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## *A Study of Foreign Direct Investment in Indian Electronics Industry*

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*Abstract: The present study focused on analysing the FDI inflow in Electronics industry form year 2007 to 2018 in country and role of FDI in development of the electronic industry in India. As well identify the current status of Electronics industry in world and the share of India in the same. The present research work also attempted to take overview of various policies introduced by Government of India to promote the FDI in Electronics industry. The FDI inflows statistics reveals that the separate category of Electronics sector is created in year 2007 by DIPP for recording FDI inflow. And sector specific data published in DIPP factsheet reveals that this industry has attracted 0.55 % of total cumulative FDI inflow in country till December 2018 which is very negligible share of overall FDI in country. The overview of policies reveals that NPE-2012 to New NPE-2018 had attempted to provide multiple incentives for Foreign Investors to establish their electronic manufacturing facilities in country but very negligible response has been seen in response of the same. Further results of study reveals that due to various FTA's & being signatory of WTO's ITA-1 in year 1996 leads toward reducing competitiveness of electronic manufacturing in India and country become net importer of approximately 50% of overall domestic need of electronics products.*

*Keywords: Foreign Direct Investment, Electronic System Design & Manufacturing (ESDM) sector.*

### I. INTRODUCTION

Many economists and researchers have considered Foreign Direct Investment as lifeblood of economic development, and from the perspective of developing and underdeveloped countries it has been seen as panacea of multiple ills in their economy. FDI is a tool to vigorously boost the economic growth through inflow of debt free foreign exchange flow which strengthen domestic capital, productivity and employment through the technology spillover in industry, developing the skills and managerial capabilities, infrastructure in various sectors of the economy. In the post liberalisation era Government of India has initiated the reforms in foreign investment policies as well reduction in bottlenecks in burocrates approvals, opening of markets and treating TNC's at par with the domestic business enterprises. The major objective behind was to upgrade existing technology prevailing in business as well maximum utilisation of resources to develop countries economy. Foreign Direct Investment (FDI) is consider as the major contributor in development of host country through technology spillover, development of human resource, employment generation, and boosting other sectors in economy. Hence every country attempts to attract FDI in its economy, which is non-debt inflow of foreign capital.

In present scenario of digitalisation, electronic industry plays pivotal role in upgradation of each and every industry. The technological development in this sector leads toward intertwining with other industries, which result in electronic industry majorly influence the success of other sectors. The innovation in electronic industry such as semi-conductors, electronic chips,

PCBs, leads toward development of majority of industries such as from huge Smart factories, Aircrafts, telecommunications devices, computers, mobile phones, industrial machineries, consumer electronics etc. Hence electronics industry can be considered as next market leader that will fuel the country's economy.

21<sup>st</sup> century is known for digital revolution and it has become possible with the development in technology in electronic industry which transformed the human life. The technological development in electronic sector, rapidly occupying almost every sector of economy, hence every nation attempting to gain self-sufficiency in this sector. But as far the case of developing countries like India, which is witness of major transformation in technological sector, yet unable to achieve the self-sufficiency in the electronics sector, and till it imports of electronic hardware is almost 65% of its total domestic need [1]. The developed nations such as Germany, USA, and Japan, as well Asian countries such as China, Taiwan, and Republic of Korea are some major source of electronics goods for India.

To achieve self-sufficiency in electronics industry and reducing the burden of imports causing huge balance of payment to economy, its utmost important to develop electronic industry in country. This objective could be completed with help of the entry of TNC's in country which will bring both FDI and technology in country. The Asian countries such as China, Taiwan, Republic of Korea, Hong - Kong, Singapore are the examples of technologically self-reliant nations and World banks report published on August 1993 explains the crucial roles played by FDI and technological development in development of various industrial sectors of both European and Asian economies [2].

Authors has identified that very negligible research work has been undertaken on the one of the most crucial industry i.e. electronic industry from the perspective of both rapidly rising importance of this industry and current status and need of more FDI in this industry, hence this research work is intended to splash light on above mention topics.

## II. OBJECTIVES OF STUDY

- I) To review the status of Global and Indian Electronic industry.
- II) To identify the pattern of FDI inflow in Electronic industry.
- III) To study the Government policies promoting FDI inflow in Electronic Industry.
- IV) To enlist the growth opportunities for MNC's and factors attracting FDI in Indian Electronic industry.

## III. RESEARCH METHODOLOGY

The country level analysis is conducted on the basis of secondary data available in the nature of numerous articles, FDI statistics provided by DIPP, IBEF Electronic industry reports, CARE Rating report, Ministry of Electronics & Information Technology's National Policy on Electronics (NPE) from 2012 to 2019 are used in study, which focus on problems & prospect for Electronic industry. This literature give idea of gaps in the existing research. That the very negligible research has been done from the perspective of FDI inflow in Electronics industry in country. Government of India's National Policy on Electronics (NPE) is studied to identify the changes in policies & aspects of Government towards Electronics sector. As the inconsistency in availability of FDI inflow data for Electronic Sector from DIPP, the Calendar year wise FDI data has been taken in study from year 2007 to 2018. The special policy reports NPE 2018 & 2019, Electronics & IT Sector Achievements Report on Make in India 2016, IBEF report in June 2017, DIPP's FDI Factsheets are used to support the data presented in research paper.

