

India's Global Dependence in Telecommunication and E-Commerce Sector

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ABSTRACT

With the globalisation of the world, the trade has been interconnected from one country to another. Foreign policy plays an important role for maintaining a good relations with the other country as well to increase the trade. India's geopolitics character has a significant impact in India's trade. Telecom services has a significant contribution in India's GDP. It contributed around 6.5% of total GDP in 2018-19. With the increasing internet penetration, E-Commerce has been increased exponentially since last decade. In this report, I have mentioned how the globalisation has impacted in telecom and e-commerce sector in India. Also will discuss how the world forces will help improving India's telecom and e-commerce sector. FDI inflow in telecom and e-commerce has a significant to boost "Make in India" initiatives and how online services will expand with the penetration of internet after Jio came into market. With a population of 1.3 billion, India has a internet subscriber of around 665 million and is the second largest internet users country of the world behind China.

The project describes the strategy needed to adopt in telecom and e-commerce sector and its impact due to global forces.

This project describes about India's global dependence in e-commerce and telecom sector and how significantly the trade has improved and what strategies has been adopted with various countries to maintain the trade. Also it describes about how much trade has been associated with various nations and contribution of telecom services, its equipment and increasing of e-commerce. The report drafted here also mentioned how weaponization of the trade playing a role in India's telecom and E-commerce sector.

Finally, the global consequences have been mentioned how it has impacted due to the current pandemic and how the work culture will affect post pandemic.

CHAPTER 1

INTRODUCTION

India being the 2nd largest population of the world, it has the world's 2nd largest market after China. The number of internet subscribers has crossed more than 635 million since the last decade. With the growing mobile economy rapidly it has a contribution of 6.5% of GDP which can be seen to contribute more in the coming years. With the increase of internet and broadband penetration, it has been boosting Government's digital India campaign. To transform India into global communication hub, the Govt. of India has been working proactively. Being the 2nd largest consumer of global data, its gross revenue stands at Rs 61,535 crore in FY19. Currently there are five key companies in the market in India viz: MTNL, BSNL, Bharti Airtel, Vodafone-Idea Limited and Reliance Jio Info-comm. The strategy adopted by each player is to focus on quality and cost effectiveness to grow the market share and among them Jio seems to be able to attract more subscribers. Both the internet penetration and E-commerce market go hand in hand. E-commerce market scope can't be ignored with the internet services. E-commerce market has been grown huge in India since 2010. The E-commerce sector has shown the dramatic changes in the last decade. As per the report E-commerce sector grew from \$3.9 billion in 2009 to USD 38.5 billion in 2019.

With the increase of globalisation, the country's economy has been related to one another. India is not unlike of that too. With the increase of technology and various E-commerce platform the business model has been changed since the last decade. Gregarization of human behaviour has changed the geopolitics of the world.

The E-commerce market has been growing tremendously and is expected to be second largest market in the world by 2034 surpassing US. But due to the Covid'19 pandemic e-commerce goods and service has been adversely affected in the current scenario. Other than that it can be seen having positive impact. As the world been suffering a lot due to pandemic and the viruses has been transmitted human to human, social distancing will be the basic norms of human life. Due to this most of the malls or public gathering will be significantly low as compared to previous years. For this using of internet or e-commerce business have the better opportunity to grow to large extend.

Taking into account the globalization, the pandemic has highlighted the glaring need to bridge the digital divide both within the country and across countries.

With the introduction of Jio in the market in 2016, the Indian telecom industry took the different shape. Jio made the revolutionary changes in the using of data among the internet customers through its quality, services and cost. As per the report India stands as the cheapest data rate of the world.

The current Covid'19 pandemic impacted both the global economic outlook and the living and working arrangement to large proportion of the world. As much of the world is still in lockdown the impact has been how the telecom operators will maintain the network and meet the surging traffic volumes. This became a challenging factor for most if the telecom operator services as work from home has been initiated at this stage. This gave an opportunity for most of the services operators to reach much customers with better network penetration.

There can be a short term loss for the Indian telecom operators as 90% of customers in India with pre-paid account and are prevented from visiting the stores from where they can top up.

But the Reliance Jio stock rise to 14% following the news that Facebook will acquire the minority stake of 9.99% for US \$5.7 billion (Rs 43,574 crore). Despite the financial crisis Vodafone-Idea shares stand at 3.53% till April'20. Bharti Airtel able to surged 17%.

The investment in Reliance -Jio will be for long term which is the biggest FDI in telecom sector in the recent time. This shows the positive signal for Indian market and for different foreign investment which can directly boost the Indian E-commerce market too. Reliance has able to acquire the paths to reach to billions of people to through WhatsApp as it is acquired by Facebook few years ago. WhatsApp already plays an important role in helping people and businesses connecting across the globe. As Facebook owned WhatsApp chat services is planning to launch a payment services in future, is can term as win-win situation for both the party as Jio occupy the largest customers share in Indian telecom market.

Due to low investment since the decade in the telecom sector , its requires government support. The Facebook- Reliance deal will make Jio stronger and Bharti Airtel, Vodafone-Idea will find it hard to match up to it. This will lead to duopoly, dominated by Jio and also can lead to loss in competition and it will affect in negative way for the customers in India.

The coronavirus pandemic has changed the structure of the global market and has direct impact in the telecom and e-commerce sector. With the guidelines asked from the corporate sector to work from home, the use of internet service has increased exponentially.

CHAPTER 2

OBJECTIVES & SCOPE AND LITERATURE REVIEW

Objectives:

- ❑ Analysing the growing market of India in E-commerce and Telecom sectors and how it is contributed to the Indian Economy
- ❑ Studying the effects of Employment in E-commerce and Telecom sectors
- ❑ Also analysing how the multinational corporation's investment in India is likely to act as a constituency of support for India in its home country

- ✓ This study will build the scope of how both the e-commerce and telecom sectors go hand-in-hand and will able to develop business strategies in e-commerce by the Indian digital players

Methodology:

- ❑ The study of this topic is conceptual survey with exploratory cum descriptive in nature. The analysis is done based on secondary data which is availed from various journals, articles, newspaper, internet and books.

Literature review:

E-commerce and Telecom sector plays a very important role in Indian economy. The Telecom sector contributed 6.5% to total GDP in the year 2018-19 as per the report cited by London based GSMA. The Economic Survey 2018-19 said that telecom sector may contribute 8.2% by 2020 to India's GDP but the outbreak of Coronavirus has shown the negative impact to India's E-commerce and telecom sector. The

E-commerce sector has shown the dramatic changes in the last decade. As per the report E-commerce sector grew from \$3.9 billion in 2009 to USD 38.5 billion in 2019.

E-commerce is probably the best thing that happened to changing middle class population of the country. Many small scale industries are able to grow exponentially through e-Commerce. With increase in population and literacy rate, it seen that the uses of internet has increased exponentially which results in increasing E-commerce business in India. There are some key factors that can be attached for rising internet penetration i.e. due to rise in young population and activities related to academic, business are interlinked through internet and for this the uses of internet among young population and business has increased sharply. Also the government of the country has allowed 100 percent FDI in the E-commerce sector which has boost the investment in the last few years. These investments indicates to the potential rise in the upcoming years.

With the increase of globalisation, the country's economy has been related to one another. India is not unlike of that too. With the increase of technology and various E-commerce platform the business model has been changed since the last decade. With the gregarization of human behaviour has changed the geo-politics.

In my findings I have come out the few global issues that India need to tackle for trade-

- Weaponization of trade
- Decoupling by US-China
- Continuous changing of the guidelines by the nations faced MNC to regulate taking into account the geo-political environment
- China to remove all foreign computer equipment by 2024
- Global narratives

In my project analysis I have divided the world into five regions

- i. ASEAN
- ii. China
- iii. US
- iv. European Nations
- v. Latin-America and Caribbean region

In the current scenario India can't ignore any nations for trade or any geo-politics strategies to achieve 5 trillion economy by 2024. Being world's second most populated country after China, India has the second most internet users in the world. The E-commerce sector touches USD 38.5 billion in 2019 only because of internet penetration in the country.

