OECD Economics Department Working Papers No. 1597

Challenges
and opportunities of India's
enhanced participation
in the global economy

**Isabelle Joumard,
Christine Arriola,
Marnix Dek**

<https://dx.doi.org/10.1787/a6facd16-en>

**CHALLENGES AND OPPORTUNITIES OF INDIA'S ENHANCED
PARTICIPATION IN THE GLOBAL ECONOMY****ECONOMICS DEPARTMENT WORKING PAPERS No. 1597**

By Isabelle Joumard, Marnix Dek and Christine Arriola

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Authorised for publication by Isabell Koske, Deputy Director, Country Studies Branch, Economics Department

All Economics Department Working Papers are available at www.oecd.org/eco/workingpapers.

JT03457346

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Working Papers describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which the OECD works.

Comments on Working Papers are welcomed, and may be sent to the Economics Department, OECD, 2 rue André-Pascal, 75775 Paris Cedex 16, France, or by e-mail to econ.contact@oecd.org.

All Economics Department Working Papers are available at www.oecd.org/eco/workingpapers.

On 25 May 2018, the OECD Council invited Colombia to become a Member. At the time of preparation the deposit of Colombia's instrument of accession to the OECD Convention was pending and therefore Colombia does not appear in the list of OECD Members and is not included in the OECD zone aggregates.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

© OECD (2020)

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for commercial use and translation rights should be submitted to rights@oecd.org

ABSTRACT/RÉSUMÉ

Challenges and Opportunities of India's Enhanced Participation in the Global Economy

India is becoming a key player in the global economy. It performs well in exporting information and technology services, pharmaceuticals and petroleum products. India's large diaspora is well integrated abroad, helping to develop new export markets and facilitate the transfer of technology and know-how. India could perform better in some domains. These include labour-intensive manufacturing exports and foreign direct investment. Better performance in these areas would boost job creation and thus make growth more inclusive. It would require improving further infrastructure, in particular transport and energy provision, modernising product market regulations, developing skills, and reconsidering barriers to trade and investment. OECD simulations suggest that India would be a major beneficiary were barriers to trade and investment be reduced multilaterally. In the absence of a multilateral agreement, the economy would also gain from a unilateral liberalisation of trade and investment.

This Working Paper relates to the 2019 *OECD Economic Survey of India*

<http://www.oecd.org/economy/india-economic-snapshot/>

JEL classification codes: F1, F13, F17, F21, F22, F6, F62, F66

Keywords: India, globalisation, trade, simulations, migration, foreign direct investment

Participation accrue de l'Inde dans l'économie mondiale : opportunités et défis

L'Inde devient un acteur clé de l'économie mondiale. Ses performances en matière d'exportation de services d'information et de technologie, de médicaments et de produits pétroliers sont bonnes. La nombreuse diaspora indienne est bien intégrée à l'étranger, facilitant le développement de nouveaux marchés d'exportation et le transfert de technologie et de savoir-faire. Cependant, les performances de l'Inde sont décevantes dans certains domaines, notamment les exportations manufacturières à forte intensité de main-d'œuvre et les investissements directs étrangers. De meilleures performances dans ces domaines stimuleraient la création d'emplois et rendraient ainsi la croissance plus inclusive. Cela supposerait d'améliorer les infrastructures, en particulier les transports et d'énergie, de moderniser la réglementation des marchés de produits, de développer les compétences et reconsidérer les obstacles au commerce et à l'investissement international. Les simulations de l'OCDE suggèrent que l'Inde serait l'un des principaux bénéficiaires d'une réduction multilatérale des obstacles au commerce et à l'investissement. En l'absence d'un accord multilatéral, l'économie indienne bénéficierait aussi d'une libéralisation unilatérale du commerce et des investissements.

Ce Document de travail se rapporte à l'*Étude économique de l'OCDE de l'Inde 2019*

<http://www.oecd.org/fr/economie/inde-en-un-coup-d-oeil/>

Codes de classification JEL: F1, F13, F17, F21, F22, F6, F62, F66

Mots-clés : Inde, globalisation, commerce, simulations, migration, investissement direct étranger

Table of Contents

Challenges and opportunities of India's enhanced participation in the global economy	6
India has seized many opportunities.....	6
Exposure to trade has increased and India has gained market shares.....	6
India has performed well for some goods.....	11
India's export basket is well diversified	11
The large diaspora living abroad is an asset	11
Export performance could improve.....	13
Addressing domestic bottlenecks: infrastructure and business environment.....	16
Improving further trade facilitation	21
Reconsidering tariffs barriers	22
Reliance on non-tariff measures is moderate, except for local content and anti-dumping measures	24
Gains from services trade liberalisation	25
Developing trade agreements or unilaterally cutting tariffs?.....	32
More foreign investment could promote income growth and support export performance.....	35
Mitigating the adverse effects of enhanced participation in the global economy.....	38
References	40

Tables

Table 1. Unilateral <i>versus</i> multilateral cut in tariffs: impacts for the Indian economy	34
Table 2. Macroeconomic impact of a reduction in India's barriers to trade.....	35
Table 3. Recommendations to improve India's participation in the world economy	39

Figures

Figure 1. India has become a major actor in the global economy	7
Figure 2. Trade intensity has increased	8
Figure 3. India has specialised in fast growing markets	9
Figure 4. Export performance has been solid	9
Figure 5. Growth in services exports has been rapid.....	10
Figure 6. Export products and markets are diversified	11
Figure 7. Migration flows, stocks and remittances are large	12
Figure 8. Changes in US imports from selected countries	14
Figure 9. Exports of textile, garment and footwear: losing steam and market share.....	15
Figure 10. The skill and technology content of manufacturing exports has increased	15
Figure 11. Wages are lower than in many other competitors	16
Figure 12. Electricity prices are high for businesses	17
Figure 13. Infrastructure and trade logistics are weighing on India's competitiveness.....	18
Figure 14. India has improved and compares well on most trade facilitation dimensions	21
Figure 15. Import tariffs have been cut but remain high and dispersed	23
Figure 16. Halving import tariffs would benefit most low-income households	24
Figure 17. A moderate use of non-tariff measures, except local content and anti-dumping	26
Figure 18. Services trade restrictions, as measured by the OECD, are relatively stringent.....	29
Figure 19. Economic impact of a multilateral and unilateral cut in service trade restrictions.....	31
Figure 20. India has developed preferential trade agreements but their depth is limited	33
Figure 21. Inward foreign direct investment has remained relatively low despite lighter regulations	37

Boxes

Box 1. Key factors behind the success of the ICT sector	10
Box 2. Ongoing programmes to improve ports and roads: Sagarmala and Bharatmala	19
Box 3. NITI Aayog has proposed creating Coastal Employment Zones	20
Box 4. The OECD Service Trade Restrictiveness Index: key features.....	28
Box 5. OECD simulations: impacts of a unilateral <i>versus</i> multilateral cut in services trade restrictions	30
Box 6. OECD simulations: impact of a unilateral reduction in trade barriers	34
Box 7. Recent changes in e-commerce rules.....	38

Challenges and opportunities of India's enhanced participation in the global economy

By Isabelle Joumard, Marnix Dek and Christine Arriola¹

India has seized many opportunities

The participation of India in the global economy has risen and is high, in terms of GDP, trade, number of Indians living abroad, although less so in terms of international capital (Figure 1). India has developed know-how and succeeded in exporting many goods and services to a large number of countries. It has specialised in sectors which will likely be in high demand in the near future (e.g. information, communication and technology (ICT) services, pharmaceuticals and medical devices). India's diaspora – the largest in the world – has helped develop trade networks while migrants' remittances and savings have supported domestic consumption and investment.

Exposure to trade has increased and India has gained market shares

India's exposure to trade – as measured by exports and imports share in GDP – has increased significantly since the mid-1990s (Figure 2). The sharp reduction in tariffs which took place in the early 1990s, coupled with the dismantling of some non-tariff barriers, played an important role (Panagariya, 2004^[1]). Trade opening has offered new opportunities for consumers, who gained access to a much wider spectrum of goods, and for firms, as they could import world-class inputs and become more competitive. Competition from abroad also facilitates the diffusion of innovation and promotes the search for productivity, putting pressures on monopolistic rents (OECD, 2015^[2]).

Since becoming more open to trade, India's exports- and imports-to-GDP ratio increased fast and now stand broadly at par with China. Exports buoyancy partly reflects the specialisation of India in fast growing products, especially services, and destinations with emerging market economies accounting for a relatively large share (Figure 3). The large share of services in total exports however stands out. The rise in the export-to-GDP ratio since the late 2000s has been partly reversed as India and many other EMEs have suffered from sluggish global demand and some re-shoring by advanced economies (AEs). Indian exports also suffered from the appreciation of the rupee and from temporary disruptions in domestic value chains associated with the 2016 demonetisation and the roll out of the Goods and Services Tax (GST) in 2017. Overall, export performance, measured by how much India's exports have grown relative to its market growth, has remained solid (Figure 4). India's share in world exports of goods and services rose from 0.5% in the early 1990s to 2.1% in 2018.

