

# Unlocking growth in India

How reducing the hidden costs of trade  
can drive growth in India



# The value of trade

Making trade more efficient can be a source of value for the Indian economy. This study puts numbers on the potential for growth.

India – the world’s fourth-largest economy – is poised for growth. The World Bank estimates that India’s GDP growth will reach 7.5% in 2016. The country’s high growth rates since 1991 have been accompanied by impressive social improvements: Life expectancy has more than doubled, literacy rates have quadrupled, health conditions have improved, and a sizeable middle class has emerged.<sup>1</sup> Still, poverty remains widespread and profound, with **average GDP per capita in 2014 less than half that of China**. With roughly half of the population under the age of 25, continued economic development is a necessity and an opportunity for India to further improve the quality of life for its citizens.

Expanding trade is one of the key vehicles supporting growth and development. By providing efficient transportation and logistics services to domestic and multinational companies, the Maersk Group supports Indian

trade and infrastructure development. Through Maersk Line, APM Terminals, DAMCO, Maersk’s Global Service Centers, Maersk crewing and Maersk Training, the Group has established a significant presence in India and is committed to a continued partnership. In 2015, Maersk commissioned a study to assess the socio-economic impacts of our activities and how Maersk is contributing to unlocking India’s economic growth potential.<sup>2</sup>

While there is often much debate about the direct costs of transportation and logistics, such as terminal rates, freight rates and inland transport costs, the most significant costs can be the indirect and hidden costs stemming from delays and inefficiencies. Reducing these costs is a significant source of potential savings and improved competitiveness for Indian exporters and importers, and our study puts numbers on just how much socio-economic value could potentially be generated for India.

Estimated GDP growth in India, 2016:

**7.5%**

Average GDP per capita in India, 2014:

**5,700 USD**

Half of the Indian population of 1.25bn people is under

**25**

India ranks

**130th**

on the World Bank’s Ease of Doing Business Index



## How long and unreliable lead times affect importers and exporters

Long and unreliable lead times – the time it takes to ship the goods from the supplier to the buyer – add significantly to the costs of trading for importers and exporters in India.

If an importer does not know whether a container will come today or next week, he will need to keep higher inventory in order to prevent interruptions in production and/or in the supply to customers. Higher inventory is expensive, particular for middle to high-end manufacturing sectors in which many Indian exporters are positioned today. Thus, for high value goods, hedging inventory to avoid out-of-stock situations can be the single most important cost item in the total trade costs after the ocean freight rate.

For exporters, long and unreliable lead times do not necessarily give rise to higher inventory for themselves. But it does give rise to higher inventory for their customers or their distributors abroad, making them less attractive as a sourcing partner and/or their products less competitive. In addition, late delivery of their products often give rise to penalties, while delays cause loss from spoilage.

In India, Maersk’s transportation and logistics services extend across the entire transportation chain. This includes inland services such as local acceptance points, container freight stations and inland offices, terminal operations such as APM Terminals’ GTI terminal in Mumbai and the GUJLL terminal in Pipavav, as well as Maersk Line’s and Damco’s shipping and logistics services. Common to all these services is a shared ambition to support customers in reducing the length and unreliability of their lead times.

### Indian government policies tackle infrastructure challenges for growth

To drive economic growth and job creation, the Indian government has initiated several large-scale investment programmes in agriculture and manufacturing. A prime example is “Make in India” which aims at making India a leading manufacturing hub. Among the government’s key policy priorities are investments in infrastructure, skills development, and ease of doing business to boost private sector investment.

For any manufacturer to be successful, it needs to be able to transport its production materials as well as its products across rural and urban markets in a timely and

cost-effective manner. This requires sufficient and effective infrastructure, and it is increasingly clear that India today faces infrastructure challenges that are holding back growth. The Indian business community often cite inland infrastructure as the single biggest hindrance to doing business. Among the challenges are extensive delays due to congested roads, rails and port infrastructure, resulting in long and unreliable lead times that make it difficult for importers and exporters to plan and meet their deadlines in increasingly competitive global markets. \*

<sup>1</sup> World Bank – India country overview (<http://www.worldbank.org/en/country/india/overview>)

<sup>2</sup> The full technical background report, conducted by Qbis Consulting, is available for download at [www.maersk.com/sustainability](http://www.maersk.com/sustainability).

\* Source: “The opportunity and challenge of India’s infrastructure”, PWC, 2013. (<http://www.pwc.com/gx/en/capital-projects-infrastructure/assets/gridlines-india-article-2013.pdf>)



# The cost of delays and unreliability

Four sector case studies estimate the hidden costs of trade for Indian importers and exporters.

Across four sector case studies – pharmaceuticals, textiles & garments, electronics, and auto components – our study finds that the indirect and hidden costs of trade accruing from delays and unreliable transportation services amount to as much as 38–47% of total transport and logistics costs. This is particularly due to the fact that for each container

transported to and from India, there is a high variation in lead times of 38–66 hours. Reducing the costs of trade by 10% has the potential to generate additional exports of up to 5–8%.<sup>3</sup> This means that within each of the four sectors, making trade 10% more efficient could potentially generate between USD 0.2bn and up to USD 3.1bn in extra exports per sector.

