

INFORMATION TECHNOLOGY IN GDP EXPANSION: INDIAN PERSPECTIVE

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ABSTRACT

The 21st century is earmarked as Information Technology driven and India is at the Centre of global attraction and considered as a knowledge powerhouse. The IT industry covers IT services, IT-enabled services (ITES), e-commerce (online business), Software and Hardware products. IT based services are indispensable for any organization to increase productivity, ease of doing business, and grow efficiently and economically in this competitive world. Information Technology not only contributed to the economic growth of the country but it has also made governance more competent and approachable. It has made access to government services and information easier and inexpensive. This paper namely 'An overview of information technology in GDP expansion in India' is explaining the information technology in GDP expansion in India.

KEY WORDS: Information technology, India, GDP, Exports of IT.

INTRODUCTION

Technology can be a difficult term to define. It has both broad connotations and specific associations. At a top level, technology commonly refers to society's application of scientific knowledge to solve practical problems in industry or commerce. Technological innovation or the application of technology takes many forms and often involves the interplay of expertise across multiple disciplines and industry verticals. The concept of technology can be arranged into five distinct categories. Each segment of the technology framework has been vitally important to economic growth and the well-being of society. Over the past decade and half though, the one segment that has arguably had the greatest impact on businesses and consumers around the world is Information Technology (IT). Information Technology (IT) can be defined as the utilization of hardware, services and infrastructure to create, store, exchange and leverage information in its various forms to accomplish any number of business objectives. Additionally, the term encompasses the workers that develop, implement, maintain and utilize information technology directly and indirectly. Indian Information Technology (IT) industry

has played a key role in putting India on the global map. The IT-BPO sector has become one of the significant growth sector for the Indian economy. In addition to fuelling India's economy, this sector is also positively influencing the lives of its people through an active direct and indirect contribution to various socio-economic parameters such as employment, standard of living and diversity. IT sector has played a significant role in transforming India's image from a slow moving bureaucratic economy to a place of innovative entrepreneurs and a global player in providing world class technology solutions and business services.¹

LITERATURE REVIEW

In IT, India has built up valuable brand equity over the years. In IT enabled services (ITES), India is emerging as one of the most preferred destinations for business process outsourcing (BPO). The importance of IT industry in the Indian economy can be gauged from the fact that its contribution to the national gross domestic product (GDP) has increased by seven fold in a span of just one decade from 0.6% in 1994-95 to 4.3% in 2004-05 (Table 1 on page 1). Although industry figures are not directly comparable with GDP as they are based on revenues rather than value added, they provide an indicator of growing importance of the IT sector in the country. Assuming that the Indian economy and IT sector will replicate the past six years performance during the next six years and value added in IT sector is two third of its sales revenue, the contribution of IT sector to national GDP will be around 8.5% during the year 2010-11, quite similar to that in the United States (US) today. The IT sector revenue is expected to increase from Rs. 1276 billion in 2004-05 to Rs. 6435 billion in 2010-11.²

The development of the Indian software industry is an archetype of how economic liberalization combined with an entrepreneurial spirit can build an industry that today contributes as much as 8% to the GDP of a fast-growing country like India. On the back of thousands of IT services companies that were built over the last three decades, the industry has generated US\$177 billion in revenue and more than US\$135 billion in exports in FY 20182019 alone. The IT industry has also created over four million direct jobs and 12 million indirect jobs in India. A testament to this growth is the fact that the largest Indian IT services company is currently valued at over US\$100 billion and generates over US\$20 billion in revenue.³

The industry was started during early 70's by Bombay-based conglomerates which entered the business by supplying programmers to global IT firms located overseas. During that time Indian economy was state-controlled and the state remained hostile to the software industry throughout the 1970s. Import tariffs were high (135% on hardware and 100% on software) and software was not considered as an "industry", so that exporters were ineligible for bank finance.