¹ Isabelle Joumard is a Senior Economist and Marnix Dek is a Statistician at the OECD Economics Department; Christine Arriola is a Junior Policy Analyst at the OECD Trade and Agriculture Directorate. They thank Indian officials, members of the Economic and Development Review Committee, Isabell Koske, Alvaro Pereira, Elena Rusticelli and Piritta Sorsa (OECD Economics Department), Sebastian Benz, John Drummond, Julien Gourdon, Susan Stone and Frank van Tongeren (OECD Trade and Agriculture Directorate), as well as Sanskruthi Kalyankar and Hidelgunn Nordås, for their valuable contributions and comments. Special thanks are due to Assa Fofana for editorial assistance.

Figure 1. India has become a major actor in the global economy

Note: GDP and trade shares in world GDP are based on volumes at market exchange rates. Trade refers to the sum of imports and exports. International assets are financial assets of residents of an economy that are claims on non-residents and gold bullion held as reserve assets. In Panel B, 1996 refers to 1997 for India. In Panel C, data for 1996 refer to 2001 for Brazil, India and Mexico, and 2004 for China.

Source: OECD; IMF Balance of Payments; United Nations, Department of Economic and Social Affairs, Population Division (2019); and OECD calculations.

StatLink <http://dx.doi.org/10.1787/888934047615>

Figure 2. Trade intensity has increased

Source: World Bank, World Development Indicators database.

StatLink <http://dx.doi.org/10.1787/888934047634>

Figure 3. India has specialised in fast growing markets

Source: Atlas of Economic Complexity, Centre for International Development, Harvard University

Figure 4. Export performance has been solid

Note: Export performance is measured as actual growth in merchandise and services exports relative to the growth of the country's export market, which represents the potential export growth for a country assuming that its market shares remain unchanged. Dynamic Asian Economies consist of: Hong Kong China, Malaysia, Philippines, Singapore, Chinese Taipei, Thailand and Viet Nam.

Source: OECD, Analytical database.

StatLink <http://dx.doi.org/10.1787/888934047653>

Exports of ICT services have been particularly buoyant

Growth in services exports has been rapid (Figure 5). India's share of world services trade more than quadrupled from 0.5% in 1995 to 3.5% in 2018. India has become one of the major exporters of business services (Benz, Khanna and Nordås, 2017^[3]), notably in the Information, Communication and Technology (ICT) sector (Box 1). Medical and wellness tourism is also supporting growth in services exports, with patients seeking high-quality medical treatments at competitive costs in some Indian hospitals. Exports of services now account for more than one third of total exports, with the lion's share in ICT— a larger share than in most OECD countries and emerging economies. India is also developing specific action plans for twelve identified champion services including tourism, transport and logistics.

Figure 5. Growth in services exports has been rapid

Note: Services credits, USD, converted, seasonally adjusted.

Source: OECD, Balance of Payments BPM6 database.

StatLink <http://dx.doi.org/10.1787/888934047672>

Box 1. Key factors behind the success of the ICT sector

Looking at the success of the ICT sector, (Mehrotra, 2019^[4]) lists 4 key factors:

1. The government has invested in creating high-speed Internet connectivity for software parks;
2. The government has allowed the ICT sector to import duty-free both hardware and software;
3. The ICT sector has been able to function under the Shop and Establishment Act and hence was not subject to the 45 labour laws which apply to industries;
4. The ICT sector benefits from public investment in technical education.

India has performed well for some goods

India's market share for some skill- and capital-intensive goods has surged. For pharmaceutical exports, India accounted for 2.5% of total world exports in 2018, up from 1.1% in 1995, making it the 11th largest exporter in the world and, by far, the first among EMEs. In the smartphone segment of electronic goods, India has transformed itself from being a net importer to a net exporter. Crude refining capacity has expanded (most crude oil is imported), and the share of petroleum products in total exports has increased steadily from 1.5% of merchandise exports in 1995 to close to 15.1% in 2018. India is also the largest manufacturer of cut and polished diamonds, exporting 93% of its production.

India's export basket is well diversified

India has succeeded in increasing the number of goods exported and in serving new markets/countries (Figure 6). Its export basket is highly diversified and exports to emerging economies are growing fast. Such a diversification reveals the high potential of the Indian economy to adjust to new demands. It also reduces exposure to risks such as lower demand in one country or for one specific product.

Figure 6. Export products and markets are diversified

Note: The Herfindahl-Hirschman Index (HHI) measures the concentration of a country's export in terms of products (Panel A) or destinations (Panel B). The HHI is calculated by summing the squared shares of products (respectively trading partners).

Source: OECD calculations using data from the UN Comtrade database.

StatLink <http://dx.doi.org/10.1787/888934047710>

The large diaspora living abroad is an asset

India has the largest diaspora in the world (Figure 7). India was the fourth most common country of origin for new migrants to OECD countries over the period 2007-17, with many Indians emigrating to non-OECD (in particular Gulf) countries. The number of Indian students enrolled in OECD countries is also large and has continued to grow in recent years, albeit at a slower pace, amid prospects for more restrictive immigration policies in some OECD countries.

Indians living abroad are valuable assets for the Indian economy. Inflows from remittances, at 2.9% of GDP in fiscal year (FY) 2018-19, are large and represent a rather stable source of current account financing. They have contributed to reduce poverty, raise consumption and investment in education and health. Non-resident Indians also support domestic investment via deposits in the financial system or direct investment.

Figure 7. Migration flows, stocks and remittances are large

Note: In Panel D, data refer to personal remittances that consist of personal transfers and compensation of employees.

Source: OECD, International Migration database; OECD, Education at a glance database; United Nations, Department of Economic and Social Affairs, Population Division (2019); World Bank, World Development Indicators database.

StatLink <http://dx.doi.org/10.1787/888934047748>

Migration can facilitate the transfer of skills, knowledge and technology. Empirical work on Indians living in the United States suggests that about one fifth of Indian students abroad return to their home country; skills Indian investors acquire abroad may find application in India (Breschi, Lissoni and Miguelez, 2019^[5]). A large diaspora can also contribute to the development of export markets in residence countries by triggering demand for home-

grown commodities and by lowering transaction costs between importers and exporters (Aleksynska and Peri, 2014^[6]; Giovannetti and Lanati, 2015^[7]). (Karayil, 2007^[8]) provides evidence on the migration-trade link for India's exports to the Gulf countries.

Export performance could improve

The government aims at getting India even more and better integrated into the global economy. The objectives are: to double India's share of world trade; to make India a hub for global value chains under the *Make in India* flagship; to boost foreign investment inflows by modernising regulations; and to attract more savings from Indians living abroad. As an encouraging sign, some multinationals have made India a manufacturing hub for automobile exports to Africa. The imposition of US tariffs on Chinese products could accelerate the rejigging of value chains. Preliminary data suggest that India has seized some of the market shares lost by China, with more success in capital- and skill-intensive industries than in labour-intensive ones (Figure 8), although other factors may have driven the increase in India's exports to the United States. The Reserve Bank of India has recently taken measures to reduce transaction costs for inward remittances.

The rest of this section reviews challenges India faces in seizing the full benefits from its participation in the global economy, in particular in terms of job and income creation, and options to address them.

Exports of labour-intensive manufacturing products could grow faster. The export performance of textiles, leather and agricultural products have lagged behind, thus limiting the positive impact of trade opening on net job creation. The textile sector provides an illustrative case. Within textile exports, the share of yarns and fabrics, which are increasingly automated, has increased while the share of labour-intensive products, like carpets, has declined (Das Krishna and Kumar, 2015^[9]). A focus on the low-technology segment (Lall classification, UNCTAD data) for textile, garment and footwear, reveals that India has stopped gaining market shares since 2013; Vietnam now has a larger market share (Figure 9). Overall, manufacturing exports have fallen as a share of total exports and their composition has shifted from labour-intensive to high-skill and technology-intensive items (Figure 10).

More dynamic manufacturing exports would create jobs, including for the many unskilled workers currently unemployed or under-employed in the low-paid unorganised sector. Although automation and artificial intelligence may affect the demand for low-skilled labour across the world (McKinsey Global Institute, 2019^[10]) and in India (Mani, 2019^[11]), increasing manufacturing exports could still help create more and better jobs in India in coming years. The increase in Chinese workers' incomes creates a window of opportunity for Indian's exports for at least two reasons. First, demand from China is increasing, including for Indian products. Second, India is becoming more competitive in labour-intensive industries thanks to lower relative wages, though other Asian countries are also benefitting (Figure 11). Persisting difficulties for employers based in India to fill positions with the right skills remain an issue, however (Manpower, 2018^[12]).

Figure 8. Changes in US imports from selected countries

Annualised percentage growth rates, 2017-2019 (first 9 months of each year)

Note: Based on the HTS2 classification. The top 10 products accounted for 68.4% of total US imports in the first nine months of 2019.

Source: United States International Trade Commission.

StatLink <http://dx.doi.org/10.1787/888934047767>

Figure 9. Exports of textile, garment and footwear: losing steam and market share

Note: Low-technology exports of textile, garment and footwear according to Lall classification.

Source: OECD calculations based on UNCTAD data.

StatLink <http://dx.doi.org/10.1787/888934047786>

Figure 10. The skill and technology content of manufacturing exports has increased

Source: UNCTAD/STAT.