### Limitations of the Study

The major limitations of the study are, the basic objective of the study is partially suffered, due to inconsistency of time series data from DIPP & related agencies as well other problem is non-homogenous data from different sources. Another major problem was that the Electronic sector has six categories which includes computer hardware's and peripherals but not the software's, some electrical components also includes in electronics, Smart Phones are included in Telecommunication category

in DIPP factsheet for computing FDI inflows, which is not possible to bifurcate from the FDI Fact sheets, because separate data category is not created for the same. The separate Electronics Industries category has been created from year 2007 hence prior to 2007's data collection is not possible.

'Ministry of Electronics & Information Technology' publish the combine data of achievement of both IT & Electronics sector from the same the major component of Software's in IT cannot be separated in absence of separate data, while presenting the performance of Electronics sector. Due to above statistically inconsistent data it's difficult to identify real contribution of electronics sector in FDI inflow in country.

#### IV. OVERVIEW OF ELECTRONIC INDUSTRY

Due to tremendous innovations and development in electronics in past two decades it has become very difficult to separate electrical and electronic industry' as both complement each other. Electronic components are used in vast range of products in both 'electrical and electronic industry', also in the form of concealed controls and drives known as embedded systems. Performing important control functions they play an essential role as a key technology. The research-intensive electronic industry is a driving force behind the innovativeness & progress of other sectors; many innovations are based on innovations in semiconductors. For instance, more powerful chips pave the way for ever smaller mobile phones that at the same time integrate the functions of navigator, mp3 player and digital camera [3]. It is crucial to get insight of the vast categories and sub categories covered under Electronic Industry. Following table will help to understand the difference in various sub categories of electronic industry.

**Table no-1 - The Electronics industry is classified in six major categories.**

Major Categories	Sub Categories
Consumer electronics	Mobile phones, Refrigerators, Air Conditioners, Televisions & Home theatre systems.
Electronic components	PCB, Semiconductor, Capacitors.
Industrial Electronics	PLC, Process Control Instruments, UPS System, Automation System.
Computer Hardware	Tablets, Laptops, Desktops, Printers, Servers, Notebooks.
Communication & Broadcast Equipment	DTH, Set Top Box, Routers.
Strategic Electronics	Radar, Internal Security System, Satellite Base Communication, Disaster management system.

From the above classification it can be reflected that the above six categories can be divided in two major categories on the basis of direct and indirect relation with the retail consumers as consumer electronics and components sub-sectors. Hence Component sub sector comprise Strategic Electronics, Industrial Electronics and Electronic components and rest of the three categories are classified under Consumer electronics.

In present scenario majority of the electrical appliances such as washing machines, Air conditioners, Refrigerator's, Microwave ovens etc. comprise multiple electronics panels, and controlled through the electronic devices hence majority of the times traditionally categorised electrical goods are now considered in electrical goods. As far as the electronic component sub sector is concerned, the growth and development of this sub sector depends on the growth of demand and production growth in ICs, which used to store and process maximum data at speedy manner. Component sub sector is capital goods industry which produce the inputs for other sectors for instance semiconductors, electronic control equipment etc. [4]. From the above overview of Electronics industry it can be inferred that this industry encompass almost every segment of human life and has potential to achieve highest growth in coming few years.

### **Global Electronics Industry**

Electronics is the one of the largest and rapidly growing manufacturing Industry in world, which is having highest application in every industry in modern era. This industry has occupied this place with continuous innovations and alliance with both electrical and software industries.

As far the production of electronic hardware industry is concerned, China, USA and Germany are the global leaders in industry. China is major contributor in total electronic hardware & components production, and it is largest exporter of Electronics to world [5]. China has become major manufacturing hub in world it has attracted numerous global electronics giants to set up manufacturing factories in the country.

In last 20-25 years locus of global electronics manufacturing and sales has dramatically changed, which causes rapid swings in both volume and value of electronics hardware industry.

