



Impact of PM Gati Shakti on MSME supply Chains: evidence from Odisha

Syed Farhan Hyder

Lecturer, Department of Commerce, NAC College Burla, Sambalpur, Odisha, India

Abstract

The PM Gati Shakti National Master Plan, launched in 2021, marks a paradigm shift in India's infrastructure and logistics planning through integrated, multimodal, GIS-based coordination across ministries. This paper investigates the early impact of the Gati Shakti initiative on the supply chain efficiency and competitiveness of Micro, Small and Medium Enterprises (MSMEs) in Odisha. Given the critical role of MSMEs in regional employment and economic diversification, especially in semi-urban and tribal belts, infrastructural bottlenecks, such as poor last-mile connectivity, fragmented transport nodes, and high freight costs have historically restricted their growth potential.

Using a mixed-method approach, this study combines survey data from 150 MSMEs across key industrial clusters in Cuttack, Angul, Rourkela, and Berhampur with key informant interviews from industry experts, district-level commerce officers, and logistics coordinators. The analysis further integrates secondary data from the PM Gati Shakti portal, Ministry of MSME reports, and Odisha Industrial Infrastructure Corporation (IDCO) logistics maps. Results show measurable improvements in transit efficiency, intermodal linkages, and the spatial alignment of infrastructure with MSME cluster needs, particularly along NH-16 and eastern corridor zones. However, significant awareness and digital capacity gaps persist—only 38% of surveyed units were aware of the Gati Shakti platform, and access remains limited in remote and tribal districts.

The findings suggest that while Gati Shakti holds promise in transforming MSME logistics landscapes, targeted integration measures are needed to ensure its benefits are widely diffused. The paper concludes with policy recommendations focused on cluster-based planning, digital infrastructure enablement, and establishing Gati Shakti MSME cells at the state level to bridge knowledge and execution gaps.

Keywords: PM Gati Shakti, MSME, supply chain, Odisha, infrastructure, cluster development

Introduction

Micro, Small and Medium Enterprises (MSMEs) form the bedrock of India's economic architecture. With over 63 million units operating across urban and rural India, the MSME sector contributes approximately 30% to India's GDP, 40% to exports, and employs more than 110 million people (Ministry of MSME, 2023) ^[5, 7]. In the context of Odisha, MSMEs are particularly vital for driving regional industrialization, rural employment, and entrepreneurship, especially in sectors such as food processing, textiles, engineering, and handicrafts. The Odisha MSME Policy 2022 recognizes this sector as a key pillar in achieving inclusive and decentralized growth.

Despite their central role, MSMEs face significant structural and operational challenges chief among them being inefficient supply chains and poor logistics infrastructure. A lack of multimodal transport integration, fragmented planning between departments, suboptimal storage facilities, and the absence of real-time logistics coordination have resulted in high transaction costs, delayed delivery cycles, and limited market access, especially for MSMEs located outside Tier-1 cities (OECD, 2020; KPMG, 2021) ^[4, 10]. These issues are more pronounced in states like Odisha, which face geographic constraints (hilly terrain, forested regions), infrastructural gaps in tribal districts, and low digital connectivity.

To address these long-standing inefficiencies, the Government of India launched the PM Gati Shakti – National Master Plan for Multimodal Connectivity in October 2021. This landmark initiative aims to revolutionize infrastructure planning and implementation by creating a unified, GIS-enabled digital platform that integrates the

efforts of 16 central ministries. Gati Shakti seeks to provide real-time geospatial data, enable seamless connectivity between roads, railways, ports, and airports, and align logistics development with industrial planning (Ministry of Commerce and Industry, 2023) ^[5, 7]. The ultimate goal is to reduce India's logistics costs to 8–9% of GDP bringing it closer to global benchmarks and enhance the competitiveness of enterprises, especially MSMEs.

Odisha is uniquely positioned to benefit from the Gati Shakti initiative. The state is rich in natural resources and is home to several industrial corridors (e.g., Angul–Dhenkanal, Paradeep–Kalinganagar, Sambalpur–Jharsuguda), yet many MSME clusters remain disconnected from formal logistics and market linkages. In regions such as Ganjam, Koraput, and Kalahandi, MSMEs rely heavily on informal transport channels and face persistent supply chain delays due to underdeveloped rural roads and lack of warehousing facilities (Odisha Economic Survey, 2023) ^[11]. Additionally, awareness of national-level logistics reforms among MSMEs in Odisha remains low, limiting their ability to adapt and integrate with evolving infrastructure ecosystems.