StatLink <http://dx.doi.org/10.1787/888934047805>

India is an exporter of agricultural products and its trade surplus in agricultural commodities has grown (OECD-FAO, 2014^[13]). The recent OECD/ICRIER review of agricultural policies in India suggests that value chains in the food sector however remain relatively under-developed (OECD/ICRIER, 2018^[14]). It concludes that a more open and stable trade policy regime is essential for India to develop a more sophisticated domestic processing and distribution industry and to more fully exploit its comparative advantage to export certain agricultural commodities.

Reaping the full benefits of globalisation, in particular the boost in job and income creation, would require addressing constraints faced by firms. Domestic bottlenecks affect all companies, whether or not they actually export. Others constraints are specific to trade, including trade infrastructure and logistics.

Figure 11. Wages are lower than in many other competitors

Note: The average wage in the local currency was converted to US dollars, using the average exchange rate of October 2018 published by the central bank of each country/region or by the State Administration of Foreign Exchange for China.

Source: Japan External Trade Organization (JETRO), "Survey of Japanese-Affiliated Companies in Asia and Oceania", 2018.

StatLink <http://dx.doi.org/10.1787/888934047824>

Addressing domestic bottlenecks: infrastructure and business environment

The performance gap between exports of services and manufacturing suggests that some constraints are particularly binding for labour-intensive manufacturing firms, and less so for services. The 2014 OECD *Economic Survey of India* (OECD, 2014^[15]) concluded that manufacturing, for which the production process tends to be more fragmented than for services, suffered most from tax cascading – taxes were levied on each successive transfer, inclusive of any previous tax being levied, as indirect taxes levied on inputs were not creditable from indirect taxes levied on outputs. The Goods and Services Tax (GST), by allowing firms to deduct taxes on inputs, should be a clear improvement for the manufacturing sector when implementation costs will disappear. Other constraints identified in the 2014 OECD Survey include: infrastructure bottlenecks and labour laws which are more stringent for industries than services and create disincentives for firms to grow.

Infrastructure bottlenecks have lessened but some persist

The quality of infrastructure is a key determinant of countries' participation in global value chains (Ignatenko, Raei and Mircheva, 2019^[16]). As exports of goods tend to be more intensive in energy and transport than services, they suffer more from infrastructure bottlenecks. In India, the government has made laudable progress in increasing electricity generation and transmission capacities, in particular from renewable sources, to fulfil its commitment to provide electricity for all. Total generation increased from 1 000 TWh in

2010 to 1 600 TWh in 2017, making India the third-largest electricity market in the world (IEA, 2018^[17]). In 2018, electricity reached every village and the government aims to provide electricity for all by 2019.

The competitiveness of electricity-intensive exports has suffered from relatively high electricity prices and the lack of reliable provision in some parts of the country (FICCI, 2018^[18]) (Subramanian, 2018^[19]). The provision of electricity has expanded significantly and power cuts are becoming less frequent. Still, India ranked 108th out of 141 economies in 2019 on the World Economic Forum competitiveness index for the quality of electricity supply. In addition, commercial and industrial users pay a higher price than households and farmers. Cross-subsidisation, coupled with large technical and transmission losses, has been reflected in relatively high electricity prices for industries (Figure 12). Several reforms, such as reducing the number of electricity prices and making retail tariffs more cost-reflective, are being implemented in some states and would help make industrial companies based in India more competitive.

Figure 12. Electricity prices are high for businesses

Note: Data for India refer to 2017.

Source: IEA, World Energy Prices, 2019 edition. IEA All rights reserved. For detailed information: <https://www.iea.org/statistics/prices/>

Transport infrastructure bottlenecks, by increasing costs for exporting goods and importing intermediate inputs, are weighing on firms' competitiveness. They also make it difficult for some regions to seize the opportunities that trade can offer for local development. The construction of highway and rural roads has accelerated in recent years. India has also made great progress in building airport related infrastructure. However, seaport infrastructure lags behind and, together with poor trade logistics, hampers India's external competitiveness. Around 90% of India's external trade (by volume) and 70% (by value) are handled by ports (NITI Aayog, 2018^[20]). Most container handling ports lack the capability to handle large container vessels due to inadequate depth. India has only one trans-shipment port in Kochi. A large share of containers is thus transhipped through other ports, such as Colombo and Dubai, creating additional costs and delays. Recent measures taken by the government have improved India's ranking in World Bank logistics performance.

Weak hinterland connectivity between production centres and gateway ports is another issue. It takes 46 hours to move shipments between a warehouse in Delhi and a port, i.e. at least 3 times more than the time required in other large emerging economies (Figure 13). Freight capacity by rail is saturated, although several dedicated freight corridors, under construction or preparation, should double freight capacity by rail. Inefficient regulations add to the infrastructure gaps. As an illustration, inter-state freight transport by road requires a national permit and administrative approval from each individual state's regional transports authority, generating additional costs and delays to the transport of goods.

Figure 13. Infrastructure and trade logistics are weighing on India's competitiveness

Note: In Panel A, domestic transport captures the time associated with transporting the shipment from a warehouse in the largest business city of the economy to the most widely used seaport or land border of the economy. It includes the time for the actual transport; any traffic delays and road police checks; as well as time spent on loading or unloading at the warehouse or border. For a coastal economy with an overseas trading partner, domestic transport captures the time from the loading of the shipment at the warehouse until the shipment reaches the port. For an economy trading through a land border, domestic transport captures the time from the loading of the shipment at the warehouse until the shipment reaches the land border. In Panel B, border compliance captures time for customs clearance and inspection procedures conducted by other agencies, e.g. the time for conducting a phytosanitary inspection.

Source: World Bank, Doing Business.

StatLink <http://dx.doi.org/10.1787/888934047843>

Container traffic at Indian ports is increasing rapidly. The Sagarmala programme launched in 2015 aims at modernising and developing ports, enhancing port connectivity, supporting coastal communities and stimulating port-linked industrialisation (Box 2). The government also aims at improving infrastructure effectiveness, reducing the turnaround time at major ports from about 3.4 days in 2018 to the global average of 1-2 days by 2022-23 (NITI Aayog, 2018_[20]). Measures to improve the ease of trading across borders have been taken, including the replacement of manual forms with e-filing, e-delivery and e-payment for shipping lines and agents, and a reduction in charges for non-peak hours at ports. The government has also abolished restrictive cabotage rules that prevented foreign ships from transporting containers between Indian ports.

Box 2. Ongoing programmes to improve ports and roads: Sagarmala and Bharatmala

The Sagarmala programme, launched in 2015 for the period to 2025, aims at reducing logistic costs – both direct costs and inventory handling costs – for foreign and domestic trade by developing and rehabilitating ports. It also aims at doubling the share of water transportation in the modal mix, since it is more cost-effective and emits less greenhouse gas than road and railway transport (Citi GPS, 2018^[21]) (FICCI, 2018^[18]). More than 605 projects have been identified by the government under the Sagarmala initiative, with a budget of INR 8.8 trillion (about 5.1% of FY 2018/19 GDP). As of 2018, 89 projects were completed and 443 were under various stages of implementation and development. Turnaround time at major ports has reduced from 107 hours in FY 2011-12 to close to 60 hours in the first seven months of FY 2018/19.

The Bharatmala programme, launched in 2017 for a five-year period, aims at developing 83 677 km of roads, including economic corridors to strengthen links between manufacturing centres and export hubs. Roads account for the lion's share in inland freight transport. The overall cost of the programme was estimated at INR 6.9 trillion (4% of FY 2018/19 GDP). The programme relies partly on public-private partnerships, in particular for highways. As of February 2019, 137 road projects with an aggregate length of 6 530 km had been awarded and were in various implementation stages.

Labour regulations are weighing on competitiveness, more so for industries

Labour regulations are more stringent for industries. Since these regulations become binding as firms grow, they create incentives for the firms to stay small. Firms cannot exploit economies of scale and productivity suffers, as does the competitiveness of labour-intensive manufacturing exports. In addition, employment protection legislation, which requires firms with 100 or more employees to obtain prior government permission to dismiss one or more workers, applies only to industrial establishments (OECD, 2014^[15]). Various measures have been taken to make labour regulations and institutions friendlier to job creation (OECD, 2019^[22]). More should be done however to promote firms' growth and competitiveness. Introducing simpler and more flexible labour laws that do not discriminate by size of enterprise should be a priority.

Streamlining administrative and regulatory processes further would help: the case of special economic zones

The Special Economic Zones (SEZs) policy was announced in 2000 to overcome difficulties resulting from the multiplicity of controls and clearances, lack of infrastructure and unstable tax regimes. It aims at promoting exports, domestic and foreign investment, and at creating jobs. Firms operating in these zones enjoy various income tax exemptions, duty-free imports and improved ease of doing business (Thomas et al., 2017^[23]). In particular, these zones provide a single-window clearance for central and state level approvals as well as income tax exemption on export profit during the first 5 years and 50% for the next 5 years. The tax benefit will disappear for units settling in such zones after March 2020. As of December 2018, India had 230 operational SEZs, which accounted for 18% of exports of goods and services (up from 3.2% in FY 2005/06) and employed two million people.

To keep up the reform momentum and speed up the dispatching of manufacturing exports, the government has proposed the creation of coastal employment zones (Box 3). Tax benefits linked to employment creation would add to existing incentives for special economic zones. Coastal zones are also likely to relax labour regulations. As of March 2019, 14 coastal zones have been proposed and plans were being developed for four pilot ones in Andhra Pradesh, Gujarat, Maharashtra, and Tamil Nadu.