<sup>3</sup> Korinek, Jane and Sourdin, Patricia (2009), Maritime transport costs and their impact on trade, OECD Working Paper; P. De, B. Rout (2008), Trade and Development Review, Vol. 1, Issue 2.

## Orient Craft

Orient Craft is the second largest exporter of apparels out of India. The company, which comprises 20 factories and 35,000 employees, produces garments, apparels and home furnishings for major international retailers. Inputs are imported from the Far East, and machinery from Europe. According to Mr. A.K. Jain, General Manager Commercial, the main challenge for Orient Craft like all garment manufacturers is that customers demand very short lead times and do not accept delays. Maintaining inventories is not possible because of frequent changes in fashion, inputs and styles. Inland transportation is the main headache: From Shanghai to Delhi can take up to 25 days with inland delays. In case of prolonged delays, the only option for the manufacturer to retain the customer can be to switch from shipping to airfreight at a significant cost. If they do not, they risk losing business to competitors in markets such as Cambodia and Indonesia.

## Reliance Industries

Reliance Industries is a major conglomerate operating in petrochemicals, retail, oil & gas, and telecom. They are India's largest exporters, responsible for almost 15% of the country's total exports by value. With 12 manufacturing sites mostly located close to the ports on the west coast of India, they still experience considerable challenges with transport delays. Ms. Geeta Uppal, VP and Head of Ocean Freight, explains that in the petrochemicals industry, global economic conditions create high price uncertainty, and the volatile situation impacts further when supply chain and logistics cannot meet expectations of on-time delivery and seamless execution. For example, Reliance's customers normally provide a contract with Last date of Shipment (LDS) to ship goods out of India. If that date is missed, the cargo must go back to the factory with extra cost on transport and not least extra hassle with customs and potential loss of business.

Orient Craft produces garments, apparels and home furnishing. The company comprises

**20** factories and **35,000** employees

Reliance Industries are India's largest exporters, responsible for almost

**15%** of the country's total exports by value.

## Reducing the costs of trade: Summary of impacts across four sectors



Pharmaceuticals



Textiles & garments



Electronics



Auto components

The study finds that the indirect costs of trade amount to **38–47%** of total transport and logistics costs

... reducing the costs of trade by **10%** has the potential to generate up to **5–8%** extra exports

... in USD this would translate into:

	Exports today, USD	Added export potential, USD
Pharma	11.7bn	0.5–0.9bn
Textiles	38.6bn	1.9–3.1bn
Electronics	9.0bn	0.5–1.2bn
Auto components	4.0bn	0.2–0.3bn

# Transport and logistics costs in four sectors

## Sector case 1: Textiles and garments



**5%**  
India share of global trade (value)

**13%**  
sector share of India's total export

**105bn**  
estimated value of sector overall (USD)

**39bn**  
estimated value of export sector (USD)

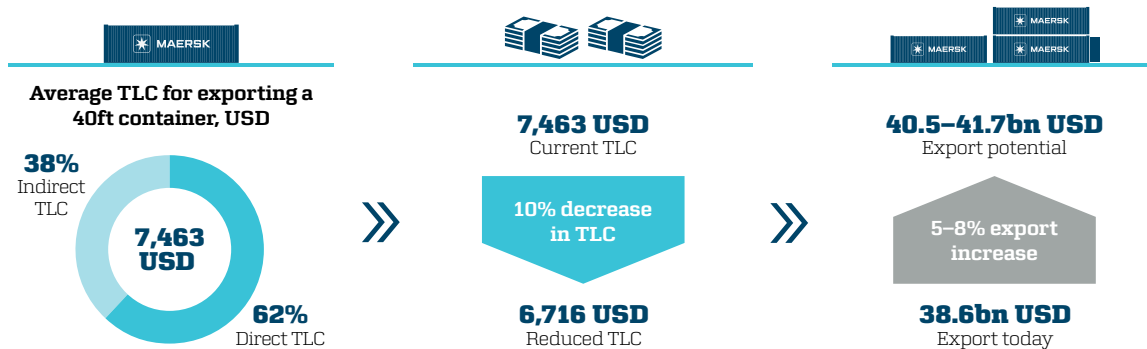
**4%**  
sector share of India's GDP

**45m**  
people directly employed in the sector

- +** India's oldest and biggest manufacturing industry accounting for a significant share of export earnings
- +** Second biggest source of employment (low-skill, high share of women workers), exceeded only by agriculture
- Relatively low levels of modernization and technology investments compared to more advanced competitors
- Intensified (price) competition from low-cost sourcing countries following 2005 textile and apparel trade liberalization
- Higher transport and logistics costs vis a vis peers with challenges in meeting just-in-time requirements of global apparel industry (long lead times, high inventory costs)

