

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, ECONOMICS & MANAGEMENT

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 - Use (ed.) for one editor, and (ed.s) for multiple editors.
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CONTRIBUTION OF INFORMATION TECHNOLOGY INDUSTRY IN PROMOTING INDIA AS BRAND INDIA

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ABSTRACT

Brand is a differentiating identity of a product, service or company, which includes name, term, sign, symbol or design or combination of them. India now has the second fastest growing large economy in the world, surpassed only by China. India today is home to many world-class corporations that enjoy global brand recognition and are busy in expanding overseas as top global companies. IT and ITES (TCS, Infosys and Wipro etc.), Ranbaxy, Hero Honda, Bajaj, Tata, all are Indian brands with global presence. The present paper examines that Indian information technology companies have started gaining acceptance in international markets for their quality products. Information technology industry in India has reasonably continued its robust growth of about 59.5 percent during the year 2009. Various aspects of information technology industry like composition, revenue, exports, employment opportunities and share in global information market etc. are studied under this paper. Challenges faced by this sector and steps undertaken by government of India are also discussed.

KEYWORDS

Brand, Information Technology, International Markets.

INTRODUCTION

What's in a name, said Shakespeare. What explains Hindustan Liver, McDonald's, P&G, Coca-cola and Mahindra to be among the 100 global brands? Is it their sales revenue? No. Is it their market shares? No. Is it their profitability and their years of existence? No. Then what does it explain? The answer is Brand. Now the next question is, what a Brand? And the answer is 'a brand is the identity of a particular product, services and business.' In broader term brand is a differentiating identity of a product, service or company (which includes name, term, sign, symbol or design or combination of them) and how it relates to key components, i.e. employees, investors, customers, partners. From the psychological aspect brands are perceptions. It relates to the thoughts, feelings, perceptions, images, experiences, beliefs, attitudes etc. E.g. 'BMW' is associated with 'the driving'. The Volvo brand stands for 'safety'. Building brands requires the same care that one would use for developing any major asset such as new products or services, new factories or new information technology system. Brand is a company's vital asset in the long term. It is also a bond between the customers of products/services and the company. A brand assures reliability and quality of the product/services. Brands are the instruments with which companies seek to build and retain customer loyalty. Hence, brands are not simply about whether customers know their names, but are about whether customers know what those brand names stand for (www.icfai.org; www.enwikipedia.org).

THE NEED FOR A GLOBAL MINDSET

In global competition to produce, to develop, promote and to sale the brand product/service to global customer, the organisations must develop "global mindset". It is essential to understand the today's business dynamics and to develop suitable strategies for introducing, promoting and retaining the brand in global market. Some key elements of this global mindset are as follows:-

- Being open-minded
- Comfort with diversity
- Interest in history, geography and global phenomena
- Integrity
- Abstract thinking
- Risk-taking capability
- People management
- Cultural sensitivity (www.vikalpa.com)

PRINCIPLES FOR BUILDING STRONG BRANDS

Brands are usually an organization's most valuable single asset. Different studies suggest that for consumer goods, brands often represent 50 to 80 percent of the market capitalization of their parent organizations and for industrial goods around 20 to 30 percent. Now a days for organizations, it is necessary to build a good brand name, which includes following features –

- Brand name must easy to know
- Be easy to recognize
- Be easy to remember
- Be easy to pronounce
- Be attractive, so that attract attention
- Be easy to translate into all languages
- Suggest the company or product image
- Distinguish the product's positioning relative to the competition
- Stand out among a group of other brands
- And must be protected under trademark.