Special zones can be useful instruments to experiment reforms on product and labour markets. Experience in EMEs has revealed that SEZs display mixed results, however. Some firms move to the zones just to avail the concessions and some sell their products to the domestic market. Relations between the domestic and export markets are often an issue. It may become unattractive for a firm located in special zones to sell to, or buy, from the domestic market, thus limiting the positive impact on firms serving the domestic market (Joumard, Dhaoui and Morgavi, 2018^[24]). Gradually extending regulatory and administrative reforms which promote productivity and job creation in special zones to the rest of the economy should be considered.

Box 3. NITI Aayog has proposed creating Coastal Employment Zones

In its *Three Year Action Plan 2017/18 to 2019/20*, the government (NITI Aayog) suggested the creation of two Coastal Employment Zones, one on the east coast and the other on the west coast, to capture agglomeration effects and attract large multinational firms leaving China because of rising labour costs.

The main features of the proposed zones would be:

- *Large areas (i.e. larger than existing special economic zones) with flexible land conversion rules.* Coastal zones are to be spread over 500 km² or more and include existing habitations and industry structures. They will have sufficiently flexible land conversion rules to permit the conversion of these habitations and structures into alternative uses over time as industrialisation proceeds. Flexibility in the Floor Space Index would also be granted.
- *More liberal and business-friendly regulations.* Coastal zones should have liberal labour laws, as is currently the case in Gujarat's special economic zones. They may also have more liberal land acquisition rules (as done in Tamil Nadu and Gujarat).
- *Tax breaks for new firms creating many jobs.* For new firms and firms creating many jobs, government financial support could be envisaged in the form of an upfront benefit for firms, in contrast to the existing tax relief that firms can only benefit from once they become profitable.
- Proximity to deep draft ports.
- *Public investment on infrastructure.* The central government may commit to investing up to INR 50 billion (0.03% of FY 2018 GDP) in each coastal zone to meet the infrastructure and housing needs.
- *Trade facilitation and trade liberalisation.* Clearance time for imports and exports will be reduced to international levels within the zones.

Improving further trade facilitation

India has improved significantly on trade facilitation since the mid-2010s by reducing the number of documents and level of fees, and thus trade costs. India is now close to best performance in OECD countries on many dimensions identified in the OECD Trade Facilitation indicator (Figure 14). Still, importers and exporters have to provide many documents and agency cooperation at the border could be improved. Overall, the time and costs for border compliance with customs and other regulations are relatively high. Variation and unpredictability in lead times for containers also create hidden costs for exporters and importers. The government announced new measures to reduce processing times at ports and airports in September 2019: the adoption and testing of standards will be encouraged while export clearances – including some customs requirements which are currently processed manually – will gradually become digital.

Figure 14. India has improved and compares well on most trade facilitation dimensions

Note: OECD, Asia-Pacific and Low-income all refer to unweighted averages.

Source: OECD Trade Facilitation Indicators, 2017.

StatLink <http://dx.doi.org/10.1787/888934047862>

India has launched the National Trade Facilitation Action Plan for 2017-2020, after ratifying the WTO Trade Facilitation Agreement in 2016. This plan aims at increasing the efficiency of cross-border trade by reducing border and documentary compliance time, permitting exporters to electronically seal their containers at their own facilities, and reducing physical inspections. The Plan foresees a decline in dwell time for imports to within three days for sea cargo, within two days for air cargo and on the same day for land customs. For exports, the aim is to reach below two days for sea cargo and on same-day for air cargo. Implementing the government's Plan, including the Indian Customs Single Window Project, will facilitate trade.

Reducing the number of documents and harmonising external formalities would improve competitiveness. OECD estimates, based on the METRO computable general equilibrium trade model (OECD, 2015^[25]), suggest that bringing trade facilitation to the G20 average level would boost India's exports by 1.6% over a 5-year horizon (see Box 6, Table 2

below). These reforms would benefit most manufacturing sectors, including agro-food, textile and apparel, heavy manufacturing, and electronic and transport equipment (OECD, 2018^[26]).

Reconsidering tariffs barriers

Import tariffs have been cut sharply since the early 1990s (Figure 15). The average effectively applied tariff level was below several large EMEs in 2017, although still higher than most OECD countries. Tariffs were raised in the annual Budget for FY 2018-19.

Empirical analysis carried out for various countries suggests that tariffs often harm low-income households disproportionately since they tend to: i) consume more out of their total income; ii) spend more on traded goods out of their total consumption basket [(Furman, Russ and Shambaugh, 2017^[27]) for the United States; (OECD, 2019^[28]) for Argentina; and (OECD, 2018^[29]) for Brazil]. In India too, low-income households are most affected as tariffs on food are high. In a scenario where all import tariffs are halved, OECD estimates suggest that households would, on average, see their purchasing power increase by more than 5% (Figure 16). Those with the lowest income (the bottom 10%) would see their purchasing power increase by more than 8%. Besides price reductions, lowering tariffs would give households access to a larger variety of goods.

High tariffs and frequent rate adjustments weigh on firms' competitiveness. In 2017 and 2018, import tariffs were hiked on various labour-intensive items and electronic goods (e.g. mobile phones and TVs) to support local industries and thus promote job creation in the manufacturing sector. Because they stifle competitive pressures, tariffs may, however, insulate domestic producers from the need to increase productivity.

More expensive imports of intermediate products, owing to import duties, can penalise exports by raising input costs and run against the objective of making India an export hub. The textile sector is an illustrative case: the poor performance of apparel exports made from synthetic cloth – despite the fact that this is a much larger and faster growing market than cotton clothing – is patent. Indeed, high import tariffs on synthetic fibres and fabrics are putting manufacturers based in India at a cost disadvantage compared to many competitors. Indian textile exporters are further penalised by the fact that several competitors (e.g. Bangladesh) access the EU market at zero rate under the *Everything but Arms* initiative. The tariff escalation (also called “inverted duty structure”) – whereby import tariffs on inputs are higher than on finished goods – has been an issue in several sectors, including textile, capital goods, cement and electronics (FICCI, 2016^[30]).

The complexity of India's tariff structure – including the large dispersion in tariff rates (Figure 15.C) – raises administrative and compliance costs while the lack of clarity on tariffs at a product level creates some uncertainty. Import duties are often coupled with an additional customs duty, a special additional customs duty, a social welfare surcharge equivalent to 10% of the tariff on imported goods and a customs handling fee (NITI Aayog, 2017^[31]). To relieve the impact of custom duties paid on inputs for exporters, India implements an export incentive scheme. The government is in the process of replacing it by a new scheme which will simplify the refund of tax, duties and other surcharges. The government has envisaged unifying all industrial tariffs to 7%. This would reduce incentives to misclassify imports and evade tariffs, and be neutral for the budget (NITI Aayog, 2017^[31]).

Figure 15. Import tariffs have been cut but remain high and dispersed

Note: Panels A, B and D show weighted averages of effectively applied tariffs across single products, whereby the tariffs are weighted by the import value of each product. Tariffs were hiked on several items in 2018.

Source: UNCTAD Trade Analysis Information System (TRAINS) data extracted from the World Bank, World Integrated Trade Solutions.

StatLink <http://dx.doi.org/10.1787/888934047881>

Figure 16. Halving import tariffs would benefit most low-income households

Note: In both panels, the x-axis shows the ten income deciles of the household income distribution, starting with the poorest decile (0-10%). The effects of trade-induced price reductions on households' purchasing power are evaluated using a compensating variation, which measures how much the expenditure can be decreased when consumer prices fall so that the utility level remains the same than before the price decrease. The level and composition of households' consumption by income decile are taken from the Household Survey, 68th Round (July 2011 - June 2012) from the National Sample Survey Office (NSSO). To compute changes in domestic consumer prices induced by a cut in tariffs, the simplifying assumption is that a change in import prices is fully passed on to domestic prices of tradable goods, as data on product-specific market structures are not available – see (Grundke and Arnold, 2019^[32]). Tariff rates are for 2017. They are weighted average rates at product level based on the HS 1988/92 classification.

Source: OECD calculations based on Household Survey, 68th Round (July 2011 - June 2012) from the National Sample Survey Office (NSSO). Tariff rates are UNCTAD Trade Analysis Information System (TRAIS) data extracted from the World Bank, World Integrated Trade Solutions.

StatLink <http://dx.doi.org/10.1787/888934047900>

Reliance on non-tariff measures is moderate, except for local content and anti-dumping measures

The percentage of products and share of imports covered by non-tariff measures (NTMs) are both relatively low in India. NTMs are related to measures that pursue regulatory objectives. Sanitary measures and technical barriers and standards are mostly implemented in the food sector, often to overcome or reduce the impacts of perceived market imperfections, such as those related to health risks. Still, some NTMs may penalise consumers and affect the development of new technologies by reducing competitive pressures on local producers. Frequent border control measures and quantitative restrictions on vehicles may be a case in point. India is also considering introducing a steel import norm whereby foreign steel makers would need to get certification from the Bureau of Indian Standards for high-grade steel products being used by Indian manufacturers. Given the low volume involved, foreign manufacturers may not be interested in getting certification. The auto-industry based in India could be penalised before local steel manufacturers start producing the specialised grades of steel they need for some auto-components.

