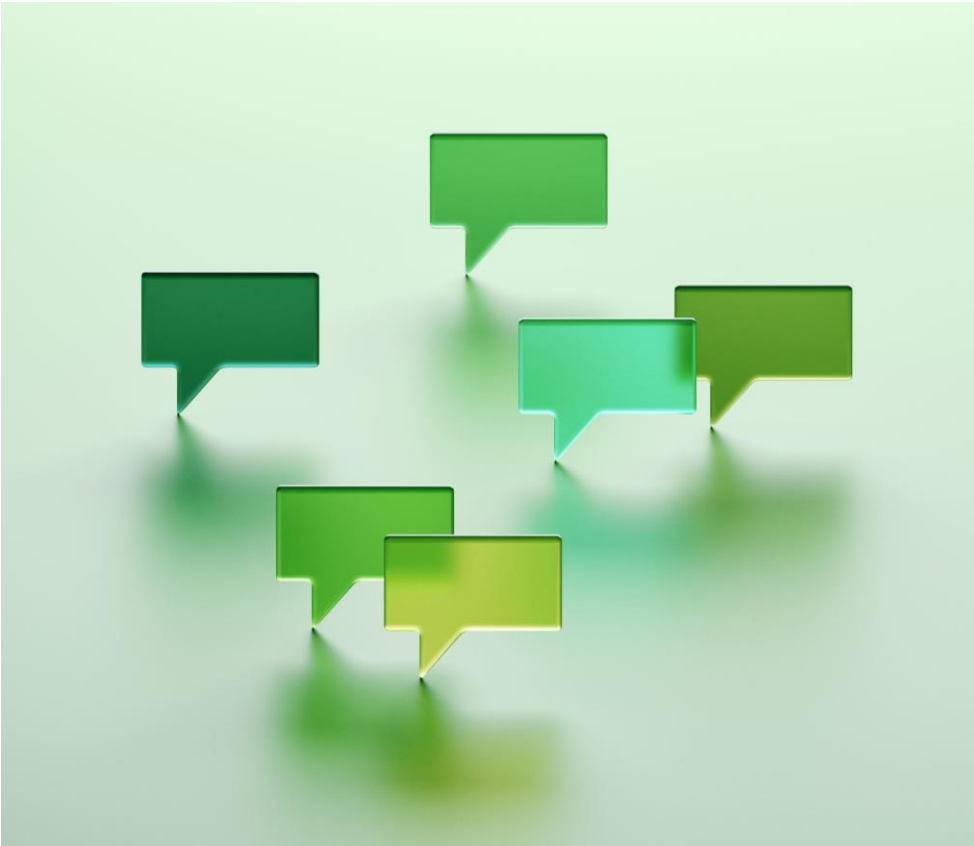




Title – A Study of the Impact of Hinterland Connectivity on Port Competitiveness in India