The global market size of electronics industry was valued at around US\$1.86 trillion in 2015 in spite of a weak sentiments in global economy. Many government and non-government agencies predicts that this sector will cross USD \$ 2 trillion mark till 2017 [6]. Asia has become low cost manufacturing hub of electronics hardware, as shift of production from the develop world to cost effective & cheap labour intensive economies such as China, Vietnam, Malaysia and technologically developed economies such as Taiwan, Republic of Korea are benefited through the FDI in electronics. Low cost manufacturing regions are expected to account approximately 69% share of world electronic hardware industry out of the same China alone is expected to accounts for 38% share which was only 2.6% in year 1995. [7] *Euromonitor International* has predicted in their report that out of top ten electronic hubs nine will be from Asia i.e. China will remain electronic hub with overall market share of 50%, South Korea, Taiwan, India, Philippines, Malaysia, Indonesia and Thailand, along with Vietnam, is set to remain a vibrant electronics hub, with estimated growth of CAGR 3% over 2017-2025, and predicted the leap frog to industry volume to USD \$ 7.3 trillion [8].

### **Indian Electronics Industry**

The growth of Indian electronics industry is directly associated with the world's second largest population of 1.3 billion of country, growing middle class population, rising disposable income in the hands of population. The consumer demand for electronic devices such as Smart Phones, Laptops, Computer, as well TV's, Refrigerator is rising rapidly. As per the various reports of government and non-government organisations, demand for electronic products expected to rise at CAGR of 41% during 2016 - 2020 to reach USD\$ 400 Billion. The above trend shows that India has the highest growth potential both in terms of consumer market and to became supplier through exports.

But present scenario of electronic sector shows that, India accounts for a meagre share of the global electronic industry, which accounts USD \$86.40 billion in fiscal year 2016-17. As well the trend in last few years shows that, countries electronics and hardware market grew by 8.6% Y.O.Y to reach USD 75 billion in 2015, the major contributor in rising demand for electronic devices, was Smart phones & Consumer durables accounts to 60% of overall demand in country. The global electronics industry was valued approximately USD\$ 1.86 trillion in year 2014-15, and India's total domestic hardware production was approximately USD \$ 32.46 billion. Which accounts about 1.5% of global production of electronic hardware. In contrast the domestic consumption of electronics was USD\$ 63.3 billion, which shows that rest of the 58 % need was accomplished with imports [9].

**Table 2: Production, Demand, Exports and Imports of Electronics Hardware by India, 2014-15 to 2016-2017**  
(Values in Billion USD)

	2014-15	2015-16		2016-17	
		Value	% Growth (YoY)	Value	% Growth (YoY)
<b>Production</b>	29.2	37.40	28	49.50	32
<b>Import</b>	37.5	40.90	9	42.80	4.6
<b>Export</b>	6.2	5.90	-	5.90	-
<b>Demand</b>	<b>60.5</b>	<b>72.40</b>	<b>19.60</b>	<b>86.40</b>	<b>19</b>

Source - New National Policy on Electronics – 2018, www.meity.gov.in/esdm.

From the above table it can be identified that the Electronic production in country is showing rise on an average 30% YoY, Export shows no significant change but it has decline as compare to year 2014-15, as far the demand is increased YoY 19%, and import has shown declining trend 2014-15 - 62%, 2015-16 - 57%, in year 2016-17 - 50%. The reason behind decline in the imports of electronics is global declining trend as well rise in investments in electronic manufacturing which was just INR 11,000 Crores in June 2014, has increased exponentially to INR 1,27,880 Crores in 2016 [10]. Electronic items are among the top three imports by value in India. The first ranker is Crude oil & other Petroleum products, and Gold & Electronic components are 2<sup>nd</sup> & 3<sup>rd</sup> in imports. The major cause for import of electronic products is huge demand for Electronic System Design and Manufacturing (ESDM) products in country.

India export's electronic components such as cables, speakers and cathode ray tubes to rest of the world as well the production of domestic electronic components includes Picture Tubes, Diodes, Transistors, Power devices, Resistors, Capacitors, Switches, Relays, Connectors, Magnetic heads, etc. As well India has good capabilities in PCB, cable and some ferrite products. As they are very heavy in weight it is not practical to import them. In addition to that hole resistors, connectors, pins, wires are mostly manufactured in India [3].

Market composition of electronics industry in India.

**Table 3 – Segment Wise Demand of Electronics in Country.**

S.No.	Segments	Market Share in overall demand
1	Mobile devices	27%
2	Consumer electronics	18%
3	Industrial electronics	15%
4	IT/Office automation	10%
5	Automotive electronics	8%
6	Telecommunication	8%
7	Strategic (Aerospace and Defence)	7%
8	Medical devices	4%
9	Others	3%
	<b>Total</b>	<b>100%</b>

Source - investindia.gov.in

The Electronic component industry was valued at \$ 13.5 billion in 2015; of which Electro-mechanical segment had the highest share at 30%. Passive and active segments handled 27% and 22% share, respectively, while remaining market of 20% was handled by the others segment. Nearly 70-80% of the electronic components market is imports-driven [16].

The overview of Indian Electronics sector shows that there is huge potential for indigenous manufacturing of electronic components in country which is yet remain untapped, and Electronic giants has huge potential to establish their manufacturing facilities in India through FDI & technological collaborations with local business entities.