### Assessment of indirect trade costs and the value of lowering trade costs in the sector\*

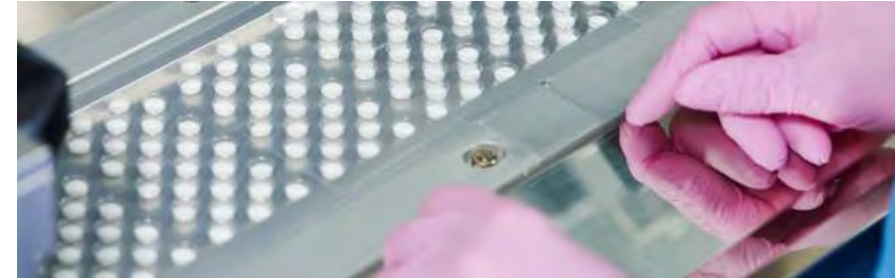
The potential value in terms of increased exports if transport and logistics costs (TLC) were reduced by 10%



\* Assessment based on interviews with shippers, Maersk Line, DAMCO and APM Terminals as well as industry reports and external company and logistics data. The assessment of indirect TLC is subject to uncertainty. The above numbers are upper estimates; lower estimates are 7–10% lower.

# Transport and logistics costs in four sectors

## Sector case 2: Pharmaceuticals



**2%**  
India share of global trade (value)

**4%**  
sector share of India's total export

**20bn**  
estimated value of sector overall (USD)

**12bn**  
estimated value of export sector (USD)

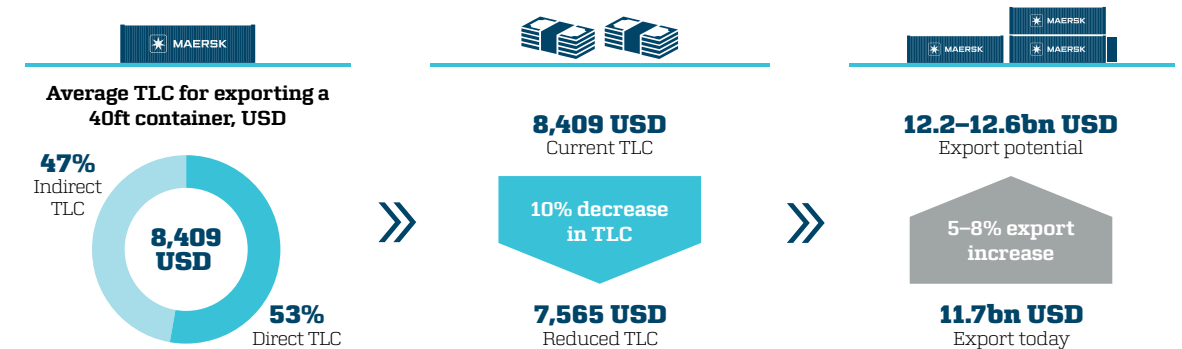
**2%**  
sector share of India's GDP

**5m**  
people directly employed in the sector

- +** India is the largest provider of generic medicines globally (20% of global exports by volume)
- +** Despite its relative infancy, the pharmaceutical segment has experienced high growth rates and account for a fair share of export earnings GDP
- +** The Government of India has an ambition to turn India into a pharmaceutical innovation hub with growing investments in R&D and value-adding activities
- Stringent pricing regulation, intensified competition from other low-cost sourcing countries (China, Israel) and quality lapses threaten exporter competitiveness
- Lack of adequate and reliable infrastructure (cold chain) adds costs to exporters and reduces competitiveness in a highly time sensitive industry

### Assessment of indirect trade costs and the value of lowering trade costs in the sector\*

The potential value in terms of increased exports if transport and logistics costs (TLC) were reduced by 10%



\* Assessment based on interviews with shippers, Maersk Line, DAMCO and APM Terminals as well as industry reports and external company and logistics data. The assessment of indirect TLC is subject to uncertainty. The above numbers are upper estimates; lower estimates are 7–10% lower.

## Transport and logistics costs in four sectors

### Sector case 3: Electronics



- + Rising domestic and regional demand for consumer electronics opens new opportunities for Indian manufacturers
- + Exports of electronic goods, while meager, has picked up to neighboring markets (Asia and Middle East) with growing FDI activity of global consumer companies
- Despite domestic manufacturing ambitions and potential, the sector remains import intensive and is the second top contributor to India's trade deficit
- Indian manufactured electronic products generally of low quality with limited appeal outside domestic market
- Limited incentives for Indian manufacturers to export due to lack of government incentives, failure to meet quality standards and infrastructure challenges and costs