Thus, brand name must right for organization, market, customers and meet organization's key criteria. (www.enwikipedia.org ;www.icfai.org)

ARGUMENTS IN FAVOUR OF BRAND

Now a days brand is a hot topic. The arguments in favour of brand are as following:

1. Brands added emotions and trust which help to create a relationship between brands and consumers.
2. Brands create aspirational lifestyles based on these consumer relationships. Associating oneself with a brand, transfers these lifestyle onto consumers.
3. Products and services have become so like that they fail to distinguish themselves by their quality, efficacy, reliability, assurance and care. Brands add all these things to the products and services.
4. The combination of emotions, relationships, lifestyles and values allows brand owners to charge a price premium for their products and services
5. A strong brand can raise prices as well as barriers to new entrants. (www.incitrio.com ; www.icfai.org; www.enwikipedia.org)

ECONOMIC CHANGES IN INDIAN ECONOMY

From 1947 to the late 1970s, the economy was characterized by central government planning and import substitution industries, and economic production was transformed from primarily agriculture, forestry, fishing, and textile manufacturing to various heavy industries, transportation and telecommunications. In the 1980s, government adopted liberalization measures - such as privatization of government industries and reduced tariffs on imported capital goods - have been credited for 1990s economic growth rates. From 1951 to 2000, the Indian business in services sector such as information technology, banking, communications, hotels, and other services has increased from 27 to 48 percent of gross domestic product (GDP), but most of this growth occurred in the 1990s. India now has the second faster growing large economy in the world, surpassed only by China. India today is home to many world-class corporations that enjoy global brand recognition and are busy expanding overseas as top global companies IT and ITES (TCS, Infosys and Wipro), Ranbaxy, Bajaj, Hero Honda, Tata all are Indian brands with global presence. These Indian brands have started gaining acceptance in international markets for their quality products (www.ibef.org; www.humanrightsinitiative.org).

INFORMATION TECHNOLOGY INDUSTRY IN INDIA- GROWTH STRUCTURE AND PERFORMANCE

Now-a-days, India has come up in the three hot fields of beauty, cricket and information technology. In general, information technology covers all aspects of managing and processing information. The last decade of 20th century has witnessed information technology to have revolutionary effect on the lives of people. During this period, Indian engineers and scientists have earned high degree of esteem around the world for their highly professional and innovative contributions. Developed countries like USA, Germany and Japan have shown keen interest, in hiring Indian software professionals in their information technology sector. On the domestic front also, information technology industry has shown highest growth rates consistently over the last many years as compared to any other industry. India is among the three countries that have built super computer on their own; the other two are USA and Japan. India is among six countries, which has launched satellites and done so even for other countries like Germany and Belgium. India's INSAT is among the world's largest domestic satellite communication systems. India has the third largest telecommunication network, among the emerging economies.

The first year of this millennium was a year of turbulence, tragedy, terrorism and slows down in the world economy. However, the Indian information technology industry has weathered this storm as well. It is indeed creditable that the information technology industry in India has continued its robust growth since 1998. In 1984, under the rule of Prime Minister Rajiv Gandhi, various efforts were made to develop information technology industry in India. The National Association of Software and Service Companies, known as NASSCOM, was registered under the Societies Act, 1860, in 1988. NASSCOM provides facts and figures about the growth of the information technology industry in India and to facilitate the business and trade in software and services. NASSCOM is a global trade body with over 980 members, of which over 150 are global companies from the USA, UK, EU, Japan and China. The share of information technology industry is 5.5 percent of gross domestic product (GDP) in Indian economy according to NASSCOM (www.imdr.edu; www.nasscom.org).

GROWTH AND PERFORMANCE OF INFORMATION TECHNOLOGY INDUSTRY IN INDIA

The information technology industry has emerged as one of the fastest growing industries in India. As a proportion of Gross Domestic Product, the information technology industry revenue has grown from 1.2 percent in 1998 to an estimated 5.5 percent in 2008. India's domestic market is estimated to grow by 20 percent growth in 2008-09. Hardware segment is estimated to grow by 17 percent to be Rs. 541 billion, information technology services segment is estimated to grow by 20 percent to be Rs. 380 billion. Whereas software products and BPO segment is estimated to grow by 15 percent to be Rs. 103.3 billion. Export growth is expected at 16-17 percent in 2008-09.