While several macro-level studies have acknowledged the transformative potential of Gati Shakti (ICRIER, 2021; NITI Aayog, 2022) ^[2, 8], there is limited empirical evidence on its localized impact on MSME logistics performance. This is particularly true for eastern states like Odisha, which exhibit unique development patterns and infrastructure constraints. Against this backdrop, the present study aims to explore how Gati Shakti is reshaping supply chains for Odisha's MSMEs

This paper contributes to the emerging discourse on infrastructure-led economic development and provides state-specific insights for optimizing the inclusion of MSMEs in India's evolving logistics and industrial planning frameworks.

Background of the Study

Micro, Small, and Medium Enterprises (MSMEs) are a cornerstone of India's economy, contributing significantly to GDP, exports, and employment. In Odisha, MSMEs are crucial drivers of industrial decentralization and inclusive growth, particularly in regions underserved by large industries. However, these enterprises continue to face persistent supply chain challenges such as fragmented logistics, poor infrastructure, and limited access to real-time transport systems which hinder their integration into national and global value chains (OECD, 2020; SIDBI, 2023) ^[10, 13].

A key reason for these constraints is the siloed development of infrastructure, where ministries and departments work in isolation, resulting in delays, cost overruns, and underutilized assets. For MSMEs, this means inconsistent access to transport corridors, poor last-mile delivery systems, and delays in procurement and distribution all of which raise operational costs and reduce competitiveness (ICRIER, 2021; KPMG, 2021) ^[2, 4]. These inefficiencies are especially acute in Odisha's MSME clusters located in semi-urban and tribal regions like Kandhamal, Koraput, and Ganjam, where physical terrain and low digital infrastructure exacerbate logistics bottlenecks (Odisha Economic Survey, 2023) ^[11].

To address these systemic issues, the Government of India launched the PM Gati Shakti – National Master Plan for Multimodal Connectivity in 2021. It is a first-of-its-kind digital initiative aimed at unifying infrastructure development across 16 ministries through a Geographic Information System (GIS)-based platform. Gati Shakti envisions seamless connectivity between roads, railways, ports, air terminals, and industrial nodes reducing logistics costs from 13–14% of GDP to global benchmarks of 8–9% (Ministry of Commerce and Industry, 2023; NITI Aayog, 2022) ^[5, 6, 7, 8].

While the potential of Gati Shakti has been widely discussed at the national level, its localized impact on MSME ecosystems especially in states like Odisha remains underexplored. This study seeks to fill that gap by assessing how PM Gati Shakti has influenced the logistics landscape for MSMEs in Odisha, identifying gaps, and proposing measures to enhance their participation in India's infrastructure transformation journey.

Review of Literature

1. MSMEs and the Supply Chain Ecosystem in India

Micro, Small, and Medium Enterprises (MSMEs) constitute over 99% of all enterprises in India and are responsible for generating significant employment and regional output. Yet, they remain disproportionately impacted by supply chain inefficiencies. According to OECD (2020) ^[10], Indian MSMEs face high input costs, unreliable logistics networks, and limited access to structured supply chains, particularly in Tier-II and rural areas. Studies indicate that these inefficiencies stem not only from poor physical infrastructure but also from coordination failures between central, state, and local bodies (ICRIER, 2021) ^[2].

Singh and Bansal (2020) ^[14], argue that India's logistics environment has historically evolved in silos, with separate planning processes for roads, ports, railways, and industrial hubs. This leads to duplication of efforts, poor last-mile connectivity, and underutilized infrastructure. For MSMEs, which rely on time-sensitive delivery of goods and inputs, such fragmentation poses a critical constraint to scaling operations and achieving competitiveness.

2. National Logistics Reform and PM Gati Shakti

The Government of India launched the PM Gati Shakti, National Master Plan in October 2021 to overcome such fragmentation. The initiative integrates infrastructure planning across 16 ministries using a digital GIS-based platform. As noted by the Ministry of Commerce (2023) ^[5], this is the first time India has implemented a unified infrastructure planning system linking economic zones with logistics corridors and transport infrastructure.

Studies by FICCI (2022) ^[11], and World Bank (2022) ^[15], have described Gati Shakti as a “game-changing” approach capable of reducing logistics costs by 3–4% of GDP over the medium term. Early assessments indicate better spatial alignment of industrial parks, warehouses, and transport hubs, particularly in priority states like Gujarat, Tamil Nadu, and Maharashtra (NITI Aayog, 2022) ^[8]. However, limited state-level research is available on its differential impact across MSME clusters, especially in eastern states like Odisha.

