



IMPORTANCE OF IT SERVICES IN INDIAN ECONOMY DURING THE PERIOD 2013 TO 2016.

R Hariharan
PhD Scholar (Economics),
IIC University of Technology, Cambodia.

ABSTRACT

Information technology (IT) is an illustration of a broadly useful technology that can possibly assume a significant part in monetary development, just as different elements of financial and social turn of events. This paper audits a few interrelated parts of the role of information technology in the evolution of India's economy. It considers the startling accomplishment of India's software send out sector and the overflows of this accomplishment into different IT empowered services, endeavors to make IT and its benefits accessible to India's provincial masses, internet business for the nation's developing working class, the utilization and effects of IT in India's assembling sector, and different types of e-administration, including inward frameworks just as citizen interfaces. The paper closes with a general appraisal of these various features of IT with regards to the Indian economy

Keywords : *Information technology, India's economy, e-governance,*

INTRODUCTION

In his foreword to the NASSCOM-McKinsey Report (2002) longer than 10 years back, India's Minister for Communications and Information Technology required a joint industry government exertion to "guarantee that the Indian IT sector stays a prevailing part in the global market, and that we arise as one of the main nations of the new thousand years". The first of these objectives relates explicitly to India's information technology (IT) industry,¹ which has done quite well in the following decade. The second expressed objective is a lot more extensive, a lot further, and a lot harder to accomplish, appearing to suggest that IT can be the foundation of India's turn of events. Does it bode well to place such a lot of faith on India's IT industry? Which commitment would it be able to make to India's by and large monetary turn of events? Would it be able to help change the nation, decrease destitution, transform people to improve things? Or on the other hand will the benefits be limited to an informed elite with admittance to occupations and force?



This paper offers an applied outline of the potential roles of IT being developed, and the various measurements where IT impacts, or may affect India's economy.

IT might have an extraordinary role to play in growth and advancement basically on account of observational attributes that apply at the current time. Specifically, the new and proceeding with fast development in IT make it a powerful sector that is an alluring applicant as a supporter of growth thus alone, much as the car business was focused by the Japanese after World War II. Then again, there might be highlights of IT that make it appealing from a hypothetical point of view on financial growth. For instance, IT might be one of the sectors in which nations, for example, India have, or can create, a similar bit of leeway. Regardless of whether this is along these lines, IT is probably going to impart this trademark to a few different sectors. A fairly more exceptional trait of IT might be that it is a 'universally useful technology' (GPT, Bresnahan and Trajtenberg, 1995), recognized by inescapability, mechanical dynamism and development correlative. For this situation, IT is one of an extraordinary few advances: different instances of GPTs incorporate steam and electricity (the two advances in force conveyance frameworks) and engineered materials. At long last, IT might be exceptional in its effect on growth. In this view, IT has a unique role during the time spent advancement, since it influences the rate at which potential groundbreaking thoughts are changed over into additions to the usable load of information in manners that nothing else can. The formalization of this unique role depends on the model of recombination growth (Weitzman, 1998).

I momentarily think about every one of these possibilities – relative preferred position, GPTs (and complementarities all the more by and large), and recombinant growth, thus, just as different parts of IT and advancement, not really connected to formal growth hypothesis, remembering more noteworthy productivity for administration and in the working of business sectors. The static hypothesis of global exchange depends on similar preferred position, dictated by relative factor gifts or potentially technology contrasts. In the previous case, a nation will trade merchandise which utilize all the more seriously the elements of creation wherein it has relative bounty. On account of software, the existence pattern of improvement and use incorporates examination and detail of prerequisites, plan, coding, testing, establishment, upkeep and backing. A considerable lot of these activities, especially coding and testing, include generally routine IT abilities that India's labor force has in huge supreme numbers (however little comparative with the absolute populace). Henceforth, ascribing India's software send out blast in any event halfway to standard similar preferred position appears to be sensible.



