners. Therefore, the situation demands long-term solutions to address systemic financial challenges and enhance the resilience of MSMEs against economic shocks. The problem has acquired further dimensions in complexity with the integration of technology in the financial ecosystem.

Digital lending platforms, for example, have cropped up as alternative mechanisms for raising finances with more speed and ease of access to credit facilities for small enterprises [7]. The authors in [8] have identified the unequal adoption of these digital platforms on account of digital illiteracy and an infrastructural gap. High transformation cost in terms of going digital, and non-tailored financial products is more problematic for MSMEs financially in areas that are rurally located [9]. Apart from the aforementioned factors, financial literacy and/or a lack thereof is another very important aspect in determining the financial health of MSMEs. Many owners of MSMEs lack the required knowledge to tackle the complexities of financial planning and credit management, as evidenced by [10]. It is the deficiency that restricts their capability to access the formal

financial systems and make well-informed decisions regarding investments and resource allocation. The financial literacy of MSMEs could be enhanced through focused training programs, which can help MSMEs make better use of available financial tools [11].

Certain structural issues persist despite multiple government initiatives being in place for MSMEs. Policies addressing the credit gap, such as the PMMY and CGTMSE, have played their role; however, [12] cite regional disparities, administrative delays, and the lack of customised solutions for different segments of the sector as reasons why such policies have had uneven impacts. This suggests that policy interventions alone are necessary but not sufficient and should be complemented by localised strategies that take into consideration the diverse needs and challenges of MSMEs spread over different regions and industries. Another related area of concern is the narrow scope of studies aimed at ascertaining heterogeneity within the MSME sector. MSMEs are far from being homogeneous—they range in size and industry [14]. According to [15], such differences are rarely considered in previous studies, and the solutions arrived at are often generalised and thus do not appropriately address the problems of specific subsets of MSMEs. For example, the financing requirements of a small rural enterprise in agriculture would be much different from those of an urban technology startup. This gap in research is important for developing more targeted and effective financial strategies.

Apart from the challenges, there is also more awareness of the opportunity that exists in leveraging MSMEs for economic transformation. For instance, it is expected that with increasing globalisation of supply chains, MSMEs will have more opportunities to access international markets. However, according to Mukherjee (2018), this will require significant investment in infrastructure, technology, and compliance, which most MSMEs cannot afford.

This, in turn, calls for collaboration between financial institutions and policymakers in the creation of enabling environments that allow MSMEs to capitalise on these opportunities. According to Putra (2024), despite the immense understanding of the challenges facing MSMEs, there are still gaps in the literature. For instance, little research has looked at the long-term implications of digital lending and crowdfunding as alternative mechanisms of financing on MSME sustainability. Second, the issue of financial literacy remains largely unexplored, especially regarding how it might improve MSME performance, particularly in the Indian context. Third, there is a need for research that zooms in further on the ways in which gender, geography, and industry interact in structuring financial experiences in MSMEs. These gaps, therefore, become important to the fuller understanding of the sector and to the informed crafting of intervention measures that may be required to help unlock full potential.

The increasing trend of sustainability has made the financial landscape even more complex for MSMEs. Moving towards sustainability generally involves upfront investment, which is not easy to incur for most resource-poor businesses. The results brought to light by [13] indicate that while many MSMEs are willing to adopt green technologies, the inability to access cheaper finance stands as the primary deterrent. This points to a growing gap in the provision of financial products aimed at enabling sustainable development in the MSME sector, which has become ever more important in the context of global environmental goals.

### *A. Indian Packaging Industry Overview*

According to the Indian Institute of Packaging [20], packaging consumption in India is increased by nearly 200% in the last decade, from 4.3 kilograms per person per annum (KPPPA) in 2010 to 8.6 KPPPA in 2020. Despite the sharp growth over the last decade, this industry remains a large space for growth compared to other developed countries worldwide. Furthermore, India is emerging as an organized retail destination globally. The presence of e-commerce is increasing rapidly and is bringing around a revolution in the retail sector, driving the need for packaging. Overall Packaging Industry in the Indian economy is currently the fifth-largest sector with a Compound Annual Growth Rate (CAGR) of 26.7% to reach USD 204.81 in the year 2025, out of which the paper packaging market contributes to Rs 1,67,110 crore (US \$19) [21].