Also demographic location suggest that India has tremendous potential to grow. Like other developing and developed nations, we know India's trade record is never been spotless and it has experimented with various ways to boost the export. India's trade relations all over the world will bring the balance of trade from exploiting also to balance with China's economic expansion.

CHAPTER 3

EVOLUTION OF TELECOM AND E-COMMERCE SECTOR IN INDIA

3.1 Telecommunications:

Generally, the telecommunication emerged in 19th century in India, when the East India Company allowed for development of Infrastructure in 1850. It was first implemented in Calcutta for the speedy passing of information. While experiment with telephone also started in India in the year 1882 when telephone was first invented in 1876. But the performance in the use of telephone was very poor and it was reflected too in the state of national economy due to backwardness Post Independence.

Major reforms started in the year 1985 when Department of Telecom was formed under Ministry of Communications. 1990's liberalization changed the face and pattern of development thinking. Introduction of National Telecom Policy opened the new horizons. With the engagement of National Telecom Policy, the government set up independent regulatory body for telecommunication i.e. TRAI (Telecom Regulatory Authority of India).

TRAI was set up to strengthen investor's confidence and ensuring fair competition and also for looking after the regulations and implementation of telecom equipment in the country. Since 2000, the government started to issue licence and made policies for the private companies to operate in the country. The government further reduced license fees for the cellular service providers and increased the allowable stake to 74 per cent for foreign companies. Due to reduced in licence fees, the cost of the call has decreased to affordable rate and it enables common citizen or middle class family to use the cell phones. Since then India came to become the 2nd most internet users of the world behind China.

After the replacement of most of the old technology in the telecom operators since 1990 and switch to digital technology and made it possible for various services like call transfer, waiting for call to end, abbreviated dialing numbers, reminder services and also wake up calls.

By 2008, the total GSM and CDMA mobile subscriber base in India reached around 375 million. With the adaptation of 3G and BWA (Broadband Wireless Access) in India in the year 2010, the telecom sector took the new shape in the country. With the penetration of 3G network, India's e-commerce sector also took the dramatic changes. This was the time when the e-commerce business took the momentum. With the further implementation of LTE since 2012, India grew to become the 2nd most internet users of the world and also designated as the fastest growing market of the world. Airtel was the first company in India to launch 4G in India using TD-LTE technology. 4G filled the gaps of 3G in terms of flexibility, efficiency and scalability. Mobile workforces of an organization are increasing now a days. Since the introduction of JIO in market in 2016, internet users in India reached more than 655 million. Compared to

3G, 4G LTE delivers higher bandwidth, huge network capacity along with reduced latency, which results in faster network response and more efficient communication.

E-Commerce

Formally in 1995 first wave of E-Commerce evolution started in India, VSNL (Videsh Sanchar Nigam Limited) introduced dial-up internet in 6 cities. Since the introduction of economic liberalization after 1990, introducing high taxes and restrictions to imports and also due to relaxed tax policies, lots of SMEs growth was recorded. Ending the licensing regime was also the factor for the growth of small scale industries and information technology. India's first B2B e-commerce business was IndiaMART.com by Dinesh Agarwal and TradeIndia.com by Bikki Khosla in the year 1996. With the introduction of Naukri.com by Sanjeev Bikhchandani online recruitment and advertisement started. Apart from all these developments, India's first online banking site launched by ICICI in 1997. While first wave of e-commerce remain low due to low internet penetration and small fraction of users of internet.

With the second wave in of e-commerce in 2005 took the dramatic changes. It all started with the aviation industry with the availability of online booking facilities. Even Indian railways implemented e-ticketing in the same year. Since 2007 online retail brought a new changes in life style. With the increase of e-commerce market, Indian e-commerce traders started to follow global trends and daily dealing. Due to this the buying websites has substantially increased and results in increased of visitors in the site. Changing behaviour and lifestyles has also shown impact due to emergence of e-commerce market. Demands for new innovation and style has increased and markets and forced the traders to prioritise the customers satisfaction. So this forced the retailers to adopt the global business model as the e-commerce market has no boundary. This grab the opportunity for venture capitalists and invested huge for the future growth.

Online travellers was dominating the digital commerce till 2013 but since 2014 online retail is taking up and more and more online shoppers are showing interest to shop online. With the changing lifestyle and internet penetration, India's retail business has grown exponentially since 2014. The E-commerce business in India is expected to reach US\$ 120billion in 2020.

3.2 Role of Technology:

The development of telecom infrastructure is critical to the nation and no doubt India had made a significant progress in it. But there is a long way to go for India to be one the most affordable market of the world in telecom sector. As we know Indian telecom industry has shown a huge changed post liberalization. It has witness substantial growth specially in wireless segment since the last decade. It has provided new set of services from voice and data services, Wi-max, VPN to virtual private network.

GSM was the predominant 2G technology that swept through most parts of the world as well as India. With the advancement of technology all over the world, Indian telecom industry also changed gradually though implementation might be in lag of 2-4 years. With the adaptation of 2G in the mobile services, it provided the better speed for transmission of messages or for calls. It was due to use of radio signals where as in 1G, we could see use of Analog radio signals. The concept of 2G technology was introduced mainly to provide voice clarity services and slow data transmission. The introduction of 2G bought a radical change in the increase of mobile phone users in India. However, since technology keeps on changing with passage of time, upgraded version of 2G like 2.5G,3G and 4G came into force.

Adoption of 3G technology in 2008 was another wave in India in telecom sector. MTNL was the first 3G mobile service provider in India followed by BSNL in 2009. Among the private sector Tata Docomo was the first to provide 3G network in India in 2010 followed by Reliance Communication. It was the time when E-Commerce sector emerged exponentially too. With the new adoption of 3G since 2008, the online retail business started to take the momentum.

While with the immersion of 4G using LTE technology in India in 2012 by Airtel, the E-Commerce sector and online services along with internet users has increased. 4G offered voice over internet protocol (VoIP) unlike 3G which offered voice based services. LTE is the current latest technology in India provided by telecom services. All these technology is changing the telecom industry. With the changing of technology in telecommunication services all over the world, Indian communication services provider too adopted new version to fill the gap in communication. India kept its socio-economic development with the help of technology keeping in mind the technological revolution of the modern world. But risk from technologies are inevitable and constant. Because there may be information leakage or compromise as the telecom equipment that is procured and deployed may have malware and/ or bugs. The sophisticated attackers of the modern age target these equipment to inflict significant economic damage and public unrest. The extent of such breaches could have substantial impact on the national security. Also the e-commerce players are launching their own new mobile-friendly applications and gradually phasing out the websites, encouraging their customers to make mobile payments to reduce costs and to grow the business. With faster data availability, social media also enable to share information. IoT is also another new technology that can boost the telecommunication sector as IoT offers unprecedented degree of inter connectivity.

With the advancement of modern technology, cyber security continues to be one of the most challenging threats to government and private sector. Generally there was hardly any strict checking for the telecom equipment to be installed which rise the security concern ofr the host countries. However, the current environment demands that these equipment and associated infrastructure be thoroughly tested to eliminate any possible security threat to the organization or to the nation.

Launching of 3G and 4G was impossible to introduce without globalization. Employment opportunities in private telecom players also increased due to globalization. Since the liberalization, FDI policies started in India and private companies are invited for investment in various sector. Between 2000-2015, Indian telecom industry received US\$ 18.4 billion as FDI inflow and it was the fourth largest highest sector then receiving.

