

A

Project Report  
On  
Effect of Coronavirus on Trade with Reference to  
5 Sector Model of Circular Income  
In

**Macro Economics**



IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE AWARD  
FOR THE DEGREE OF

**Master of Business Administration**

UNDER

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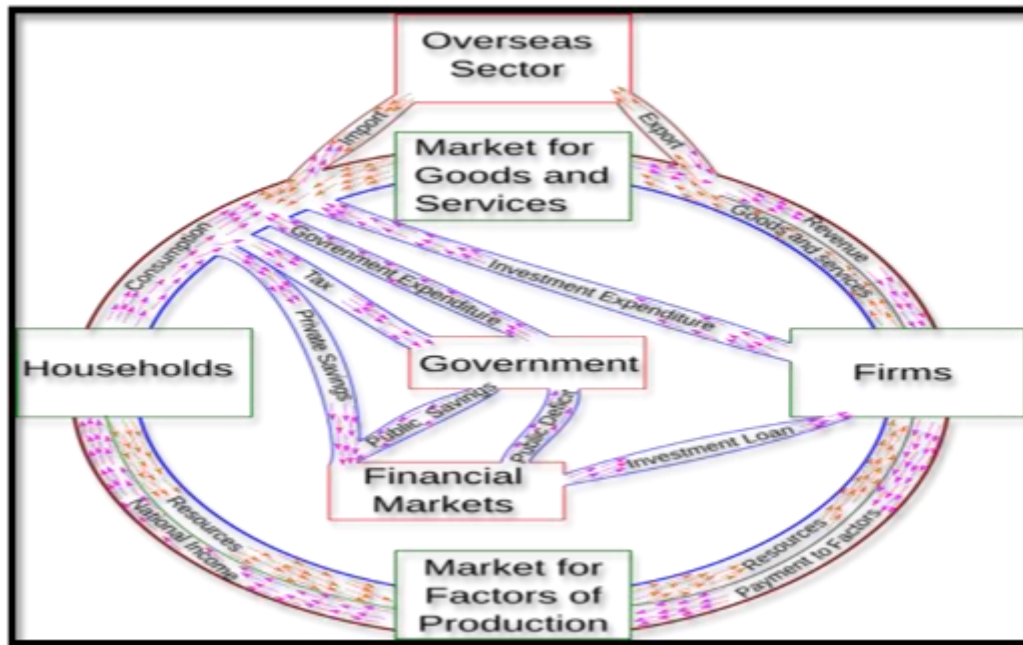
# **Effect of Coronavirus on Trade with Reference to 5 Sector Model**

## **Circular Income**

**Introduction:** The spread of the new coronavirus is a public health crisis that could action a serious risk to the macro economy through the stop of production activities obstacle of people's movement and cut-off of supply chain. Coronavirus (COVID-19) outbreak is disrupting world trade and could result in a 50-billion-dollar decrease in exports across global value chains. The trade impact of the coronavirus epidemic for India is estimated to be about 348 million dollars and the country figures among the top 15 economies most affected as slowdown of manufacturing in China disrupts world trade. The coronavirus outbreak ensured that the Year of the Rat didn't get off to the most propitious start. Over 2000 people dead so more than 80000 infected and 40+ countries affected. Cities in lockdown, travel restrictions in place, plant closures mounting. Global trade, commerce, tourism, investment and supply chains in disarray. the slowdown of manufacturing in China due to the coronavirus (COVID-19) outbreak is disrupting world trade and could result in a 50-billion-dollar decrease in exports across global value chains. The most affected sectors include precision instruments, machinery, automotive and communication equipment etc.

**Circular Flow of Income:** The circular flow of income is a model of the economy in which the major exchanges are represented as flows of money, goods and services between economic agents. The flows of money and goods exchanged in a closed circuit correspond in

value but run in the opposite direction. The circular flow analysis is the basis of national accounts and hence of macroeconomics.



This image shows the circular flow of income in a five-sector economy. The flow of money is shown with purple, and the flow of goods and services is shown with orange. Money flows in the opposite direction from goods and services.

- **Market for Goods and Services:** The goods and services market is where households purchase consumable items and businesses sell their wares. The market includes stores, the Internet, and any other place where consumer goods and services are exchanged.