**0.4%**  
India share of global trade (value)

**2.8%**  
sector share of India's total export

**32bn**  
estimated value of sector overall (USD)

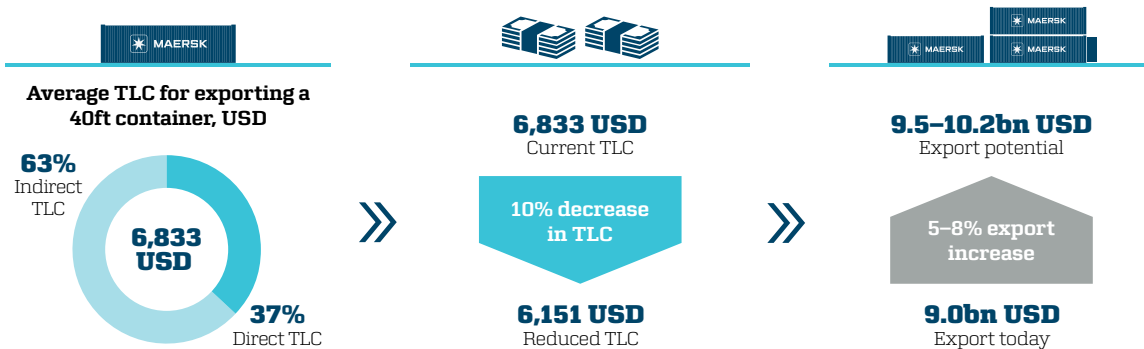
**9bn**  
estimated value of export sector (USD)

**2%**  
sector share of India's GDP

**2%**  
export sector growth (CAGR), 2010-14

#### Assessment of indirect trade costs and the value of lowering trade costs in the sector\*

The potential value in terms of increased exports if transport and logistics costs (TLC) were reduced by 10%



\* Assessment based on interviews with shippers, Maersk Line, DAMCO and APM Terminals as well as industry reports and external company and logistics data. The assessment of indirect TLC is subject to uncertainty. The above numbers are upper estimates; lower estimates are 7-10% lower.

## Transport and logistics costs in four sectors

### Sector case 4: Auto components



- + Transfer of know-how and skills from multinational automakers has made India's auto-component sector a viable sourcing alternative for global auto-manufacturers
- + Innate advantages of geographic affinity to large auto-part importers, a growing domestic market and abundant access to raw materials (steel)
- + Small, but growing, export sector driven by changed sourcing strategies of global OEMs/auto-manufacturers
- Low levels of innovation and high penetration of counterfeit auto-components, threaten the sector's future competitiveness and global image
- Infrastructure bottlenecks around major auto-component gateway ports (Mumbai and Chennai) increases costs of imports and exports

**1%**  
India share of global trade (value)

**1%**  
sector share of India's total export

**14bn**  
estimated value of sector overall (USD)

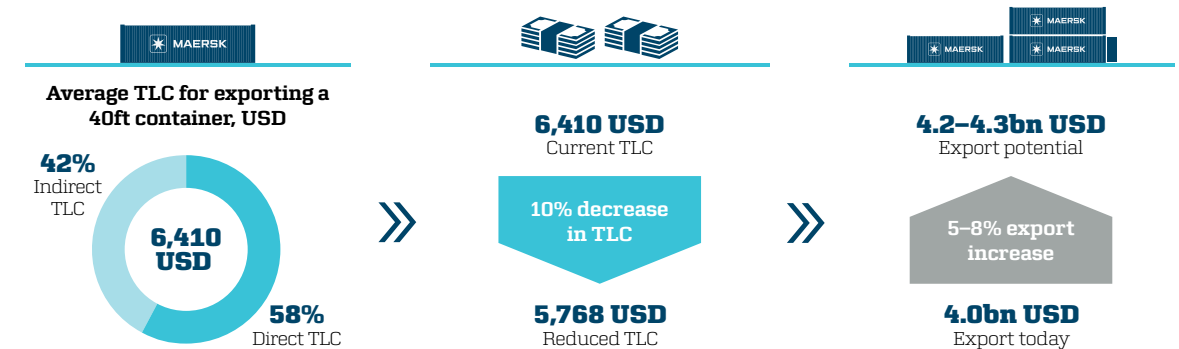
**4bn**  
estimated value of export sector (USD)

**0.7%**  
sector share of India's GDP

**16%**  
export sector growth (CAGR), 2010-14

#### Assessment of indirect trade costs and the value of lowering trade costs in the sector\*

The potential value in terms of increased exports if transport and logistics costs (TLC) were reduced by 10%



\* Assessment based on interviews with shippers, Maersk Line, DAMCO and APM Terminals as well as industry reports and external company and logistics data. The assessment of indirect TLC is subject to uncertainty. The above numbers are upper estimates; lower estimates are 7-10% lower.

# How the Maersk Group is reducing the costs of trade in India

Maersk businesses in India are contributing to making trade more efficient and less costly. This has a potential to generate further exports, turnover and jobs.

## The value of reducing inland delays

The businesses in the Maersk Group provide services that support our customers in reducing their transport and logistics costs. This is not because Maersk offers lower prices than industry average – in fact, sometimes quite the opposite. Maersk’s impacts are in making trade more efficient, reducing delays and unreliability and thereby the indirect costs of trade.

In India, many delays occur in connection with inland transport. The impact study finds that a combination of effective inland services and triangulation (direct reuse of an imported container for export), and Maersk Line’s high capacity and number of services to and from

India, has the potential to reduce indirect transport and logistics costs by an average of 20–26% for shippers who make use of Maersk Line’s services across the studied transport corridors. When the added costs of using Maersk Line’s more expensive services are subtracted from the equation, the net reduction in transportation and logistics costs amount to up to 6%.