The Indian packaging market is expected to grow to approximately ₹653.57 billion (USD 7.8 billion) by 2030, driven by e-commerce, FMCG, and pharma demand, underpinned by robust growth from 2024 levels and a CAGR of 18–20% between 2025 and 2030. Flexible packaging (mainly plastics and laminates) currently constitutes about 54% of India's packaging volume, growing fastest due to cost-effectiveness and suitability for ready-to-eat and consumer goods [22]. Rigid packaging (plastics, glass, metals, corrugated boxes) still dominates certain segments—beverages, chemicals, premium goods—where strength and durability are vital [23]. The food and beverage segment accounts for almost 45% of Indian packaging consumption; the other major segments are pharmaceuticals and personal care [24].

Powered by e-commerce and a shift away from single-use plastics, the fast-growing paper packaging sector of India includes corrugated boxes, cartons, and paper bags [25].

### *B. Indian Corrugated Box Industry Challenges*

*GST Inverted Duty Structure:* The tax on raw materials such as kraft paper stands at 18%, while the finished corrugated box is taxed at 5%, leading to working capital blockages and margin pressure for most MSME manufacturers.

*Raw Material Price Fluctuations:* Prices of raw materials like kraft paper and paperboard, mostly imported, are always fluctuating, making cost planning quite difficult and affecting profitability.

*Compliance and Regulatory Burden:* Increasing environmental and compliance requirements contribute to the operational complexity, especially in cases of small players with limited administrative resources.

*Competition:* Flexible plastic packaging and imported boxes are cheaper alternatives, therefore, squeezing the market share and forcing aggressive pricing.

*Slow Automation Adoption:* Most Indian units lack digital monitoring and automation of processes, which translates to higher costs of manual labour, inconsistent quality, and lower productivity compared with global peers.

**C. Cost Drivers**

*Paper/Paperboard Costs:* These comprise 70–80% of total box production costs and magnify the impact of kraft price spikes.

*Logistical and Transportation:* Corrugated boxes are bulky yet lightweight; poor transportation and surging fuel prices hike the cost of overall manufacturing.

*Labour Costs:* Lower than global averages, Indian MSMEs are still concerned with rising wages and the growing demand for skilled workers, particularly as the necessity for automation

rises.

*Energy and Utility Expenditure:* Power usage in paper processing and box conversion adds to costs, particularly for units operating outdated machinery.

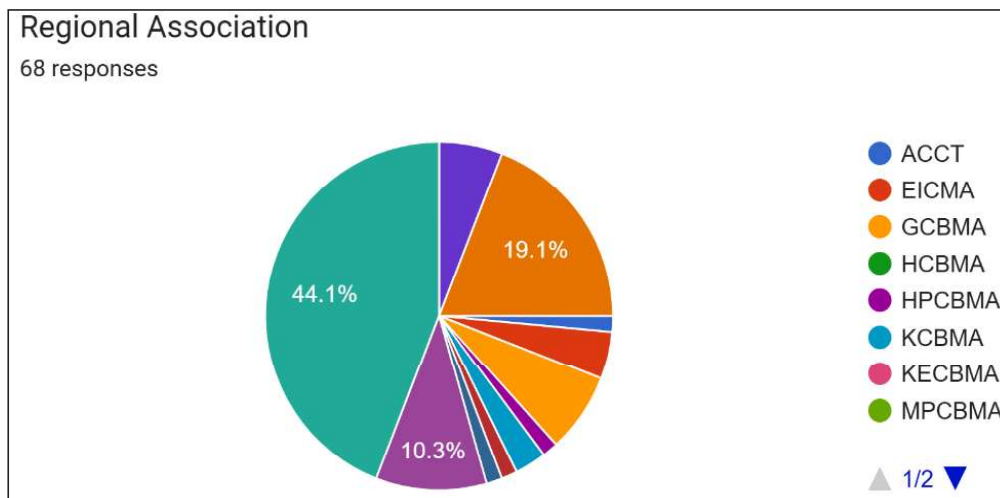
Delays in GST input credit refund blocked working capital due to inverted duty structure increase cost of borrowing and result in constrained growth investments.

These combined issues present significant barriers to scaling, profitability, and global competitiveness for the Indian corrugated box sector.