3.4 Globalization and Government Role

India joined as a founding member of WTO in 1995 after the liberalization to integrate Indian economy with the world economy. Because of this India got the market access to different countries without any bilateral trade agreement. Also helped in achievement of advanced technology in low cost. India's position in globalisation can be seen from the services sector which was estimated around US\$ 30billion between 1990-2000. For liberalizing the telecom sector, India made certain commitments in WTO. But India's liberalization in telecom sector seems much more than the commitments adopted in the actual policies of WTO. This shoes India has given much more liberalized. Also the extent of foreign investment in India is much more than 25% that was committed in WTO. And this development was due to allowing of FDI in India. The Indian telecommunication was state owned until 1991,when the DoT began the process of introducing private participation in the sector by inviting bids for private sector participation. After that the foreign investment has increased significantly from US\$ 177.69 million in 2000 to a high of US\$ 6.2 billion in 2017.. The following shows the FDI inflow in telecom sector in the following years:

Years	In Billions
2000-2012	\$ 12.62
2013	\$ 1.3
2014	\$ 2.9
2015	\$ 1.3
2016	\$ 5.5
2017	\$ 6.2
2018	\$ 2.6

Table 1: FDI inflow in India

India needs a huge investment in building the telecommunication infrastructure over the next two decades.

Airtel was the first private telecom services provider in India in 1998. There were two major characteristics that changes the telecom and e-commerce i.e. due to rapid technology advances and the understanding its growth that liberalize the telecommunication and e-commerce. With the inflow of

foreign players both in e-commerce and telecom sector since 1990's there is rapid changing in market structure in India. E-Commerce sector climbing to one of the world's second largest market in India reaching to US\$120 billion by 2020. As telecommunications markets are liberalized around the world, the role of national governments is changing from that of a direct player in the industry to that of policy maker and regulator. Also the international telecom trade strategies has been changing taking into account the policies of country to country. The framework varies regarding the nation policies.

With growing young population and crossing more than 650 million mobile subscribers, India has been finding itself point to point changes dramatically with the customers behaviour, its demand to fulfil and governments to operate and collaborate with the world for digital revolution. The country has seen massive transformation since the last decade in the digital world with growing e-business and its demand. The potential for e-business to grow has been swelling at a much faster rate than most of developed and developing countries.

The recent investment in Jio by Facebook and KKR, both American based company shows the result of global market strategy. Amazon's investment in India and Walmart acquiring Flipkart shows the global trends how the trade are globalized. Investors has funded aggressively in the E-Commerce sector since 2014 due to strong growth prospects. An observable change is seen with the changing behaviour of the human and its selection of purchasing. With the more internet penetration since Jio came to market, people are becoming more tech oriented and have started online purchase and sharing of information through social media networks and other websites. With the increasing social media interaction and meetings, telecom services has a greater advantage to reach even to the remote places and to increase its user base.

CHAPTER 4

INDIA’S TRADE WITH THE WORLD

4.1 Trade with ASEAN Economies

India and ASEAN nations combined economy stands at 5.7 USD trillion at present. The Indian government reported that the GDP is expected to reach US \$ 5 trillion by 2024 against US \$ 5.2 trillion ASEAN economies. Economic engagement with ASEAN will remain crucial element of India’s “**Act East Policy and strategy**”. Through this policy the relationship has matured across trade, investment, defence, security, culture and education into a dynamic and progressive collaboration. As global E-commerce market is expected to reach UD\$ 4.5 trillion by 2021, India and ASEAN are the fastest growing market in this sector. Computers and information services form a major trade of India with the ASEAN. The following table shows India’s trade with ASEAN.

India's trade with ASEAN	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
EXPORT (Bn. USD)	33.01	33.13	31.81	25.15	30.96	34.20	37.47
%Growth	-10.17	0.38	-3.99	-20.8	23.09	10.46	9.56
IMPORT (Bn. USD)	42.87	41.28	44.71	39.91	40.61	47.13	59.32
%Growth	1.68	-3.71	8.33	-10.9	0.88	16.04	25.86
TOTAL(Bn. USD)	75.87	74.41	76.53	65.06	71.57	81.33	96.79
TRADE BALANCE (Bn. USD)	-9.86	-8.14	-12.9	-14.75	-9.65	-12.93	-21.85

Table 2: India’s import export data with ASEAN

India has a trade deficit of USD 21.85 billion with ASEAN with Indonesia having the largest trade deficit followed by Malaysia. India shows a major trade deficit with most of the big economy countries which became very important for India to find out the different strategies to cut down the trade deficit. Most of the telecom equipment has been imported from the various nations of the world. Among them India imported 12% of telecom equipment from Vietnam while from Singapore stands at \$2.6 Billion.

This result shows that it became critical for Govt. of India to coherence with “Make in India” and “Digital India”. So it is to be noted that India cannot afford another wave of import surge in electronics arising from digitalization. India have to boost up the manufacturing unit of equipment and can’t depend on imported telecom equipment and control devices as the backbone of our critical digital infrastructure.

India’s top five sectors attracting FDI and ASEAN’s investment in India are:

- i) Services
- ii) Telecommunications
- iii) Computer software and hardware
- iv) Construction Development
- v) Automobiles

4.2 Trade with China

India faces various security as well as commercial implications with China. China stands at 1st position as trading partner for India. Most of India’s mobile equipment has been traded from China. The impact can be seen in this year due to coronavirus outbreak. Huawei and ZTE operated in India since 1998. Huawei became the simple task of adopting the most affordable and reliable vendor for the technology employing around 8000 in India. As per 2018 India has a trade deficit of US \$ 53.1 billion. The following figure shows the value of import and export since 2016 to 2018

