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Contribution And Role of Information Technology (IT) Sector in Indian Economy

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Abstract :- This paper is an attempt to study the contribution of Information Technology sector in Indian economy. As Information Technology sector of India is taking the Indian economy to remarkable heights. In the past decade, most people consume IT services in some form or the other and the role of internet and computer has grown manifold in our lives. The study aims to study the role of IT sector in Indian economy and growth of GDP of India. The study also focuses on showing the trends in export and import of IT sector services and products from India. In order to study the changing trends in IT sector the data is collected from both governmental agencies and professional journals. The data collected from secondary sources have been suitably edited, analysed and interpreted according to the requirement of the study. The result shows that contribution of IT sector to the Indian economy is going to increase manifold in the future.

Keywords :- Information Technology, Gross Domestic Product, Indian economy, Indian Companies, Software.

INTRODUCTION

In India Information Technology (IT) is a vast industry which comprises information technology services, consulting and outsourcing. The information technology industry accounted for 8 percent of India's GDP in 2020. The IT sector includes all the companies offering IT-enabled services, Information Technology services, Software products, e-commerce facilities and many more. The role of the internet and computer has grown manifold in our lives in the past decade. The Covid-19 pandemic further highlighted the contribution of the Information Technology sector to the Indian economy. With the shift to remote working the Information Technology sector enabled the other sectors to operate from distance mode as well. The sector is opening up new startup which boosts the Indian economy as a whole.

India is examined as a popular manufacturing hub and has grown its domestic electronics production from US$ 29 billion in 2014-15 to US$ 67 billion in 2020-21. The electronics sector of India contributes around 3.4% of the country's Gross Domestic Product. The government has committed nearly US$ 17 billion over the next six years across four PLI Schemes: Semiconductor and Design, Smartphone's, IT Hardware and Components.

The Ministry of Electronics & Information Technology released the second volume of the Vision document on Electronics Manufacturing in India, which stated that the electronics manufacturing industry will increase from the present US$ 75 billion in 2020-21 to US$ 300 billion by 2025-26. The major products and services that are expected to drive growth in India's electronics manufacturing are mobile phones, IT hardware (laptops, tablets), consumer electronics (TV and audio), industrial electronics, auto electronics, electronic components, LED lighting, strategic electronics, printed circuit board assembly, wearables and hearables, and telecom equipment. Mobile manufacturing is expected to cross US$ 100 billion in annual production growth from the current US$ 30 billion by accounting for nearly 40% of the industry growth.

The Information Technology sector in India is one of the largest contributors with a 9% contribution to GDP. The Information Technology industry is around US$ 194 billion and is expected to exceed to US$ 300-350 billion by 2025. India's IT industries and companies are majorly located in the southern regions such as Bangalore, Hyderabad, Chennai, Visakhapatnam, Trivandrum, Mysore, Mangalore, Kochi, etc. India's major information technology hubs are Mumbai, Pune, Delhi, etc.

Bangalore known as the "startup capital of India" or "Silicon Valley of India" is globally India's biggest technology hub. The Bangalore accounted for 38% of total IT exports from India during 2016-17. The city employs 10 lakh people directly and 30 lakh indirectly. The Top Information Technology companies of India were as follows:

Table 1. Top Indian IT Companies

NAME	HEADQUARTERS	TOTAL INCOME (FY 2021)	CITY
Tata Consultancy Services	Mumbai	₹ 1,67,311 Crore	Ahmedabad, Bangalore, Bhubaneswar, Chennai, Coimbatore, Delhi, Ganghinagar, Gurgaon, Guwahati, Hyderabad, Indore, Jamshedpur, Kochi, Kolkata, Lucknow, Mangalore, Mumbai, Nagpur, Noida, Patna, Pune, Vadodara, Varanasi, Thiruwananthapuram.
Infosys	Bangalore	₹ 1,02,673 Crore	Bangalore, Bhubaneshwar, Chandigarh, Chennai, Delhi, Hyderabad, Indore, Jaipur, Mangalore, Mysore, Pune, Thiruwananthapuram.

Wipro	Bangalore	₹ 64,325 Crore	Ahmedabad, Bangalore, Bhubaneshwar, Chennai, Coimbatore, Gurgaon, Guwahati, Hyderabad, Jaipur, Kochi, Kolkata, Mumbai, Mysore, Noida, Pune, Vadodara, Visakhapatnam.
HCL Technologies	Noida	₹ 76,306 Crore	Bangalore, Chennai, Gurgaon, Hyderabad, Kochi, Kolkata, Lucknow, Mumbai, Noida, Pune, Vadodara.
Tech Mahindra	Pune	₹ 38,642 Crore	Bangalore, Bhubaneshwar, Chandigarh, Chennai, Hyderabad, Kolkata, Mumbai, Nagpur, Noida, Pune, Visakhapatnam.
Oracle Financial Services Software	Mumbai	₹ 5,115 Crore	Bangalore, Chennai, Hyderabad, Mumbai, Pune.
Larsen & Toubro Infotech	Mumbai	₹ 12,644 Crore	Bangalore, Chennai, Mumbai, Pune, Hyderabad, Jamshedpur, Navi Mumbai, Ranchi.