Government policy towards IT sector changed when Rajiv Gandhi became Prime Minister in 1984. His New Computer Policy (NCP-1984) consisted of a package of reduced import tariffs on hardware and software (reduced to 60%), recognition of software exports as a "delicensed industry", i.e., henceforth eligible for bank finance and freed from license-permit raj; permission for foreign firms to set up wholly-owned, export oriented units and a project to set up a chain of software parks that would offer infrastructure at below-market costs. These policies laid the foundation for the development of a world-class IT industry in India. In India, the software boom started in the late 1990s. Most of the Indian software companies at that time offered only limited software services such as banking and engineering software. The business software boom started with the emergence of Y2K problem, when a large number of skilled personnel were required to fulfill the mammoth database-correction demand in order to cope up with the advent of the new millennium.⁴

OBJECTIVES

- 1.To study the It sector exports in India from 2008-09 to 2019-20.
2. To observe the growth of GDP from 2008-09 to 2019-20.

HYPOTHESES

- 1.To study the It sector exports in India from 2008-09 to 2019-20 is not a significant.
- 2.To observe the growth of GDP from 2008-09 to 2019-20 is not a significant.

METHODOLOGY

Basically the secondary sources have been used for data collection for the study. Variables such as global economy. The statistical tools used for the analysis of data are Percentage, Graphs etc. India stage the time period has been considered the marketed value of IT and GDP from the year 2008- to 2020.

IT SECTOR AND THE GDP

Information technology (IT) has become one of the most crucial ingredients influencing productivity of factors of production. The adoption of IT in economic activities plays a vital role in enhancing the economic development of world economies by its direct or indirect involvement in productive capacities. It is now seen as the strongest industry as compared to other industries throughout the world because of its large economies of scale and insatiable demand from both consumers as well as producers. It has contributed enormously towards economic growth and aggregate employment in both developed as well as developing



countries. The beauty of it is that it helps in leverage or growth process of others sectors of the economy as information in general is a significant factor in production processes that strongly stimulate the productivity of factor inputs, particularly of labour. The IT revolution has had an exceptional impact on societies, businesses and nations, by stimulating the growth process in the world economy. In this regard, India is not an exception. The tremendous success of the IT sector after economic reforms, particularly in software and service exports, has influenced economic growth of the Indian economy. The importance of IT software and services has been increasing since the last decade, as reflected by its mounting shares in various macroeconomic parameters, like national income, total exports, employment and foreign exchange of the country. An abundant supply of labour force acts as a comparative advantage of the Indian software and services industry. Investments in the education industry in the form of Indian Institute of Technologies (IITs), Indian Institute of Management (IIMs) and engineering colleges over the years have significantly contributed to the growth of software and service industry. The country's abundant IT professionals have been absorbed by the software and services export sector, thus enjoying some sort of monopoly in supplying desired labour (Arora and Athreye, 2002). The benefit of the International Standard Organization (ISO) certification is also significant because it acts as a quality signal to potential customers. This certification has enabled to enjoy the firm's enhanced income through higher level of price per unit of output besides increasing the quality of output (Arora and Asundi, 1999). Large changes in the locational division of labour brought more jobs to India. The real benefit to the industry comes through exports carried out on-site, which do not involve costs of hardware or software technology for the Indian firms. Indian IT industry has recorded exceptional growth rate, particularly after the period of liberalization. It accomplished 51% compound annual growth rate, with it being the only nation to have this rate of growth during the period 1990 to 2002. The domestic software industry growth rate was even higher than that of the global industry (Kumar 2001). However, the IT industry witnessed a falling growth amid a worldwide change in innovation and business models since 2014. Its software and services exports are experiencing a skewed nature of slowdown in growth, essentially due to the reliance on North American and European markets. Furthermore, other developing nations, like China, Malaysia and the Philippines, are also entering into the world software market in meeting the global demands of software and services of the advanced nations by overcoming their earlier hurdles. Now, an important question that arises is how to deal with the global strategic paradigm shifts [1]. Answering this question requires an assessment of the direction and magnitude of the potential factors responsible for software and service exports. This article attempts to