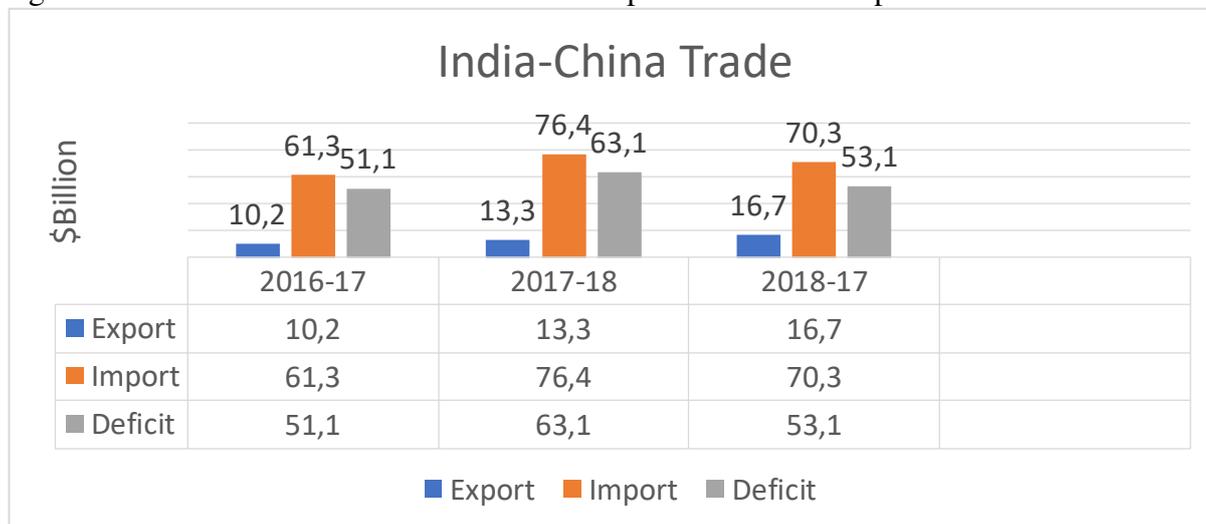


Table 3: India-China trade

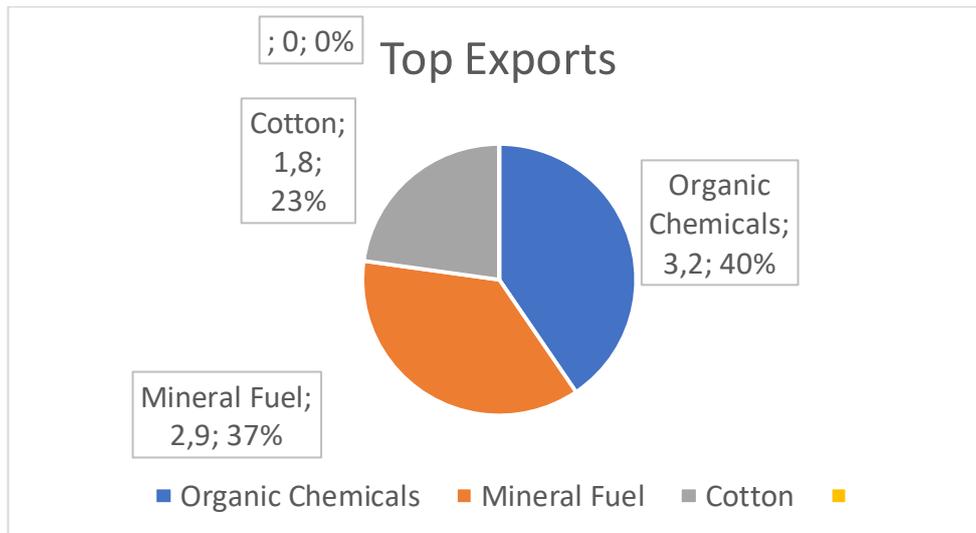


Table 4: India’s export to China

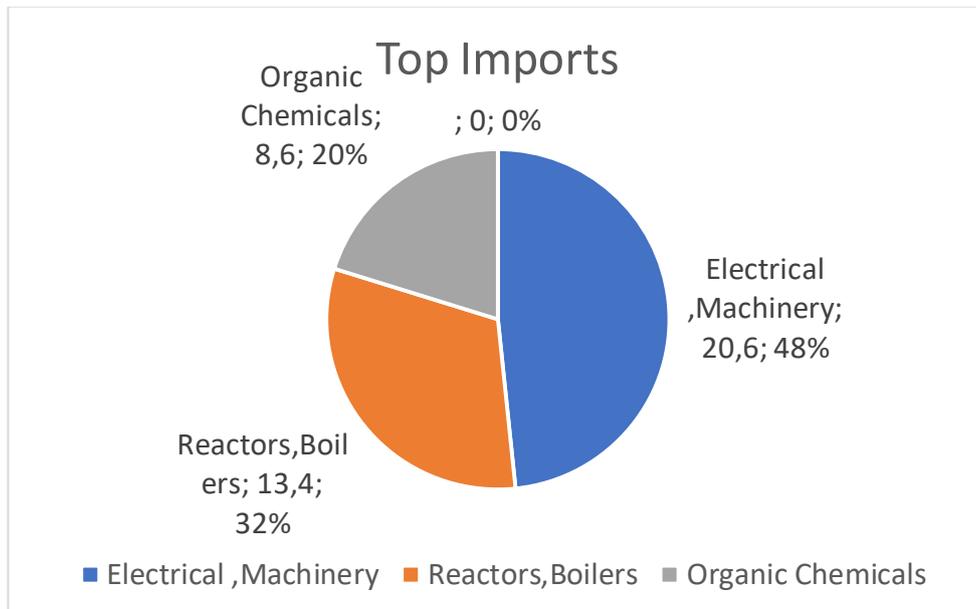


Table 5: India’s import from China

The above figure shows the top imports and exports items of India. It can be seen that import of electrical and machinery items stands at 48% of total import which is around US \$ 20.6 billion. This analysis shows that India needs to improve a lot in manufacturing unit of machinery and electrical equipment including telecom equipment. Local manufacturing of telecom equipment is low but there have been some attempts made to bring under control.

The implementation of 5G technology became a strategic decision for India due to US warning for the national security concern. In spite of rhetoric statement from the US administrative India must view from the prism of the border India-China relationship. India allowed Huawei to trial in India which split the opinion among the three big giants telecom operators in India- Airtel, Vodafone-idea, and Jio. The advantage for Huawei is its low cost and its potential to sell the equipments at much lower rate than other foreign players. Also its attractive financing schemes and quality of the equipment.

Talking about the E-commerce sector in India , it has started abit late as compared to China.But the good thing about being a late developing economy is that we have such a lot of international experiences to learn from. The digital retail share of India is 5% compared to 15% in China. Alibaba is focusing more on smaller early stages deals in India. The following figure shows the various investment in E-commerce sector in India

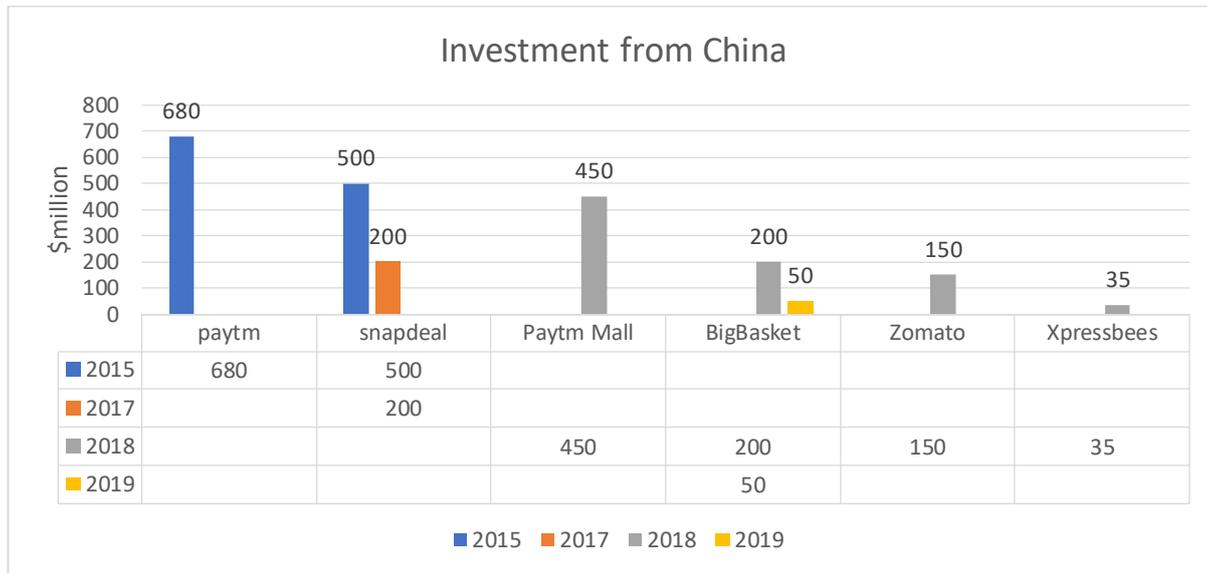


Table 6: China’s investment in India

The above figure shows that China has invested in major e-commerce platforms in India over the years. Paytm and Snapdeal acquired an investment of US\$ 680 and US\$700 respectively since 2015. So the policy reforms in India in e-commerce sector have to be friendly policy to attract the FDI.

Guo Ping, rotating chairman, at Huawei, the largest Chinese technology giant with annual revenue of more than 120 billion dollars annual said that their survival is at stake after US bans on semi-conductor exports. After the ban of semi-conductor by US government, it is going to impact Huawei its expansion plan and its maintenance and for the operations. Huawei has been operating in more than 170 countries around the world and it is worth billions of dollars.

After the pandemic and China has been accused around the globe for the negligence to control the spread of virus, it face much criticism and most the manufacturing companies wants to shift their unit to either Vietnam, India, Thailand or Malaysia. Lava, mobile handset manufacturer decided to shift the entire manufacturing and R&D hub to India and it will boost the govt. campaign such as “Make in India”. As

per the Chairman and Managing Director of Lava, the company will invest Rs 800 crores in next five years.