## V. FDI IN INDIAN ELECTRONIC INDUSTRY

India is characterised by rapidly growing population, which is demanding high-tech electronics gadgets. The electronics market with USD \$ 100 billion, which is expected to grow up to USD \$ 400 billion till 2025 shows highest growth opportunity for both domestic and foreign electronic giants to invest in India. The prime reason behind is, out of countries total demand of electronic products, more than fifty per cents (50%) need is satisfied by imports.

But present status of market shows that our country is still a minnow in the global electronics production, but our people are having huge demand for electronics. This rising need yet fulfilled by imports causing the huge balance of payment to country, hence there is need to produce the indigenous electronics to bridge this gap and avoid the long term threats both for economy and electronics industry in country. The present solution for this problem could be following the path of attracting world-wide electronics giants to establish their facilities in country, by providing multiple incentives and liberal FDI policy.

As the production systems for electronic products and components needs huge investment and demands very large setups. Producers prefer locations offering low cost, high skilled labor, ease of doing business, incentives from government, cheaper and quality inputs, developed network of suppliers and large domestic market for their products. To find the historical and present status of FDI in electronics sector it is needed to find trend in FDI investment in country. There is lots of volatility has been seen in FDI flows in this sector and yet this sector attract very minor share in overall FDI inflow. This can be seen in

**Table no. 4 - Cumulative FDI Inflow in Electronics Industry Form Year 2000 – 2018 (Jan. –Dec.)**  
(Figures in US \$ Million)

YEAR	CUMULATIVE FDI INFLOW	ACTUAL INFLOW	INCREASE / DECREASE	% - INCREASE / DECREASE
2000 - 2007	578.44	-	0	0
2008	748.08	169.64	169.64	0
2009	783.03	34.95	-134.69	(-79)
2010	884.57	101.54	66.59	191
2011	1145.38	260.81	159.27	157
2012	1197.52	52.14	-208.67	(-80)
2013	1297.59	100.07	47.93	92
2014	1413.23	115.64	15.57	16
2015	1621.49	208.26	92.62	80
2016	1708.99	87.50	-120.76	(-58)
2017	1836.38	127.39	39.89	46
2018	2268.86	432.48	305.09	239

Source – Compile by researcher from various issues of DIPP Fact sheets.