investigate the factors that influence software and service exports from India both positively and negatively. Such a study is important to understand in depth the impact of each determinant on software and service export, for formulation of policy measures for sustainability and competitiveness of the Indian IT industry. The rest of the paper is organized as follows. Section 2 summarizes earlier literature. Section 3 provides a conceptual framework and outlines the data sources and econometric methods adopted. Section 4 provides a pre-estimation analysis of variables and the empirical results of the study. The conclusion and policy implications are given in the final section.

The IT companies have increased their contribution to India’s GDP from 1.2% in 1998 to almost 8% in 2018 and 7.7% of India’s GDP in 2020 amidst the COVID-19 situation. According to the Software Technology Park of India (STPI), software exports by the IT companies stood at a whopping 1.20 Lakh crore (US\$16.29 billion) in the 1st quarter of financial year 22 (FY22). The Information Technology and business service industry’s revenue is at approximately US\$6.96B in the first half of the year 2021 and an increase of 6.4% Year of Year (YoY). The export revenue of the IT companies is at approximately US\$150B in FY21. According to Gartner, IT companies spending is estimated to reach US\$93B in 2021 with 7.3% YoY Growth in India and further increase to US\$98.5B in 2022. The IT and BPM industry together have greater than 4.5 million workers as of FY21.⁶ Table-1 -shows the export of IT products (us dollars) in from 2008-2019-20 years.

TABLE-1

EXPORT OF IT PRODUCTS (US Dollars)

S.NO	YEARS	EXPORT OF IT PRODUCTS (US Dollars)
1.	2008-09	66.8
2.	2009-10	74.1
3.	2010-11	88.4
4.	2011-12	100.8
5.	2012-13	108.5
6.	2013-14	118.0
7.	2014-15	146.4

8.	2015-16	154.0
9.	2017-18	167.0
10.	2018-19	181.0
11.	2019-20	191.0

Source: IBEF, Ministry Of Commerce Of Commerce & Industry, Government Of India.

Table-1 explain the export of IT products (us dollars). The market size (especially export) of the IT industry has grown manifold from approx. 67 billion US dollars in 2008-09 to 191 billion US dollars in 2019-20. Figure-1- shows the Export of IT products (us dollars).

Figure-1-The Export of IT products (us dollars).

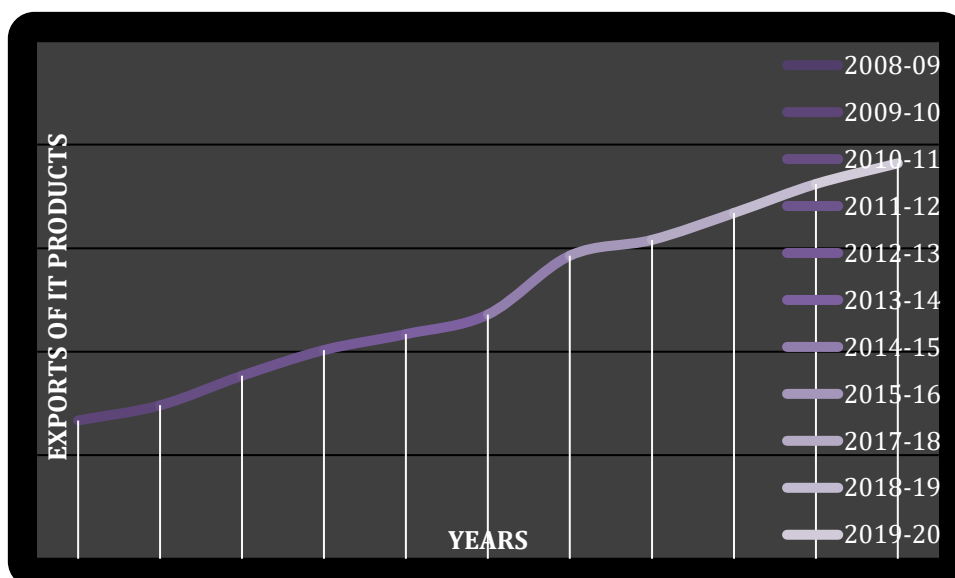


TABLE-2

IT SECTOR SHARE IN SHARE IN GDP(%)

