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India's Potential of Export in Services: A Study of Software Technology Parks of India

Aditi Goel

Research Scholar
Singhania University
&

Dr. Harish Handa

Associate Professor
Shaheed Bhagat Singh College

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Abstract:

Liberalisation, privatisation and globalisation policy of the Government of India provided a fillip to the service sector. The share of service sector in GDP has risen to around 59.9 per cent in 2015 from 38 per cent in 1980's. The study examines the experience of India in exporting information technology services. It highlights the role of policy initiatives and institutional interventions undertaken by the government in achieving this success, in specific establishment of Software Technology Parks of India (STPI) as it has played a pivotal role in India having earned the reputation of an Information Technology superpower. The study also examines the contribution of the STPI scheme to export oriented growth of the IT industry and throws light on the need to strengthen the scheme for facing the challenges in global markets.

Keywords: GATS, STPI, ITeS.

Introduction

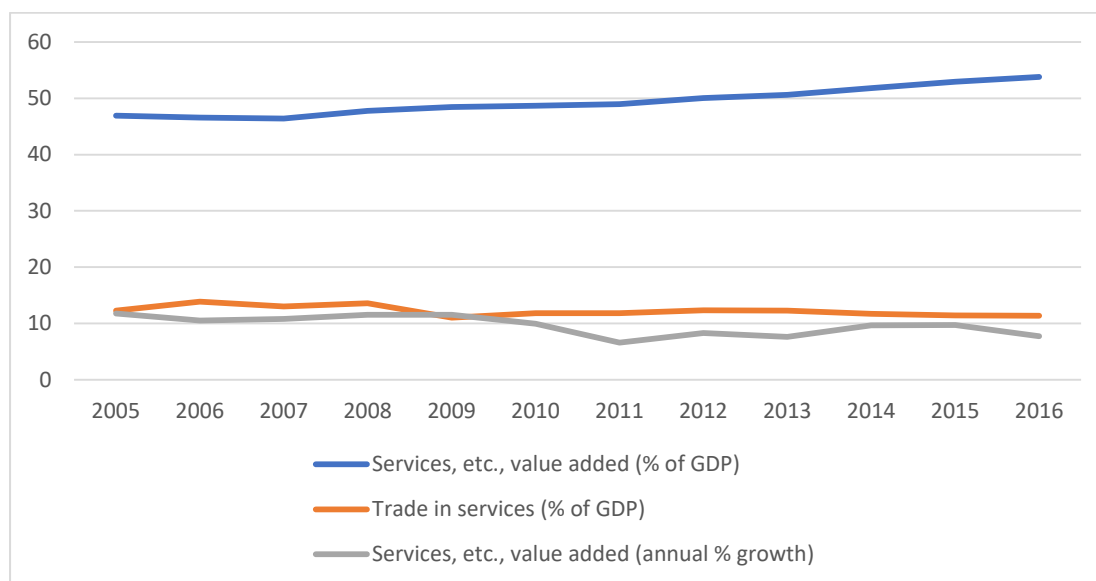
For a developing country foreign trade plays a vital role in its economic development. Prior to economic liberalisation, India was almost a closed economy due to the average tariffs exceeding 200 per cent and the extensive quantitative restrictions on imports. India initiated the reforms for liberalising the economy in 1991 by introducing New Economic Policy. It constituted liberalisation, privatisation and globalisation of the economy. Since then, India's economy has improved mainly due to increased foreign trade.

During the process of liberalisation, the Government of India realised the significance of export of services. The General Agreement on Trade in Services (GATS)¹, 1995 provided a stimulus to the efforts of the Government of India to expand the service sector. Prior to the Uruguay Round (1986) of General Agreement of Trade and Tariffs (GATT), services were considered to offer less potential for trade expansion than merchandise goods, due to existence of technical, institutional and regulatory barriers. However, the trade in services increased with the development of new transmission technologies enabling the supply of

services (e.g. data communication link, electronic banking, tele-education). The services trade also gained momentum with the opening up of monopolies in various countries and gradual liberalization of sectors which were previously controlled like transport, banking and insurance along with changes in consumer preferences. These changes led to increase in international flow of services and generated a similar need for multilateral treaty – like GATT in the case of merchandise trade. Therefore, the main motive behind the foundation of the GATS was to form a consistent and dependable system of international trade rules for stimulating trade in services among the member countries.