**Global Effect:** The Organization for Economic Co-operation and Development's

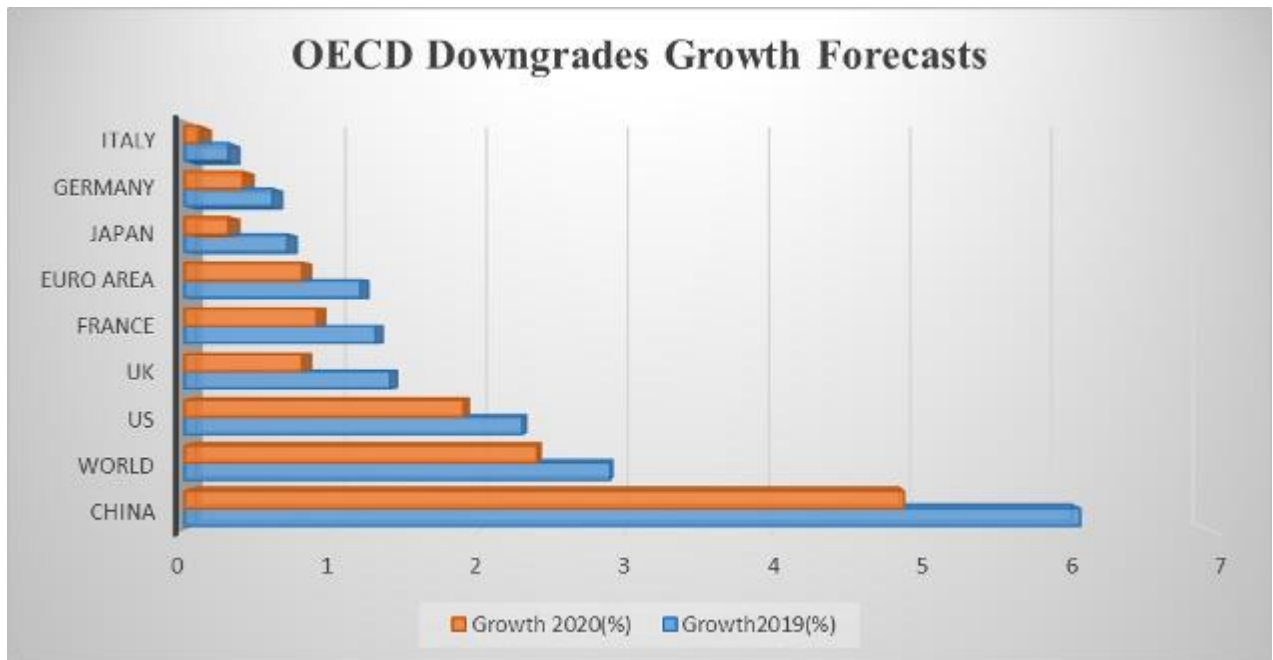
(OECD) recent report expects the outbreak of the coronavirus (COVID-19) to create a severe impact on China and global economy.

“Restrictions on movement of people, goods and services, and containment measures such as factory closures have cut manufacturing and domestic demand sharply in China,” the OECD said. “The impact on the rest of the world through business travel and tourism, supply chains, commodities and lower confidence is growing.”

In the best-case scenario, a slowdown in world growth is expected in the first half of 2020 as supply chains and commodities are hit, tourism decreases and confidence fades. The report anticipates global economic growth to fall 2.4% for the whole year compared to 2.9% in 2019, while a rise to 3.3% in 2021 is expected.

The OECD revised China's growth to below 5% in 2020 compared to 6.1% in 2019.