3. Odisha's MSME Landscape and Structural Gaps

Odisha presents a unique development context home to both rich mineral-based industrial corridors and large tribal, agrarian regions with rising MSME participation. According to the Ministry of MSME (2023) ^[5, 7], Odisha has over 3.9 lakh registered MSMEs as of March 2023. However, most operate in semi-formal settings, are geographically dispersed, and lack access to coordinated logistics support. The Odisha Economic Survey (2023) ^[11], outlines several structural issues, including poor multimodal infrastructure, congestion around industrial estates, and limited cold storage or dry ports. Remote clusters in districts like Kandhamal and Koraput are particularly disadvantaged due to hilly terrain and limited rail and air connectivity. While state agencies such as IDCO and OSIC have initiated logistics parks and MSME clusters, integration with national-level logistics platforms remains uneven.

4. International Experience and Comparative Insights

Globally, countries like South Korea and Germany have successfully developed cluster-based logistics infrastructure to support SMEs, often through public-private partnerships (OECD, 2019) ^[9]. These models emphasize digitized supply chain coordination, real-time logistics tracking, and local logistics councils to integrate policy and operations. In India, while the Gati Shakti platform aspires to emulate similar levels of coordination, it faces implementation barriers in capacity, interoperability, and MSME awareness (ICRIER, 2021; SIDBI, 2023) ^[2, 13].

Odisha can benefit from such comparative insights by developing decentralized logistics cells linked to the Gati Shakti portal and engaging local MSME associations in infrastructure planning. Without this, there is a risk that Gati Shakti may remain top-down, failing to respond to micro-level supply chain bottlenecks.

5. Digital Infrastructure and MSME Preparedness

Another dimension emphasized in the literature is digital infrastructure readiness. While Gati Shakti offers a digital solution to planning and monitoring, MSMEs, particularly in eastern and tribal regions face a digital divide in terms of broadband connectivity, tech-savviness, and access to GIS-based tools (Sarkar & Agarwal, 2021) ^[12]. SIDBI (2023) ^[13] identifies that less than 25% of MSMEs use digital logistics tracking tools or access national dashboards. This limits their participation in the formal supply chain ecosystem and reduces their ability to benefit from infrastructure convergence.

Digital skilling and integration, therefore, are seen as essential prerequisites for MSMEs to meaningfully participate in initiatives like Gati Shakti. Studies suggest that when small firms are digitally empowered and connected to real-time supply chain data, productivity gains of up to 20–25% can be achieved in logistics-intensive sectors (World Bank, 2022; KPMG, 2021) ^[4, 15].

6. Literature Gap

The reviewed literature collectively underscores the importance of integrated logistics planning and digital inclusion for MSMEs. While the PM Gati Shakti initiative presents a potentially transformative framework, empirical evaluation of its impact on MSMEs at the sub-national level is still emerging. Odisha, with its diverse geography and expanding MSME base, offers an important site to examine these effects. The present study fills this gap by analyzing early outcomes of Gati Shakti in the state's MSME clusters and identifying policy levers for more inclusive and efficient supply chain integration.

Research Objectives and Hypotheses

1. Research Objectives

This study aims to assess the early impact of the PM Gati Shakti initiative on the supply chain performance of MSMEs in Odisha. Given the complexity of logistics systems and the diversity of MSME clusters in the state, the research focuses on identifying both tangible infrastructure improvements and institutional readiness among MSMEs. The key objectives are:

1. To analyze the current supply chain and logistics challenges faced by MSMEs in Odisha.
2. To evaluate the influence of PM Gati Shakti on improving infrastructure connectivity, logistics efficiency, and delivery timelines.
3. To assess the level of awareness, digital readiness, and institutional integration of MSMEs with the Gati Shakti platform.
4. To identify regional disparities in logistics development and MSME access to multimodal infrastructure.
5. To propose policy recommendations to strengthen MSME inclusion in Gati Shakti-led infrastructure development.

2. Research Questions

To operationalize the objectives, the study addresses the following questions:

- What specific logistics barriers do MSMEs in Odisha currently face?
- How has Gati Shakti contributed to reducing supply chain bottlenecks in selected MSME clusters?
- Are MSMEs aware of and equipped to utilize the Gati Shakti portal and related infrastructure developments?

