

US-India Chemicals and Petrochemicals Forum

Investment and Collaborative Opportunities
between the US and India

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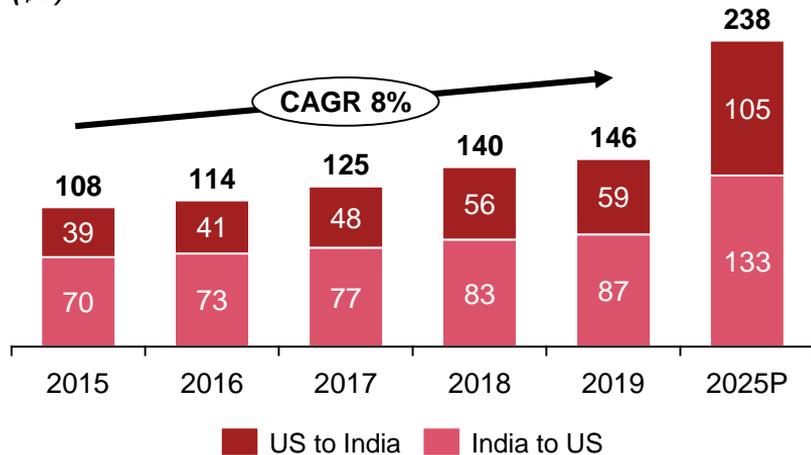
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US and India have a strong bilateral trade relationship as a result of complementary policy and trade interests

In 2019, US-India Goods and Services trade totaled ~\$146B¹; bilateral trade is projected to exceed \$238B in 2025² with an estimated annual growth rate of ~8-10% through 2025

US-India Goods and Services Trade from 2015-2025P
(\$B)



1. Sourced from Office of US Trade Representative
 2. Sourced from US-India Strategic Partnership Report
 Source: Office of the US Trade Representatives, US-India Strategic Partnership Form

Key Drivers for the Successful Trade Relationship



India's rapid economic growth and diverse consumer base



Continued trade tension between US and China



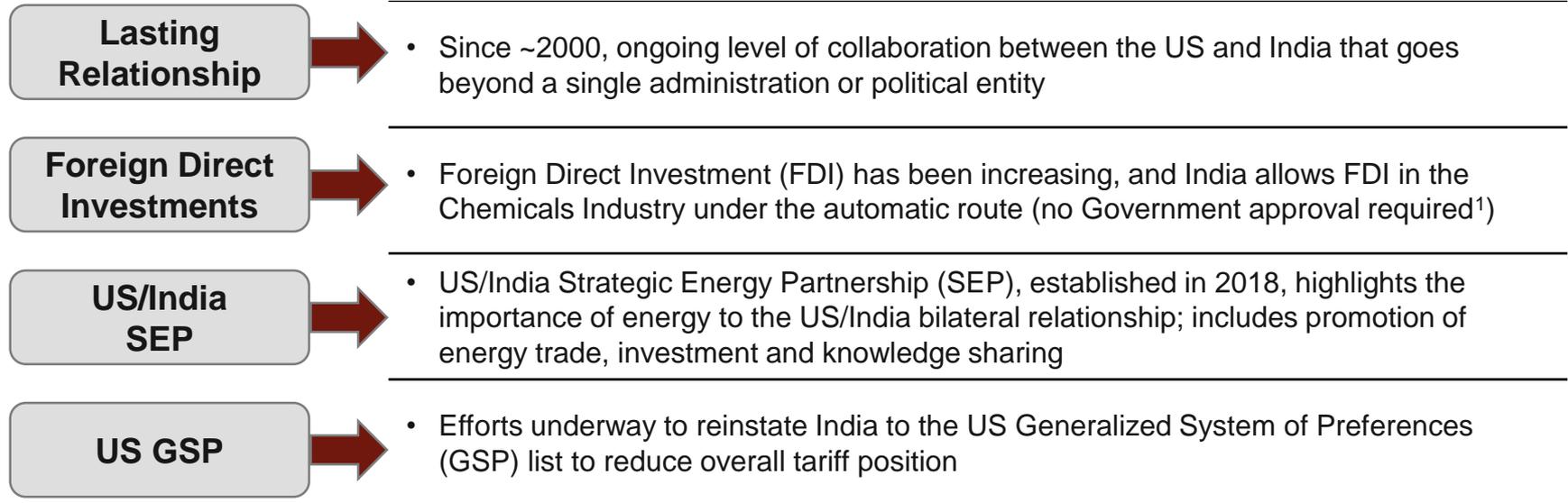
Shared approach on energy security and access