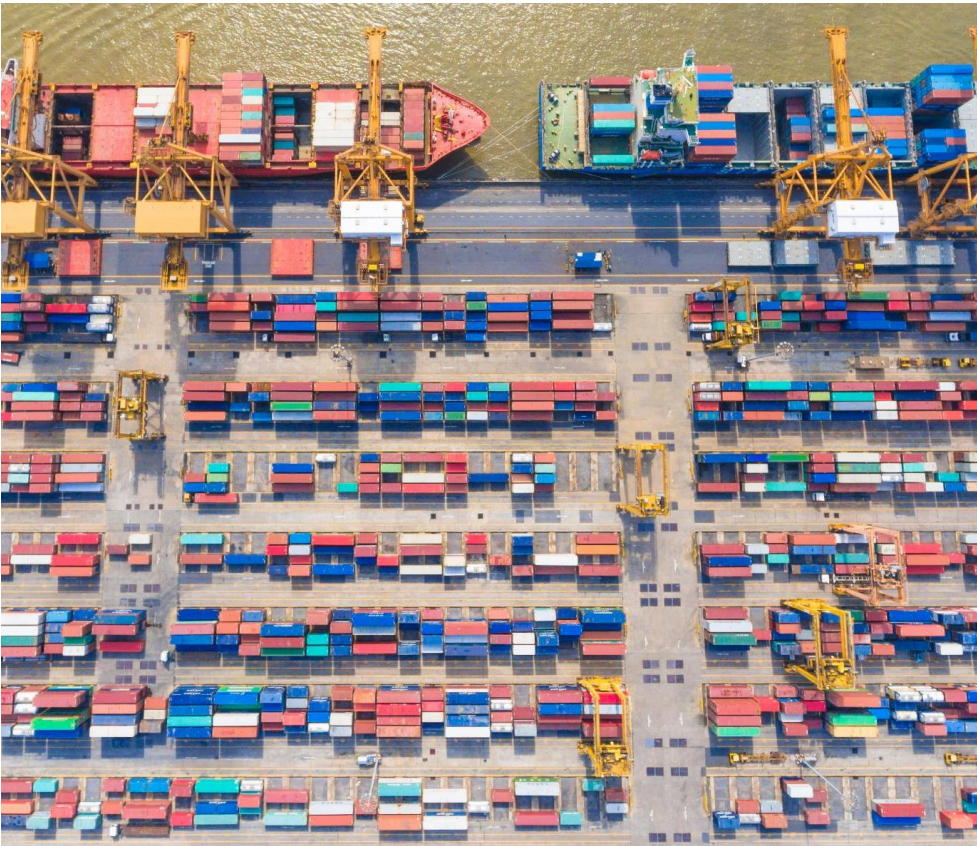
Agenda

The session includes a 20-minute presentation and 20 minutes for Q&A and feedback.



- Introduction & Problem Statement
- Research Question & Objectives
- Identification of Methodology & Framework
- Discussion of Key Findings
- Limitations of the study
- Conclusion

Introduction and Problem Statement



Introduction

Ports are vital for global supply chains, enabling international trade and driving economic growth. They are no longer just geographical areas; they crucial links in the logistics network. Improving hinterland connectivity is essential to expand market reach and boost port competitiveness.

Problem Statement

- Hinterland Connectivity Issues
- Lack of intermodal integration
- Governance and Coordination Gaps

Research Question & Objectives



Research Question

What is the impact of hinterland connectivity on the competitiveness of major Indian Ports?

Research Objectives

- **Multimodal Integration Assessment**

Assess the integration of road, rail, and inland waterways connecting the ports to hinterlands.

- **Infrastructure and Governance Evaluation**

Evaluate inland infrastructure quality and governance structures including stakeholder coordination.

- **Influence on Shipper Port Choice**

Explore how hinterland connectivity affects shipper decisions in selecting ports.

Methodology & Framework

Qualitative Research Design

The study uses semi-structured interviews with diverse port and logistics professionals to collect nuanced data supported by secondary literature.

Thematic Analysis and Ethics

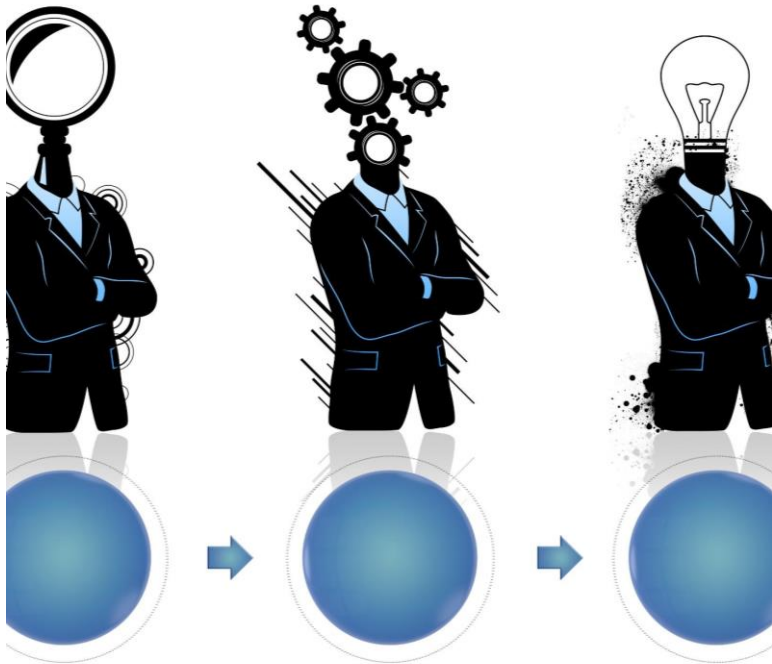
Thematic analysis codes interview transcripts while ensuring confidentiality and informed consent are maintained.