As it is known that, Huawei is aiming to become a global technology giant with a contract to roll out 5G infrastructure in all major European nations, but due to criticism faced by the world after Coronavirus pandemic and latest American ban, none of this would be possible for China. A delay can be seen in India trial for adopting 5G. The auctions which was supposed to be in the month of march has been postponed without any further notice due to the lockdown in the country.

4.3 Trade with US

The trading of India with US stands at the 2nd position after China. The US-India trade relationship is rapidly approaching a point of crisis. Both the countries are not able to reach the settlement and not able to address the growing trade obstruction. This lead to growing trade tensions. Even after the great event like “Howdy Modi” and “Namaste Trump” the failure for trade agreement can be seen. This places both the nations at the peak point to negotiate. USA is one of the largest trade exporter country for Indian traders and it is the 2nd largest trading partner. As per the report from Ministry of Commerce bilateral trade in goods and services grew at an average annual rate of 8 per cent from 2008-2018, double in value from USD \$ 68.5 billion to USD \$142 billion.

The following two diagram shows the import and export of India with US.

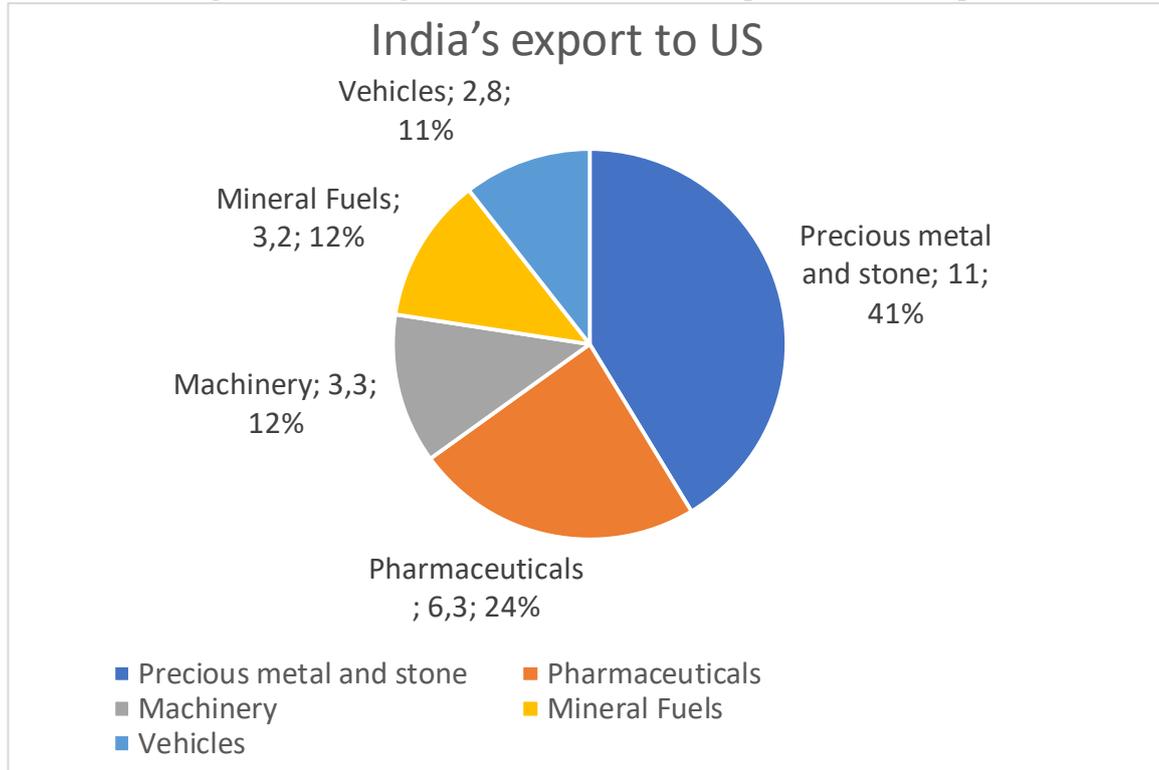


Table 7: India's export to US

India's import from US:

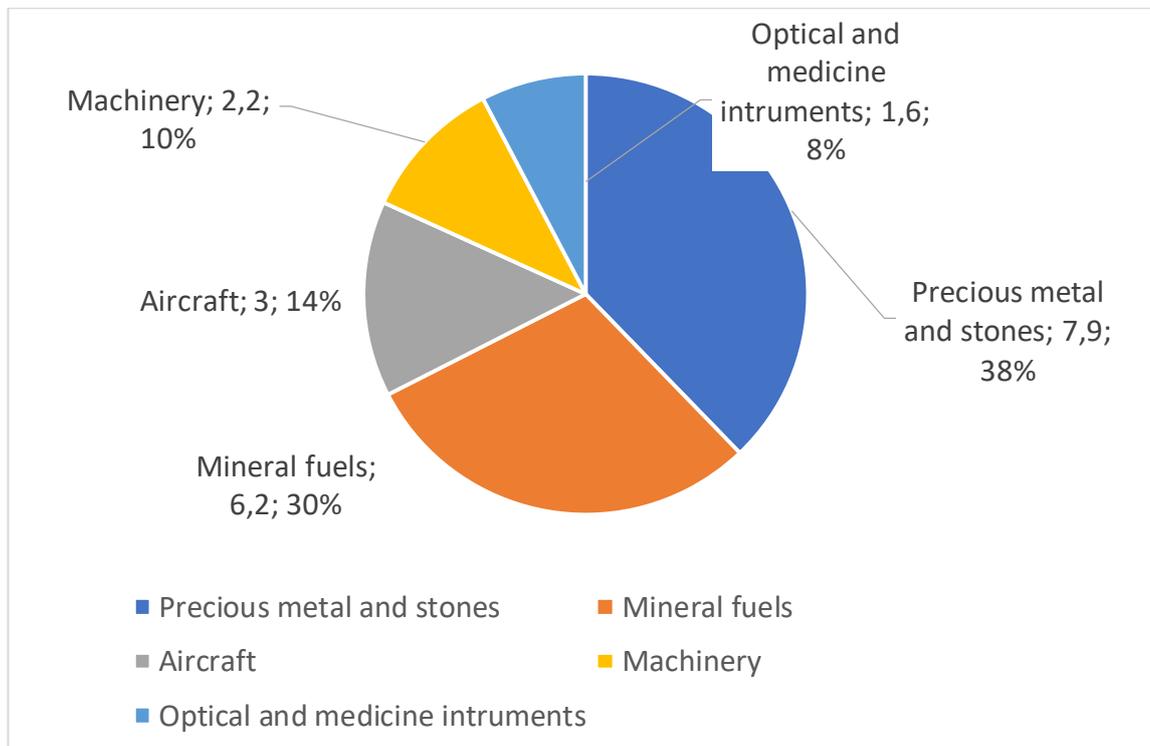


Table 8: India's export from US

The two figure shows that India import for machinery is around 10% of total US's import which is around US\$ 2.2 billion. Among them the telecom equipment imported is only 2% of total import of machinery (\$415 million). The Govt. of India charged tariff of 20% of the telecom equipment imported across the globe. This has been charged to counter the import from China, Hong-Kong and Vietnam as large portion of telecom equipment has been imported from these nations.

But US has repeatedly hit out at India for charging high tariffs on US products, enacting market access barriers and having a difficult regulatory environment. It is reported that India will suffer a potential revenue loss of more than \$3 billion if duties are removed on IT product tariff lines.