Static near favorable position hypothesis clarifies examples of exchange, however not growth. For that one can go to hypotheses of endogenous growth. The elements of these models commonly incorporate separated capital information sources, monopolistic competition, creation of new contributions through R&D, and at last economy-wide expanding restores that permit supported growth to happen. Consequently these models move away from the selective spotlight on capital collection that portrayed the neoclassical growth model (just as the center of Indian post-autonomy financial strategy). Crafted by Grossman and Helpman (1991) and Rivera-Batiz and Romer (1991a,b) joins global exchange and the evolution of relative bit of leeway into endogenous growth models. In these investigations, the economy is regularly separated into assembling, R&D and traditional sectors, so the IT sector doesn't really fit flawlessly into any single model classification. For instance, plan and improvement of software have qualities of R&D, while IT-empowered services are more similar to assembling in their utilization of set up methods for creation. The overall message of these models, nonetheless, is that externalizes related with monopolistic competition may give strategy a role in affecting the evolution of similar bit of leeway toward a path that increments monetary growth

General models of endogenous growth underscore the importance of R&D by and large (for adding to the load of information, which thus raises productivity of actual data sources), as opposed to IT as such. The idea of GPTs gives a fairly extraordinary role to IT, to act as an illustration of a GPT. GPTs have three key qualities: inescapability, mechanical dynamism and advancement reciprocal. Helpman and Trajtenberg (1998a, 1998b) model GPT-drove growth, in which supported growth comes from the intermittent, exogenous presentation of new GPTs. Systems that would give endogenous growth are precluded, yet something else, the structure, comprising of endogenous R&D, monopolistic competition and the presentation of new halfway contributions as the usage channels for growth, is like endogenous growth models. In these models, any GPT has comparable unique impacts.

One can say a little additionally regarding how well IT fits the attributes of GPTs. Inescapability is by all accounts conceivably a characteristic property of IT. In the Indian setting, questions about accomplishing inescapability are focused on issues of cost and access. Table 1, in any case, outlines the significant positive patterns that help inescapability. Mechanical dynamism alludes to the potential for supported advancement that accompany new GPTs, and is again outlined by the sensational fall in costs appeared in Table 1. The corresponding of GPTs are vertical complementarities, in light of the fact that GPTs prod development and lower producing costs in downstream sectors, with positive criticism impacts to the GPT itself.⁴ There are likewise level reciprocal, since the downstream sectors may confront a coordination issue in extending



adequately to support the improvement of the GPT (consequently making positive input). Note that global exchange with a further developed nation might be one approach to beat a portion of these externalize issues.

Table 1: Falling Costs of Computing (US\$)

Costs of computing	1970	1999	2012
1 Mhz of processing power	7,601	0.17	<0.01
1 megabit of storage	5,257	0.17	<0.01
1 trillion bits sent	150,000	0.12	<0.01

The overall importance of complementarities (beside being one component of GPTs) in understanding growth measures has been depicted in most detail by Matsuyama (1995; see likewise Ciccone and Matsuyama, 1996). Matsuyama mentions three helpful observable facts. The first is the ID of the contrasting roles played by level and vertical complementarities, for example, was examined in the past passage. The second is the distinction between innovative complementarities, stressed by writers, for example, Kremer (1993) and Milgrom, Qian and Roberts (1991) and the interest based complementarities and financial externalities that drive models, for example, those of Matsuyama. The third point is the contrast between the impacts of history and of assumptions in influencing harmony results and growth. Either or both may neutralize advancement and growth, by forestalling composed development out of a 'terrible' balance.