For a country like India, the service sector is key to economic growth, export competitiveness, and poverty reduction. The sector is also important for generating employment and employment growth as traditional services like distribution, education and social services are labour intensive. Income-related demand shifts, technological developments, falling costs of communications and the increased presence of transnational corporations has led to expansion of services and emergence of new services. In the high income industrialized economies, the value addition by service sector generally exceeds 60 per cent of total output. The European Union and the United States together account for over 60 per cent of world service exports. In many developing economies, the commercial market for services is enormous and growing. This trend is obvious as national economy develops and income rises, the commercial service sector accounts for larger share of Gross Domestic Product (GDP).

In India service sector is emerging as an important sector in terms of contribution to GDP, trade flows, FDI inflows and employment (Figure 1). Value addition by services in 2016 was 53.8 percent of total output with share in employment at 28.7 percent of total employment. As a result, the service sector has replaced agriculture as the dominant sector in India. The share of service sector in GDP has risen to around 59.9 per cent in 2015 from 38 per cent in 1980's. As per the Economic Survey for 2013-14, "India has the second fastest growing services sector with its Compound Annual Growth Rate (CAGR) at 9 per cent, just below China's 10.9 per cent, during the last 11-year period from 2001 to 2012", making it one of the driving forces of the Indian economy. Trade in services is an essential contribution to economy accounting for nearly 11.39 per cent of GDP in 2016.

Figure 1: Expanding Role of Services in India

Source: data.worldbank.org

Table 1: Service Exports of India

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BoP (Current US\$ Billion)	52	69	86	106	92	117	138	145	149	157	156	161

Source: data.worldbank.org

A service can be broadly defined as the product of human activity aimed to satisfy a human need, which cannot be stored as it does not take form of a tangible commodity, is invisible, perishable and usually requires simultaneous production and consumption. However, there is no definition of “services” in the GATS. The GATS take a very comprehensive view of trade in services. Trade in services for the purposes of this agreement consists of four types of transactions:

- Mode 1: supply of a service from the territory of one Member into that of another, i.e. supplier and consumer interact across distance (cross-border trade).
- Mode 2: consumption of a service by consumers of one Member who have moved into the territory of the supplying member (consumption abroad).
- Mode 3: services are supplied by foreign suppliers that have commercial presence in the territory of another member (commercial presence).

- Mode 4: services are delivered through persons of a Member country temporarily entering the territory of another Member Country (presence of natural persons).

Therefore, the scope of the GATS is much broader than that of the GATT in merchandise trade. As stated by Adlung & Mattoo (2008) “the GATS cover not only traditional trade flows across borders, but also three additional types of transactions where supplier and consumer directly interact by way of the consumer moving abroad (mode 2) or the supplier, either a commercial entity or a natural person, moving into the territory of the consumer (mode 3 and 4, respectively).”

However, all the globally traded services are covered by the GATS with two exceptions namely, services provided to the public in the exercise of governmental authority, and, in the air transport sector, traffic rights and all services directly related to the exercise of traffic rights. All tradable services have been divided by the WTO into following twelve sectors. These are further divided into 161 sub-sectors.

Classification of Services under GATS

- | | |
|--|--|
| 1. Business Services | 7. Financial Services |
| 2. Communication Services | 8. Health Services |
| 3. Construction and Engineering Services | 9. Tourism and travel Services |
| 4. Distribution Services | 10. Recreation, Cultural and Sporting Services |
| 5. Education Services | 11. Transportation Services |
| 6. Environment Services | 12. Other Services not elsewhere classified |

Information Technology Sector in India

This sector is of paramount importance for sharing information, developing knowledge and providing the software infrastructure necessary for the electronic supply of other services. Trade in these services is a fairly modest activity in most developing countries. Several countries are enjoying the gains from trade in IT-enabled services. Countries like China, India and Israel have developed a sizable export-oriented information technology (IT) service sector.