The recent regulations in E-commerce issued by government of India has also become one of the biggest issue in the current trade ties with USA .The trade impact has been seen due to India's new rule to E-commerce specially to Walmart and Amazon. Also the Government of India issued is that foreign vendors of telecom equipment will be able to supply to Indian buyers only if their home country allows similar import of telecom equipment from Indian companies. The biggest ever E-commerce acquisition globally is by Walmart to Flipkart. Walmart has invested \$16 billion in Flipkart in India. This data shows the increasing sign of E-commerce business in India and globally. But due to globalization, it's the duty for Govt. of India to protect domestic traders including small traders. Flipkart as well as Amazon, had investment in India and has opened many new distribution centers over the past three years in India, creating thousands of jobs and greatly benefiting to consumers and generating jobs.

Also the coronavirus pandemic is causing a shift in global power dynamics, leaving India with a window of opportunity. India's demographic location gave opportunity to grow as Manufacturing hub with and for global supply chain. Many companies are planning to shift to either Vietnam or India, China is trying its best effort to hold back major companies and also don't want to lose the opportunity to start for trial of 5G in India by Huawei. Supply of telecom equipment has been a controversial in the recent past with companies, especially those from China being accused of building backdoors and planting vulnerabilities in the networks to favour their home country.

4.4 Trade with European Union

The EU is the largest source of FDI in India. EU regions has the greatest impact in India's telecom and services sectors. 80% of EU's export to India comprises of telecom equipment, IT, transport and other business services. It is seen that India relies heavily on EU specially for machinery and nuclear reactors including optical photo equipment, aircraft and spacecraft and vehicles. The current investment amount to India from EU stands at around US \$ 82 billion of cumulative. Out of the total investment flow from the world to India ,15% comes from EU. While the trade services between the two regions stands at around US \$ 43 billion. The total import has been counted at around UD \$ 20 billion while the import is at around UD \$ 23 billion.

The analysis shows that around 6000 EU companies are currently present in India collectively providing direct employment to 1.8 million workers and indirect employee to 5-5.6 million. Growing China’s investment to EU nations made concern for India to rethink to maintain the trade relations. With the weaponization of trade, China’s belt and road initiatives project and its making link with any trade deal with EU nations made a concern for India. The figure given below (collected secondary) shows the China’s investment in various EU nations.

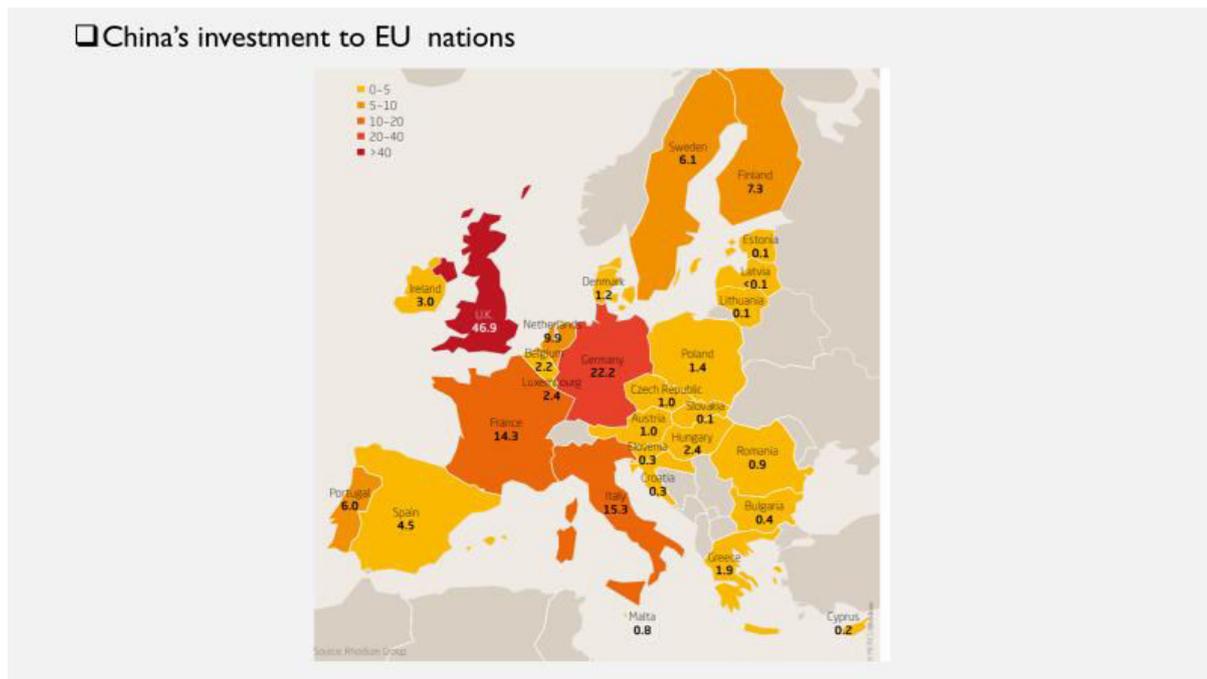


Fig 1: China’s investment in Europe

- The above figure shows that China’s investment in UK stands at US \$ 47 billion which is the highest among the EU nations. Germany stands at 2nd position with the investment of US \$ 23 billion.
- Though the Sweden has much better telecom equipment than most of the countries, it has the investment of around US \$ 6 billion.

The trade between India-EU has not increased substantially because the Bilateral Trade and Investment Agreement (BTIA) has not been negotiated. However, several EU countries are hampered in investing India without an investment agreement in place and was supposed to put in motion when PM Modi was supposed to visit Brussels in March but had to dropped the plan due to the Coronavirus pandemic. India’s action in abrogation of Article 370 and subsequent imposition of communications blockage in Jammu and Kashmir, and passage of Citizenship Amendment Act (2109) have also received significant attention from the European Union.

Taking the geopolitics concern India have to make a strategic move to limit the China’s involvement in most of EU firms. As we can see in the last decade China started investing in most of EU nations. The Brexit will be the advantage for both the nations to strengthen its relationship and to make deal to improve India’s information technological services by easing the flow of high skilled man power.

4.5 Trade with Latin America and Caribbean Region

It is known that India and the LAC have a combined GDP of \$8 trillion and account for over a quarter of global population. India's trade with LAC has reach \$39 billion in 2018, with India's exports - UD\$13 billion and imports - US\$26 billion. But the trade deal in telecom and E-commerce sector with LAC is not as much as comparable as India has with other nations. Among them India as the largest trade deal with Brazil. The trade with Brazil is expected to grow US \$ 14-15 billion by 2022. As the trade in services has very low footprint in LAC nations it doesn't bring any significant impact to Indian economy. So India continuing its capacity to make the bilateral ties with the LAC nations and to coordinate much more in trade relations for the betterment of both the regions. Its time for India and LAC regions to make position themselves to strengthen the trade ties in the field of services and communications too. In-order to increase the trade and diversify trade and to add greater values. It's the opportunity to improve the blue economy for both the regions taking relevance of south-south regions demographically. With the help of large Indian diaspora in the Caribbean region, Indian government have to take the strategic move to overcome the China's influence in the region.

There is a huge potential to strengthen India-LAC relations by depending trade and investment ties. There is significant scope for India to export machinery and mechanical appliances, electrical machinery and equipment, plastics, transport vehicles, pharmaceuticals, among others, owing to their high import demand in the region. But the supply chain constraints the trade between the regions to grow due to its high transportation cost and also due to lack of proper direct shipping between the regions results in high cost to transport the goods.

The telecommunication sector in the LAC region attracted around US\$138 billion (2007-2017) which was total 13.1% of the total FDI inflow in LAC region. This data shows how fast the telecommunication services has been increasing in the recent years. The investment by Indian firms in LAC is close to only US\$ 704 million in the last 10 years and this amount stands only 1% of total FDI inflow in LAC regions. The FDI inflow in LAC regions has been increasing exponentially accounting the market opportunities by still this lack much behind other Asian nations in inflow of FDI. Both India and LAC has to rise its FDI inflow in-order to match with other Asian nations.