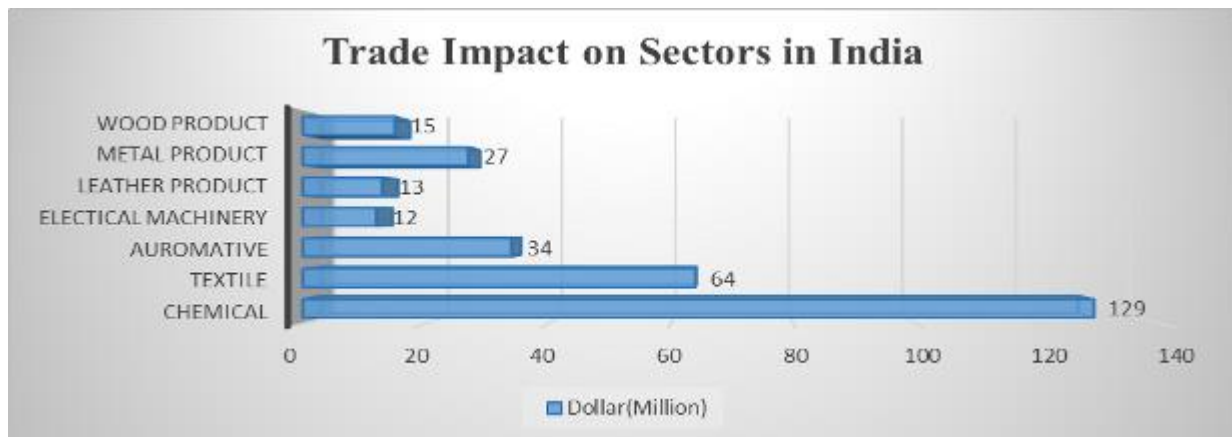
But if COVID-19 continues to spread similarly as it did in China, it could decrease global growth as low as 1.5%, the OECD noted.



**Effect in India:** Coronavirus has disrupted the demand and supply chain across the country and with this disruption it can be seen that the tourism, hospitality, and aviation sectors are among the worst affected sectors that are facing the maximum impact of the current crisis. Closing of cinema theatres and declining footfall in shopping complexes has affected the retail sector by impacting the consumption of both essential and discretionary items. As the consumption of any product or services goes down, it leads to an impact on the workforce. In the current scenario, with all the retailers closing down their services, the jobs of the employees are at a huge risk.

For India, the overall trade impact is estimated to be the most for the chemicals sector at 129 million dollars, textiles and apparel at 64 million dollars, the automotive sector at 34 million dollars, electrical machinery at 12 million dollars, leather products at 13 million dollars, metals and metal products at 27 million dollars and wood products and furniture at 15 million dollars.

As per UNCTAD estimates, exports across global value chains could decrease by US\$ 50 billion during the year in case there is a 2% reduction in China's exports of intermediate inputs.



### Major Survey Results

- ❖ A significant 53 per cent of Indian businesses indicate the marked impact of the COVID-19 pandemic on business operations even at early stages.
- ❖ The pandemic has significantly impacted the cash flow at organizations with almost 80 percent reporting a decrease in cash flow.
- ❖ The pandemic has had a major impact on the supply chains as more than 60 per cent respondents indicate that their supply chains were affected. The companies also highlighted that they are closely monitoring the situation and expect the impact of the pandemic on the supply chain to worsen further.
- ❖ Organizations have brought in a renewed focus on hygiene aspects concerning the pandemic. Almost 40 per cent have put in place stringent checks on people entering

their offices and disinfection. Nearly 30 per cent organizations have already put in place Work-from-Home policies for their employees.

- ❖ Nearly 42 per cent of the respondents feel that it could take up to 3 months for normalcy to return.

➤ **Firm:** - A firm is a commercial enterprise, a company that buys and sells products and services to consumers with the aim of making a profit. A business entity such as a corporation, limited liability company, public limited company, sole proprietorship, or partnership that has products or services for sale is a firm.

### **Global Effect on firms: -**

- ❖ Based on a survey of SMEs in February, reports on China showed that a third of SMEs only had enough cash to cover fixed expenses for a month, with another third running out within two months, putting millions of Chinese SMEs at risk. Reporting on 14 March, suggests 60% of Chinese SMEs are back in business, but now face further challenges due to reduced demand from other markets.
- ❖ An early March survey of micro and small firms in Italy showed that 72% of the 6000 responding firms were directly affected by the situation because of a drop in demand or problems along the supply chain and transport and logistics. One third of respondents estimated a decrease in revenues greater than 15% and an additional 18% of firms estimated that decrease to be between 5-15%. The most affected firms are those in transport (98.9%) due to the demand downfall then tourism (89.9%), fashion (79.9%) and agro-food (77.7%).