According to the latest findings of NASSCOM, the aggregate revenues of the sector are expected to reach USD 60 billion in 2008-09. Industry will continue to net hire and focus on value creation, provide direct employment to 2.23 million and indirect job creation estimated to eight million employees. Indian information technology sector is developing as the biggest source of revenue and employment generator. The growth of information technology industry will also develop the other industries of the economy. This industry has a number of customers in India, as well as also in abroad. The USA (60 percent) and the UK (19 percent) remain the largest, information technology export markets in 2008. The industry footprint is steadily expanding to other geographies - with exports to continental Europe in particular is growing at a CAGR of more than 51 percent over 2004-2008 (www.nasscom.org).

TABLE 1: INDIA'S GDP AND INFORMATION TECHNOLOGY INDUSTRY GROWTH

Years	GDP Growth (USD Billion)	IT Growth (USD Billion)	%age share of IT Industry in GDP
1997-98	411.570	5.0	1.2
1998-99	440.597	6.0	1.4
1999-00	461.914	8.2	1.8
2000-01	473.050	12.1	2.6
2001-02	494.997	13.4	2.7
2002-03	573.167	16.1	2.8
2003-04	669.442	21.5	3.2
2004-05	783.141	28.2	3.6
2005-06	877.224	37.4	4.3
2006-07	1098.945	47.8	4.3
2007-08	1232.946	64.0	5.2

Source: (i) www.adb.org & (ii) www.nasscom.org

INDIA'S GDP AND INFORMATION TECHNOLOGY INDUSTRY GROWTH

Indian information technology industry has grown manifold during the period 1997-98 to 2007-08 as shown in table 1. The size of Indian information technology industry has increased from USD 5.0 billion in 1997-98 to USD 64.0 billion in 2007-08. The share of information technology industry in Gross Domestic Product has increased from 1.2 percent in 1997-98 to 5.2 percent in 2007-08. Thus, information technology industry is considered as a key industry for the development of Indian economy.

FACTORS CONTRIBUTED IN THE GROWTH OF INFORMATION TECHNOLOGY INDUSTRY

A large number of factors have facilitated the fastest growth and development of information technology industry in India is:

- Abundant human capital
- Relatively low cost of technical labour
- Contribution of IITs and other leading engineering colleges in India
- Creation of global household brands
- Special attention to technology based industries and R&D by government
- Foreign Investment in information technology industry
- Mathematical and logic expertise
- Entrepreneurial culture
- The legal system in India is relatively simple and clear procedure
- Reverse brain drain
- Reasonable technical innovations
- Strong tertiary education
- Government support and policies
- The quality inherent in the Indian information technology and business process industry is excellent. Various quality control and process management tools are used to improve the quality and to establish credibility.
- Familiarity with English language (India has the second largest pool of English speaking scientific professionals in the world. It is second only to the USA) (www.nasscom.org.).

TABLE 2: GROWTH OF SOFTWARE AND SERVICES INDUSTRY IN INDIAN DOMESTIC AND FOREIGN MARKET

Years	Domestic MKT. (USD bn.)	Percentage Growth	Foreign MKT. (USD bn.)	Percentage Growth	Total IT MKT. (USD bn.)
1999	1.7 (39.5)	-	2.6 (60.5)	-	4.3
2000	1.9 (32.2)	11.8	4.0 (67.8)	53.8	5.9
2001	2.5 (28.7)	31.6	6.2 (71.3)	55.0	8.7
2002	2.6 (25.2)	4.00	7.7 (74.8)	24.2	10.3
2003	3.0 (23.8)	15.4	9.6 (76.2)	24.7	12.6
2004	3.9 (23.4)	30.0	12.8 (76.6)	33.3	16.7
2005	4.8 (21.8)	23.1	17.2 (78.2)	34.4	22.0
2006	6.1 (20.7)	27.1	23.4 (79.3)	36.0	29.5
2007	8.2 (20.9)	34.4	31.1 (79.1)	32.9	39.3
2008	11.6 (22.3)	41.5	40.4 (77.7)	29.9	52.0
2009	12.5 (21)	7.76	47.0 (79)	16.3	59.5

Source: (i) Nasscom-Mckinsey study, (ii) Hardware sector is not included; & (iii) Figures in brackets show percentage share of IT industry.