Chart no - 1

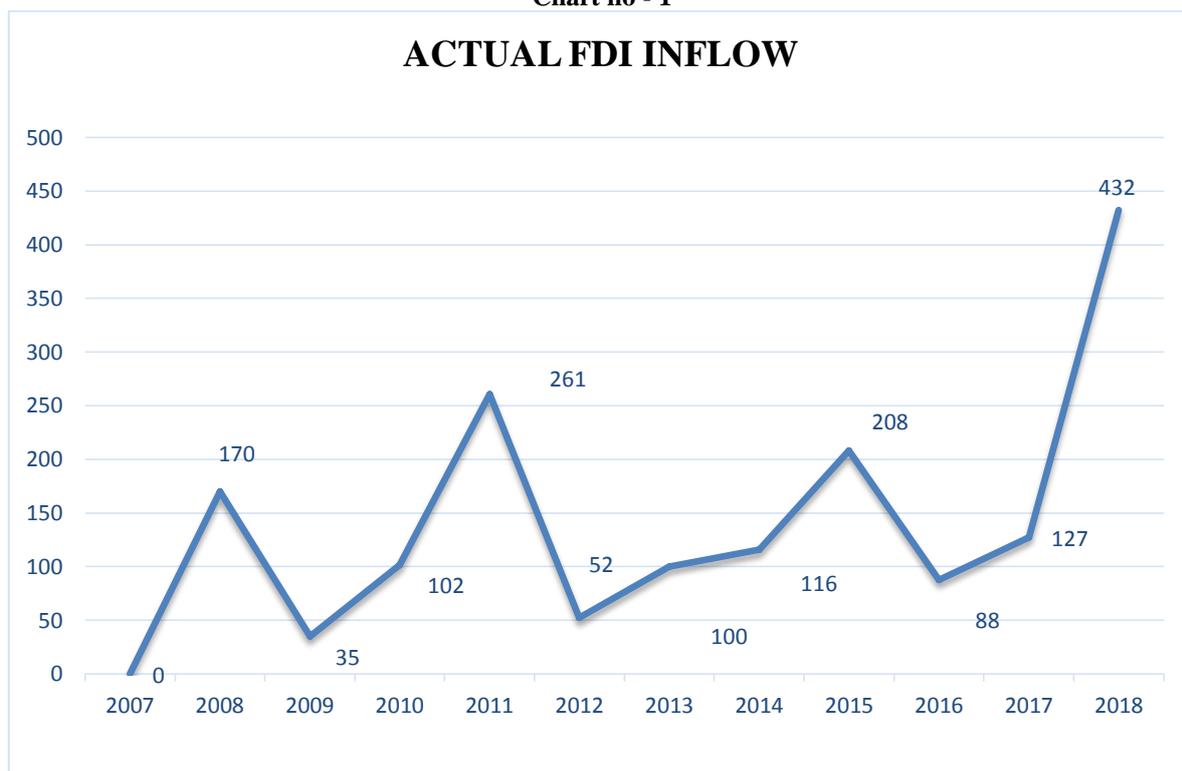
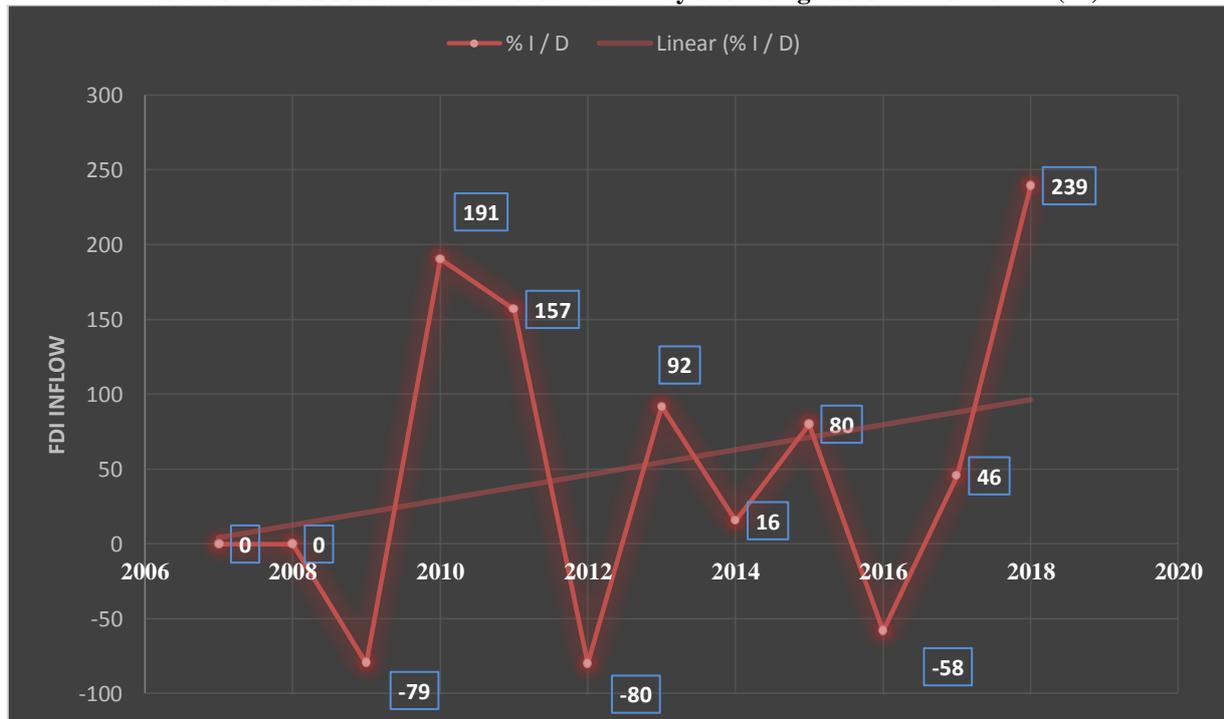


Chart no – 2. FDI inflow in Electronics Industry Percentage Increase / Decrease (%)



From the table no.3 and chart no. 1 & 2 it can be seen that there is enormous volatility in the FDI inflow in the Electronic sector during 2007 – 2018. The sector has witnessed the major declines in some years such as in 2009, 2012, 2016 respectively by 79 %, 80%, 58%. And major up swings are seen in year 2010, 2011, 2018 by 191%, 157% and 239 %. As the above statistics shows that there is inclining trend in FDI inflow in Electronics sector since year 2016 but this sector unable to achieve significant share in overall FDI inflow in country, this sector contribute 0.55 % of total cumulative FDI inflow in country till December 2018.

As specified in study limitation the agencies recording and publishing the FDI inflow data maintain the FDI database in manner that the FDI inflow in all six categories of Electronic industry cannot be clubbed to get the exact gross figure of FDI inflow industry.