- What are the regional variations in MSME access to Gati Shakti-supported logistics networks?

3. Research Hypotheses

Based on the review of literature and preliminary stakeholder inputs, the following hypotheses are proposed for empirical validation:

H1: MSMEs located in regions with active Gati Shakti corridor development report improved logistics performance compared to others.

H2: There is a positive correlation between MSME awareness of Gati Shakti and improvements in supply chain efficiency.

H3: Lack of digital infrastructure and capacity in rural clusters negatively affects MSME integration with Gati Shakti systems.

H4: Multimodal infrastructure convergence under Gati Shakti has begun reducing delivery times and freight costs for MSMEs.

H5: Institutional coordination and GIS-based planning are significant enablers for logistics improvements in MSME clusters.

Research Methodology

1. Research Design

The study employs a mixed-methods research design, combining quantitative and qualitative approaches to capture both numerical trends and contextual insights. This design is suited to understanding the infrastructural, institutional, and behavioral dimensions of PM Gati Shakti's impact on MSMEs in Odisha. While the quantitative survey identifies patterns in logistics performance and MSME awareness, qualitative interviews provide deeper explanations for these trends.

2. Study Area and Sampling

The study focuses on five key MSME clusters in Odisha that are either linked to existing industrial corridors or fall within the scope of infrastructure upgrades under the Gati Shakti framework. These include:

- Cuttack–Jagatpur Cluster (engineering, textiles)
- Angul–Dhenkanal Industrial Belt (steel, metal fabrication)
- Rourkela Region (mechanical and ancillary units)
- Berhampur MSME Hub (food processing, agro industries)
- Balasore and Ganjam Semi-Urban Units (plastics, packaging, electronics)

A **stratified random sampling technique** was used to ensure representation across industrial categories, geographies, and firm sizes.

3. Data Collection Methods

1. Primary Data

- **Survey of 150 MSME owners/managers:** Structured questionnaires were administered to gather data on logistics challenges, awareness of Gati Shakti, infrastructure needs, and perceived changes post-implementation.
- **Key Informant Interviews (n = 12):** Conducted with district-level commerce officers, officials from the Odisha Industrial Infrastructure Development Corporation (IDCO), logistics managers, and MSME development officers.

- **Focus Group Discussions (FGDs):** Two FGDs were held in Angul and Berhampur with local entrepreneurs to capture collective insights.

2. Secondary Data

- Gati Shakti portal reports and GIS infrastructure layers (<https://gati.gov.in>)
- Odisha Economic Survey 2022–23
- MSME Udyam Registration data
- Reports from SIDBI, ICRIER, and the Ministry of Commerce

3. Tools and Techniques

- **Descriptive statistics:** Used to present the socio-economic and operational characteristics of surveyed MSMEs.
- **Correlation and regression analysis:** Applied using SPSS to test hypotheses on relationships between Gati Shakti exposure and logistics efficiency.
- **SWOT analysis:** Conducted for each major MSME cluster to assess the strengths, weaknesses, opportunities, and threats associated with supply chain integration.
- **Thematic analysis:** NVivo software was used to code and analyze qualitative interview transcripts.

4. Ethical Considerations

All respondents were informed about the purpose of the study, and participation was voluntary. Anonymity and confidentiality were ensured, and ethical clearance was obtained from the institutional review committee prior to fieldwork.

Findings and Discussion

This section presents the key findings from the field survey and interviews, followed by an analytical discussion on how PM Gati Shakti has impacted MSME supply chain performance across selected clusters in Odisha.

1. Profile of MSMEs Surveyed

Out of 150 MSME respondents:

- 62% were small-scale units, 28% micro-enterprises, and 10% medium-scale industries.
- Sectoral spread included engineering (31%), food processing (24%), textiles (18%), packaging/plastics (15%), and others (12%).
- Geographic distribution: Angul (24%), Cuttack (21%), Rourkela (19%), Berhampur (18%), Balasore/Ganjam (18%).

2. Awareness and Digital Readiness

- Only 38% of respondents were aware of the PM Gati Shakti initiative and its relevance to logistics/infrastructure.
- Among these, 59% had accessed some information via DICs or MSME development offices.
- Just 21% of all respondents were aware of the GIS-based portal (<https://gati.gov.in>), with even fewer having used it.
- MSMEs in Cuttack and Angul showed greater digital readiness due to proximity to industrial parks and prior exposure to e-governance schemes.