**II. METHODOLOGY**

*A. Data Collection*

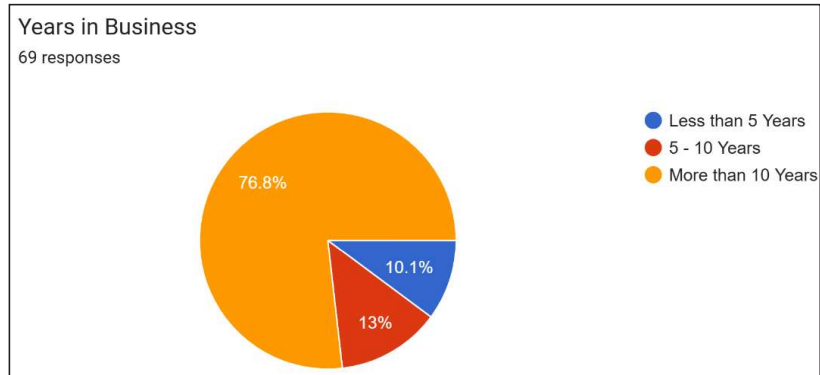
Primary data was collected during the federation of corrugated box manufacturers, which is an apex body of the corrugated box industry, having 15 regional associations spread all over the country, annual conference held in Bangalore between 20th to 22nd Dec 2024. The event was attended by more than 500 corrugated box manufacturers representing various states. A structured questionnaire was distributed among industry representatives across various sectors and regions. Then, Google Sheets were also shared to get wider views from those who were not present. Key focus areas included maintenance practices, manpower, technology adoption, financial health, and standards compliance.



**B. Analysis Approach**

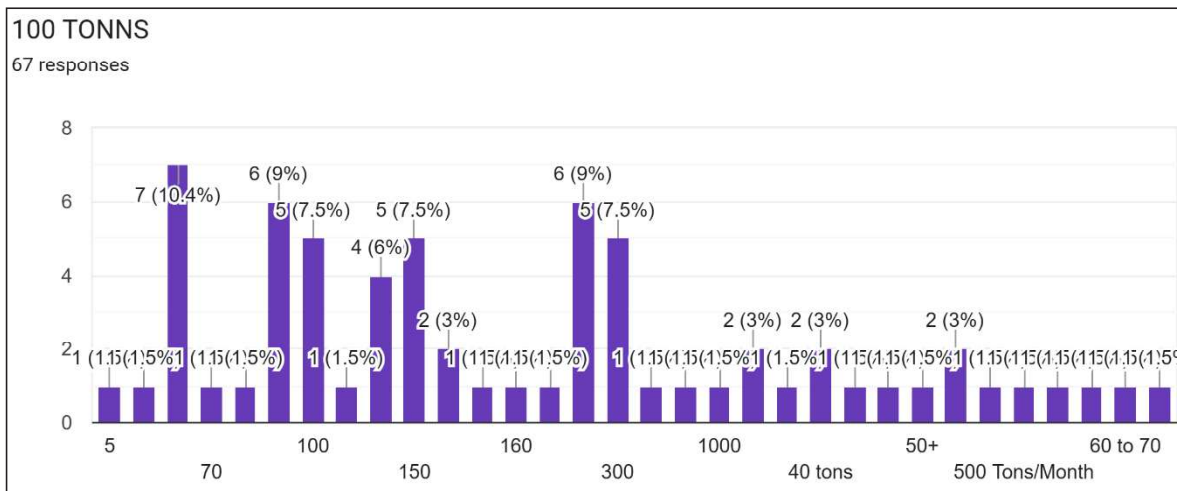
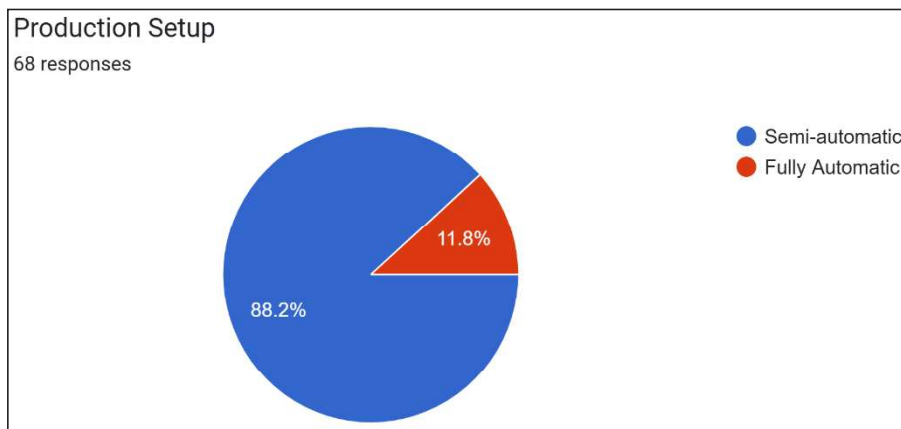
Responses to the survey were categorized and coded for highlighting frequencies of specific challenges. Both binary and qualitative entries have been processed. Descriptive statistics

and graphical visualization support themed analysis. Seasonal and regional variables, such as uneven demands in certain areas where fruits and vegetables are grown or summer seasons when demands for electric appliances-for example, AC and coolers-rise, so does packaging; number of years in the business.