#### Some Major examples of FDI inflows in Electronics Industry

- Telecom major Nokia was established world's largest cell phone assembly plant in SEZ in Tamilnadu in year 2005, which was only assembly plant and no domestic production or components manufacturing was done. Company closed it's the Indian & Chinese operations after acquisition by Microsoft in November 2014 to Hanoi, Vietnam, due to subsidised resources and cheap labour in Vietnam [11] (Dutta 2016).
- 'Wistron' a Taiwan based electronics contract manufacturer has set up two plants near Bengaluru, Karnataka that assemble Apple's iPhone SE and iPhone 6S devices for sale in India. It has got approval from Ministry of Electronics and IT for investment proposal of Rs. 5091 Cr to assemble Apples i phone 8, which is expected to generate approximately additional 10,000 jobs in country. [12]
- 'Foxconn' world's largest Taiwan based electronics contract manufacturer has submitted investment proposal of Rs. 2500 Cr to government in year 2018. Foxconn has two assembly sites in the southern states of Andhra Pradesh and Tamil Nadu, where it makes devices for Xiaomi and Nokia. [12]
- South Korean consumer electronics major Samsung Ltd. has opened its world's largest mobile factory in Noida, Uttar Pradesh & proposed to invest Rs 4,915 crore over the next three years, to manufacture and export Smart Phones, TVs and

air-conditioners etc. This new factory is expected to be Samsung export hub. Samsung has another manufacturing unit at Sriperumbudur, near Chennai, five R&D centres and one design centre in India. [13]

Samsung employs nearly 45,000 employees in India [14]

### **Need and opportunities of FDI in Indian Electronics Industry**

The above FDI statistics shows that Electronics industry has minor share in overall FDI inflow of country, as well industry statistics shows that country satisfies more than 50% of its domestic demand through imports. This facts signifies that though India extensively attempting to find solution for the problem of rising share of electronics imports in countries' overall imports contributing to major balance of payment, it has not able to successfully resolve this problem. As well India's electronic industry is under development phase and electronic component manufacturing is intermediary industry which depends on demand from other manufacturers.

The major MNC's located in China are looking for the next manufacturing destination in Asia, as rising wages in China and reducing over dependence on single source of production. India has the strategic location in world which could become destination for both manufacturing and logistics of the same products to Middle East and Europe. As well India has the third largest pool of Scientist & Technologically soul human resource which could be create ecosystem of the electrons R&D in India, and contribute to employment generation in country. Asia accounts approximately sixty 60% production of ESDM in world, but Asia's second largest economy India contribute only 1.80% of electronics production of world, which is cause of concern. This meagre share can be increase to considerable level if FDI inflow increase in sector, with development of domestic suppliers, logistics network & policy support environment is created. There is a huge scope for the foreign MNC's to establish their Electronics manufacturing facilities in India. The opportunities are enlisted as below.

### **Opportunities for foreign manufacturers to invest in India.** [1].

- i) The electronics market of India is one of the largest in the world and is anticipated to reach USD 400 billion by 2020.
- ii) India has a large pool of skilled manpower and has the third largest pool of scientists and technicians in the world.
- iii) Major government initiatives like Digital India and Make in India and supportive policies including favourable FDI policies for electronics manufacturing.
- iv) Huge domestic demand and rising disposable income. Also there is a huge consumption of electronics products in the Middle East and in emerging markets such as North Africa and Latin America.
- v) *Favourable government Policies :*

Modified Special Incentive Package Scheme (M-SIPS)

Electronics Manufacturing Clusters Scheme (EMC).

Electronics Development Fund Policy (EDF).

In past ten years the adoption of high-end technology devices, transitions such as roll out of 4G/LTE networks and the Internet of Things (IoT) are driving accelerated adoption of electronic products. Moreover, the Government of India has announced several programs such as Digital India, Smart Cities, cloud initiative, solar power and UIDAI projects and National Knowledge Network initiative, which will boost the domestic consumption of electronics content. This will present bunch of opportunities for MNC's to expand in electronics market in India [10].

**Present Government Policies creating base for Electronic industry & attracting FDI inflow in Country**

Government of India has recognised the rising importance and high potential of the ESDM sector, the government has been introducing multiple policies which help to create a more holistic and investor-friendly business environment in country. Some Policy reforms are enlisted below.

i.) Liberal FDI Policy -

100% FDI under the automatic route, no industrial license requirement and no payment of technical know-how fee and royalty for technology transfer under the automatic route. In case of electronics items for defence, FDI up to 49 per cent is allowed under the government approval route, whereas anything above 49 per cent is allowed through the approval of the cabinet committee on security.

ii.) Modified Special Incentive Package Scheme (M-SIPS) –

The M-SIPS scheme, developed to boost manufacturing and attract investments in the electronic sector, was modified in August 2015 by extending the scheme for 5 more years to 2020, and adding 15 new product categories like smart cards, liquid crystal modules, consumer appliances, Internet of Things products, multi-functional electronic devices and optical fibre etc.

iii.) Electronic Development Fund (EDF) - Under Union Budget 2017, government has increased the allocation of the Modified Special Initiative Package & the Electronics Development Fund to US\$ 110.81 million to create an ecosystem to make India a global manufacturing hub.