Source: Author compiled as secondary source obtained from website www.ibef.com.

REVIEW OF LITERATURE

Singh, I., & Kaur, N. (2017), the study states that IT Industry in India has shown a remarkable growth in the last two decades. It shows growth from very far from minimal percentage of GDP to an impressive percentage. With the changes in global economy improvement, and consumer confidence increases, investing in new technologies such internet of things, products and platforms, cloud computing, mobility and analytics etc. will enable vendors to gain efficiency, agility, access to consumers, and innovation. The Indian Information Technology industry's continued success is providing a big boost to business and is expected to provide revenues up to USD 300 billion by 2020. But the road is full of challenges like competition, customer understanding, protectionism, economic volatility etc. They will have to go for IT enabled digital transformation in order to compete in the globally connected world.

Dubey, M., & Garg, A. (2014), the study depicts that Information Technology sector has brought about revolution in India particularly since 1990s. This is because it has reduced intermediation in business and society, provided solutions across sectors (be it agriculture sector or manufacturing sector), re-organized firm level behaviour, empowering individuals. And also provides them with more information and is increasingly becoming an important tool for national and rural development through E-governance, E-Banking and E-

Commerce programmes. During the last decade the export performance of India's software and service sector has been unprecedented. As a result, the software and service sector accounts for over 20% of India's total exports and 2.6% of GDP. In addition, there has been a marked decline in the share of onsite services and today almost 60% of India's software and services export takes the form of off shore services. The identical and service nature of Indian software firms has meant that human capital has acquired an importance that was attending reserved for financial and physical capital in Indian industry.

OBJECTIVE OF THE STUDY

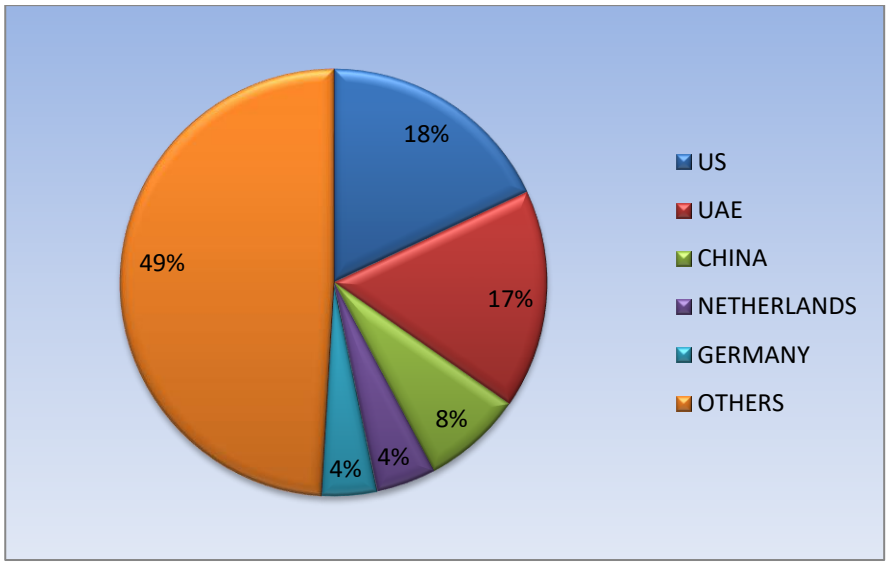
- To study the role of Information Technology in Indian economy.
- To find the IT sector contribution in Indian Gross Domestic Product (GDP).
- To find Top Information Technology hubs of India and its contribution towards economic growth.

TRENDS IN EXPORT AND IMPORT OF IT SECTOR PRODUCTS AND SERVICES FROM INDIA

During 2021 as per data published by Ministry of Commerce and Industry, the top five destinations for Indian electronic goods exports are: USA, UAE, China, Netherlands and Germany. From Chart 1 it is depicted that USA is the largest importer of India's electronic exports followed by UAE, accounting for 18% and 17% of the overall exports, respectively. The key importing markets for mobile phones exports from India were South Asia, Africa and Middle East. For the Information Technology-ITeS services of India, the top three export destinations of India are USA, UK and EU. India also exports these services to Asia Pacific regions, Latin Americas and Middle East Asia and sees new opportunities emerging to expand services to continental Europe, Japan, China and Africa.