Low awareness suggests a gap between national-level reforms and MSME-level dissemination. This supports H2,

indicating that awareness levels are linked to better supply chain outcomes.

3. Changes in Logistics Performance

Respondents in Gati Shakti-aligned zones (Angul, Rourkela, Cuttack) reported:

- Average reduction in delivery time: ~18–22%
- Improved input procurement efficiency: 41% reported easier sourcing post-Gati Shakti implementation.
- Freight cost reductions: ~12% decrease among firms using multimodal corridors.

In Berhampur and Balasore, improvements were less evident, with challenges in road maintenance, slow infrastructure updates, and poor last-mile connectivity.

Supports H1 and H4: MSMEs in areas with active corridor development and intermodal upgrades experienced measurable benefits.

4. Cluster-Specific SWOT Analysis

Angul–Dhenkanal Cluster

- **Strengths:** Close to NH-55, rail freight terminals, steel hubs.
- **Weaknesses:** Limited digital infrastructure.
- **Opportunities:** Inland waterway integration via Mahanadi.
- **Threats:** Rising congestion and over-reliance on road logistics.

Rourkela Region

- **Strengths:** Multimodal transport availability; smart city integration.
- **Weaknesses:** High logistics service costs.
- **Opportunities:** Private sector logistics partnerships.
- **Threats:** Underutilization of the Gati Shakti digital platform.

Berhampur Cluster

- **Strengths:** Strong food processing MSMEs; port connectivity potential.
- **Weaknesses:** Poor road access, seasonal disruptions.
- **Opportunities:** Gati Shakti-backed warehousing.
- **Threats:** Low awareness and coordination gaps.

5. Institutional Coordination and Policy Perceptions

Key informants reported:

- Positive effects of GIS-based planning, especially in land acquisition and corridor mapping.
- Challenges in inter-departmental coordination at the state level, particularly between transport, MSME, and industry departments.
- Limited MSME representation in Gati Shakti planning sessions, despite guidelines for stakeholder participation.

These findings align with H5, supporting the need for better institutional integration and bottom-up planning.

Policy Implications and Recommendations

The findings from the study indicate that while PM Gati Shakti holds significant transformative potential for MSME supply chains in Odisha, its implementation and impact remain uneven. Strategic policy interventions are essential to deepen MSME participation, strengthen infrastructure convergence, and ensure that the benefits of this national logistics initiative are equitably distributed across geographies and sectors.

1. Strengthening Awareness and Capacity Building

A major barrier to MSME participation is the low level of awareness about the Gati Shakti platform and its relevance to enterprise logistics.

- **Recommendation:** Launch state-wide MSME awareness campaigns on Gati Shakti through District Industries Centres (DICs), industry associations, and startup incubators.
- **Actionable Step:** Develop localized training modules in Odia and tribal languages, and conduct workshops on reading GIS logistics data for business planning.

2. Establishing Gati Shakti MSME Facilitation Cells

There is currently no dedicated institutional mechanism to guide MSMEs in aligning their operations with Gati Shakti infrastructure updates.

- **Recommendation:** Create district-level Gati Shakti MSME Facilitation Cells, under the joint supervision of the MSME Department and IDCO.
- **Actionable Step:** These cells should help MSMEs track upcoming infrastructure projects, advise on logistics optimization, and assist in infrastructure-linked credit applications.

3. Promoting Cluster-Based Infrastructure Planning

The study found that MSMEs in regions with existing multimodal infrastructure performed better, suggesting the need for cluster-focused logistics planning.

- **Recommendation:** Integrate Gati Shakti corridor planning with the Odisha MSME Cluster Development Programme, especially in backward districts like Kandhamal, Koraput, and Gajapati.
- **Actionable Step:** Use the Gati Shakti GIS tool to identify infrastructure gaps in existing MSME clusters and prioritize them in state-level logistics planning.

4. Enhancing Digital Infrastructure and GIS Readiness

Digital literacy and connectivity are prerequisites for engaging with the Gati Shakti portal.

- **Recommendation:** Introduce GIS and digital supply chain modules in PMKVY skill training centres and ITIs.
- **Actionable Step:** Collaborate with NIC and private GIS solution providers to build micro-level digital capacity among MSMEs, especially in tribal and remote areas.

5. Encouraging Public-Private Logistics Partnerships

Gati Shakti can enable scalable logistics services only if private logistics providers are integrated into the ecosystem.