iv.) Electronic Manufacturing Cluster (EMC) Scheme - As of July 2015, investments of USD13.96 million for 2 EMCs have been approved. Total number of EMCs approved in the last 1 year have become 21; 16 for Greenfield EMCs, 3 for Brownfield EMCs in 7 states.

v.) Customs duty relaxation - No customs duty on 217 tariff lines covered under the Information Technology Agreement (ITA-1) of the WTO. Peak rate for basic customs duty is 10 per cent.

vi.) Intellectual Property Rights - Intellectual Property Rights (IPR) are a key determinant of progress in R&D and innovation in the electronics sector. GOI has amended relevant IPR-related acts (like the Copyright Act, Trademark Act, New Designs Act) from time to time to help spruce up innovation and new technologies in the sector.

vii.) EPCG, EHTP schemes - EHTP provides benefits, such as duty waivers and tax incentives, to companies which replace certain imports with local manufacturing Cabinet approved the Modified Special Incentive Package Scheme (M-SIPS) to boost electronics manufacturing in India, under which the firms achieving a turnover of US\$1.48 billion within a timeframe of 5 years from the approval date would be incentivised.

viii.) New National Policy on Electronics (NPE) 2018 - Provide support for infrastructure development through formulation of a new scheme or suitable modifications in the existing Electronics Manufacturing Clusters (EMC) scheme, for both Greenfield and Brownfield manufacturing clusters.

ix.) Phased Manufacturing Programme (PMP) - Encourage domestic manufacturing of electronic products and their inputs for significantly increasing value addition by building a comprehensive ecosystem, covering the entire supply chain, through suitable Phased Manufacturing Programme (PMP) and/or fiscal interventions.

x.) Promote a forward looking and stable tax regime - Advance intimation to the Industry to plan their investments in the form of phased manufacturing programmes in various segments of electronics. Income Tax Holiday for 10 years in a block of 15 years, including exemption from Minimum Alternate Tax (MAT). Retention/ refund of Central Goods and Services Tax (CGST).

- xi.) Provide support for Assembly, Testing, Marking and Packaging (ATMP) lines for identified electronic components/products.
- xii.) Exempt the import duty on capital equipment, to reduce capital expenditure for setting up and expansion of existing units and address disabilities to a certain extent.

The above list of supportive government initiative to promote and develop electronic industry in country shows that there is dual benefit of Foreign Investor as huge domestic market of country plus supportive policies of Government. The NPE's objective of "net zero electronics imports" a reality it is crucial to promote both Domestic and Foreign Investors to invest in Electronic sector of country.

## VI. FINDINGS

From the above analytical study multiple findings are come forth some of them enlisted as below.

- i) Global Electronic industry is rapidly expanding and nations having the high-tech manufacturing facilities such as smart factories, which can survive in upcoming fourth industrial revolution. This growth is output of growth in Electronics industries in develop nations.
- ii) The Electronic manufacturing trend has shifted from develop world to Asia's electronic hub China, and in recent few years this trend is shifting to other south Asian nations such as Vietnam, Malaysia, Philippines which characterised by cheaper labours.
- iii) As far Indian scenario is concerned our country accounts for minor share i.e. approximately 1.80% of global electronics output, but it has largest consumer market of USD \$ 100 billion & which expected to touch USD\$ 400 billion till 2025. Presently this market capable to satisfy only 50% of domestic demand.
- iv) The sea opportunities are exists in Indian electronics market for both MNC's to establish their facilities in India and for domestic firms also has huge opportunities in electronic components and device manufacturing.
- v) As far the FDI inflow in electronic industry is concerned, the trend is very volatile & having very minor share in overall FDI inflows in country. the major reason for the same is India is signatory of WTO's Information Technology Agreement (ITA- 1), which allows to imports of 217 Electronic items at zero custom duty, as well India's agreements with ASEAN & other country blocks leads to promoting electronic imports at cheaper cost in country. This scenario discouraged domestic electronic manufactures as well MNC's world-wide did not positively respond to government campaigns such as 'Make in India'. The Free trade agreements with the ASIAN group, Japan, South Korea and ITA-1 leads toward reducing competitiveness of country and India yet unable, to firmly stand as Electronics manufacturing destination on world map. [15]
- vi) By identifying the potential of Indian electronic market, with favourable policy environment major electronic giants such as Apple, Samsung, Phillips, Xiomi, Gionee, OPPO Mobiles have initiated to establish their factories in country. And existing domestic as well foreign MNC's such as LG, Phillips etc. are adding investment to yield maximum share in Indian market. This positive steps of MNC's leads toward positive trend of FDI in country.
- vii) The policy environment in country is one of the major supportive factor for creation of positive sentiments for foreign investors. The FDI Policy which support, New National Electronic policy 2018 & Make in India policy has incentivised the new entrants in electronics manufacturing sector. But till date the positive results of liberalising FDI policy, NEP – 2012 cannot be seen in the nature of major inflow of FDI in sector as well self-sufficiency in production not achieved. But there are hopes of Govt. agencies that the above policies will result in to inducing global electronics giants to establish their facilities in India.