Brazil is one of the India's most important trading partner in the entire LAC region. It has increased substantially in the last two decades. The total trade stands at US\$ 12 billion out of which India used to export for about US\$ 8 billion against import of US\$ 4 billion. But after the global pandemic the scenario is supposed to change unexpectedly. The Chinese investment in Latin American countries has been increased since the last decade and most of the countries has been examined the debt trap strategy by the China. India has the vast opportunity to increase its market base in Latin America in Telecommunications and E-services .

CHAPTER 5

ANALYSIS OF GLOBAL FORCES

The report presented in this project shows that the country's economy development and to improve its trade with the world, depends on the foreign policy and the structure of ease of doing business.

With several bi-lateral links has been made between India and ASEAN, it became crucial for both the regions to make various check points for implementing to meet the various objectives made. As India and ASEAN both joined paths to economic and social prosperity, it would be important to leverage institutional mechanisms for an appropriate reduction of non-tariffs barrier to enhance trade and investment.

Global retail e-commerce is expected to reach US\$ 4.6 trillion by 2021. While India and ASEAN are the fastest growing market in this sector. Since now-a-days the trade has been weaponized, the denial of India to join RCEP, trade with ASEAN might face hinderance due to China's influence. This can be calculated taking into account as India- ASEAN trade has grown three times since 2009 against China-ASEAN which is five times.

After India denied to join RCEP, it can be seen various ASEAN reconsider their opinions joining the group as they can see that the huge advantages will be all toward only China and as it is clear that ASEAN has huge trade deficit with China. So, It became an golden chances for India to make new strong bilateral agreements and also further updating FTA norms taking into account of loss suffered due to Covid'19 pandemic.

The service sector of India is remarkably strong and has the highest percent of contribution in the Indian Economy. This shows the opportunity for Indian service sector to expand it's service to the ASEAN. With growing e-market in the Asian nations and 1/3rd of total population being situated at the region and also considering the geographical location of India, it can make proper strategic and bilateral trade agreement through sea route with these ASEAN.

Indian telecom companies being offering the cheapest data rate in India and it is the lowest in the world, India can try its hand in the ASEAN as most of their nations are developing and cost plays a crucial role in all developing nations. The Chinese product has gained global market share due to their cheap products and low labor wages and most of the resources are being found there.

The proposed steps by Department of Telecommunications to boost the manufacturing hub of telecom equipment to provide incentives 5-6% for a period of 5-6 years will encourage the international telecom manufacturer like giant companies like Ericsson, Nokia and also Huawei to manufacturer in India itself which will help manufacturer reduce the cost disadvantage they face in India compared to China and Vietnam. The following table shows the how the telecom equipment manufacturer will gear cost advantage over India against China and Vietnam.

	China	Vietnam
Material Cost	2-3%	1-2%
Manufacturing Cost	2%	1-1.5%
Logistics Cost	1%	0.5%
Finance Cost	3-3.5%	1.5-2%
Financial Incentives	10-11%	4.5-5%

Table 9: Telecom manufacturing equipment cost

Due to the pandemic, India is seeking to attract the US firms to shift their manufacturing hub to India. This will help the Govt. of India for overall development of country's economy. India's geopolitical strategy depends on how the domestic firms has been reforms, but if fails it will reduce its capacity and will forced to ally with a major power bearing less favourable terms. But if India's relative power with respect to China and the US improves, India has the opportunity to become a selective alignment for both the US and China led groupings. But if it is reverse, India will have to align itself more closely with the US rather than China. Chinese governments will try hard its diplomatic strategies to make sure that Huawei gets 5G network rollout contracts in India as well as around the world.

The recent investment in Jio by Facebook bought the win-win situation for both the organizations. Facebook bought a equity stake of 9.99% with an investment of US\$ 5.7 billion (Rs 43,574 crores). The motivation for Facebook is that they are looking for a small business platform and for the services that has huge user base. And Jio was the perfect organization for Facebook to enable new opportunities for business. Also Jio-Mart has the opportunity to grow through messaging app- WhatsApp owned by Facebook to connect with small business. With the believe of Jio's platform to have potential to transform Indian digital economy, KKR invested Rs 11,367 crore. So all the investments in Indian telecom industry can attract the further FDI and also built confident for the foreign investors to invest in Indian telecom industry. This will help E-commerce to grow exponentially. As we know with its huge population size and huge internet users, India stands as the most attractive markets to establish E-commerce presence also considering the vast demographic potential and as there is no single large established player yet.

But it is also important for the India to build the telecom equipment and handsets. Though it can be seen increasing in manufacturing of mobile handsets in last few years but its not up-to the mark. Having low VA content and there is also no much support from the government to push the manufacturing of infrastructure of telecom equipment. And also to mention that it is serious challenges to decrease trade deficit depending high on telecom equipment to other countries.. It will encourage only if the government will develop ecosystem for the emergence of component manufacturer and also help in successful

commercialisation. Also the government of India must focus on funding of major telecom infrastructure and in technology development, but it has long process to meet the target considering huge investment and to cover various telecom networks.

It is very critical for getting market access of domestic products and for the successful commercialization. Domestic equipment makers are not able to attain high scale and size of global majors companies like Ericsson, Nokia, ZTE and Huawei as they start receives strong support from the government and also getting financial support from their Government by way of dedicated funding, tax breaks on R&D etc. It is to note that due to not showing fear or hesitation to support along with non-tariff barriers to their companies, it has helped China create companies like Huawei and ZTE to compete fiercely on the global markets.

Due to the coronavirus pandemic and most of foreign companies to shift their manufacturing unit from China, India can grab the opportunity to invite these shifting companies which will boost India's "Make in India" dream. Analyzing the current telecommunication and e-commerce market in India, I have drafted following insights :

- ❑ With the changing human behaviour and geo-politics, the FDI inflow in India has came down to \$ 2.6 billion in 2018 from \$ 6.21 in 2017. This clearly indicates that India cannot only rely on foreign countries rather than have to boost up investing more of its own in telecom equipment manufacturing unit.
- ❑ There is a decrease of around 43% in FDI inflow in India in the FY 2018-19.
- ❑ The total contribution from telecom sector is 6.5% (\$ 140 billion) of total GDP employing close to 4 million
- ❑ E-Commerce market stands at around \$ 40 billion employing around 1.4 million directly or indirectly.
- ❑ Though Huawei found place in India to start trial for 5G even after warned by US but due to the border tension and covid'19 pandemic ,Govt of India wants to reconsider the decision. Also China has warned reverse sanctions though it is not clear how.
- ❑ More than 500 registered or unregistered companies are working in India which provides millions of employments in services.
- ❑ Due to China's influence in Europe, India have to take proper strategic decision to deal in FDI inflow from Europe because as per policy India govt. allows 100% FDI in telecom sector which can boost exponentially.
- ❑ E-commerce contribute 4.5% to India's GDP in 2019-20 and it is estimated that it will create more than 1 million jobs by 2022 directly.
- ❑ Total 2.25 lakh employees are working in various telecom sector.
- ❑ The border and trade tensions are a manifestation of a bilateral relationship in the current scenario that can be seen maturing in the midst of most interrelated structural transformations around the global markets.
- ❑ Huge sections of Indian population has to be covered through internet and they have to start using online platforms despite promoting platform like 'Digital India' by the Govt. of India .
- ❑ Also large sections are still not using smart phones or are not in a position to afford.

- ❑ It is found that around 70% of e-commerce customers are men with an average age of 25, so its high time for the Govt. to promote female section or trained them to be digital.

- ❑ Tech giant like Huawei is considered to be one of China's biggest liability and can be considered as ticket for China to enter the foreign market. But after the coronavirus global outbreak, the opinion regarding the Huawei has been divided among the countries. Huawei was considered as one of the most affordable 5G network provider. Regarding the security concern USA has warned and trying hard to block and to keep it away from international contracts. But after the pandemic, plate has changed because the blame for the virus outbreak has been associated with China and Huawei has the direct impact in it. The world is trying to find the alternatives .