- ❖ February KfW-IFO barometer in Germany on the Mittelstand suggested that so far small businesses in Germany are relatively less affected because of operating in regional supply chains. While business sentiment among SMEs in February improved by 0.8 points, business sentiment of larger firms declined by 2.4 points, reflecting the coronavirus situation. However, a new survey by DIHK of over 10 000 German companies (85% of which had less than 200 employees) released on 9 March indicated that almost half of respondents expected a negative impact on business in 2020, with almost one third expecting a decline in turnover of more than 10%.
- ❖ In March, the Korean Federation of SMEs published a survey of SMEs engaging in import/export. Of the 191 firms surveyed, 71.8% stated they would be affected by the outbreak, with more than half of these firms stating that they were unable to meet delivery dates due to factory closures in China.
- ❖ A 13 March survey from the US National Federation of Independent Business among 300 of its 300,000 members from employers with up to 120 workers showed that 74% of small businesses say they are not yet affected by the pandemic, while 23% say they are being negatively affected. Of those indicating they were not affected, nearly half anticipate the outbreak to negatively impact their business if the virus spreads to or within their immediate area over the next three months. Among the businesses that said they were being damaged, 42% reported seeing slower sales, while 39% were experiencing supply-chain disruptions.<sup>17</sup> A Survey in Seattle, showed that 60% of small businesses are considering wage cuts and staffing cutbacks, while 35% said they might have to close.



### **Effect on firms in India: -**

Citing loss of business amid closure of stores due to the spread of the coronavirus, Retailers Association of India (RAI) has asked the government for several financial “reliefs” including a 90-day grace period for filing income tax, GST and provident funds and 120 days’ moratorium for repaying bank loans.

The country’s largest retail group comprising modern retailers including Future Group, Reliance Retail and Shoppers Stop have also asked the government for April-June “job support subsidy” of 50% of minimum wages for retail employees through direct benefit transfer and said the retailers themselves would bear the rest.

“Currently, the retail industry is under lock-down (“closed”). With no revenue flow, the impact is significant to all retailers small or big,” the group representing more than 5,000 retailers said in a press release. “The entire consumption value chain will feel the impact of store closures. There is an urgent need for immediate economic stimulus to ensure continuity of retail stores and consumption in India.” RAI said it has sent letters on Thursday to the Prime Minister’s Office (PMO) and the finance minister.

- **Production Industry: -** The branch of manufacture and trade based of the fabrication, processing, or preparation of products from raw materials and commodities. This includes all foods, chemicals, textiles, machines, and equipment. This includes all refined metals and minerals derived from extracted ores. This includes all lumber, wood, and pulp products.

## **Global Effect on Production Industry**

COVID-19 did not just start anywhere in China. Wuhan, the city that hosted the first major outbreak of the coronavirus, is one of China's major automotive production (parts & cars) sites. GM, Honda, Nissan, Peugeot and Renault all have manufacturing plants in Hubei Province, of which Wuhan is the capital. It is fair to say that the car industry was the first economic victim of COVID-19, and the economic impact of the virus became global faster than the virus itself.

### **PASSENGER VEHICLE SALES JANUARY/FEBRUARY**

<b>Country</b>	<b>Jan/Feb 2019</b>	<b>Jan/Feb 2020</b>	<b>Y-o-Y</b>
<b>Japan</b>	<b>887,402</b>	<b>790,288</b>	<b>-10.94%</b>
<b>China</b>	<b>3,250,000</b>	<b>1,831,000</b>	<b>-43.66%</b>
<b>India</b>	<b>552,334</b>	<b>514,230</b>	<b>-6.90%</b>
<b>Malaysia</b>	<b>44,264</b>	<b>39,127</b>	<b>-11.61%</b>
<b>Philippines</b>	<b>16,958</b>	<b>14,636</b>	<b>-13.69%</b>
<b>Thailand</b>	<b>78,090</b>	<b>71,688</b>	<b>-8.20%</b>
<b>Australia</b>	<b>55,201</b>	<b>43,142</b>	<b>-21.85%</b>
<b>Korea</b>	<b>221,771</b>	<b>181,324</b>	<b>-18.24%</b>

**Domestic OEM sales only**

## **Effect on Production Industry in India**

According to a report in ET Auto, the Indian automobile industry is likely to suffer an estimated revenue loss of around 13,000 crores to 15,000 crores due to the coronavirus outbreak. With the pandemic disrupting the domestic economy and several businesses in the country, the automakers will have to bear the estimated revenue loss if they are forced to shut down the operations for the next 10 days. A majority of the manufacturers like Maruti, Hyundai, Honda, Suzuki, TVS & Tata Motors have already opted for the temporary shutdown the operations. Some companies that are yet to announce closure are Kia Motors and BMW India. However, MG Motor India has decided to introduce disinfect & deliver program initiative for the customers wherein the vehicle will be completely sanitised to ensure minimal risk of infections.