Manufacturing setup and volume of business which is the conversion of raw material into corrugated boxes, because as

volume is increased, the cost of production reduces. So, this is important to consider the volume when we analyse DATA.



### III. RESULTS

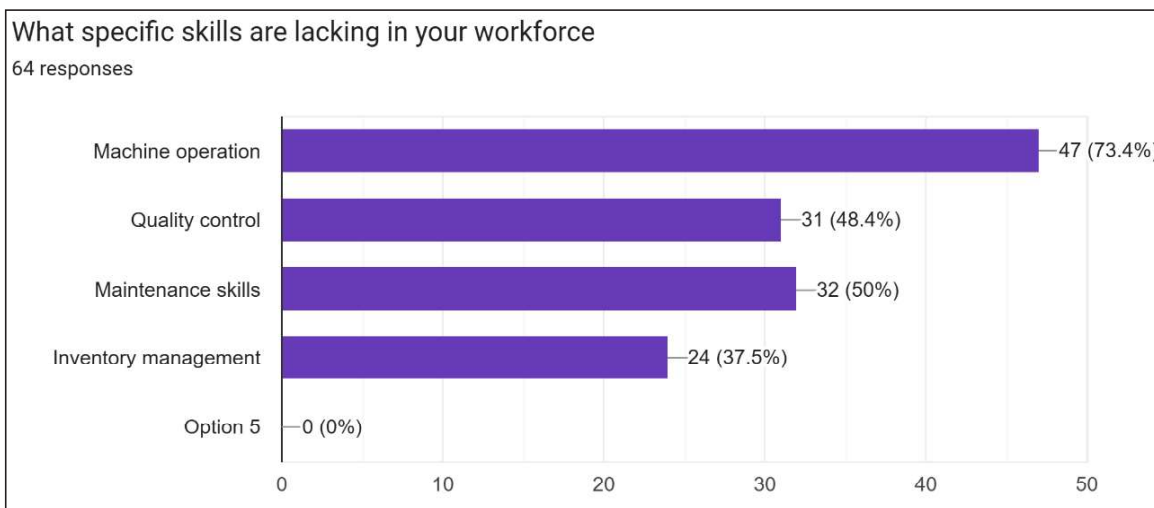
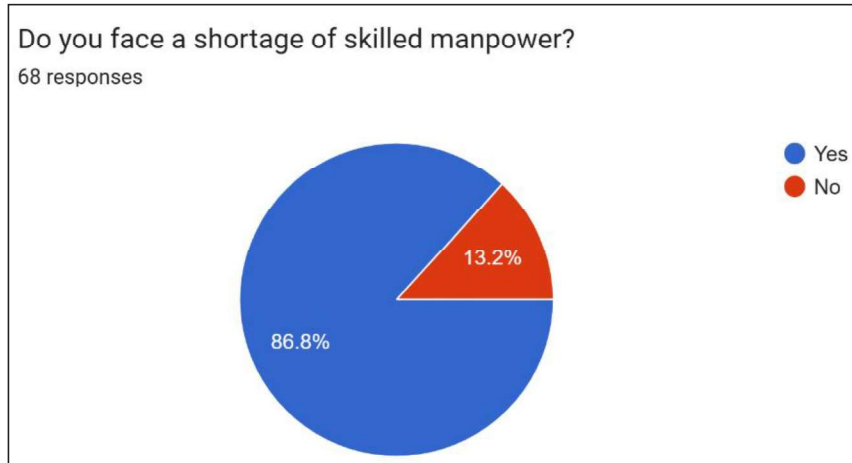
#### A. Demographic Overview

The respondents represented various sectors, and over 80% had more than 10 years of experience in business. Most of the firms were operating non-automatic or semi-automatic set ups, whereas very few operated fully automatic setups.