Demand for IT services is propelled by competition in international markets which compels companies to raise productivity and reduce the costs associated with the use of IT. Significant cost savings through labour-cost arbitrage and economies of scale are offered by providing these services on offshore basis. Development and maintenance of customized software application are the types of work most commonly outsourced to developing countries. Web designing and development represent another area in which entrepreneurs in developing countries have excelled.

M. Engman (2010) observed that supply is fuelled by many developing countries that have invested in education and are now able to offer an abundance of young, motivated and technically adept graduates. India is, so far, the only developing country that has created a



sizable, export-oriented IT service sector. Trade in IT services is of interest for developing countries for several reasons. First, it makes intensive use of human capital and is not particularly reliant on physical capital. An export-oriented IT service sector can thus thrive in a country with good technical education and limited infrastructure. Second, widespread connectivity to international information and communication technology networks enable IT service entrepreneurs to compete for business independently of location. Third, a dynamic domestic market is not necessarily a prerequisite for success, like in India, an IT service sector can be nurtured and thrive without significant local demand. Companies with necessary talent can tap into international markets and grow on the back of foreign demand. Fourth, the international market for IT services is growing rapidly.

However, Dongier and Sudan (2009) noted while there is plenty of demand, relatively few developing countries have the supply capacity in terms of the quantity and quality of human resources and sophistication of local companies to develop a sizable export industry in the short or medium term. Most companies in countries with dynamic IT service sectors, including India, are struggling with staff attrition and salary inflation because of the limited number of adequately trained and experienced staff. Dossani (2010) and others have concluded that the endowments of entrepreneurship and quality education are key in the IT service sector.

According to A.T. Kearney's global services location index (GSLI)ⁱⁱ India and China are the two developing countries that have high scores in human resources and in cost structures. According to 2015 index, "India remains the preeminent destination for offshore services, with excellence in IT, BPO, and voice services. India is the undisputed leader in the field for last decade." According to National Association of Software and Service Companies (NASSCOM)ⁱⁱⁱ, "this sector employs around one million people and represents 25 per cent of India's total exports and dominates the industry with exports of \$40 billion, followed by BPO exports of \$20 billion."

Due to recovery in global economy, global IT spending has increased 2.1 per cent in 2014 as compared to 2013. The Indian IT sector is estimated to aggregate revenues of US\$ 105 billion in 2013-2014 as compared to US\$ 73.9 billion in 2009-10. During the same period, IT software and services added about 1,68,000 jobs (consisting of 30 per cent women employees), taking the direct employment number to 3.13 million, a year-on-year growth of over 5.67 per cent whereas the indirect employment attributed to the sector is nearly 10 million. The India software and services exports including Information Technology enabled Services (ITeS)/ Business Process Management (BPM) have grown by 71 per cent from US\$ 50.1 billion in 2010 to US\$ 86 billion in 2014. The IT services exports increased by 90 per cent from US\$ 27.3 billion in 2010 to US\$ 51.9 billion. IT services contributed 60.3 per cent of total IT-BPM exports in 2014. The spectacular growth performance in IT-BPM industry in the last decade has helped the industry to contribute substantially to India's GDP. The IT-BPM sector's proportion in GDP has grown from 1.2 per cent during 1998-99 to nearly 8.1 per cent in 2013-14. (Source: Annual Reports STPI).

India occupied third position after the US and the UK occupying the top two positions, in promoting 4200 technology driven start-ups in the world in 2015. The start-up environment

in India is becoming an example of innovation world-wide due to initiatives like 'Start-up India', 'Make in India' and 'Digital India'.