As per the ET Auto report, the Indian auto sector earns gross revenue of around 2,000 crores each day and shutting down the production by the manufacturers for the next 10 days will result in a revenue loss of up to 15,000 per day wherein the annual business of the sector stands at ₹7.8 lakh crore. Additionally, the industry also contributes around 7.5 per cent to India's overall GDP, which accounts for 49 per cent of its manufacturing sector.

However, the estimated loss can be recovered, once production resumes and the manufacturers are willing to ramp up the production and increase the capacity utilisation. The domestic automobile sector is already going through a negative phase as of now with severe underutilisation of capacity due to slow demand over the last year. Now, the coronavirus pandemic has forced the automakers to stop production at their facilities and force their non-manufacturing employees to work from home.

As of now, the OEMs have halted the production at their selected facilities where the state government have issued orders for the complete shutdown. But, seeing the magnitude of the impact and exponential rise in the cases of coronavirus in the last two days, some experts believe that the auto sector may be heading towards a 100 per cent shutdown.

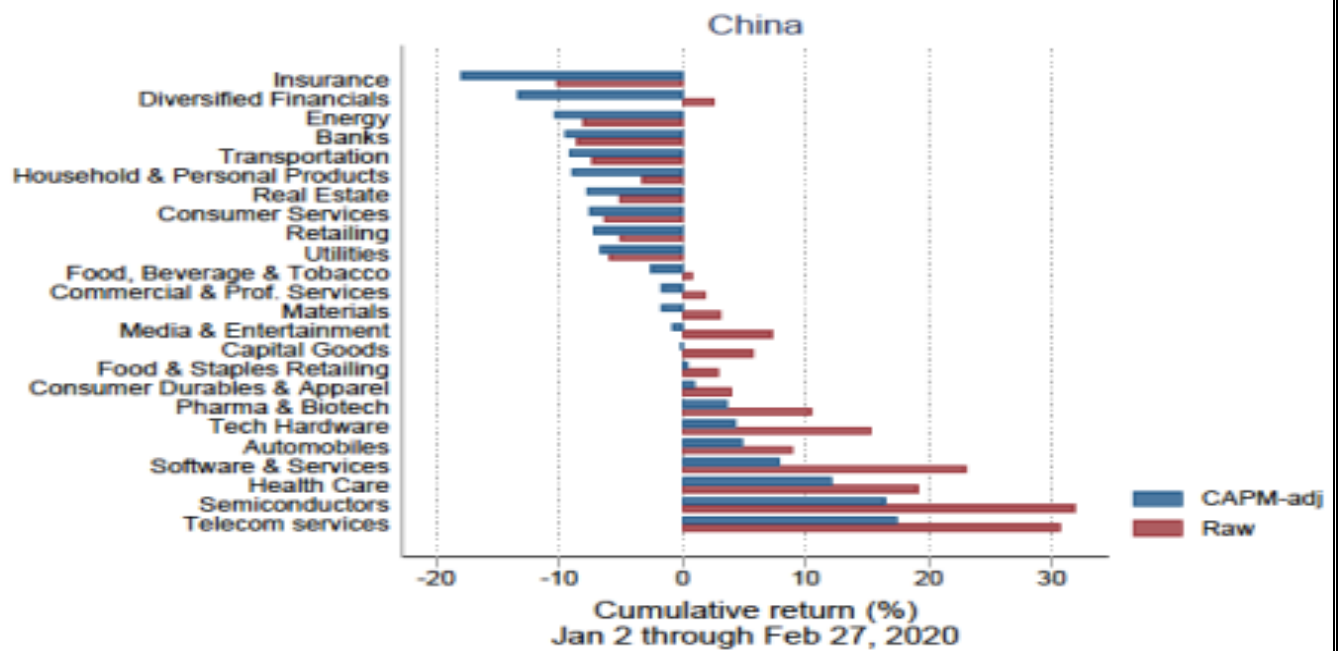
According to the latest data from the Union Health Ministry, there has been a steep rise in coronavirus cases that jumped to 396 till Sunday.