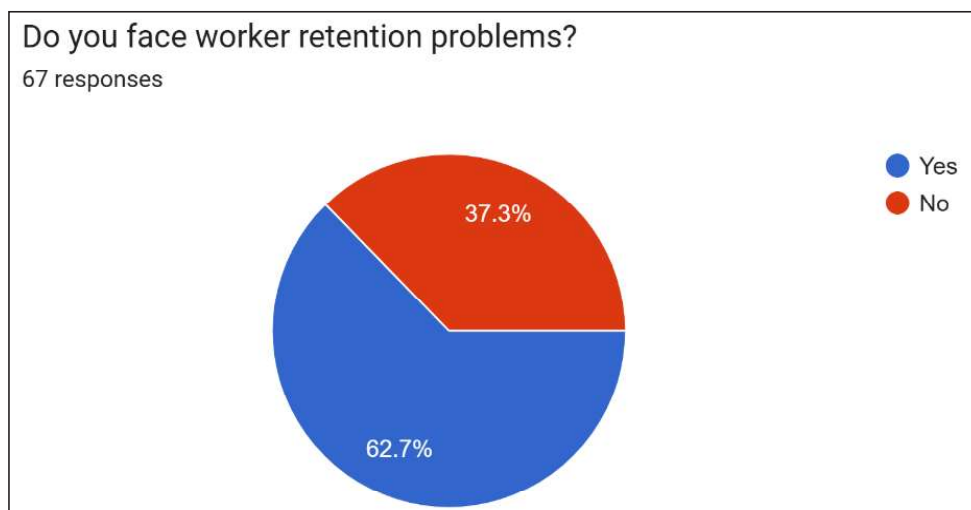
#### B. Key Operational Challenges

##### i. Skilled Manpower Shortage

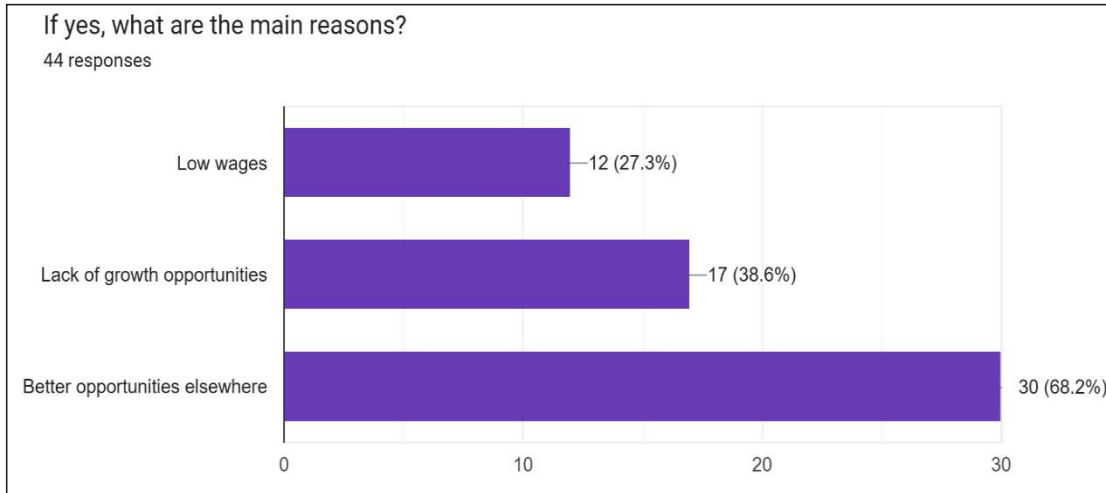
Most respondents (59 of the surveyed firms) reported persistent skilled labour shortages.