SWOT Analysis Insights

Recurring themes are synthesized into a SWOT analysis highlighting strengths, weaknesses, opportunities, and threats.

Conceptual Framework

The framework shows how internal port factors and hinterland connectivity enhance competitiveness in a reinforcing loop.





Data Analysis Method

- Thematic Analysis
- Transcription and coding of interviews
- Identification of recurring patterns and themes
- Grouping the ideas into themes

Key Findings – Infrastructure and Modal Imbalance



- Rail transport is the preferred mode but not sufficiently developed
- Heavy dependence on road transport
- Inland waterways are underdeveloped
- Traffic congestion increases logistics cost

Key Findings – Intermodal Integration



- Weak first-mile and last-mile connectivity
- Limited integration between ports, ICDs and railways
- Operational inefficiencies reduce port attractiveness to cargo owners



Key Findings – Governance and Policy

- Government plays a crucial role
- Multiple agencies involved in the process
- Coordination gaps leads to delays
- Integrated policies improve performance

Strategic Findings - SWOT Analysis

Strengths

- Improvement in rail links which enhances the connectivity
- PPP drives efficiency
- Digitization initiatives will reduce delays

Weaknesses

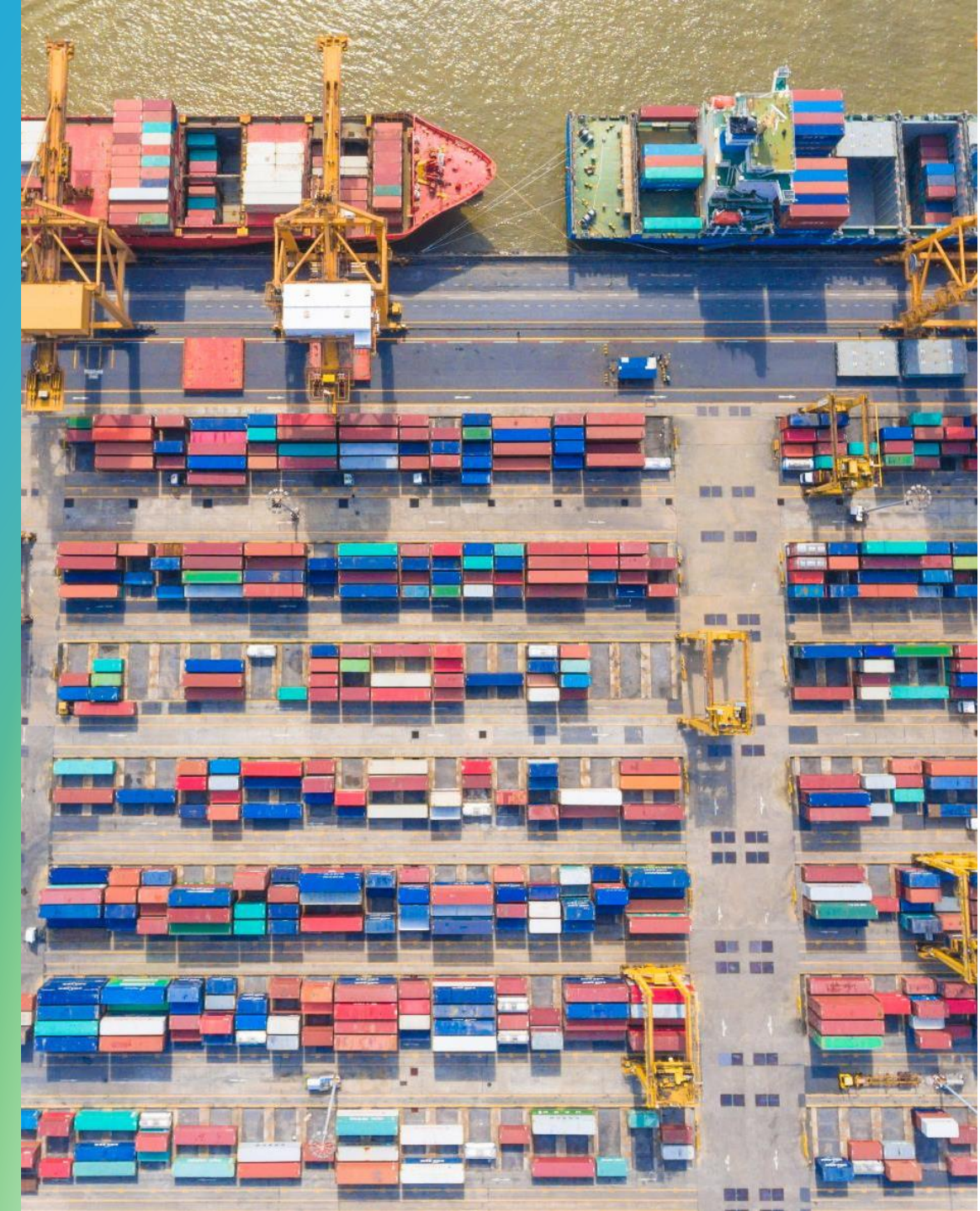
- Uneven connectivity across ports
- Co-ordination gaps within various agencies
- Slow adoption of technology

Opportunities

- Government initiatives like Sagarmala, PM Gati Shakti, Dedicated Freight Corridor
- Development of inland water transport offering sustainable and cheaper mode of transport
- Automation & Green logistics will make ports more attractive

Threats

- Urban encroachment causing land acquisition issues
- Traffic congestion leading to delays & increase in costs