OBJECTIVES OF THE STUDY

1. To study on Evolution of IT Industry in India
2. To study on Generation of Employment Opportunities

IT-BPO Industry

The numbers on India's IT industry will in general be all around promoted by the business affiliation, NASSCOM (www.nasscom.org). NASSCOM has more than 1200 individuals, over



two-thirds of which have yearly incomes surpassing US\$ 40 million ("huge" as indicated by NASSCOM's own classification).⁵ This affiliation addresses software (counting services and items), just as business measure rethinking (BPO), however prohibits equipment fabricate. The last term has generally supplanted a prior term, IT-empowered services (ITES), in portraying an entire scope of activities driven by the utilization of IT in different structures. Evaluations for 2012 on the ITBPO sector project yearly income arriving at US\$ 88 billion), or multiple times the sum (in ostensible. terms) of 10 years sooner. Growth rates have reliably been in twofold digits. Including equipment takes the complete above US\$ 100 billion. 10 years back, a lot of the world market, regarding global expenditure on software and services, was around 2 percent, however the most recent numbers address around a 10 percent portion of the global market. To contrast the IT-BPO sector with GDP, one needs to assess the negligible portion of deals that constitutes esteem added. Expecting this division to be 66% would infer that IT-BPO straightforwardly contributed around 5 percent to GDP, well over the 1 to 2 percent assessed 10 years sooner (Singh, 2002).

Rural Development

It might appear to be dumbfounding that advanced IT, regularly connected with created country markets and capital-concentrated techniques for creation, has any pertinence for a country where many millions, especially in provincial zones, actually need fundamental necessities of wellbeing, schooling and sanitation. By and by, there are numerous endeavors in progress in India and other agricultural nations to show the solid benefits of IT for rustic populaces, and to do as such in a way that makes financial sense.⁹ The overall assumption behind these endeavors is that assets spent thusly have a positive profit for advancement adequately huge to legitimize a potential redirection from different utilizations that straightforwardly address those essential requirements.

The calculated structure incorporates the possibility that jumping innovations may bode well. This is least demanding to see within the class of digital correspondence innovations: cell phones and communication over the Internet can be given to individuals who have never approached customary circuit-switched wired phone organizations. The Internet as a conveyance system for every day news can be savvy in zones where day by day papers have not infiltrated. All the more extensively, IT might help jumping in different types of financial institutions: town craftsmans may publicize and sell their manifestations on the Internet, without truly having been essential for an ordinary retail production network.



Other than the self-evident – and as we have implicitly recommended with the jumping models, shallow – Catch 22 of presenting current advances prior to fulfilling essential requirements, the issues included are not clear, since the execution of rustic IT includes authoritative and social changes, just as the selection of a perplexing arrangement of current innovations. For sure, two focuses to be accentuated are the synergist role of IT in prodding reciprocal advancements, and its extraordinary idea, recognizing them from different kinds of current advances, including other GPTs, for example, electric force.

Indeed, even a rearranged image of provincial families' monetary activity drives home the point that they take part in an expansive scope of exchanges and choices with financial effects. These incorporate creation and advertising choices, saving, utilization, speculation and danger the executives. What is significant other than the complexity of this financial dynamic is that numerous choices are made with extremely limited information, and that market cooperations are regularly dependent upon high exchange costs, because of flaws and deviations in information, just as high transportation costs, wasteful intermediation and time delays. High exchange costs will consistently keep minimal exchanges from being embraced; in extraordinary cases, the market may neglect to work by any stretch of the imagination. Given this situation, its role can be perceived regarding lessening exchange costs, just as improving the proficiency of dynamic within rustic family units (both as makers and as buyers). Decreases in correspondence and exchange costs are especially advantageous where they can permit new business sectors to create, as in existing merchandise and enterprises, in any case confined to metropolitan regions, or to an extremely limited fragment of provincial populaces, presently can be offered to more extensive cross-segments of the country population.¹⁰ Examples incorporate monetary services, specific sorts of training, wellbeing services, significant distance interchanges, and aptitude on a scope of creation related choices. Regardless of whether this should be possible in an economical way relies upon the stock conditions for IT-based provincial services.

E-Commerce

Internet business can be deciphered comprehensively to incorporate business-to-business (B2B) exchanges, or even inner cycles. The last are taken up in the following area, in a conversation of assembling. B2B exchanges are important for the inventory network, and the executives of the production network is likewise a powerless connection in India. Once more, this is an issue talked about further in the following area. In Section 2, I examined the complementarities between the IT sector and the remainder of the economy. These complementarities emerge from exchanges situated in the B2B field. Indeed, non-industrial nations have the opportunity to jump



over more established, more costly methodologies, for example, Electronic Data Interchange, which address huge heritage interests in nations, for example, the US.