ii. Worker Retention



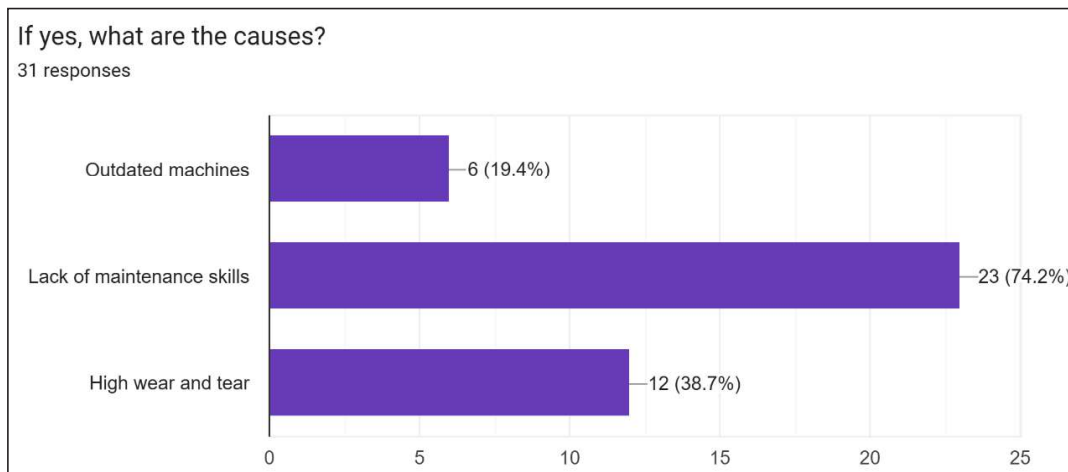
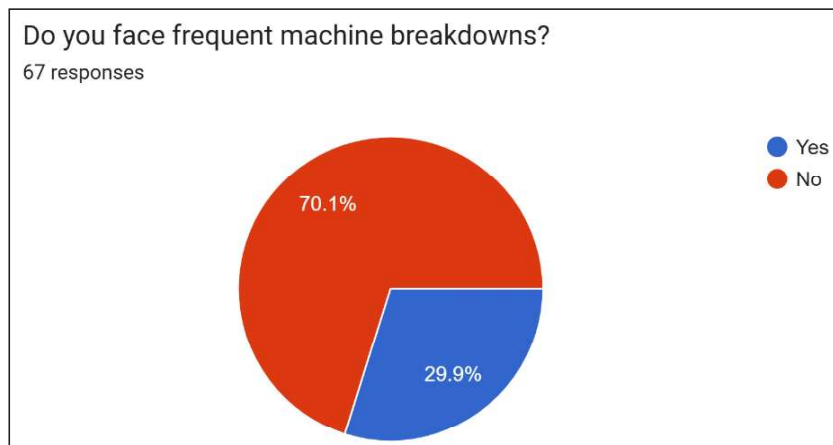
42 firms indicated worker retention as a major concern, often due to low wages and lack of growth opportunities.



Studies indicate high attrition rates in MSMEs due to non-competitive salaries.

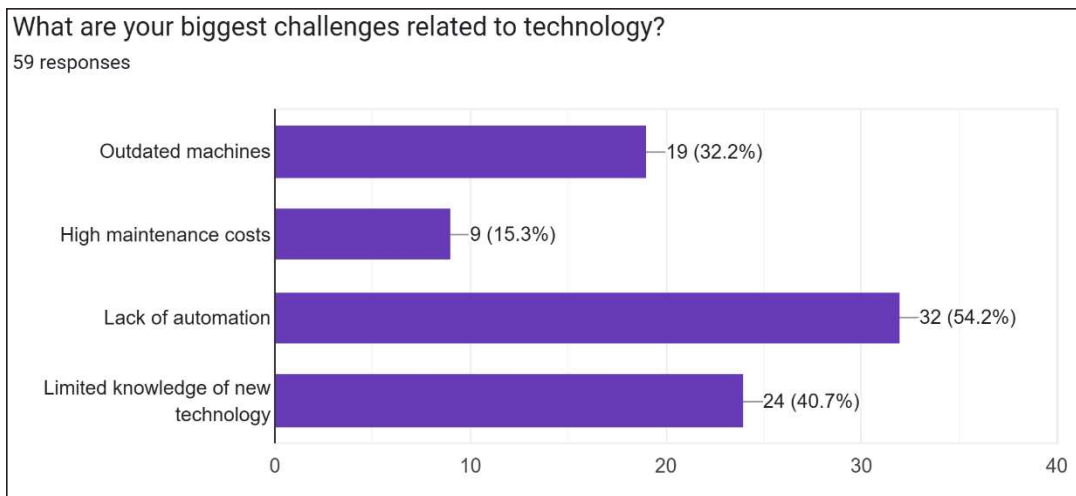
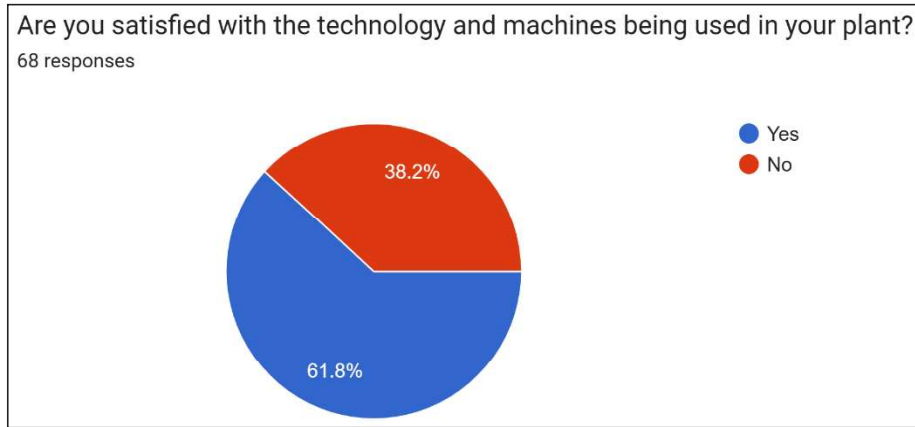
*iii. Frequent Machine Breakdowns*