Similarly, the study finds that a combination of inland network and process flow optimization and consolidation has the potential to reduce hidden transport and logistics costs by an average of 12–24% for shippers who make use of Damco’s services. This in turn can lead to a net reduction in transportation and logistics costs of up to 8%.

India’s ports handle over

**95%**

of the country’s international trade volumes.

Through effective services including high capacity, triangulation, inland network and cargo consolidation, Maersk Line and Damco can reduce indirect trade costs for their customers by

**12–26%**

... resulting in an average net reduction of transport and logistics costs by up to

**8%**

... if applied to all exporters across the four sectors, this would translate into a potential of up to

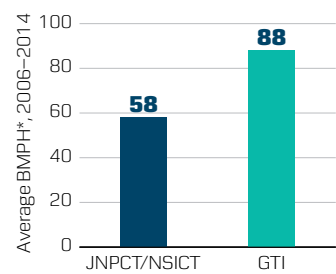
**6.5%**

increase in exports, corresponding to an added export value of

**USD 3.8bn**



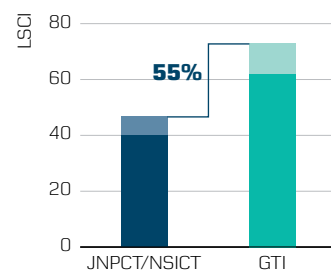
**Terminal productivity**



GTI has consistently outperformed the industry since 2006



**Liner shipping connectivity\*\***



This has improved India’s liner shipping connectivity



**Import/export increase**

**9%**  
trade increase

Which in turn has an estimated impact of up to 9% additional trade for India since 2006.

To illustrate the potential in a wider sector perspective, if the cost reductions delivered by Maersk Line and Damco were applied to all exporters of pharmaceuticals, textiles & garments, electronics and auto components, this would have the potential to generate up to 6.5% increase in exports. This would have a total added export value of USD 3.8 billion, and in turn support additional generation of turnover and jobs in Indian industry.

## The value of efficient port operations

India’s ports handle over 95% of the country’s international trade volumes. Consequently, port performance has a significant impact on the costs of exporting and importing to and from India, and thereby also on the country’s competitiveness in global markets. Several of India’s key ports are reaching capacity constraints and operate above their capacity, making it vital to maximise

productivity and capacity in order to minimise delays and bottlenecks.

APM Terminals’ Gateway India (GTI) in Nhava Sheva near Mumbai has consistently increased its container throughput and productivity since 2006. As a result, the study finds that GTI has improved India’s liner shipping connectivity and estimates a resulting 9% additional trade for India since 2006. Since GTI handles around two million TEU per year, this corresponds to 180,000 extra TEU of import and export or close to 2% of India’s foreign trade.

In Pipavav, the APM Terminals-owned Gujarat Pipavav Port Ltd (GPPL) is part of the Gujarat ports forming the gateway to the high-growth landlocked north-western region of India. In addition to preventing further congestion and delays in Nhava Sheva, the study estimates that the Gujarat ports offer 4–7% lower transport and logistics costs compared to Nhava Sheva, due to lower congestion and better rail connectivity.

## Liner shipping connectivity

Liner shipping connectivity is a measure of how well connected a country is to global shipping networks. It is typically measured by indicators such as number of service providers, as well as number, size and carrying capacity of vessels. As connectivity increases, economies of scale, higher frequencies, and more competition lead to lower transport costs, while at the same time improving companies’ access to new and existing markets across international destinations.

\* BMPH = Berth moves per hour

\*\* The lighter shade in the bar graphs represent a margin of variation in the assessment.

GTI: Gateway Terminals India, JNPCT: Jawaharlal Nehru Port Container Terminal, NSICT: Nhava Sheva International Container Terminal

# How transport and logistics costs are estimated in this study

**Direct costs:** Consists of charges for inland and ocean transport as well as container handling in container freight stations, inland container depots and sea terminals. In addition, costs associated with compliance with documentary requirements of exporting including fees and procedures.

**Indirect costs:** These are often overlooked in analyses investigating the impacts of transport and logistics on trade and competitiveness. Nonetheless, particularly when infrastructure is poor and/or operating close or above capacity limitation, these costs become substantial. Based on interviews with shippers and consignees<sup>4</sup>, six different indirect cost elements have been identified and assessed, including losses due

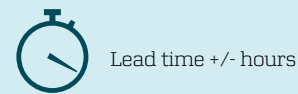
to breakage and spoilage, penalties for late delivery, inventory and storage costs.

The indirect costs vary according to the estimated **length and variation in lead time**. For example, the longer the lead time and particularly, the more variation, the higher the required inventory in order to prevent a stock-out situation.

In addition to interviews with shippers and consignees, the study is based on data collected from Maersk Line, DAMCO and APM Terminals, as well as existing transport and logistics data including World Bank's enterprise survey for India, Trading Across Borders and national Logistics Performance Index for India.

