



**Arab Academy**

for Science , Technology and Maritime Transport



The International Maritime Transport  
and Logistics Conference

**“MARLOG 13”**

**Towards** \_\_\_\_\_  
**Smart Green Blue  
Infrastructure**

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## **Presentation Title**

**LOGISTICS PERFORMANCE AS  
FACILITATOR TO TRADE PERFORMANCE:  
AN INDIAN PERSPECTIVE**





## Backdrop –Global Integration of Value Chain

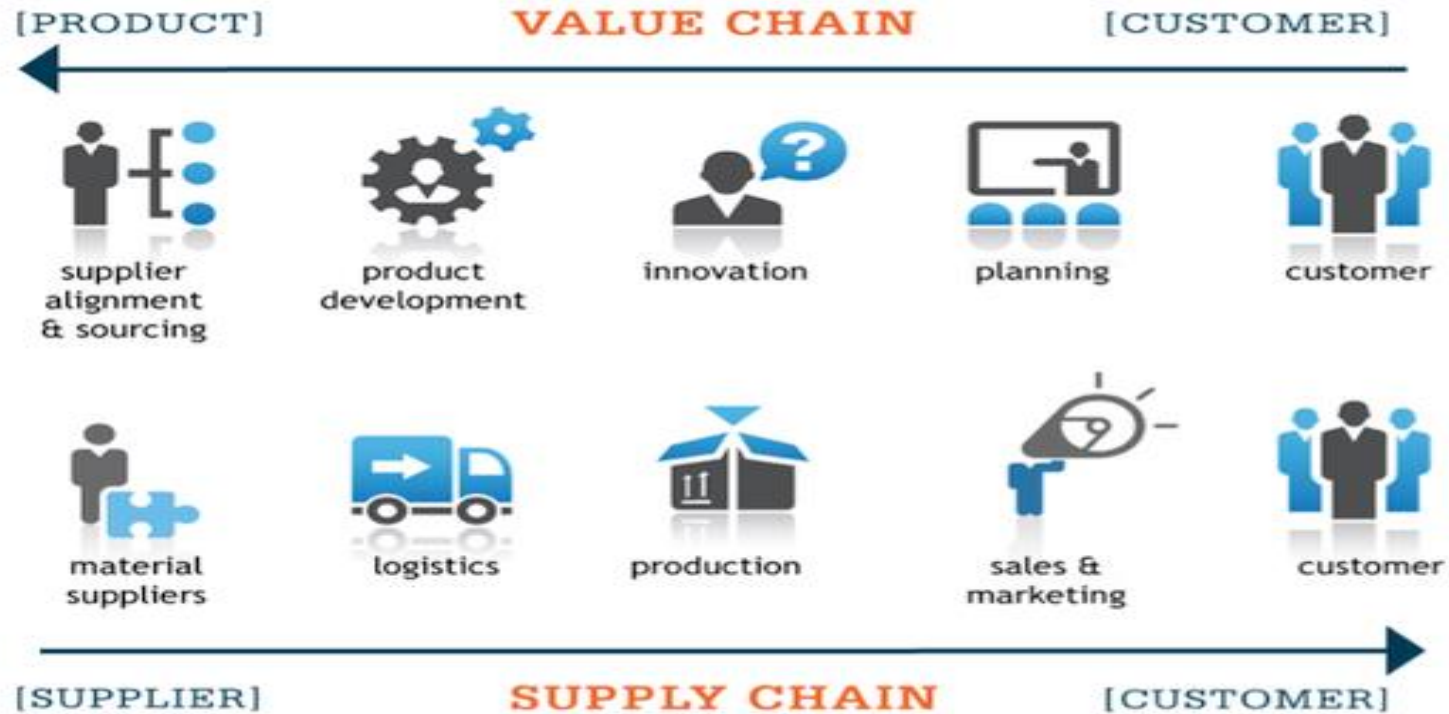
With the growing realisation of the importance of global integration in the production and consumption value chain, the importance of maritime logistics and transportation facilitating international trade is profoundly recognized.

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# Backdrop – Global Integration of Value Chain





# Backdrop

Such external dynamics and engagements in international trade would propel blue economic growth if backed by strong maritime logistics initiatives and establishment.