- viii) India need FDI in Electronics sector to primarily bridge the huge gap generated through electronics imports in Balance of Payment of country. The further allied benefits of FDI such as employment generation, infrastructure development, push for governments Digital India initiative and so on.
- ix) As India's Electronics sector has sea opportunities such as out of proposed USD\$ 400 billion market of electronics India could attain till 2025, the MNC's could achieve approximately 2/3 i.e. 300 billion market share.

As India's ESDM market is in development phase there is billion \$ opportunities for global manufacturing companies, but these companies can only be attracted to invest in India if there is sufficient supply of standardised intermediary products. In this connection, increasing foreign investment in India in this sector should be a priority objective of government.

## VII. CONCLUSION

India is one of the largest consumer market in the world, and Consumer electronics contribute largely in this demand. This sector has got big push due to growing middle class having considerable disposable income, decrease in electronic components prices, availability of cheap finance for purchasing the appliances, access of electricity to rural area adding new consumers, digitalisation initiative such as 'Digital India', cashless economy, mobile banking, e-Aadhar, etc. But all of the above government initiatives and demand satisfaction are majorly based on the imported electronic devices and components.

Though GOI has prioritised the promotion of electronics manufacturing so as to achieve net zero imports by 2020, it seems difficult to achieve this objective, because sluggish responses have been received to 'Make in India' for Electronics manufacturing, and out of the received proposals only few come to existence. As India is expected to become USD\$ 400 Billion market till 2025, it could not contribute through domestic production of electronics, if the basic infrastructure of logistics, rail, road networks within the major production centres to ports is not developed. As well the electronics and IT hardware are one of the key pillars of the developing the electronic industry in country, but India has excelled in software exports but fails in hardware manufacturing and exports due to lack of supportive industrial structure for building mega electronics industries in country. As well until the government didn't renegotiate the Free Trade Agreements (FTA's) terms with member countries in favour of India, the trend of cheaper and duty free imports will rapidly increase, which may cause the achieving the governments mission of self-sufficiency till 2020 will remain day dream.

Finally it can be conclude that though India has the highest pool of technologically soul & cheaper manpower, favourable policy environment, large consumer market, but country has to work on building the vertical integration strategy by developing of indigenous technologies and capabilities for achieving the objective to achieve high proportion in total FDI inflows.

## References

1. Electronic Systems - Make In India [www.makeinindia.com/sector/electronic-systems](http://www.makeinindia.com/sector/electronic-systems)
2. Developing the Electronics Industry, Published: August 1993 ISBN: 978-0-8213-2522-3, <https://doi.org/10.1596/0-8213-2522-1>. <https://elibrary.worldbank.org/doi/abs/10.1596/0-8213-2522-1>
3. Electronic Components Industry In Germany, Commercial Wing, Consulate General of India in Frankfurt 6/22/2016.
4. Foreign Direct Investments and Development: The Malaysian Electronics Sector, - Mohd Nazari Ismail, Chr. Michelsen Institute Development Studies and Human Rights - CMI Working Papers- WP 2001: 4
5. Which Countries are Most Important in Electronics? By Investopedia Updated Nov 17, 2018. <https://www.investopedia.com/ask/answers/042915/what-countries-contribute-largest-weight-global-electronics-sector.asp>
6. Ministry of Electronics & Information Technology's National Policy on Electronics (NPE) from 2019.
7. Indian ESDM Industry updates, An IESA & EY Report – Feb 2017.
8. Top 10 Countries to Drive Global Electronics Production Over 2017-2025- Euromonitor International Report, Published on Jan 2018. <https://www.euromonitor.com/top-10-countries-to-drive-global-electronics-production-over-2017-2025/report>
9. Make in India Strategy for Electronic Products, NITI Aayog, Government of India May 2016.
10. Opportunities for Foreign Investors - <https://www.india-briefing.com/news/esdm>.
11. Dutta, Madhumita (2016): "The Nokia SEZ Story: Economy of Disappearances", Economic & Political Weekly, Vol 51, No 51, pp 43-51.
12. Wistron, Foxconn plan to invest Rs. 7500 Cr. Over next five years. [economictimes.indiatimes.com/12/02/2019](http://economictimes.indiatimes.com/12/02/2019).

13. <https://www.tribuneindia.com/news/business/samsung-opens-world-s-largest-mobile-phone-factory-in-noida/617761.html>
14. <https://www.ibef.org/archives/detail/bmV3cyYzNzczNjcmNjg4>
15. Francis, Smitha (2018): Economic & Political Weekly, August 25, 2018 VOL LIII No. 34, pp. 112-117.
16. <https://www.investindia.gov.in/sector/electronic-systems>.