Observations

- India is one of the fastest growing economies in the world with GDP growth rate of 7 - 8% prior to COVID impact in 2019
- India continues to be a key US regional trade partners as the new Biden administration has announced that it will not immediately remove the Trump Tariff on China
- US-India Strategy Energy Partnership was established in 2018 and has led to significant cooperation in key petroleum, renewable, and energy infrastructure partnerships

A combination of factors have impacted the strategic partnership between the US and India

Overall, the relationship between the US and India has been positive, with longstanding cooperation

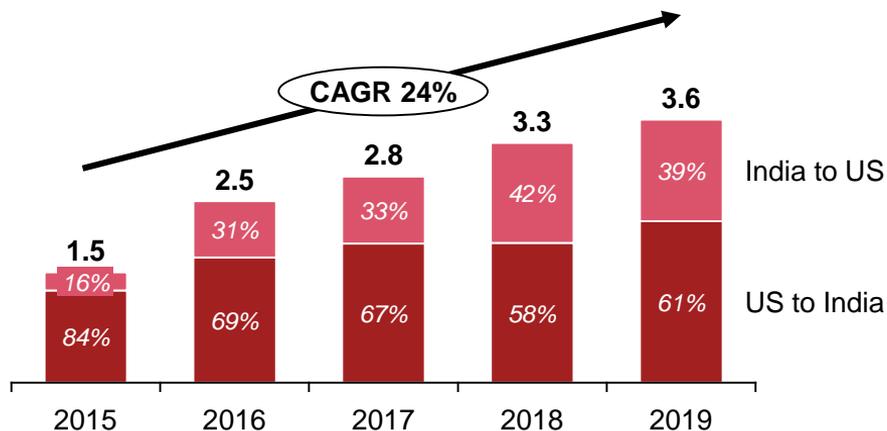


1. Except in the case of certain hazardous chemicals
Source: Congressional Research Service, FDI India, US DoE

Chemical Industry Foreign Direct Investments between the US and India have steadily risen since 2015

Chemical Investments between the US and India have become increasingly bi-lateral with India increasing FDI in the US

Balance of Payments and Direct Investment Position - Chemicals Industry 2015-2019¹ (\$B)



Investment Flow

Observations

India → US

- According to the FICCI, the largest share of investment capital from India has been allocated to industries associated with the knowledge economy.
- This capital is helping the U.S. increase employment in high value-added industries, such as chemicals

India ← US

- Investment from US to India is largely focused on leveraging the end market access and growth for chemicals (both base and specialty) in the region

1. Sourced from Bureau of Economic Analysis
Source: BEA, Invest India, FICCI, Make in India

Major US chemical manufacturers have recently completed or have planned investments in India

Select investment projects include acquisitions, capacity expansions, greenfield manufacturing investments and R&D centers



- In 2017, H.B. Fuller opened a new Pune, India, business office and a new R&D center in its Shirwal, India manufacturing facility



- In 2018, Dow opened a Polyurethane site in Maharashtra, India to serve growing market segments such as consumer durables, infrastructure and automotive



- In 2019, Celanese acquired Next Polymers Ltd., one of India's largest engineering thermoplastics compounders



- In 2019, Ecolab, a provider of water, hygiene and energy technologies, in partnership with SMC², has set up an Ecolab Digital Center (EDC) in Bengaluru



- Lubrizol and Grasim Industries have entered into a definitive agreement to manufacture and supply CPVC resin in India through increased production capacity in Dahej, Gujarat (*proj. 2022*)



- INOX Air Products, a JV between Industrial Oxygen Company and Air Products, announced plans to build eight new greenfield Air Separation Units across India through 2024

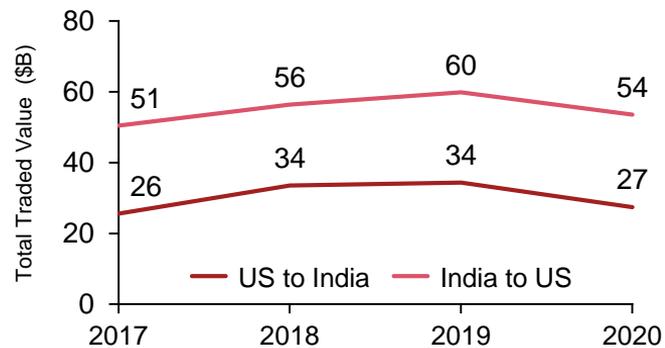
Source: H.B. Fuller, Dow, Lubrizol, Cision, Businesswire, Business Line