## Transport and logistics costs

### Direct costs



### Indirect costs



<sup>4</sup> The interviewed shippers and consignees are Reliance, Sanofi, Allanson Limited, Panacea, Mahindra & Mahindra, Samsung, LG Electronics, Welspun, Designco, Shahi, Target, TJX and Walmart.

# Joint action for innovative solutions

Realising the potential for future growth indicated by this study will require collective action and innovative approaches to enable more efficient trade.

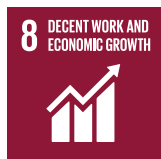
There are uncertainties to all economic analyses. The findings in our study are based on interviews with shippers, consignees and Maersk business units, as well as external sources including the World Bank's Logistics Performance Index and enterprise surveys. These are all subjective in nature and our findings can therefore not be considered hard facts. Also important to note is that impacts are assessed on an all other things being equal situation, which means that the impact may not materialise if other trade determinants worsen for India or if India's international competitors also are able to reduce their trade costs or in other ways improve their competitiveness.

What the findings do indicate is nevertheless the significant potential

to reduce the 'hidden' transport and logistics costs that result from delays and unreliability across the trade value chain, and thereby to improve the competitiveness of companies importing to and exporting out of India. The result will be value creation not only for the Maersk Group and our customers, but for the Indian economy and the population of India. To realize this important goal requires the collective action of public and private sectors. Maersk Group is looking forward to taking the dialogue forward with our customers, government and industry partners as well as other key stakeholders in India, to identify and test new and innovative solutions to boost infrastructure, trade and development in India.

## Trade and the Sustainable Development Goals

By enabling trade and infrastructure development, Maersk's businesses directly support the realisation of the UN's Sustainable Development Goals 8 and 9. See [www.maersk.com/sustainability](http://www.maersk.com/sustainability) for more information about Maersk's sustainability priorities and how we are taking action globally in support of the SDGs.



# The Maersk Group in India

In addition to our role in enabling trade, the Maersk Group also generates socio-economic value for India through our employment and turnover. The impact study puts numbers on the value.

The Maersk Group has a long-standing and comprehensive presence across the Indian subcontinent with business activities in areas such as shipping, terminal operations, logistics, crewing and training and more. In fact, Maersk's presence in India is so comprehensive that the 'average' employee across

the entire Group is a 37-year old male Indian, employed by Maersk Line and holding about five years of seniority.

In India, Maersk is represented by Maersk Line, APM Terminals, DAMCO, Maersk Global Service Centres, Maersk Training and Maersk Crewing.

In 2015, Maersk Line handled around

**950,000** FFEs corresponding to around **18%** of India's total container through-put



**Maersk Line** has 25 offices, 48 inland acceptance points at Inland Container Depots (ICDs), 100 pickup points, 72 repair shops for containers and 127 vendors. It services around 7,000 customers and its ocean services call 15 ports in India.



**APM Terminals** operates India's largest container terminal Gateway India (GTI) in Nhava Sheva near Mumbai and the entire port of Pipavav.

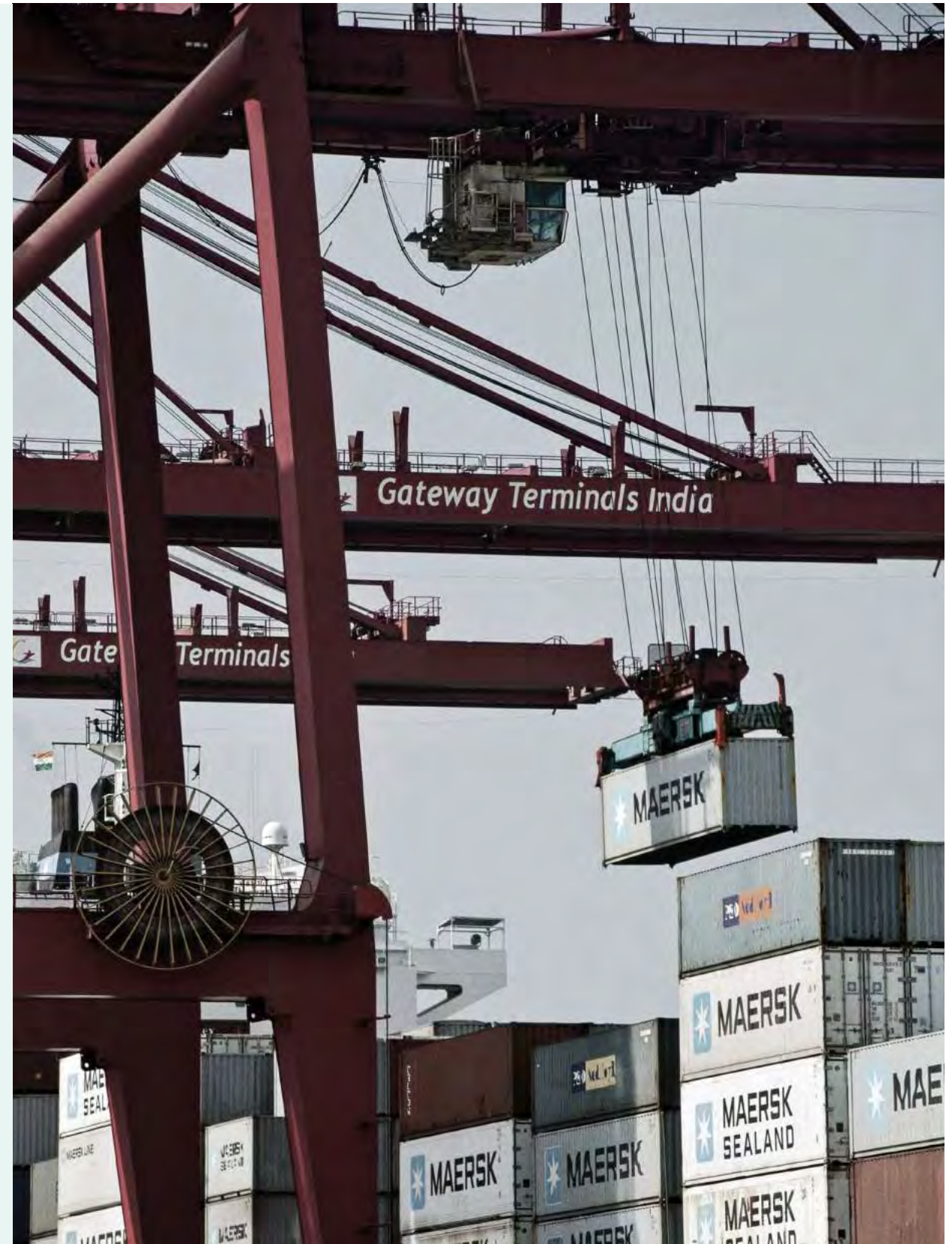
In addition, APM Terminals Inland Services operates Container Freight Stations (CFSs), Inland Container Depots (ICDs), and Container Services Centres across Mumbai, Dadri, Chennai, Kochi, Tuticorin and Pipavav.