Non-tariff measures may raise trade costs and penalise more small companies with less access to legal and regulatory information. The OECD has developed a method to convert NTMs into ad-valorem equivalents (Cadot, Gourdon and van Tongeren, 2018^[33]). Empirical analysis carried out at the OECD suggests that the cost of NTMs in India stands

at about 6% – lower than in many OECD countries (Figure 17).² On the other hand, India relies on local content requirements, requiring firms to use domestically-produced goods and services, in particular in electrical machinery and equipment (including solar panels and telephone sets). By restraining competition from imports, local content requirements reduce the choice of inputs or providers and raise production costs. OECD work suggests that such requirements weigh on competitiveness and exports (OECD, 2016^[34]). Anti-dumping measures are also used, in particular on steel and chemical products. Empirical analysis suggests that these tend to raise import prices and increase profit margins in protected sectors, with adverse impacts on consumers and downstream industries (Aggarwal, 2010^[35]). Similar impacts have been observed in Brazil (OECD, 2018^[29]).

Gains from services trade liberalisation

Facilitating services trade can bring benefits to consumers and strengthen domestic productivity and export performance. OECD analysis (Rouzet and Spinelli, 2016^[36]) concludes that pro-competitive services trade reforms can reduce the price of certain services by about 20%, and in some countries by almost 80%, providing substantial savings to manufacturing enterprises and eventually final consumers.

India has recently taken steps towards more competitive services by raising or eliminating limits on foreign equity in civil aviation, cable and satellite broadcasting and the insurance sector and allowing for foreign branches for reinsurance activities. A number of restrictions on cabotage in maritime transport were lifted in 2018. For single-brand retail trade, India has eased local sourcing requirements in 2019 by relaxing the definition of goods subject to the 30% local sourcing requirement. Single-brand retailers will also be allowed to open online stores before setting up brick-and-mortar ones (not more than two years after).

² While the OECD methodology captures a wide array of non-tariff measures, as inventoried in the UNCTAD MAST system, it does not identify all trade-related regulations, such as measures imposed at the sub-national level. The measurement of ad-valorem equivalents of non-tariff measures controls for country-specific factors and should be interpreted as the additional trade costs that can come on top of the general costs of doing business.

Figure 17. A moderate use of non-tariff measures, except local content and anti-dumping

Note: The ad-valorem equivalent (AVE) of a non-tariff measure is the proportional rise in the domestic price of the goods to which it is applied, relative to a counterfactual where it is not applied, as defined in Cadot, Gourdon and van Tongeren (2018).

Source: Cadot, Gourdon and van Tongeren (2018); Global Trade Alert; WTO.

StatLink <http://dx.doi.org/10.1787/888934047919>

Foreign suppliers still face some restrictions in some services sectors (Export-Import Bank of India, 2019^[37]). While 100% foreign equity is permitted for construction of railway infrastructure, railway operations are reserved for Indian Railways, a state-owned enterprise. Rail freight operations in other emerging markets such as China or Brazil are less restricted, providing positive spillovers to manufacturing firms that rely on those services. However, Indian Railways has enabled a private operator to operate train services from 2019. Some professional services suppliers are protected from foreign competition. For example, only Indian nationals are allowed to practise as lawyers or architects and can become partners or hold equity in firms active in the two sectors. Granting access to these professions based on qualification rather than nationality would help raise quality and lower prices that benefit businesses and consumers. Overall, the degree of service trade

restrictions as assessed by the OECD is similar to the level in China and Indonesia but remains higher than the OECD average (Box 4, Figure 18).

India's services exports face restrictions from other countries, reducing potential gains from trade in services where India is competitive (Mukherjee and Kapoor, 2017^[38]). In recent years, several countries have raised restrictions on the temporary movement of professionals, so-called "Mode 4" in the WTO, through quotas, labour market tests and limitations on duration of stay. Such restrictions are affecting India's ICT exports and most other business services as these depend a lot on movement of people. India also restricts the temporary movement of professionals, limiting the possibility for Indian engineers and other professionals to team up with foreign partners and offer service support for both local and foreign manufacturers.

Reducing restrictions to services trade would boost trade in services. Recent work (Benz, Khanna and Nordås, 2017^[3]) estimates that a reduction of India's restrictions to the mean for ten large countries would increase services trade by 85%. As an example, with better telecommunication connectivity, design and engineering could become a new source of services exports.

Stringent regulations on services are weighing on export performance far beyond services, because services are key inputs for other sectors and support participation in global value chains. The OECD Trade in Value Added (TiVA) database reports that exports of machinery and motor vehicles have the highest services content in India, along with textiles and metals. Distribution, transports, telecommunication, energy and financial intermediation are particularly important for the manufacturing sector. Modernising regulations on services trade would boost competitiveness and exports of goods, thus contributing to the success of the *Make in India* initiative. Improvement in fixed broadband services is seen as a priority to help Indian manufacturers scale up export volumes (Benz, Khanna and Nordås, 2017^[3]).

In a scenario of a simultaneous cut in service restrictions across G20 countries, empirical work (OECD, 2019^[39]) suggests that India would be the single largest beneficiary in terms of production growth. Better-priced services inputs would feed manufacturing expansion. In the absence of such a multilateral move, OECD simulations suggest that a modernisation of India's regulations affecting services would also boost manufacturing exports, output and jobs (Box 5).

Box 4. The OECD Service Trade Restrictiveness Index: key features

The OECD Services Trade Restrictiveness Index (STRI) provides information on regulations affecting trade in services in 22 sectors across OECD countries and several EMEs (Figure 18). The STRI covers limitations on market access and national treatment, as well as national regulatory and competition policies, which apply to both Indian/resident and foreign/non-resident companies, and investment policies. In some sectors, even though India applies no, or little, sector-specific restrictions, the STRI is still slightly higher than the OECD average – computer services, road transport and engineering services are examples – reflecting administrative procedures and licensing and permit requirements which apply to all companies (Nordås, 2019^[40]).

The policy measures accounted for in the STRI database are organised under 5 policy areas:

- **Restrictions on foreign entry** include information on foreign equity limitations, requirements that management or board of directors must be nationals or residents, foreign investment screening, restrictions on cross-border mergers and acquisitions, capital controls and a number of sector-specific measures.
- **Restrictions on movement of people** include information on quotas, economic needs tests and duration of stay for foreign natural persons providing services as intra-corporate transferees, contractual services suppliers or independent service suppliers, and recognition of foreign qualifications in regulated professions.
- **Other discriminatory measures** include discrimination of foreign services suppliers as far as taxes, subsidies and public procurement are concerned; and instances where national standards differ from international standards where relevant.
- **Barriers to competition** include information on anti-trust policy, government ownership of major firms and the extent to which government-owned enterprises enjoy privileges and are exempted from competition laws and regulations. Sector-specific pro-competitive regulation in network industries also falls under this category.
- **Regulatory transparency** includes information on consultations and publications prior to entering into force of laws and regulations. It also records information on administrative procedures related to establishing a company, obtaining a license or a visa.

The STRI reviews regulations currently in force and does not take into account preferential trade agreements. The STRI database is updated every year and countries covered are given the opportunity to comment on, and discuss, the accuracy of the information therein.

As it is the case for any composite indicator, STRI scores are dependent on the selection and weighting of measures it incorporates. These have been validated by experts. Sensitivity tests suggest that the results are fairly robust. India has concerns with the STRI methodology since some regulatory barriers relevant to EMEs may not be fully reflected, such as visa-related issues and non-portability of social security benefits.

Figure 18. Services trade restrictions, as measured by the OECD, are relatively stringent

Note: The STRI takes values between zero and one, one being the most restrictive. OECD refers to an unweighted average.

Source: OECD, Services Trade Restrictiveness Index database.

StatLink <http://dx.doi.org/10.1787/888934047938>

Box 5. OECD simulations: impacts of a unilateral *versus* multilateral cut in services trade restrictions

The first, immediate, impact of a cut in restrictions on services trade is to reduce the prices of services used as inputs. There are however many second-round effects, including:

- Production increases in sectors where services are a large share of intermediate inputs;
- Higher exports for those goods and services which become more competitive thanks to the decline in input costs;
- Job growth in sectors where production increases;
- Increase in national income.

To quantify the potential economy-wide impacts of trade reforms, the OECD has developed a global computable general equilibrium model, METRO (OECD, 2015^[25]). Two scenarios are presented here:

- A multilateral move where all G20 countries reduce their STRI to the benchmark (Benz and Gonzales, 2019^[41]). The level of services trade regulation among member states of the European Economic Area is assumed to be what can be achieved through a cooperative approach – i.e. the benchmark. This translates into a reduction in trade costs for services averaging just over 90%; and
- India reduces unilaterally its STRI score by 20%.

For these two scenarios, the economic impacts by sector are presented in Figure 19. Key findings are as follows:

- The reduction in India's input prices is bolder in the multilateral scenario as Indian producers gain from both lower domestic prices and improved access to cheaper imports.
- The increase in production is higher in several sectors, but not all, under the multilateral (and bolder) scenario. Sectors that would benefit the most include textile and electronic equipment.
- Exports increase, notably in manufacturing for which services account for a large share of intermediate inputs. Exports of services also increase sharply in the multilateral scenario, in particular transportation and communication (which include IT services). For most sectors, the multilateral scenario (with a larger reduction in services trade restrictions) is more favourable reflecting two main factors: i) India also benefits from the opening of others' markets; ii) the implicit reduction in India's services trade restrictions is higher in the multilateral scenario where India is supposed to reduce services trade restrictions to the benchmark. Under the unilateral scenario, exports of most services will benefit, with the main exception of financial services.
- Employment in several manufacturing sectors increase, including textile, transport and electronics equipment.