- **Recommendation:** Promote public-private partnerships (PPPs) for developing logistics parks, rural freight terminals, and e-commerce delivery hubs under the Gati Shakti umbrella.
- **Actionable Step:** Provide incentives to logistics startups working with rural MSMEs, including subsidized warehousing and data-sharing access from the Gati Shakti dashboard.

6. Monitoring and Feedback Integration

Real-time policy adaptation requires feedback from ground-level stakeholders.

- **Recommendation:** Institutionalize a bi-annual MSME-Gati Shakti impact review forum at the state level.
- **Actionable Step:** Collect performance metrics and challenges through surveys, integrate feedback into Gati Shakti updates, and adjust infrastructure priorities accordingly.

Conclusion

The PM Gati Shakti National Master Plan represents a paradigm shift in India's approach to infrastructure and logistics governance. By introducing a unified, GIS-based digital platform for planning and coordination, the initiative aims to overcome long-standing fragmentation and inefficiencies that have historically plagued infrastructure delivery in India. For the MSME sector particularly in states like Odisha, where enterprises are geographically dispersed and logistically underserved Gati Shakti presents a transformative opportunity to integrate with modern, multimodal supply chains.

This study examined the early impact of Gati Shakti on MSME supply chain performance across five clusters in Odisha, using a combination of field surveys, stakeholder interviews, and secondary data analysis. The findings show that MSMEs located in regions where Gati Shakti infrastructure interventions are active such as Angul, Rourkela, and Cuttack have begun to experience tangible improvements in logistics performance, including reduced delivery times, better freight coordination, and more reliable access to input markets. However, the benefits remain uneven across the state, with MSMEs in remote and tribal districts still grappling with infrastructure deficits, low digital readiness, and limited awareness of national logistics reforms.

While the Gati Shakti framework has made strides in inter-ministerial coordination and infrastructure convergence, its full potential can only be realized through the meaningful inclusion of MSMEs in both planning and implementation. This requires targeted capacity-building, localized outreach, improved digital infrastructure, and strong institutional linkages at the district level.

In conclusion, Gati Shakti is not just a logistics reform, it is an opportunity to rebalance regional development and empower India's small enterprises through smarter, faster, and more inclusive infrastructure. For Odisha, strategically aligning MSME growth with Gati Shakti's evolving infrastructure map could be a key driver of industrial competitiveness and economic decentralization in the decade ahead.

References

1. FICCI, Transforming logistics through Gati Shakti. Federation of Indian Chambers of Commerce Industry, 2022.
2. ICRIER, Infrastructure and logistics in India: Reform priorities. Indian Council for Research on International Economic Relations, 2021.
3. Kapoor A, Singh R. Creative economy in India: Mapping innovation in traditional sectors. *Indian Journal of Entrepreneurship*, 2021;9(3):105–122.
4. KPMG, Improving logistics efficiency for MSMEs. KPMG India, 2021.

5. Ministry of Commerce Industry. PM Gati Shakti Dashboard. Government of India, 2023. <https://gati.gov.in>
6. Ministry of MSME. Annual report, 2022, 2021–22. Government of India. <https://msme.gov.in>
7. Ministry of MSME, Annual report, 2023, 2022–23. Government of India. <https://msme.gov.in>
8. NITI, Aayog. India s. freight logistics reform vision 2025. Government of India, 2022.
9. OECD, Enhancing SME competitiveness through smart logistics. OECD Publishing, 2019. <https://www.oecd.org>
10. OECD, India SME policy index: Enabling the business environment for MSMEs. OECD Publishing, 2020.
11. Odisha Directorate of Economics and Statistics. Odisha economic survey Government of Odisha, 2023, 2022–23. <https://desorissa.nic.in>
12. Sarkar A, Agarwal R. Cluster-centric logistics planning for MSMEs in India. *Journal of Infrastructure Policy Development*, 2021;5(2):117–136. <https://doi.org/10.24294/jipd.v5i2.1470>
13. SIDBI, State of MSMEs in India Small Industries Development Bank of India, 2023, 2022–23. <https://www.sidbi.in>
14. Singh M, Bansal R. Regional logistics constraints MSME performance in India. *South Asian Economic Journal*, 2020;21(1):45–67. <https://doi.org/10.1177/1391561419900015>
15. World Bank. Building effective logistics systems in federal contexts: Lessons from India. World Bank Group, 2022. <https://www.worldbank.org>