For instance, Miller (2001) studied the potential for B2B internet business in India. He gives the case of Reliance Industries, which, however still quite differentiated, is presently intensely into creation and appropriation of synthetic substances. Of the organization's 20,000 or more clients in India, around 3,000 are significant purchasers, representing more than 3/4 of all out deals. These significant clients are electronically connected to a Reliance-controlled Internet-based market trade. Utilizing rented lines, clients can deal with requests, and Reliance can impart dispatching subtleties, better oversee stock, complete invoicing, and give client assistance. Utilizing this framework, Reliance diminished receivables from 310 days to 90 days. General expense enhancements came from a general fixing and speeding up of preparing within the organization, and between the firm and its clients. The speed of request conveyance enormously improved, and inventories were decreased. A move by clients from rented lines to the Internet will give additionally cost reserve funds.

Going to retail, or B2C online business, a key measurement is that India has just around 150 million Internet clients, of whom 75-80 percent are dynamic or customary clients. Consequently, the current capability of the B2C market is well beneath that of the populace. Around 30% of the client base is in provincial regions, including the individuals who utilize cell phones. Metropolitan Internet clients lean toward correspondence and interpersonal interaction, while diversion (e.g., music, photographs and recordings) is the essential driver of Internet use in provincial India. Content sites, for example, Yahoo! are mainstream in India, and Google offers different Indian dialects for its search engine.

Given issues of lacking frameworks of installment and conveyance, country Internet clients in India are bound to be essential for the consideration economy, paying for admittance to content through their thoughtfulness regarding promoting. Metropolitan Indian shoppers, be that as it may, are more similar to their Western partners, utilizing internet business for a wide assortment of products. Since internet business came moderately late to India, its direction didn't follow that of the West, beginning with books and CDs. Nonetheless, merchandise that are costly to stock in full assortment, similar to books and music, are characteristic contender for internet selling. One as of now finds a wide scope of sites for Indian web based business, either wide based, as Flipkart, or work in explicit scopes of products, for example, attire, shoes, hardware or family unit items. These online sites, somewhat, fill the hole of the nonattendance of complex retail



chains, which are generally frail or scant in India (with the incomplete exemption of the southern piece of the country)

Indian online business sites have needed to adjust to the Indian situation, as far as coordinations, installment frameworks and lawful instruments. Curiously, they have been sensibly fruitful, despite the institutional shortcomings. The utilization of money down and private dispatches and the importance of trust and notoriety have permitted internet business exchanges to acquire a traction in Indian retailing. Ongoing moves to permit FDI in multi-brand retail in India explicitly avoid ecommerce, giving some "baby industry" assurance to India firms. Flipkart, for instance, has not needed to rival goliaths, for example, Amazon, and will keep on being shielded in this regard. Obviously, substance and market middle person services, for example, eBay are a lot of part of online contributions in India. Besides, the idea of online business is that Indians are additionally ready to make buys from unfamiliar web based business sites, and by and large transportation costs are not prohibitive. There is likewise almost no to keep unfamiliar sites from going about as middle people between Indian purchasers and venders.

Manufacturing

Contrasted with numerous other non-industrial nations, India's assembling sector has assumed a strange part in the public growth experience. In 1950-51, the main year for which practically identical information is accessible, producing was around 9% of GDP. By 1979-80, this proportion had risen near 15%, however from that point has scarcely expanded. The most elevated portion of assembling at whatever year was in 1996-97, at 16.6%: after then the figure has drifted on either side of 16%, even in the years when India's GDP developed at more than 9% annually.¹⁹ In this specific circumstance, the new National Manufacturing Policy's (NMP, 2012) explicit objective of expanding assembling's offer to 25% by 2022 is very ambitious. Panagariya (2008), remarks on the situation of Indian assembling: "as opposed to different nations that have effectively transitioned from the principally provincial and agrarian design to the cutting edge one, fast growth in India has not been joined by a similar expansion in generously compensated proper sector occupations. In huge part, this has been because of a stale portion of industry and assembling, particularly untalented work concentrated assembling, in the GDP. This example of growth has implied that the development of the labor force out of farming and into the coordinated sector has been moderate. Modernization of the economy requires the development of work opportunities in the coordinated sector." (Panagariya, 2008, p. 309).