Figure 19. Economic impact of a multilateral and unilateral cut in service trade restrictions

Source: OECD simulations based on the METRO model.

StatLink <http://dx.doi.org/10.1787/888934047957>

Developing trade agreements or unilaterally cutting tariffs?

India has used preferential trade agreements as a key component of its trade and foreign policy, especially since the early 2000s. It has concluded bilateral agreements with several Asian countries (including South Korea in 2009 and Japan in 2011), in goods more so than in services (Government of India, 2016^[42]). It is party to various regional trade agreements, including the SAFTA, the Asia Pacific Trade Agreement, and the ASEAN, although in November 2019 it stepped out from the discussions on the Regional Comprehensive Economic Agreement (RCEP) with China and other Asian countries. India does not have preferential agreements with the European Union and the United States. Overall, countries covered by a trade agreement with India account for a relatively large share of the world GDP (Figure 20).

Empirical evidence on the impact of preferential trade agreements on export performance is mixed. Some sectors appear to have benefitted, while others have experienced an increase in imports (Government of India, 2016^[42]). Several factors may affect these results. *First*, the depth of most preferential agreements signed by India is relatively low (Figure 20.B) – those with Japan and South Korea are exceptions since they embody some cooperation in services trade, investment, standards and competition. *Second*, the initial level of tariffs matters: as tariffs tend to be higher in India than elsewhere, trade agreements may, in the short run, boost imports more than exports. *Third*, in the absence of concomitant improvement in the business environment, exports may fail to exploit fully the opportunities offered by foreign market opening. This would largely explain why Indian apparel exporters have not been able to increase their export shares in Japan after the move to zero tariffs under the trade agreement (Mukherjee et al., 2018^[43]). Overall, for preferential agreements to deliver their full impact on exports, India should undertake complementary improvements in the business environment.

OECD simulations suggest that, even in the absence of new bilateral, regional or multilateral trade agreements, India would benefit from reducing trade tariffs: exports, domestic production and income would increase. The METRO model has been used to compare the impact for India of a multilateral reduction in tariffs – all G20 countries are assumed to lower their tariffs to the lowest level implemented across G20 countries – to a situation where India alone cuts tariffs (Table 1).

The positive impact of India reducing trade tariffs is only marginally smaller than the impact from a multilateral reduction, reflecting the fact that effectively applied tariffs in G20 partner countries are already relatively low. The simulated impact of a multilateral move on India is however likely underestimated since a large share of India's exports are to countries which are not members of the G20. Overall, even acting alone, the Indian economy would benefit from improved trade. Some firms, in particular small and less competitive ones, may however suffer from a more competitive trade environment (see below).

Figure 20. India has developed preferential trade agreements but their depth is limited

Note: Trade agreements are weighted by partner countries' GDP in PPP US dollars, excluding domestic countries' GDP. The measure of depth is taken from (Dür, Baccini and Elsig, 2014^[44]). This is an additive index that combines seven key provisions that can be included in preferential trade agreements. The first provision captures whether the agreement foresees that all tariffs (with limited exceptions) should be reduced to zero (that is, whether the aim is to create a full free trade area). The other six provisions capture cooperation that goes beyond tariff reductions, in areas such as services trade, investments, standards, public procurement, competition and intellectual property rights. The higher the outcome (score varies between 0 and 7) the deeper the trade agreement.

Source: World Bank, World Development Indicators database; OECD calculations based on the Design of Trade Agreements (<https://www.designoftradeagreements.org/>), May 2019.

StatLink <http://dx.doi.org/10.1787/888934047976>

Table 1. Unilateral versus multilateral cut in tariffs: impacts for the Indian economy

	Percentage change from the base level	
	Unilateral cut: India lowers tariffs to lowest G20 level	Multilateral cut – all countries lower their tariffs to lowest G20 level
Real GDP	0.3	0.3
Imports	3.6	5.0
Exports	7.7	8.6
Domestic production	0.5	0.7

Source: OECD estimations based on the METRO model.

The OECD METRO model has been used to quantify the impacts of a reduction in India's trade barriers under various reform scenarios, including non-tariffs barriers and service trade restrictions (Box 6). In each of these scenarios, consumption, investment, exports, domestic production and income, all increase compared to the base level (Table 2). Employment in the manufacturing sector increases. Among the four trade reforms envisaged (scenario 1 to 4), reducing services trade costs has the strongest impact, with a significant increase in manufacturing employment.

Box 6. OECD simulations: impact of a unilateral reduction in trade barriers

The OECD's trade model, METRO, is a computable general equilibrium model (CGE) that has a comprehensive specification of economic activity within and between economies. The underlying approach for the multi-region model is the construction of a series of single country CGE models that are linked through trade relationships. It models bilateral trade relationships for 61 economies and 57 sectors. The model is documented in (OECD, 2019^[45]) and is regularly used to assess economic impacts of trade policies.

The METRO model has been used here to quantify the impacts for India of a unilateral reduction in trade barriers under 5 scenarios:

1. A 20% unilateral cut in India's tariffs on goods;
2. A 20% unilateral cut in the estimated ad-valorem equivalents (AVE) related to India's non-tariff measures on goods;
3. A 20% unilateral cut in the estimated AVEs of India's non-tariff measures in services for India;
4. A reduction in India's trade facilitation costs to the average G20 level;
5. Simultaneous trade liberalisation (i.e. all four types of trade barriers reduced).

Key results are as follows:

- By unilaterally reducing all trade barriers, India's real GDP increases by 2.4% and total production by almost 3%. While benefits are widely shared across agriculture and manufacturing industries, Indian service sectors would face stiffer competition from foreign suppliers.
- Production in the service sectors, particularly financial services, decline as firms substitute away from domestic providers. However, downstream industries that rely on services as inputs benefit from the fall in intermediate input prices.

- The cost of intermediate goods and services in manufacturing sectors, like motor vehicles and machinery, decrease by 3% and 2 %, respectively. Improvements in trade facilitation increase access to intermediate goods from foreign sources and reduce production costs.
- Demand for labour shifts away from services sectors, where production declines, while jobs in the textile and electronic equipment sectors increase by about 5% and 10%, respectively – the METRO model assumes full employment in the economy.
- Exports across all sectors increase with the exception of the financial sector. The largest increases in exports are in manufacturing sectors, driven by reductions in the services trade restrictions. Exports increase, even in the scenario where only import tariffs are reduced, reflecting the impact of lower input costs on India's competitiveness.

Table 2. Macroeconomic impact of a reduction in India's barriers to trade

	% change from base				
	20% reduction in tariff rates	20% reduction in non-tariff trade costs on goods	20% reduction in non-tariff trade costs on services	Trade facilitation costs reduced to G20 level	Simultaneous liberalisation
Real GDP (expenditure)	0.1	0.3	1.5	0.5	2.4
Private consumption	0.4	0.4	3.6	0.5	4.9
Investment	0.0	0.5	2.3	0.9	3.9
Imports	0.6	1.1	15.0	1.9	19.0
Exports	1.3	0.9	9.9	1.6	14.1
Domestic production	0.1	0.0	2.3	0.4	2.8

Source: OECD estimates based on the METRO Model.

The above simulated impacts of a reduction in trade barriers on jobs and income may be underestimated for at least 3 reasons. First, simulations have been carried out with the underlying assumption of full employment while under-employment is frequent in India. Second, a large share of India's trade is with countries which are not members of the G20. Third, trade liberalisation may boost FDI inflows and productivity. These induced effects are not taken into account in the simulations.

More foreign investment could promote income growth and support export performance

Foreign investment usually brings technology, knowledge and management skills, boosting productivity and export performance in the host country. It may also facilitate access to global markets. Empirical evidence suggests that inflows of foreign direct investment (FDI) in India have promoted services exports [(Kumar Dash and Parida, 2013^[46]); (Saleena, 2013^[47])]. In the automobile industry, some foreign companies have built production capacity in India, making India an export hub for markets such as Africa and West Asia. Some Indian auto-part manufacturers became world leaders by having first acquired technical and managerial skills from leading original equipment manufacturers (Saraf, 2016^[48]). FDI can also boost activity in small and medium-sized enterprises (SMEs) to global value chains, contrary to the frequent belief that benefits accrue mainly to large firms. Empirical evidence for ASEAN economies suggests that SMEs tend to export

intermediate goods to global value chains indirectly through sales to multinational firms which then export (López González, 2017^[49]).

India has liberalised its FDI policy in many sectors over the past two decades. Since 2014, India has been a top reformer: caps on foreign participation have been raised and more sectors have been brought under the automatic route, avoiding the administrative burden associated with the government approval route. The opening was most ambitious in the air, real estate and retail distribution sectors. In 2017, the Foreign Investment Promotion Board was abolished and the government approval system was simplified and decentralised – concerned ministries are now invited to accept or reject FDI projects within a shorter timeframe (8-10 weeks). Overall, the OECD FDI Restrictiveness Index suggests that in 2018 India was more open than several other EMEs, including China, Indonesia and Malaysia. While global FDI flows declined three years in a row to 2018, FDI inflows to India as a share of GDP have remained relatively robust (Figure 21).