20 firms faced regular machine maintenance issues, largely stemming from lack of preventive care and outdated equipment.



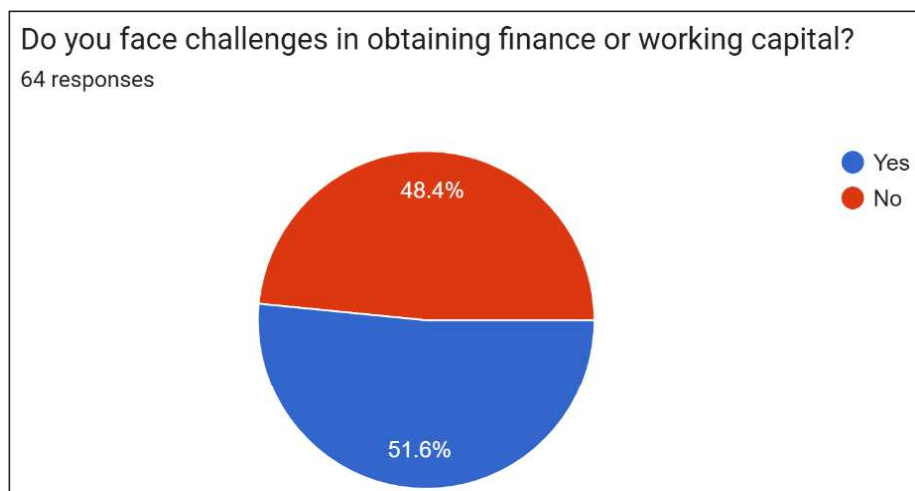
*iv. Technology Dissatisfaction*

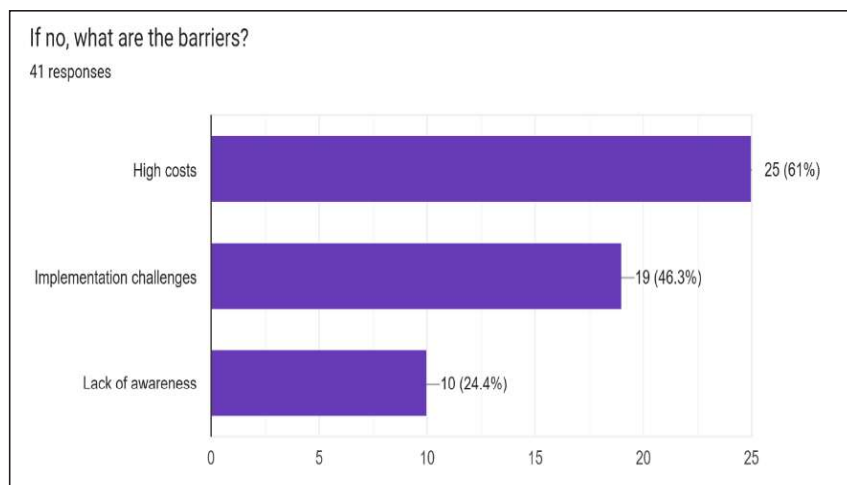
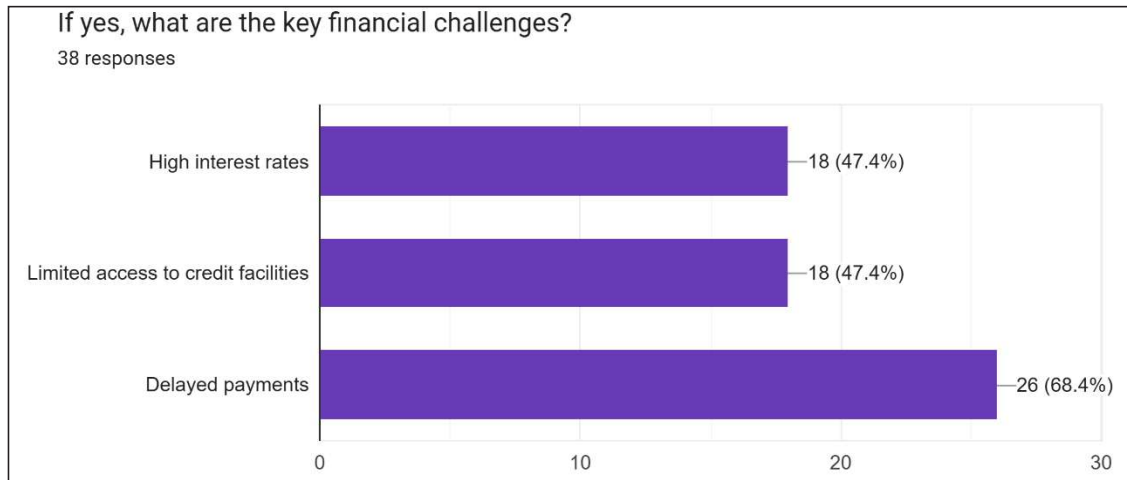
42 responses showed dissatisfaction with the technology and machines deployed. Respondents cited lack of automation and limited knowledge of new technology.