India is among the largest IT and BPM services exporting countries and accounts for about 56% of the global outsourcing market. The Indian Information Technology and IT enabled services exports were valued at US$ 150 billion recording a growth of 2% over FY 2020. During 2020-21, Information Technology services exports were valued at US$ 81 billion, witnessing a growth of 2.6% over previous year, accounting largest share of the IT & ITeS industry exports. Business process management exports are valued at US$ 34 billion, growing 2.3% over the previous year. This growth in Business Process Management is mainly driven by automation-led services in finance & accounts and human resources, increased adoption of robotic process automation and analytics. Business Process Management is also witnessing an accelerated shift to platform solutions.

CHART 1 : SHOWING INDIA'S ELECTRONIC GOODS COUNTRY-WISE EXPORT SHARE IN PERCENTAGE (Apr-Nov 2021)



Source: Author compiled from website of Ministry of Commerce and Industry.

As per Reserve Bank of India (RBI) statistics, Software services exports to USA and Canada combined grew by 4.6% from US$ 74.7 billion in 2019-20 to US$ 75.1 billion in 2020-21, accounting the largest share at 56% of the overall exports. Europe, with exports valued at US$ 40.3 billion as compared to US$ 35.5 billion in the previous year. UK is the largest importer of Indian software services within EU region, accounting for 48% of exports to EU. Asia region exports of Indian software services were valued at US$ 9 billion, with a major share of East Asia exports valued at US$ 6 billion.

Over the last few years, engineering research and development services have recorded one of the fastest export growths driven by increasing adoption of software-led products and cloudification of equipment and devices. Exports for Engineering Research and Development sector are valued at US$ 31.1 billion in 2020-21. Software products witnessed 2% growth to reach US$ 3 billion, mainly driven by the rise in demand for collaborative applications, application platforms, security software, system & service management software, and content workflow & management applications.

India's export of electronic goods rose by almost 88%, from US$ 6.6 billion in 2013-14 to US$ 12.4 billion in 2021-22.The key export products in this sector are Mobile phones, IT hardware which includes laptops and tablets, consumer electronics (TV and audio), industrial electronics and auto electronics. As per the Ministry of Electronics & Information Technology vision, India's electronics industry exports are expected to increase to US$ 120 billion by 2026.

GOVERNMENT INITIATIVES FOR THE IT SECTOR

- The Ministry of Electronics and Information Technology has implemented several production-linked incentives to improve electronics production of India with the growing need for electronic goods.
- In the Union Budget 2022-23 announced by Finance Minister were allocated to the Information Technology and telecom sector equivalent to ₹ 88,567.57 Crores.
- The Government of India has launched schemes such as the Manufacturing of Electronic Components and Semiconductors (SPECS), Modified Electronic Manufacturing Clusters (EMC 2.0), to promote the country's electronic goods industry.
- By the Government of India in September 2021 five new National Institute of Electronics & Information Technology Centres were inaugurated in North-eastern states where the development of the Information Technology sector is limited to develop the sector and also provide employment to the youth there.
- Under Software Technology Parks of India (STPI) Scheme an autonomous society under Ministry of Electronics and Information Technology is implementing STPI scheme, which is a 100% export-oriented scheme.
- Under Remission of Duties and taxes on Exported Products scheme, goods and products exporters are granted freely transferable duty credit scrips on realized FOB value of exports in free foreign exchange at a specified rate. To pay basic custom duties for importing inputs or goods such duty credit scrips can be used.
- Under Service Exports from India Scheme (SEIS) the government initiated this scheme to offer service providers freely transferable duty credit scrip at 5% to 7% of net foreign exchange earned through exports.
- Under Duty Exemption & Remission Schemes enable duty free import of inputs for export production with export obligation. The scheme consist of Advance Authorization Scheme, Duty Free Import Authorization Scheme, Interest Equalization Scheme, Zero duty EPCG scheme, Post Export EPCG Duty Credit Scrip Scheme.
- Ministry of Electronics and Information Technology founded in 1991, is the apex body governing India's electronics and information technology industry. The ministry is promoting e-governance and India's role in internet governance, tending to policy matters, interacting about Information Technology related matters with international bodies and promoting the industry in India through various schemes and initiatives.

CONCLUSION

In India the hardware market is also set to develop under the government's initiative of Atmanirbhar Bharat. Several PLI schemes meant to boost the development of computer hardware parts in the country has been launched by Government of India. Presently, the country relies on Asian markets like China and Taiwan for computer hardware like chips. The result shows that contribution of IT sector to the Indian economy is going to increase manifold in the future.

The imports from these Asian countries slowed down during the COVID-19 pandemic, global trade suffered, and since, it created a problem of chip shortage in the entire world. India is empowering private players to set up hardware manufacturing plants in the country to become the pioneer of chip development technology.

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