The government aims at making India a more attractive FDI destination. FDI restrictions in single-brand retail, digital media, contract manufacturing and coal sector were loosened in August 2019. Local sourcing norms for single-brand retail FDI have been softened. In presenting its Budget for FY 2019-20, the government indicated that further reforms are likely, including in the insurance, aviation and media sectors.

Restrictions on FDI remain higher than in most OECD countries, especially in banking and insurance, legal, accounting and audit services and agriculture. In retail trade, 100% FDI is allowed and large foreign retailers have recently invested in India. However, new guidelines for FDI in the e-commerce sector remain relatively restrictive (Box 7). Restrictions on FDI, combined with structural bottlenecks (see above), act as an impediment to FDI inflows. Further liberalisation and simplification of FDI policy could trigger foreign investment. The impact could be large: i) in the context of rising trade tensions where firms are considering relocating their production facilities, and ii) given the relatively low stock of FDI in India compared to other EMEs while the size of the domestic market is large.

Figure 21. Inward foreign direct investment has remained relatively low despite lighter regulations

Note: In Panel A, data for 2018 for India are based on OECD calculations using CEIC data. In Panel B, data for Brazil and South Africa are for 2017. In Panel C, services include computer software and hardware. The FDI Regulatory Restrictiveness Index measures statutory restrictions on foreign direct investment across 22 economic sectors. It looks at four main types of restrictions on FDI: 1) Foreign equity limitations; 2) Discriminatory screening or approval mechanisms; 3) Restrictions on the employment of foreigners as key personnel and 4) Other operational restrictions. Restrictions are evaluated on a 0 (open) to 1 (closed) scale. The overall restrictiveness index is the average of sectorial scores.

Source: Government of India, Ministry of Commerce and Industry; World Bank, World Development Indicators database; OECD calculations based on CEIC data; OECD, FDI Main Aggregates database; OECD, FDI Regulatory Restrictiveness Index database.

StatLink <http://dx.doi.org/10.1787/888934047995>

Box 7. Recent changes in e-commerce rules

In February 2019, a new circular on FDI was issued on FDI guidelines relating to e-commerce. It confirms that fully-owned foreign companies may enter e-commerce in India, but under conditions that restrict the business model of foreign retailers. The regulation distinguishes between the inventory based and the market-place based models of e-commerce. Foreign ownership is only allowed in the market-place model.

In the market-place model, the e-commerce entity provides a platform over which sellers and buyers interact. The e-commerce entity may offer logistics support and payment systems to vendors. Specifically, foreign e-commerce suppliers may only engage in business-to-business (B2B) operations. Furthermore, market-place based e-commerce entities may not sell goods or services produced by firms in which they own shares. Another criterion is that no vendor may have more than 25% of its sales through the market-place e-commerce – this regulation may be hard to enforce, since the e-commerce entity would not have information about its customers' total sales. Finally, the regulation most likely implies that foreign bricks and mortar retailers cannot offer online sales.

Although the regulation may protect small traditional retailers in India, it will hurt consumers by restricting the basket of goods they have access to and by stifling price competition. Moreover, the regulation may result in lost opportunities for local manufacturers. Modern retailers offer a channel for small manufacturers to reach consumers beyond their village, and often also support them in improving product quality and complying with standards.

Mitigating the adverse effects of enhanced participation in the global economy

In most countries, globalisation increases incomes for many, but not all. Recent empirical work suggest that the average income benefit of globalisation tends to be higher in emerging than in advanced economies, but that income inequality is likely to increase in EMEs (Lang and Mendez Tavares, 2018^[50]). In India, high-performing sectors abroad tend to employ skilled workers – the ICT sector is one of them – or be capital-intensive – e.g. oil refining. On the other hand, the labour intensive manufacturing sector has so far benefitted less from globalisation. Overall, trade has tended to benefit skilled workers and asset-rich individuals more than unskilled workers, deepening income inequality.

Trade may exacerbate regional disparities because of the geographical concentration of activities, fuelling discontent. Empirical work for the OECD area (Rusticelli et al., 2018^[51]) suggests that trade has an important role in regional labour market developments. A YouGov survey (Bertelsmann-Stiftung, 2018^[52]) suggests that people in India see globalisation and trade as a positive development for wages and job security, while the opposite view prevails in advanced economies. Still, a large majority calls for stronger protection against foreign competition.

Opening India further to trade and investment will entail a reallocation of resources both across sectors and within sectors across firms. The new Insolvency and Bankruptcy Code will help reallocate capital from declining industries and firms to more promising ones. Modernising labour laws should help reallocating labour from sectors adversely affected by trade to growing sectors, and thus to reduce disparities across individuals and regions.

A more fluid housing market would be instrumental to enable the geographical relocation of people.

Policies can reduce the burden of adjustment for poor and vulnerable households. Equipping people with the means to succeed in an open and changing world should be a priority. This would require putting more resources in the education system, in particular more trained teachers. Providing vocational training opportunities is also key to help workers to get ready for new jobs in expanding sectors and enhance their chances of accessing better-paid jobs. Reinforcing the social safety net may also help. Recent moves in this direction – in particular, the enhanced insurance for hospital care, pension insurance for informal workers, the minimum income for farmers – could help.

Large emigration flows may help raise living standards, including for low-income families through remittances, but brain drain may be an issue. To take an illustration, in the health care sector, migration may weigh on the ability to provide quality public services for all. In the early 2010s, India was the world's top supplier of emigrant doctors and second supplier of emigrant nurses (OECD, 2015^[53]). Nurses born in India work in many OECD countries, primarily the United States (42% of Indian-born nurses working abroad), the United Kingdom (28%), Australia (9%), New Zealand and Ireland (7% each). Some of the health professionals working abroad return to practice in India and can contribute their knowledge and clinical and research skills. Experience in other countries (Dodani and Laporte, 2005^[54]) suggests that brain drain can be converted into brain gain by developing training programmes and research projects with health professionals living in the home country. Still, avoiding too large an outflow of nurses and doctors may call for better work and pay conditions for nurses and doctors in India.

Table 3. Recommendations to improve India's participation in the world economy

Findings (main findings in bold)	Recommendations (key recommendations in bold)
Removing domestic bottlenecks	
The quality and reliability of transport and electricity networks have improved but transport times are still long and electricity outages are an issue in some regions, weighing on the competitiveness of the manufacturing sector.	Invest further to improve electricity provision, roads and ports.
Labour-intensive manufacturing exports are lagging behind. Labour regulations are complex, in particular in the industrial sector, and discourage firms to grow and exploit scale economies, hampering competitiveness.	Introduce a simpler and more flexible labour law which removes disincentives for firms to create jobs.
Special economic zones account for a growing share of total exports. They can be a useful instrument to experiment product and labour market reforms.	Extend gradually the regulatory and administrative reforms which promote productivity and job creation to the rest of the country.
Removing foreign trade and investment barriers	
Tariffs harm more low-income households and weigh on export competitiveness. Even in the absence of a multilateral trade agreement, India would benefit from a reduction in trade tariffs.	Strive for a multilateral trade agreement or, as a second best, further reduce tariffs.
The dispersion in import tariffs is large. Higher rates in inputs than on final products penalise domestic producers. They also add to administrative and compliance costs.	Simplify the tariff structure.
Manufacturing exports embody a high share of services. Reducing restrictions to services trade would promote manufacturing exports and job creation.	Further reduce restrictions to services trade.
FDI restrictions have declined sharply but are higher than in many OECD countries.	Further streamline restrictions to FDI.
Trade facilitation has improved but the number of documents remains high and co-operation across agencies is still lacking.	Further improve trade facilitation by reducing the number of documents for importers and exporters and by improving agency co-operation at the border.