GROWTH OF SOFTWARE AND SERVICES INDUSTRY IN INDIAN DOMESTIC AND FOREIGN MARKET

Information technology industry caters both the domestic as well as foreign market. But it is the software and services sector which has made impressive growth in the foreign as well as domestic market. Table 2 conveys that the size of IT software and services sector in domestic market in 1999 was just USD 1.7 billion, which has increased to USD 12.5 billion in 2009. But the percentage share of domestic market has declined from 39.5 percent in 1999 to 21 percent in 2009. The foreign market of software and services sector has grown rapidly. In 1999 the growth of foreign market was just USD 2.6 billion, which has grown near about USD 47.0 billion in 2009. The decline in the share of domestic market is due to foreign market's expansion and less absorption capacity of Indian economy for information technology services. While India has been able to establish arena, yet India has not been able to make a dent in the software product market. In spite of all this, Indian total information technology market has increased from USD 4.3 billion in 1999 to USD 59.5 billion in 2009, which is itself an achievement.

GROWTH OF INFORMATION TECHNOLOGY SOFTWARE AND SERVICES EXPORTS

India has exported its information technology services to more than hundred countries around the world, but there is a heavy reliance on the USA market, which accounts for 62 percent of the total software exports. The leading software-exporting firms include the companies like Tata Consultancy Services, Infosys Technologies and Wipro Technologies etc.

TABLE 3: GROWTH OF INFORMATION TECHNOLOGY SOFTWARE AND SERVICES EXPORTS (USD Billion)

Years	IT Software & Services Exports	Percentage Growth
1999-00	3.4	-
2000-01	5.3	55.9
2001-02	6.2	16.9
2002-03	7.1	14.5
2003-04	9.2	29.6
2004-05	17.7	92.4
2005-06	23.6	33.3
2006-07	31.4	33.1
2007-08 (E)	40.3	28.3

Source: (i) www.nasscom.org, (ii) www.mitgov.in, (iii) E-Estimated, (iv) Software also includes ITES-BPO

Table 3 shows that the exports of information technology software and services have increased from USD 3.4 billion in 1999-00 to USD 5.3 billion in 2000-01. Further these exports have increased to USD 17.7 billion in 2004-05 and USD 31.4 billion in 2006-07. The estimated exports of information technology software and services are USD 40.3 billion in 2007-08. The yearly growth rate of these exports have slightly declined during 2001-02 and 2002-03 but from 2003-04 onwards, the growth rate of exports of information technology software and services have increased significantly. During 2007-08, the growth rate was 28.3 percent.

COMPOSITION OF INFORMATION TECHNOLOGY INDUSTRY IN INDIA

Composition of total information technology industry mainly comprises of software, ITES-BPO and hardware segment. Total software and services segment includes IT services and products, ITES-BPO, engineering services, R&D and software products. This segment is growing faster than the hardware segment in India.