S.No	YEARS	IT SECTOR SHARE IN GDP(%)
1	2008-09	5.9
2	2009-10	5.8
3	2010-11	6.1
4	2011-12	6.4
5	2012-13	7.5

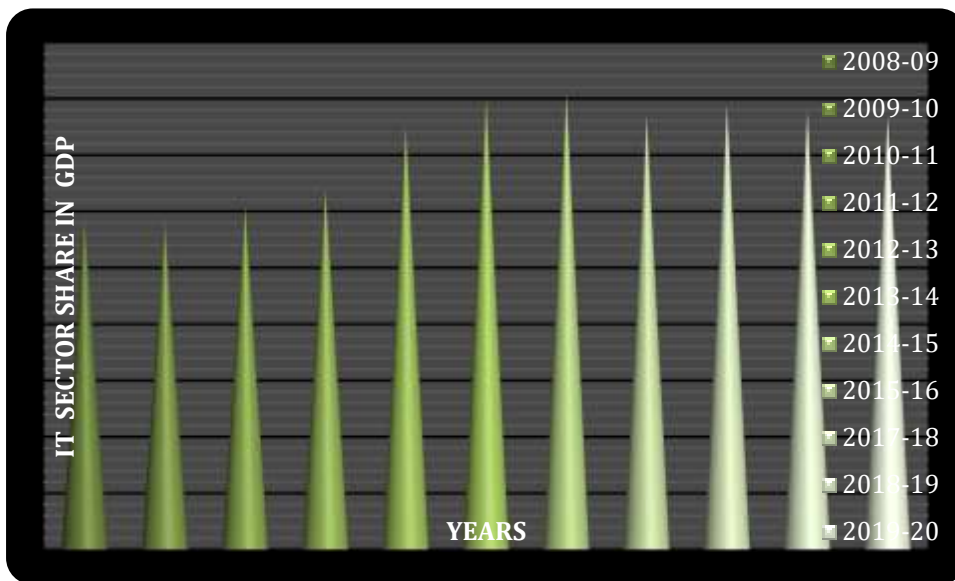
6	2013-14	8.0
7	2014-15	8.1
8	2015-16	7.7
9	2017-18	7.9
10	2018-19	7.8
10	2019-20	7.7

Source: IBEF, Ministry Of Commerce Of

Commerce & Industry, Government Of India.

Table-2 explain IT sector share in GDP percentages. IT sector share in GDP was 5.9 percent in 2008-09. It was increased 7.7 percent in 2019-20 years. Figure -2- shows the IT sector share in share in GDP(%).

Figure-2- shows the IT sector share in GDP.



CONCLUSION

Information Technology helps businesses, governments, and individuals increase their efficiency and effectiveness. Rapid improvements in hardware and processing ability forces consumers to purchase new, relevant technology. On a market level, this rapid turnover creates demand. From a firm's perspective however, this can result in a lower customer retention rate. Regardless, organizations are continuing to demand innovative technological solutions, leaving room for new entrants, particularly those with a unique concept. Firms who are able to find a niche market - or one with low competition - will find this industry attractive. Barriers to entry

remain high when entering existing markets though, therefore most potential entrants will find the overall industry unattractive.

RESULTS

1. The hypotheses namely “To study the IT sector exports in India from 2008-09 to 2019-20 is not a significant” is accepted/
2. The second hypotheses namely “To observe the growth of GDP from 2008-09 to 2019-20 is not a significant ” is partially accepted.

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