References

- Aggarwal, A. (2010), “Trade Effects of Anti-dumping in India: Who Benefits?”, *The International Trade Journal*, Vol. 25/1, pp. 112-158, <http://dx.doi.org/10.1080/08853908.2011.532047>. [35]
- Aleksynska, M. and G. Peri (2014), “Isolating the network effects of immigrants on trade”, *World Economy*, Vol. 37, pp. 434-455, <http://dx.doi.org/10.1111/twec.12079>. [6]
- Benz, S. and F. Gonzales (2019), “Intra-EEA STRI Database: Methodology and Results”, *OECD Trade Policy Papers*, No. 223, OECD Publishing, Paris, <https://dx.doi.org/10.1787/2aac6d21-en>. [41]
- Benz, S., A. Khanna and H. Nordås (2017), “Services and Performance of the Indian Economy: Analysis and Policy Options”, *OECD Trade Policy Papers*, No. 196, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9259fd54-en>. [3]
- Bertelsmann-Stiftung (2018), *People want a safety net for globalization and trade*, <https://www.bertelsmann-stiftung.de/en/topics/aktuelle-meldungen/2018/april/people-want-a-safety-net-for-globalization-and-trade/>. [52]
- Breschi, S., F. Lissoni and E. Miguelez (2019), *Does India gain from high-skilled migration to the US?*, Ideas for India, <https://www.ideasforindia.in/topics/productivity-innovation/does-india-gain-from-high-skilled-migration-to-the-us.html>. [5]
- Cadot, O., J. Gourdon and F. van Tongeren (2018), “Estimating Ad Valorem Equivalents of Non-Tariff Measures: Combining Price-Based and Quantity-Based Approaches”, *OECD Trade Policy Papers*, No. 215, OECD Publishing, Paris, <https://dx.doi.org/10.1787/f3cd5bdc-en>. [33]
- Citi GPS (2018), *Securing India’s growth over the next decade*, Citi GPS, <https://www.citigroup.com/commercialbank/insights/assets/docs/2018/Securing-Indias-Growth-Over-the-Next-Decade/files/assets/common/downloads/publication.pdf?uni=279b9671efcc777ce2bed95e198e8a84>. [21]
- Das Krishna, G. and R. Kumar (2015), “Indian Exports -- Loss of Global Competitiveness”, *Economic & Political Weekly*, Vol. L/34, pp. 20-23. [9]
- Dodani, S. and R. Laporte (2005), *Brain drain from developing countries: how can brain drain be converted into wisdom gain?*. [54]
- Dür, A., L. Baccini and M. Elsig (2014), “The Design of International Trade Agreements: Introducing a New Database”, *Review of International Organizations*, Vol. 9/3, pp. 353-375. [44]
- Export-Import Bank of India (2019), *India’s Services Trade Liberalisation and Export Promotion -- A Study for Government Policy Making*. [37]
- FICCI (2018), *Envisioning India 2030*, FICCI, <http://ficci.in/spdocument/23058/Envisioning-India-2030-web.pdf>. [18]
- FICCI (2016), *FICCI Survey on Inverted Duty Structure in the Indian Manufacturing Sector*, <http://ficci.in/SEDocument/20375/FICCI-INVERTED-DUTY-Report-2016.pdf>. [30]
- Furman, J., K. Russ and J. Shambaugh (2017), *US tariffs are an arbitrary and regressive tax*, <https://voxeu.org/article/us-tariffs-are-arbitrary-and-regressive-tax>. [27]

- Giovannetti, G. and M. Lanati (2015), “The Indirect pro-trade effects of Indian ethnic networks”, *Research Report 2015/14, CARIM India Series, European University Institute.* [7]
- Government of India (2016), *Economic Survey 2015-16.* [42]
- Grundke, R. and J. Arnold (2019), “Fostering Argentina’s integration into the world economy”, *OECD Economics Department Working Papers*, No. 1572, OECD Publishing, Paris, <https://dx.doi.org/10.1787/7ed95b2b-en>. [32]
- IEA (2018), *World Energy Outlook 2018*, International Energy Agency, Paris, <https://dx.doi.org/10.1787/weo-2018-en>. [17]
- Ignatenko, A., F. Raci and B. Mircheva (2019), *Global Value Chains: What are the Benefits and Why Do Countries Participate?*, <https://www.imf.org/en/Publications/WP/Issues/2019/01/18/Global-Value-Chains-What-are-the-Benefits-and-Why-Do-Countries-Participate-46505?cid=em-COM-123-38262>. [16]
- IMF (ed.) (2018), *The distribution of gains from globalization*, https://www.imf.org/en/Publications/WP/Issues/2018/03/13/The-Distribution-of-Gains-from-Globalization-45722?utm_medium=email&utm_source=govdelivery. [50]
- Journard, I., S. Dhaoui and H. Morgavi (2018), “Insertion de la Tunisie dans les chaînes de valeur mondiales et rôle des entreprises offshore”, *Documents de travail du Département des Affaires économiques de l’OCDE*, No. 1478, Éditions OCDE, Paris, <https://dx.doi.org/10.1787/546dbd75-fr>. [24]
- Karayil, S. (2007), “Does migration matter in trade? A study of India’s exports to the GCC countries”, *South Asia Economic Journal*, Vol. 8/1, pp. 1-20. [8]
- Kumar Dash, R. and P. Parida (2013), “FDI, services trade and economic growth in India: empirical evidence on causal links”, *Empirical Economics*, Vol. 45/1, pp. 217-238. [46]
- López González, J. (2017), “Mapping the participation of ASEAN small- and medium- sized enterprises in global value chains”, *OECD Trade Policy Papers*, No. 203, OECD Publishing, Paris, <https://dx.doi.org/10.1787/2dc1751e-en>. [49]
- Mani, S. (2019), “Robot Apocalypse: how will automation affect India’s manufacturing industry?”, Vol. LIV/8, pp. 40-48. [11]
- Manpower (2018), *Solving the talent shortage*, Manpower. [12]
- McKinsey Global Institute (2019), *Globalization in transition: the future of trade and value chains*, <https://www.mckinsey.com/featured-insights/innovation-and-growth/globalization-in-transition-the-future-of-trade-and-value-chains>. [10]
- Mehrotra, S. (2019), *Why an industrial policy is crucial*, <https://www.thehindu.com/todays-paper/tp-opinion/why-an-industrial-policy-is-crucial/article27155537.ece>. [4]
- Mukherjee, A. and A. Kapoor (2017), *India and Trade Facilitation in Services (TFS) Agreement: Concerns and Way Forward*, http://icrier.org/pdf/Working_Paper_347.pdf. [38]
- Mukherjee, A. et al. (2018), *Trade, trade agreement and subsidies: the case of the Indian apparel industry*, http://icrier.org/pdf/Working_Paper_365.pdf. [43]

- NITI Aayog (2018), *Strategy for New India @ 75*, [20]
http://niti.gov.in/writereaddata/files/Strategy_for_New_India.pdf.
- NITI Aayog (2017), *India -- Three year Action Agenda, 2017-18 to 2019-20*, [31]
https://www.niti.gov.in/writereaddata/files/coop/India_ActionAgenda.pdf.
- Nordås, H. (2019), “Services trade restrictiveness index, methodology and application: the Indian Context”, in D. Chakraborty and Nag, B. (eds), *India’s Trade Patterns and Export Opportunities: Reflections through Trade Indices and Modeling Techniques*, New Delhi: Sage Publications.. [40]
- OECD (2019), *METRO Version 2: Model documentation. OECD TAD/TC/WP/RD)(2019)1*. [45]
- OECD (2019), *OECD Economic Surveys: Argentina 2019*, OECD Publishing, Paris, [28]
<https://dx.doi.org/10.1787/0c7f002c-en>.
- OECD (2019), *OECD Economic Surveys: India 2019*, OECD Publishing, Paris, [22]
<https://dx.doi.org/10.1787/554c1c22-en>.
- OECD (ed.) (2019), *Trade Policy and the Global Economy -- Scenario 4: Addressing Barriers to Service Trade*, OECD, <https://issuu.com/oecd.publishing/docs/oecd-trade-scenario-4-services>. [39]
- OECD (2018), *OECD Economic Surveys: Brazil 2018*, OECD Publishing, Paris, [29]
https://dx.doi.org/10.1787/eco_surveys-bra-2018-en.
- OECD (2018), *Trade Facilitation and the Global Economy*, OECD Publishing, Paris, [26]
<https://dx.doi.org/10.1787/9789264277571-en>.
- OECD (2016), *The economic impact of local content requirements*, OECD, [34]
<https://www.oecd.org/tad/policynotes/economic-impact-local-content-requirements.pdf>.
- OECD (2015), *International Migration Outlook 2015*, OECD Publishing, Paris, [53]
https://dx.doi.org/10.1787/migr_outlook-2015-en.
- OECD (2015), *METRO Version 1 Model Documentation*, OECD. [25]
- OECD (2015), *The Future of Productivity*, OECD Publishing, Paris, [2]
<https://dx.doi.org/10.1787/9789264248533-en>.
- OECD (2014), *OECD Economic Surveys: India 2014*, OECD Publishing, Paris, [15]
https://dx.doi.org/10.1787/eco_surveys-ind-2014-en.
- OECD/ICRIER (2018), *Agriculture policies in India*, OECD. [14]
- OECD-FAO (2014), *Agricultural outlook, 2014-2023*, OECD. [13]
- Panagariya, A. (2004), *India’s trade reform: Progress, Impact and Future Strategy*, [1]
<https://econwpa.ub.uni-muenchen.de/econ-wp/it/papers/0403/0403004.pdf>.
- Rouzet, D. and F. Spinelli (2016), “Services Trade Restrictiveness, Mark-Ups and Competition”, *OECD Trade Policy Papers*, No. 194, OECD Publishing, Paris, <https://dx.doi.org/10.1787/5jln7d1m3931-en>. [36]

-
- Rusticelli, E. et al. (2018), “Going local: a regional perspective on how trade affects labour markets and inequality”, *OECD Economics Department Working Papers*, No. 1530, OECD Publishing, Paris, <https://dx.doi.org/10.1787/2981f94c-en>. [51]
- Saleena, N. (2013), “Impact of FDI on Services Export: Evidence from India”, *Journal of Business Management & Social Sciences Research* (, Vol. 2/11. [47]
- Saraf, P. (2016), *Automotive in South Asia : From Fringe to Global*, World Bank, <https://openknowledge.worldbank.org/handle/10986/25119>. [48]
- Subramanian, A. (2018), *Of Counsel -- The Challenges of the Modi-Jaitley Economy*, Penguin. [19]
- Thomas, A. et al. (2017), “Taxation and Investment in India”, *OECD Economics Department Working Papers*, No. 1397, <https://dx.doi.org/10.1787/4258e11a-en>. [23]