TABLE 4: COMPOSITION OF INFORMATION TECHNOLOGY INDUSTRY IN INDIA (USD Billion)

USD BILLION	2003	Total % age share	2004	Total % age share	2005	Total % age share	2006	Total % age share	2007	Total % age share	2008	Total % age share	2009 (E)	Total % age share
IT Services & Products	9.9	61.6	10.4	48.2	13.5	48.1	17.8	47.6	23.3	48.7	31.0	48.4	35.2	49.1
-Exports	7.1 (71.7)	44.1	7.3 (70.2)	33.8	10.0 (74.1)	35.6	13.3 (74.7)	35.6	17.8 (76.4)	37.2	23.1 (74.5)	36.1	26.9 (76.4)	37.5
-Domestic	2.8 (28.2)	17.5	3.1 (29.8)	14.4	3.5 (25.9)	12.5	4.5 (25.3)	12.0	5.5 (23.6)	11.5	7.9 (25.5)	12.3	8.3 (23.6)	11.6
ITES-BPO	2.7	16.8	3.4	15.8	5.2	18.5	7.2	19.3	9.5	19.9	12.5	19.5	14.8	20.5
-Exports	2.5 (92.6)	15.5	3.1 (91.2)	14.4	4.6 (88.5)	16.4	6.3 (87.5)	16.8	8.4 (88.4)	17.6	10.9 (87.2)	17.0	12.8 (86.5)	17.9
-Domestic	0.2 (7.41)	1.3	0.3 (8.8)	1.4	0.6 (11.5)	2.1	0.9 (12.5)	2.4	1.1 (11.6)	2.3	1.6 (12.8)	2.5	1.9 (12.8)	2.6
Engineering services and R&D, software products	NA	NA	2.9	13.4	3.9	13.9	5.3	14.2	6.5	13.6	8.6	13.4	9.5	13.4
-Exports	NA	NA	2.5 (86.2)	11.6	3.2 (82.1)	11.4	4.0 (75.5)	0.7	4.9 (75.4)	10.3	6.4 (74.4)	10	7.3 (76.8)	10.2
-Domestic	NA	NA	0.4 (13.8)	1.9	0.7 (17.9)	2.5	1.3 (24.5)	3.5	1.6 (24.6)	3.3	2.2 (25.4)	3.4	2.3 (24.2)	3.2
Total software & services	12.6	78.3	16.7	77.6	22.5	80.1	30.3	81.0	39.3	82.2	52.0	81.2	59.6	83.2
-Exports	9.6 (76.2)	59.7	12.9 (77.2)	60	17.7 (78.8)	63.0	23.3 (77.9)	63.1	31.1 (79.1)	65.1	40.4 (77.7)	63.1	47.0 (78.9)	65.6
-Domestic	3.0 (23.8)	18.6	3.8 (22.8)	17.6	4.8 (21.3)	17.1	6.7 (22.1)	17.9	8.2 (20.9)	17.2	11.6 (22.3)	18.1	12.6 (21.1)	17.6
Hardware	3.6	22.3	4.9	22.7	5.6	19.9	7.1	19.0	8.5	17.7	12.0	18.7	12.1	16.9
-Exports	0.3 (8.3)	1.8	0.5 (10.2)	2.3	0.5 (8.9)	1.8	0.6 (8.5)	1.6	0.5 (5.9)	1.0	0.5 (4.2)	0.7	0.3 (2.5)	0.4
-Domestic	3.3 (91.7)	20.5	4.4 (89.8)	20.4	5.1 (91.1)	18.1	6.5 (91.5)	17.4	8.0 (94.1)	16.7	11.5 (95.8)	18	11.8 (97.5)	16.5
Total IT Industry	16.1		21.6		28.1		37.4		47.8		64.0		71.7	

Source: (i) www.nasscom.org., 2009, (ii) Figures in brackets show percentage share & (iii) NA – Not Available (iv) E – Estimated

The total information technology industry has grown from USD 16.1 billion in 2003 to USD 64 billion in 2008. Table 4 shows that Indian information technology primarily comprises of software and services segment which accounts for 82.2 percent of total information technology industry in 2008. The percentage share of ITES-BPO segment has grown from 16.8 percent in 2003 to 19.5 percent in 2008. It means that there is more opportunity for this segment to develop in future. India's percentage share in engineering services, R&D and software products are throughout approximately 13.4 percent from various years. Hardware segment has accounted for 18.7 percent of total information technology industry in 2008. It is estimated that in 2009 total information technology software and services segment will account for USD 59.6 billion, hardware segment will account for USD 12.1 billion and total information technology industry will account for USD 71.7 billion respectively as per estimates.