Contribution of IT Sector to India's Growth Story



Indian IT industry has accomplished remarkable growth during the post-monetary change time frame. The changed strategy system, quick mechanical progression, declined costs of PC equipment, mushrooming of software engineering and Technology instruction, availability of an enormous pool of ability to the business moderately at lower cost, all together have made huge commitment to the growth of this industry during the most recent 25 years.

Indian Software in Domestic Market

The Indian software industry had developed at an accumulate yearly pace of more than half in the 1990s, the most elevated for any country during that period. According to latest things, the space explicit arrangements zeroing in on union, customization, efficiencies and confinement, M2M technology and more current advancements around SMAC are assuming a critical part in driving the growth of ER&D and software items. With more than 3,100 firms, India is arising as a hotbed for software items with SMAC (Social media, mobility, examination and cloud) and a steady environment making fruitful stories.

Generation of Employment Opportunities

The quick growth of IT industry in India has made countless positions along these lines raising the financial level of countless families. The of all shapes and sizes software organizations, BPOs, and other related business communities utilize an enormous number of talented and even incompetent individuals. The absolute work in IT-ITES industry has been ascending throughout the long term and stretched around 3.688 million out of 2015-16. Around 5% of the representatives working in IT-BPO industry come from the financially in reverse areas of the general public. Work to one individual for each family carries an enormous distinction to their financial status. Expansion in work in IT-ITES services have helped other related organizations like security, housekeeping, catering, transportation and land to develop. Every one of these activities are adding to the Indian economy as duties paid to the public authority.

Table 2: Employment in IT-ITeS Industry (in millions)



Year	IT Services & Exports	BPO Exports	Domestic Markets	Total Employment
2001-02	0.17	0.11	0.25	0.52
2002-03	0.21	0.18	0.29	0.67
2003-04	0.3	0.22	0.32	0.83
2004-05	0.39	0.32	0.35	1.06
2005-06	0.51	0.42	0.38	1.29
2006-07	0.69	0.55	0.38	1.62
2007-08	0.86	0.7	0.45	2.01
2008-09	0.92	0.79	0.5	2.21
2009-10	0.99	0.78	0.52	2.29
2010-11	1.15	0.83	0.56	2.54
2011-12	1.15	0.83	0.56	2.54
2012-13	1.29	0.88	0.6	2.77
2013-14	1.6	0.989	0.699	3.288
2014-15	1.74	1.03	0.745	3.515
2015-16*	1.844	1.086	0.758	3.688

* estimated
Source: NASSCOM <http://www.mit.gov.in/content/employment>

Importance of IT Services in the Indian Economy

On the planet economy, the importance of the help sector couldn't be more important. The portion of services on the planet economy remains at 66% in 2013. The sector likewise represented 45.1% of the positions on the planet economy in 2013 as indicated by gauges by the International Labor Organization (ILO). Throughout the years from 2001 to 2013, the rate portion of administration sectors' commitment to GDP has hardly declined from 68.8% in 2001 to 66% in 2013. It comes as a bit of a shock as the portion of business has expanded from 39.1% to 45.1% over a similar period.

Likewise, the importance of the help sector can likewise be measured from the way that assistance sector represented 19.8% of the world fares in 2013. It has somewhat expanded from 19.4% in 2001. Likewise, the sector is significant according to the perspective of Foreign Direct Investments, which is the biggest wellspring of cross-line streams on the planet economy.