# Backdrop

In this context, deep routed challenges, particularly in the domestic maritime logistics sector in manufacturing hubs like India, could potentially hamper her comparative advantages in international trade.

It is in this context that this paper comes as an intercession by analysing India's Logistics Performance Index (LPI) and its impact on trade performance.

# Backdrop

Also, this paper provides a comparative analysis of India's LPI with that of other trade competitors from South and East Asia and tries to find out challenging areas of maritime logistics for India and suggest the required policy prescription thereof.

# Objective

To Analyse the India's Logistics Performance Index (LPI) and its impact on trade performance. ➤

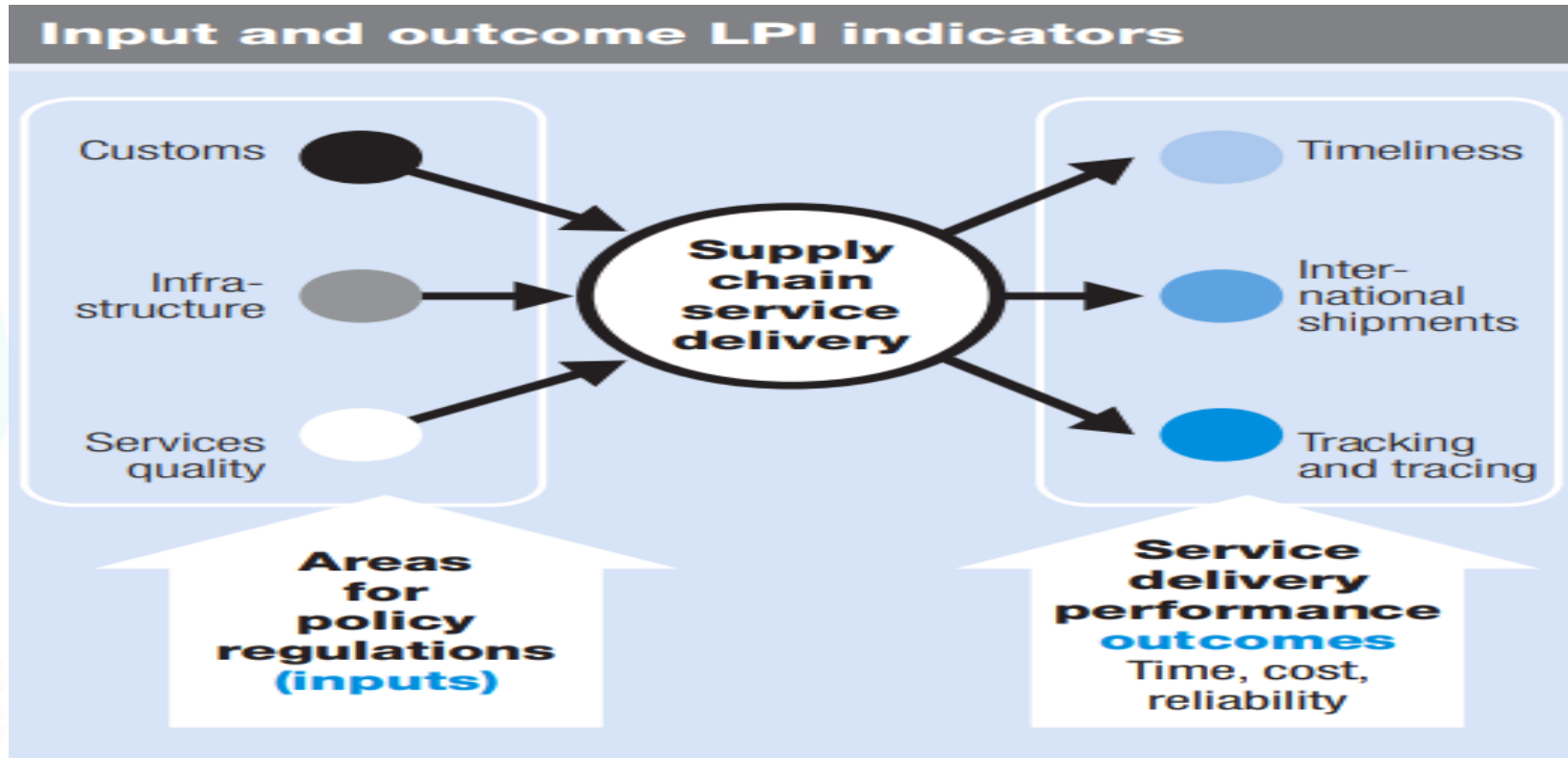
To provide a comparative analysis of India's LPI with that of other trade competitors from South and East Asia. ➤