Role of Software Technology Parks of India

One of the reasons for the emergence of a strong Indian IT industry can be accredited to the active role of the government. The setting up of special development zones like Software Technology Parks of India (STPI) has been one of the most important components of government policy. It has played an important and dominant role in the emergence and development of Indian Software industry. STPIs have played an important role in expanding regional boundaries of IT sector in India by creating necessary IT infrastructure in Tier-II/ III locations facilitating IT companies to avail the cost advantage and high-quality scalability from these locations. In 2014, 53 STPI centres were operational across the country, out of which 46 centres were in Tier II and Tier III cities.

India has earned itself a reputation of an IT superpower. Software Technology Parks of India have played a seminal role in accomplishing this status. Today, STPIs across over the country are synonymous with excellent Infrastructure and Statutory support aimed at furthering growth of Information Technology in the country. In 1991, under Ministry of Electronics and Information Technology, STPI was established and registered as an autonomous society under the Societies Registration Act 1860 with the purpose of encouraging, promoting and boosting software exports from India. The services rendered by STPI for the software exporting community are statutory services, data communications servers, incubation facilities, training and value-added services. The objectives of STPI are:

- a) To promote the development and export of software and software services.
- b) To provide statutory and other promotional services to the exporters by implementing Software Technology Park/ Electronics Hardware Technology Park schemes.
- c) To provide data communication services including value added services to IT/ ITeS (Information Technology enabled Services) related industries.
- d) To promote micro, small and medium entrepreneurs by creating conducive environment for entrepreneurship in the field of IT/ ITes.

Incentives for STPI units

The STPI scheme is a 100% export-oriented scheme for the development and export of computer software using data communication links or in the form of physical media including the export of professional services. The major attraction of this scheme is single point contact service to the STPI units. STPI provides physical infrastructure, including dedicated high-speed connectivity to technology parks and freedom for 100 per cent foreign equity investments. STPI units were exempted from payment of corporate income tax till 2010. All the imports of Hardware & Software in the STPI units are completely duty free. Also import of second hand capital goods is permitted. A very attractive feature of the policy is the provision of incubation infrastructure. Under the incubation scheme, new units are given ready-to-use built-up space with plug-and-play facilities along with internet connectivity and power backup, enabling them to commence their operations with minimum



gestation period and least upfront costs. Several IT majors including WIPRO were benefitted by this scheme in the initial years of their development. The STPI also functions as an export promotion council. It takes initiatives like quality assurance, certification and information security management, development for software and export promotion campaign, for promoting software exports.

During the year 2015-16, 105 new units got registered under STP and 409 units were registered for availing softex attestation services only. As on 31st March 2016, 3644 units were operative out of which 2525 units were actually exporting.

Table 2: Total Operating and Exporting Units under STPI

Year	Operating Units	Exporting Units
2005-06	6383	5116
2006-07	7543	6321
2007-08	8188	6842
2008-09	8455	7214
2009-10	7007	5814
2010-11	6554	5565
2011-12	5235	4542
2012-13	4534	3755
2013-14	3563	3335
2014-15	3676	2832
2015-16	3644	2525

Source: www.stpi.in

Performance of STPIs

With aim of achieving STPIs prime objective of promotion of development and export of software and software services, major thrust has been given to establishment of new centres and revamping of existing centres. The efforts have resulted in fourfold increase in the exports made by STPI registered units in span of twelve years (2004-16) as noted in the table given below.

Table 3: Exports made by STPI

(Rs in crore)