Illustrative, Not Exhaustive

Chemicals Goods represent a key area of global trade between US and India

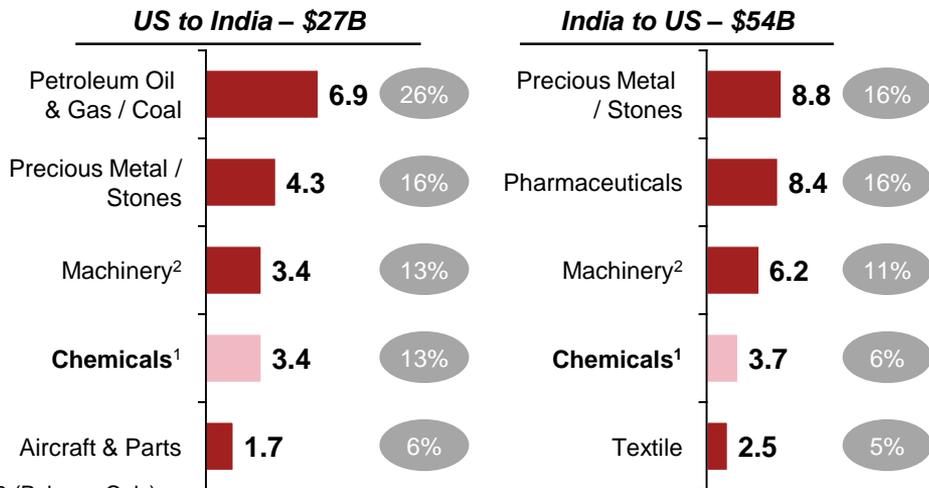
Chemicals Goods was one of the top traded categories between US and India in 2020 and represented \$7B in total value

US-India Goods Trade from 2017-2020



Goods Trade Deficits (\$B)	2017	2018	2019	2020
	25	22	26	27

US-India Goods Trade Breakdown by Category (top five) (\$B)



1. Represents Chemicals Goods in UN Comtrade with HS Code- 28, 29, 32, 38, 39 (Polymer Only)

2. Represents both electrical and mechanical machinerics

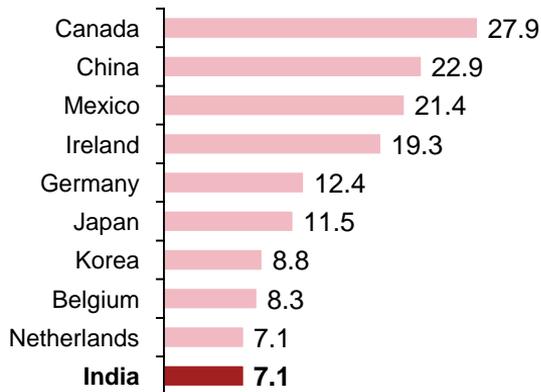
Source: UN Comtrade, PwC Analysis

India is well positioned with US in Chemicals trade and is projected to further strengthen their position going forward

India is currently the 10th largest chemical trade partner for the US and is estimated to increase to 7th by 2030E based on historical growth rate projections

Trade with India has had a higher CAGR than that of its peers...

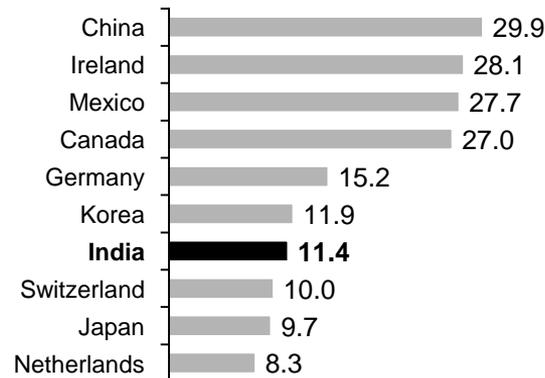
US 2020 Chemicals Trade (import and export) by key partners¹ (\$B)



10 Yr CAGR used to project future trade position

...which may result in an increased trade position in the future

PwC Estimate – US 2030E Chemical Trade (import and export) by key partners^{1,2} (\$B)



Illustrative

1. Represents Chemicals Goods in UN Comtrade with HS Code- 28, 29, 32, 38, 39 (Polymer Only)

2. Estimated using 2020 trade values with historical 10 yr CAGR

Source: UN Comtrade, PwC Analysis