# Logistics Performance Index

The LPI is a composite index which measures the logistics performance of 139 countries (as of 2023) based on six indicators, namely efficiency of Customs, quality of Trade and Transport infrastructure, Competence and Quality of Logistics, Timeliness in terms of the frequency with which shipments can reach consignee within the scheduled or expected delivery time, Ease of arranging competitively priced shipments, and Ability to Tracking and Tracing of consignments.

# Logistics Performance Index



# Methodology and Variables

To measure this, the present study takes into account a conventional trade function and includes trade facilitation measures to quantify the impacts. •

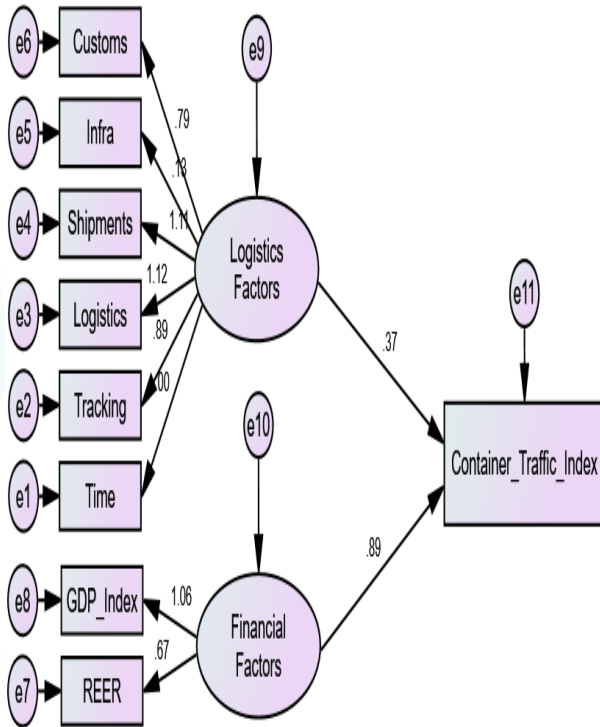
In this model, trade flows are a function of Gross Domestic Product, Real Effective Exchange Rate, and various indicators of the Logistics Performance Index (LPI). •

# Methodology and Variables

- The study used Structural Equation Model (SEM) and constructed two latent variables;
- (1) ‘Logistics Factors’ consisting of six observed variables, which are six indicators of the LPI.
- (2) ‘Financial Factors’ consists of two observed variables viz., Real Effective Exchange Rate (REER) and Constant GDP Index.

• The dependent variable is the Container Traffic Index.

# Analysis



Parameter	Estimate	P
Time	0.004	0.00*
Tracking	0.89	0.00*
Logistics	1.124	0.00*
Shipments	1.113	0.01**
Infra	0.128	0.19
Customs	0.791	0.00*
REER	0.666	0.00*
GDP_Index	1.06	0.01**
Container_Traffic_Index	0.366	0.01**
Container_Traffic_Index	0.885	0.00*

# Findings

The model estimation (SEM) shows a positive and significant impact of the Logistics Performance Index (LPI) on container traffic movement in India. •

The analysis of LPI scores for India, along with other sample countries, illuminates that the major inefficiency of India in logistics performance lies in the lack of proper trade and transport infrastructure and rigid customs and border procedures. •

# Conclusion

Therefore, India's major actionable focus to •  
promote international trade could be external  
economic integration with major trading  
partners coupled with domestic reforms in the  
customs and infrastructure segments of the  
logistics and transportation sector.



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*Thank You*