- **Financial Market:** - A financial market is a market in which people trade financial securities and derivatives at low transaction costs. Some of the securities include stocks and bonds, and precious metals.

### **Global Effect on Financial Market**

We begin our analyses with an overview of industry-level returns in China, the US, Europe, and Asia ex China, throughout the full months of January and February 2020 (the latest data available to us for countries other than the US). While discussions in the media have generally used raw returns, we also compute CAPM-adjusted returns that is returns adjusted for a firm's exposure to the overall market.

The industry averages of cumulative returns for China (top panel) and the US (bottom panel). Energy, Retailing and Transportation were losers both in China and the US. Healthcare gained substantially in both countries. There are also differences across regions. For example, the Semiconductor sector gained sharply in China, but lost in the US. Utilities lost in China but gained strongly in the US.



Stock returns by industry in China and the US, January to February 2020

### Effect on Financial Market in India

In wake of the novel coronavirus (Covid-19) outbreak, over 50 per cent of Indian companies see impact on their operations and nearly 80 per cent have witnessed decline in cash flows, says a survey.

The pandemic has presented fresh challenges for the country's economy, causing severe disruptive impact on both demand and supply side elements which has the potential to derail the growth story, according to a poll conducted by industry body FICCI

The country is already experiencing a slowdown in growth. In the third quarter of the current fiscal, the economy grew at 4.7 per cent, slowest in six years. A significant 53 per cent of Indian businesses indicate the marked impact of the coronavirus pandemic on business operations even at early stages, Federation of Indian Chambers of Commerce and Industry (FICCI) said. The pandemic has significantly impacted the cash flow at organisations with almost 80 per cent reporting a decrease in cash flow, the survey showed.

The findings were based on interactive sessions and survey conducted by Ficci amongst the industry members.

"Besides the direct impact on demand and supply of goods and services, businesses are also facing reduced cash flows due to slowing economic activity, which in turn is having an impact on all payments including to those for employees, interest, loan repayments and taxes," it said.

It said combination of monetary, fiscal and financial market measures is needed to help the businesses and people cope with the crisis.

"The Reserve Bank of India (RBI) need to support the Indian industry and economy at this juncture by bringing down the cost of funds further through reduction in policy rates, say, by close to 100 basis points," it said.

Banks should be given a flexibility to reschedule payment terms without the need for provisioning.

The survey said there is need to maintain liquidity at surplus levels and provide special

liquidity support for any companies/NBFCs/banks that come under strain due to intensifying risk aversion in financial markets or due to large demand shock.

With the corporate bond and commercial paper markets are facing liquidity challenges, the RBI should intervene, either directly or through the commercial banking system, to ensure adequate flow of funds into the market.

The government should not cut its capital expenditure plans despite any shortfall in tax collections, it said. It also said the Insolvency and Bankruptcy Code (IBC) should be suspended for a short period for sectors like aviation and hotel, that are severely impacted due to Covid-19.

The survey showed that more than 60 per cent of respondents have seen impact on their supply chains and expect the situation to worsen further.

"Nearly 42 per cent of the respondents feel that it could take up to three months for normalcy to return," the survey highlighted.

Most of the organisations have brought in a renewed focus on hygiene aspects concerning the pandemic.

Almost 40 per cent have put in place stringent checks on people entering their offices and disinfection while nearly 30 per cent organisation have already put in place work-from-home policies for their employees.

- **Households:** A household consists of one or more people who live in the same dwelling and share meals. It may also consist of a single family or another group of people. The household sector includes the entire population of society. It includes all of the consumption-seeking members of society--the entire population. In effect, the economy exists to satisfy the wants and needs of the household

### **Effect on Global Household:**

The outbreak of coronavirus will have a larger negative effect on the global economy. The virus has brought large parts of the world's second largest economy to a standstill and its impact was felt across industries.

China was the sixth largest economy, accounting for only 4.2 per cent of world GDP. China is now the world's second largest economy, accounting for 16.3 per cent of world GDP. Therefore, any slowdown in the Chinese economy sends not ripples but waves across the globe.