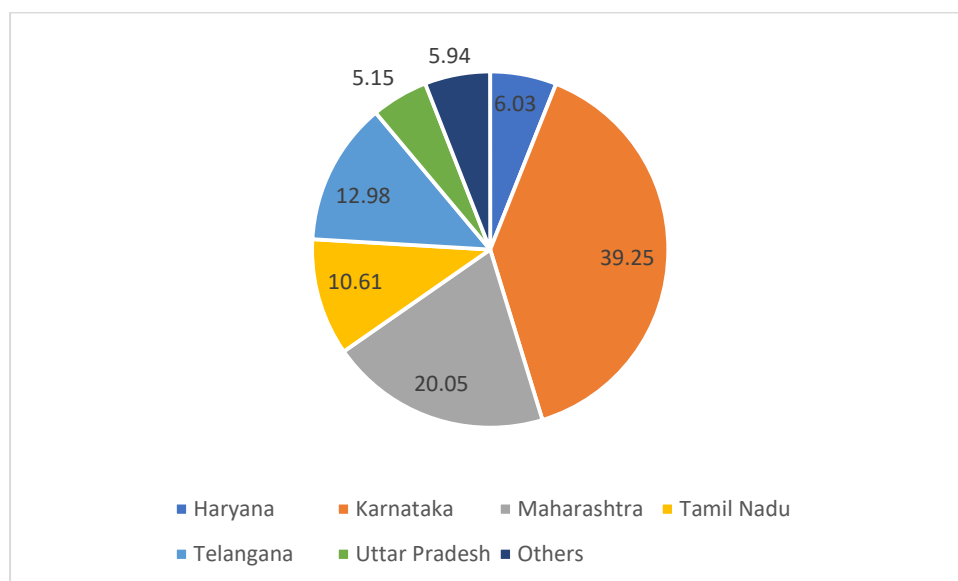
Year	STPI Exports
2004-05	74019
2005-06	100965
2006-07	144214
2007-08	180155
2008-09	207358
2009-10	205505

2010-11	215264
2011-12	226712
2012-13	251497
2013-14	273313
2014-15	293797
2015-16	319569

Source: www.stpi.in

STPI policy of the government of India has also been playing a proactive role in facilitating the geographic expansion of the industry within the country. It is obvious from the figure 2 given below that despite the continuing concentration of IT activity in Karnataka, there is significant contribution by other states as well. In 2015-16, Karnataka contributed to around 39 percent share in total exports made by registered units through STPI. Haryana, Tamil Nadu, Telangana, Uttar Pradesh and Maharashtra together contributed 54.81 percent of total exports.

Figure 2: State wise software exports made through STPI



Source: STPI annual report 2015-16

In the end, it can be submitted that government of India should undertake some initiatives to remove common impediments in the international supply of IT services which will benefit export- oriented IT service companies. First, address the limitations in infrastructure. Stable power and reliable telecommunications and internet connectivity are the main critical inputs for production in the IT service value chain. Unless the telecommunications sector provides much more rapid connections, IT service companies may not have a reasonable chance to



export through electronic supply (Mode 1). To attract greenfield investment from foreign IT service companies, several developing countries have sought to overcome the constraints of poor supply of electricity, telecommunications-Internet broadband, weakness in local business environment through software and high-technology parks. Second, technical education curricula should be updated, support should be given to private technical colleges and students should be encouraged to learn foreign languages. The IT service sector makes intensive use of engineering talent. Much of the growth in the number of engineering graduates in South Asia has been generated by the private provision of IT training. Third, a professional public-private industry association should be established to promote the sector. An industry association plays a key role by providing essential services like collecting and disseminating information about the sector, organising international trade fairs, organising workshops to educate members, promoting the use of professional certificates for IT staff to raise quality standards etc.

Notes:

ⁱ The General Agreement on Trade in Services (GATS) is a treaty of the World Trade Organization (WTO) that entered into force in January 1995 as a result of the Uruguay Round negotiations. The treaty was created to extend the multilateral trading system to service sector, in the same way the General Agreement on Tariffs and Trade (GATT) provides such a system for merchandise trade.

ⁱⁱ A.T. Kearney's global services location index (GSLI) is a widely studied benchmarking tool for the IT service sector. It illustrates how different locations have different strengths that cater to the different needs of foreign clients. The GSLI, tracks 51 countries across three major categories: financial attractiveness, people skills and availability, and business environment.

ⁱⁱⁱ The National Association of Software and Services Companies is a trade association of Indian Information Technology and Business Process Outsourcing industry. Established in 1988, NASSCOM is a non-profit organisation.

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