**DAMCO** has 34 offices across India and services large multinational customers with consolidation of cargo and optimisation of their supply chains.



**Maersk Global Service Centres (GSCs)** are the official shared service centres of the Maersk Group. Maersk has GSCs at five sites around the world, of which three are in India (Pune, Chennai and Mumbai).

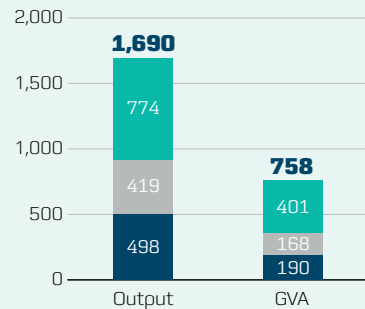




## Economic value added

In 2014, the Maersk Group in India had a turnover of USD 498 million, which is estimated to have yielded a total turnover of USD 1,690 million to the shared benefit of the Group, employees and their dependents, local business partners and the local economy. Subtracting the costs of all the inputs and raw materials, this corresponds to USD 758 million in direct, indirect and induced Gross Value Added (GVA). This means that for each USD 1 million of GVA generated by Maersk, another USD 3 million of GVA are generated by suppliers to Maersk and other companies supplying consumer goods to Maersk.

### Gross value added 2014 (MUSD)\*

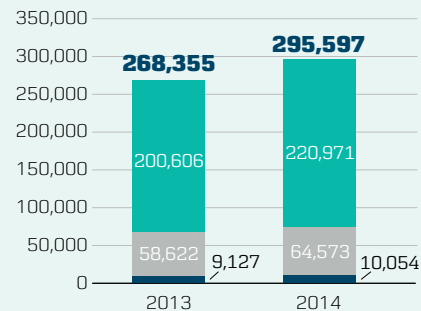


- Induced GVA:** GVA created in the economy through spending of wages and salaries of the direct and indirect employees on food, housing, transportation, etc.
- Indirect GVA:** GVA created by companies providing goods and services to Maersk
- Direct GVA:** GVA created by Maersk's operating surplus and wages/salaries

## Job creation

In 2014, there were nearly 13,000 employees in Maersk companies registered in India, corresponding to 10,054 FTEs. This is estimated to have supported another 64,600 jobs in companies providing goods and services to Maersk and nearly 221,000 jobs through the spending of salaries of Maersk and supplier employees on private consumption. This way, Maersk is estimated to have created nearly 296,000 direct, indirect and induced jobs in India in 2014. This means that for each job created by Maersk, another 29 jobs are created by suppliers to Maersk and other companies supplying consumer goods to Maersk' and its suppliers' employees.

### Jobs (FTE)\*



- Induced jobs:** Employees of the companies from which the direct and indirect employees spend their wages and salaries on food, housing, transportation, etc.
- Indirect jobs:** Employees of Indian companies from which Maersk procures goods and services
- Direct jobs:** Persons directly employed by Maersk in India

\* Source: Qbis Consulting on the basis of the OECD Stan Database containing input/output-tables for the Indian Economy and financial data from Maersk in India.