Comparing with China ,India is less integrated in the global trade. China join the WTO in 2001, since then, they are able to stand as one of the global supply chain leaders of the world. China has greater economic influence in the South- East Asian region it is trying to engage further through its Belt and Road Initiatives project and also possibly by RCEP (Regional Comprehensive Economic Partnership). But it is seen that since India denied to join RCEP, most of ASEAN wants to reconsider their decision to join the group as higher advantage of the trade through RCEP will shift towards China to whom ASEAN nations has already huge trade deficit. So it became opportunity for India to build strong economic partnership with ASEAN and also to maintain economic balance. Also it is important for India to maintain strong economic and strategic relations with other Ocean nations for increasing the trade and services.

India's strategic decision against any countries of the world have a significant effect in trade. It can be seen India always plays the defensive strategy with the world. Taking the example, we can see that, the trade relations have been improving with Malaysia since the formation of new government.

India's decision not to join the RCEP took the dramatic turn as some member countries wants India to join the group and also ready to accept the terms offered by India. So this gave India upper hand to make an agreement to develop the trade and to maintain the deficit in the region. Telecommunications services and E-commerce can take the better opportunity as the internet penetration has been increasing in most of ASEAN remote regions too. India has the opportunity to grow its telecom services in most of Asian nations as most nations are developing and cost plays a greater role in this service. In the developed nations it will be difficult for India to try its hand as it depends on quality. Being not a telecom equipment manufacturer country, India have to take burden of huge costs trying its hand in developed nations.

Geopolitical Effect due to Covid-19:

Due to the pandemic the world's business model won't remain the same. Global supply chain has hampered and various lacking in the strategies has been emerged. Globalisation will hamper and the trade relations will not be as much as potential as it was expected before the pandemic. But the world will come out with the better precautions to tackle such type of pandemic. Global supply chain structure will change as the world will be ready for any such kind of pandemic to tackle as such kind of virus can emerge from any nations or any particular region can be the hotspot for the beginning of any virus. With the implementation of work from home culture, Telecom services and E-commerce will have greater advantages to boost the market share. It is also clear that the decoupling of goods will increase among the nations most probably between China and US. So, it's the duty for India to come out with the new strategic decision to tackle the emerging geopolitical competition among the countries and also to maintain its position as one of influential country. It is also seen that with the embracing work form home option in business, the demand for collaboration and conferencing solution has witness a significant impact.

Potential impact that can be seen in Telecom and E-Commerce in India:

Network usage has been increased in many countries seeing the large spikes around the world and also can be seen in India too. With the increase in demand for services due to high spike there is increased in pressure on cellular infrastructure too. The mobile and broadband user and its download speed in the country has fallen due to force in networks. The situation has arisen where the Cellular Operators Association of India (COAI) has to write to the Government to request streaming service providers such as Hot-star, Netflix, Amazon Prime Video, Zee5, Jio tv to switch to a lower definition streaming and to reduce advertisements to ease the traffic on existing networks. Also the launched of new smartphones has to change its date due to constraints of supply chain in the country and in the world. While the telecom service providers are adapting new plans to sell products and provide services to customers. The telecom services providers are also requesting OTT platforms to ease network stress by reducing video quality. Internet and broadband connectivity to face tremendous pressure due to adaptation of work from home.

The main factor for growth of e-commerce business before Covid-19 was due to strong and steady growth of internet users and increasing online launching of products and interaction and sharing of information through social media and various websites. While after the Covid-19, social distancing and staying at home is further expected to push the customers to opt for online purchases though it might be clothing, electronics, kitchen utensils etc. The global e-commerce industry is impacted due to uncertainty in the supply chain and consumer demand across the globe. So in the future we could expect companies to explore newer distribution channels and might focus on a 'direct to consumer' strategy.

After US designated Huawei and ZTE, a national security threat, its impact can be seen in India too. As it is known that Huawei is the world's largest telecom equipment maker and also the world's second largest mobile phone parts maker of the world. Huawei has remained the most affordable telecom infrastructure provider for most of the developing economies of the world due to its low cost. Also ZTE manufactures patented telecom equipment for telecom operators at very low costs. Huawei comprises of around 30% share of the world trade in telecom equipment revenue and ZTE stands at around 11%.

So if India follows the path of US and bans Huawei and ZTE, negative impact can be seen in overall development of Indian telecom sector.

- Delay in the expansion of 5G. As the trail for 5G was permitted to conduct in India to Huawei after the no backdoor agreement in June 2019, but due to the pandemic, the trail has to be postponed and also due to the border tension between India-China seems Indian government will reconsider the decisions. So unfortunately, absence of major telecom equipment supplier like Huawei can delay the commercial rollout of 5G by 2-3 years
- India has to bear the cost of telecom operations. As the cost of Huawei and ZTE equipment are up-to 30% lower than other Korean or European equipment providers like Ericsson and Nokia. Around 25% of Indian telecom equipment has been occupied by Huawei and Vodafone and Bharati Airtel are highly dependent to Huawei. Vodafone uses up-to 30% of Chinese telecom equipment while Vodafone uses 40%.
- Rise in monopoly market of Reliance 5G. Reliance Jio is the only telecom service provider which doesn't use Chinese telecom equipment. Also Reliance is developing its 5G network with collaboration with Samsung.
- This also will increase India's dependence in European countries for telecom equipment which leads to duopoly for Nokia and Ericsson.

CHAPTER 6

CONCLUSION

With the increase in globalisation of the world, the trade relations among the countries has increased and its trade value. For these it has become difficult for the country to grow of its own. Hence a particular country cannot stand alone to boost its economy. Since the last decade it can be seen that E-Commerce and Telecom sector has a significant impact in Indian economy. With the changing of the human behaviour and globalisation, internet services has become a basic requirements for human life. Geopolitics character plays a very crucial role for any foreign policies of the country to make a trade deal or to make any bi-lateral trade agreement. Also weaponization of trade can in seen in the last decade. For any strategic decision, trade has been weaponized to come into agreement or to deal with its interest. India's geopolitics policies played a very crucial role in the recent years for maintaining trade relations. India's increasing trade in services can be seen due to impact of globalization and this is increasing exponentially over the years.

India's E-Commerce sector has been increasing due to its huge demand and also due to increasing number of its internet penetration in the country. With the increase in internet penetration in the recent years, the campaign like Digital India can be seen in huge impact and India's dream to promote digital India has been increasing with acceptable pace. India's huge population is also being given greater opportunity for the telecom and e-commerce sector and due to this online business has been increased exponentially. Also the e-commerce companies will have to come up with their strategies to challenge in the emerging market and considering the data storage, security issues, payments procedure and supply chain.

Every country has different draft to access the foreign players in the host country, so also India have to adapt the guidelines for leaning towards the benefits of the domestic traders and domestic customers. The expected growth in the e-commerce market in India has been estimated to reach by US\$ 120billion by 2020-21 but due to global pandemic and due to most of the countries in lockdown, the expected margin might not reach but will increased to a acceptable height. But also due to lack to good quality technological infrastructure and well design supply chain , it has been limiting the country to achieve higher and more inclusive economic growth.

These increased in the market can be seen through the increasing user of internet in the coming years. With more the 665million internet users in the country, India can expect to grow at much higher rate as compared to other nations.

The digital economy in the country has the capacity to improve India's lack in targeting the social welfare programmes, its implementation and also improving governance through various campaign and government schemes. It also will create jobs and will improve skill. India's impressive start-up represents an encouraging picture. With around 4800 tech start-ups in the country, India stands at 3rd position in the world after the United States and Britain. So it can be seen as India has emerged as one of the top three countries globally in terms of the number of start-ups emerged since last decade.

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