The effects of coronavirus are most pronounced in household consumption and somewhat mitigated in the industrial sector because factories are seasonally idle during this period.

Nevertheless, in many ways China's economy is more vulnerable today than it was in 2003, with productivity and overall economic growth already slowing and the effects of the US-China trade conflict.

### **Effect on Indian Household:**



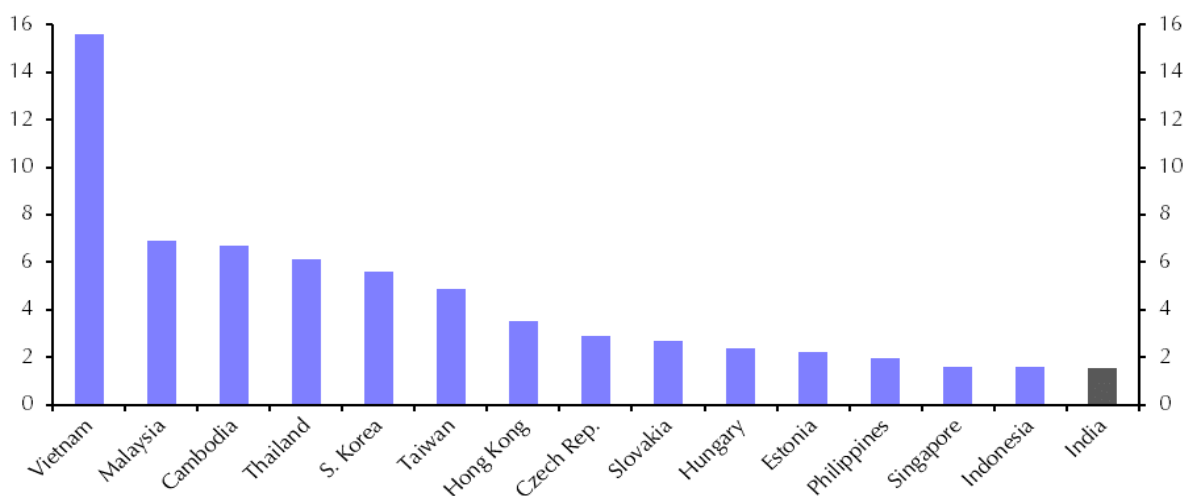
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Nevertheless, in many ways China's economy is more vulnerable today than it was in 2003, with productivity and overall economic growth already slowing and the effects of the US-China trade conflict.

India's total electronic imports account for 45% of China. Around one-third of machinery and almost two-fifths of organic chemicals that India purchases from the world come from China? For automotive parts and fertilisers China's share in India's import is more than 25%. Around 65 to 70% of active pharmaceutical ingredients and around 90% of certain mobile phones come from China to India.

In terms of export, China is India's 3<sup>rd</sup> largest export partner and accounts for around 5% share. The impact may result in the following sectors namely organic chemicals, plastics, fish products, cotton, ores, etc.

It has been seen that some sectors of India have been impacted by the outbreak of coronavirus in China including shipping, pharmaceuticals, automobiles, mobiles, electronics, textiles, etc. Also, a supply chain may affect some disruptions associates with industries and markets. Overall, the impact of coronavirus in the industry is moderate.



**Conclusion:** Effect on trade about the impact of the COVID-19 on China's productive capacity, the most recent statistics point to a significant downturn. The full effect of COVID-19 on global value chains will become clearer in the coming months. However, one question of importance is how a disruption in Chinese supply of intermediate inputs will affect the rest of the world. Based on the analysis two key points can be made.

- If the outbreak of COVID-19 is contained mostly within China, the fact that Chinese suppliers are critical for many companies around the world implies that any disruption in China will be also felt outside China's borders. European, American and East Asian regional value chains will be disrupted. The estimated global effects are subject to change depending on the containment of the virus and or changes in the sources of supply.
- It is expected that the spill over effects of a disruption in Chinese supply will be diverse across economic sectors and dependent on the geographic localization of the COVID-19 outbreak and of the containment measures within China. For example, automotive industry's intermediate exports may fall relatively more as the industry is geographically localized in the region where the outbreak of COVID-19 occurred. Importantly Because of lack of information this note does not consider this second aspect. Once sectoral data on Chinese output is available the likely effect on the various global value chains will become clearer.

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