An examination of the assistance sector of different economies brings and intriguing point to the cutting edge. The phase of the economy as additionally the per capita pay levels decides the commitment to the GDP of an economy. Major league salary nations have the top level input to the GDP by administration sectors in their individual economies. India is an outstanding exemption for the previously mentioned rule as it has generally 58% commitment to the GDP coming from the help sector of the economy. It is extraordinarily high and is significantly more than China, which is at any rate ten years in front of India in the per capita pay levels.



The Indian help sector has been the growth driver for the Indian economy for as far back as 20 years. In 2014-15, 72.4% of the growth came from this sector. At a sub-public level too the help sector is the predominant sector. It has over 40% offer in GDP in all the states and Union territories (UT) notwithstanding the northeastern conditions of Sikkim and Arunachal Pradesh. Among the states and UT's Chandigarh and Delhi are UT's with over 85% portion of GDP coming from the help sector alone.

There are an assortment of services that come in the help sector ambit. The scope of services is genuinely wonderful. Administration activities are a different pack with services going from the exceptionally fundamental services like those offered by a hair stylist to more perplexing ones like IT and some monetary services. Under the NIC 2008 arrangement of the economy, services have been characterized into the accompanying five expansive regions. These incorporate (a) Trade, inns, and cafés, (b) Transport, stockpiling, and correspondence (c) Financing, protection, land, and business services (d) Community, social, and individual services and (e) Construction.

Their overall offer or commitments to the GDP and their separate growth rates throughout the long term show an intriguing pattern. Financing, protection, land, and business are the greatest patron in GDP followed by Trade, inns, and cafés. Together they represent generally 40% of the complete gross worth addition in the assistance sector. Remarkable growth is by and by being witnessed in the exchange and fixes sub-fragment.

FDI in services has been a critical part of the services growth in the previous 15 years or somewhere in the vicinity. The portion of services in the total FDI Inflows over the time frame from April 2000-November 2014 is 53.8%. The majority of streams went to the monetary and non-monetary help sector, trailed by development advancement. From a time of April 2000-November 2014, these sectors pulled in 65 billion US dollars of FDI. These represented a little more than 27% of aggregate FDI inflows during a similar period.

As indicated by financial study 2014-15, India has demonstrated 'sensibly great execution' in various services like telecom, flight, the travel industry, rail routes, and delivery on different execution boundaries. In the telecom sector, India has approximately 91 crore phone associations. Also, avionics services were delivered to 10 crore homegrown and worldwide travelers in 2013-14. In the travel industry space, India is required to get a sum of 7.5 million global sightseers, which is relied upon to get 19.7 billion USD of unfamiliar trade profit. Indian Railways likewise conveyed 1051 million tons of cargo traffic in 2013-14. The port traffic of 975 million tons 2013-14 shows an increment of 125 million tons over the earlier year mirroring a developing delivery sector. The growth in these sub-sectors throughout the long term shows the



extending of the services' sector and the importance it has in the growth and improvement of the Indian economy.

In the coming years, services will keep on ruling the growth story. Regardless of whether the assembling sector gets administration sector importance won't lessen. It is on the grounds that assembling has a multiplier impact in the economy with one blue collar position making a different of administration sector occupations. The assistance sector growth is setting down deep roots.

CONCLUSION

This paper has given a survey and outline of different aspects of IT in India's economy. The most clear of these is simply the IT sector, including IT empowered services, for example, business measure re-appropriating. This sector has end up being versatile and imaginative, proceeding to extend and overhaul its contributions. The fare direction of the sector has added to its competitive order and achievement, however that achievement has never been a renounced end. At the opposite finish of the advancement range, this paper talked about a few parts of rustic IT in India. 10 years back, there were numerous ambitious endeavors to tackle the capability of IT for giving provincial interchanges and other IT-based services. The narrative of these endeavors delineates large numbers of the overall issues of advancement. Regularly, the coupling imperative was an absence of particular kinds of human and social capital. Low degrees of pay likewise were a conspicuous test in making economical plans of action for country Internet conveyance. In any case, different analyses and more ambitious endeavors have given exercises about how to go about such endeavors later on, and they have proposed that IT access for India's country masses isn't an unrealistic fantasy.

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