- Policy delays due to bureaucracy



Discussion – Linking Findings to Theory

- Supports Port Regionalization Theory
- Hinterland Connectivity is a Key Competitive Indicator
- Ports compete as logistics systems, not as stand-alone entities



Contributions

Impact of Hinterland Connectivity

Hinterland connectivity enhances port competitiveness by improving reliability, reducing costs, and expanding market reach.

Research Contributions

The study provides evidence on connectivity's role in India and offers actionable recommendations for stakeholders.

Strategic Recommendations

Invest in integrated hinterland networks, unified logistics governance, and prioritize rail with data sharing for transparency.

Limitations & Future Direction

Lack of quantitative analysis

Small sample size

Research focused on Indian ports hence no comparison with international ports

Future studies should explore quantitative analysis, cross-country comparisons, and emerging technologies like AI and blockchain

Professional Growth and Skills Acquired



Gained expertise in semi-structured interviews, thematic coding, and policy framework analysis during research transition.



Improved problem-solving and stakeholder engagement skills through complex research challenges.



Gained practical understanding of multimodal supply chains applicable to logistics management roles.



Developed flexibility and rigor in qualitative research, fostering adaptability to challenges.

Conclusion

- Hinterland connectivity strongly influences port competitiveness
- Hinterland connectivity is not the only indicator of competitiveness
- Infrastructure, intermodal integration and governance must align
- No-one-size-fits-all connectivity model



THANK YOU

I welcome your questions, feedback,
and reflections.