2014 Group turnover:

**USD 498m**

**USD 1m**

Maersk value add generates additional

**USD 3m**

Indian value add

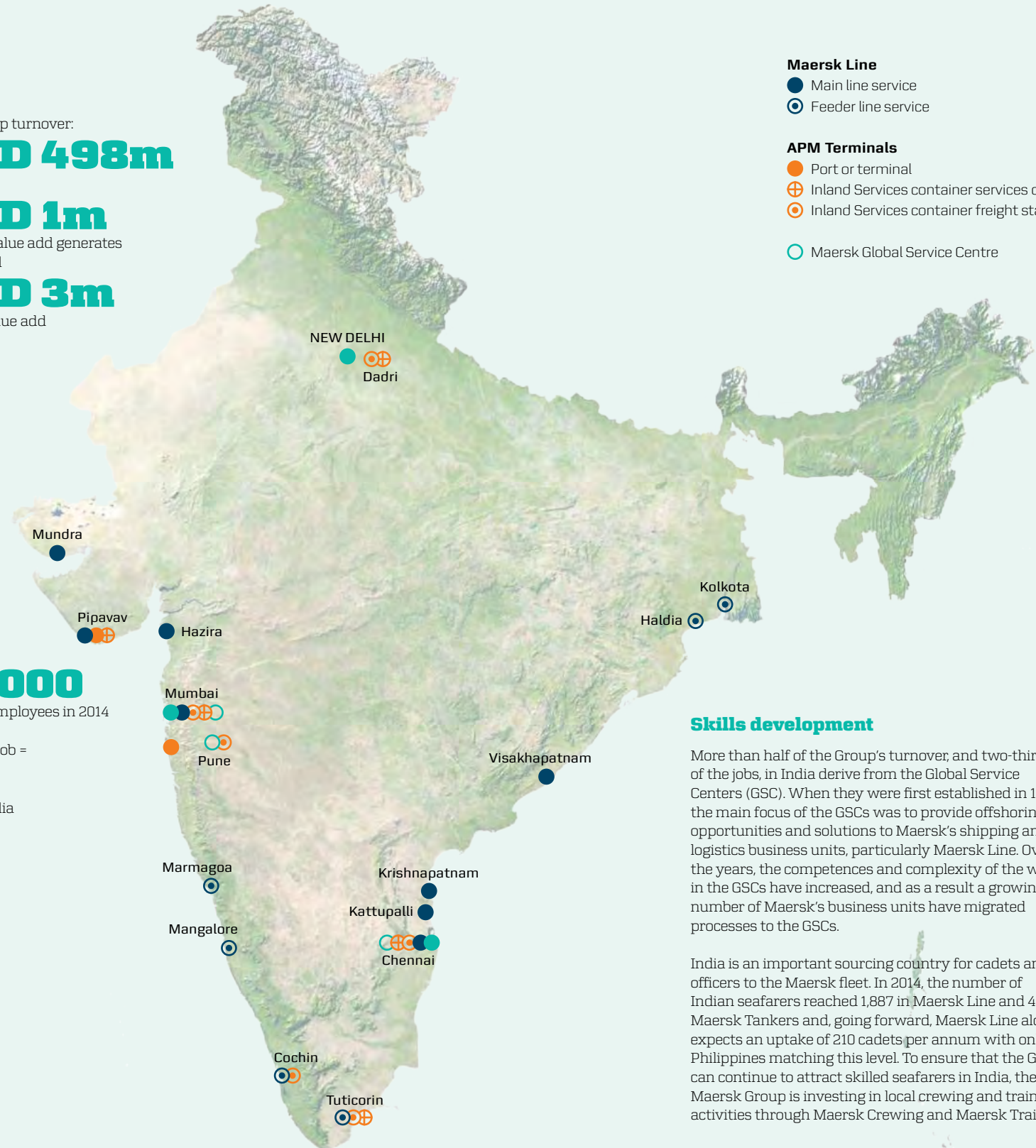
**13,000**

Maersk employees in 2014

1 Maersk job =

**29**

jobs in India



## Skills development

More than half of the Group's turnover, and two-thirds of the jobs, in India derive from the Global Service Centers (GSC). When they were first established in 1999, the main focus of the GSCs was to provide offshoring opportunities and solutions to Maersk's shipping and logistics business units, particularly Maersk Line. Over the years, the competences and complexity of the work in the GSCs have increased, and as a result a growing number of Maersk's business units have migrated processes to the GSCs.

India is an important sourcing country for cadets and officers to the Maersk fleet. In 2014, the number of Indian seafarers reached 1,887 in Maersk Line and 470 in Maersk Tankers and, going forward, Maersk Line alone expects an uptake of 210 cadets per annum with only the Philippines matching this level. To ensure that the Group can continue to attract skilled seafarers in India, the Maersk Group is investing in local crewing and training activities through Maersk Crewing and Maersk Training.

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The technical report 'Impact Study of Maersk in India' can  
be downloaded here: [www.maersk.com/sustainability](http://www.maersk.com/sustainability)

For more information about Maersk Group's impact studies  
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