*v. Financial Challenges*

33 firms reported difficulties obtaining finance, citing high interest rates and limited access to credit.





**C. Graphical Visualisation**

Bar chart and pie diagrams below summarise frequency of the main challenges:



**IV. DISCUSSION**

**A. Analysis of Surveyed Challenges**

Findings reinforce existing literature that the Indian MSMEs have areas that require improvement, including workforce skill, better maintenance regimes, modernised technology, and easy access to finance. Quality compliance and regulatory burdens further complicate operations for smaller enterprises.

**B. Regional and Sectoral Observations**

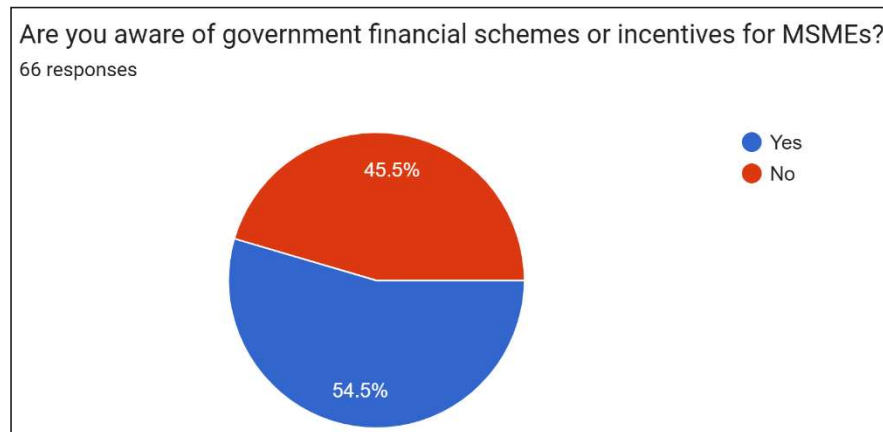
Semi-automatic installations reported more breakdowns.

- Worker retention issues were more significant in firms with lower wage rates.
- Technology dissatisfaction associated with lower automation levels.
- Financial obstacles were across different sectors.

### C. Role of Government and Industry Bodies

Government policies and beneficiary schemes play a very important role in the growth and operation of Indian MSMEs,

but due to a lack of awareness, many MSME units are not able to take advantage of these schemes.



Respondents expressed the need for:

- Skill development programs and training workshops.
- Lower interest rates and improved access to financial incentives.
- Support with technology upgrades and compliance requirements.

### V. CONCLUSION

The survey clearly shows that Indian MSMEs are plagued by recurring issues of skilled manpower, retention of employees, machine uptime, technology adoption, and finance. These hamper the ability of the sector to innovate and expand. These issues demand concerted efforts by the government in harmony with financial institutions and industry associations. To enable MSMEs to prosper in a changing market environment, targeted interventions and customised support will become imperative. The main observation could be that there is an urgent need for automation. However, on account of financial constraints and manpower availability, automation shall be selective and blended automation consistent with the Industry 5.0 philosophy.

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