CONTRIBUTION OF INFORMATION TECHNOLOGY INDUSTRY IN EMPLOYMENT

Apart from wealth creation and large export earnings, Indian information technology industry has also provided large scale employment to educated and skilled work-force. This is the fastest growing sector which is providing large employment opportunities. The very success of information technology industry in India is infact due to the availability of highly skilled work-force. Indian education system gives more emphasis on mathematical skills and proficiency in English language and this has created skilled work-force ideally suited to the information technology industry. Indian universities are pumping out 1, 20,000 engineering graduates in a year. The NASSCOM - McKinsey report 2005 states that the Indian information technology industry will demand for 8,50,000 information technology professionals and 1.4 million ITES-BPO professionals by 2010 respectively.

TABLE 5: LEVEL OF KNOWLEDGE PROFESSIONAL EMPLOYEES IN INFORMATION TECHNOLOGY SECTOR (Employees numbers in 000's)

Years	IT Services and Software Exports	Domestic Market	BPO Export	Total Employee	Percent Growth
2000	110	132	42	284	-
2001	162	198	70	430	51.4
2002	170	246	106	522	21.4
2003	205	285	180	670	28.3
2004	296	318	216	830	23.8
2005	390	352	316	1,058	27.5
2006	513	365	415	1,293	22.2
2007	690	378	553	1,621	25.4
2008	860	450	700	2,010	24.0
2009	946	500	789	2,235	11.2

Source: (i) www.nasscom.org., 2009, & (ii) Figures do not include employees in the hardware sector.

LEVEL OF KNOWLEDGE PROFESSIONAL EMPLOYEES IN INFORMATION TECHNOLOGY SECTOR

Table 5 conveys that in information technology industry, number of employees is increasing. In 2000, the number of employees in information technology sector was 284 thousands, whereas in 2009 it has reached at 2,235 thousands. But the percentage growth of employees in information technology industry has declined from 51.4 percent in 2001 to 11.2 percent in 2009 respectively. In 2009, 946 thousand employees are engaged in IT services and software exports. In domestic market, 500 thousands employees and 789 thousands employees are employed in BPO export sector. Hence, information technology is emerging as one of the biggest employment generating industries.

MARKET VERTICALS IN DOMESTIC AND OFFSHORE

Vertical markets include services for banking, finance, services and insurance, manufacturing, telecom, healthcare, customer interaction and support, finance and accounting, knowledge services, human resource management, construction and utilities, airlines and transportation, retail etc. Information technology industry provides its services to different sectors and earning a large amount of revenue.

TABLE 6: DOMESTIC MARKET VERTICALS (In Percentage)

Vertical	Domestic Market (2009)
-BFSI	41
-Hi-Tech/Telecom	20
-Manufacturing	17
-Retail	8
-Healthcare	3
-Airlines Transportation	3
-Construction and Utilities	3
-MPE	2
-Other	3

Source: www.nasscom.org, 2009

Table 6 shows the contribution of information technology industry in domestic market verticals that is, BFSI (banking, finance, services and insurance) (41 percent), Hi-tech/telecom (20 percent), in manufacturing (17 percent) and retail (8 percent). Health care, airlines and transportation, constructions and utilities are the growing segment in the domestic market.

TABLE 7: OFFSHORE MARKET VERTICALS (In Percentage)

Vertical	Offshore Market (2008)
-Customer Interaction and Support	43.5
-Finance and Accounting	22.1
-Vertical Specific BPO Services	17.1
-Knowledge Services	8.1
-Other Horizontal Services	4.1
-Human Resource Management	3
-Procurement Services	1.4

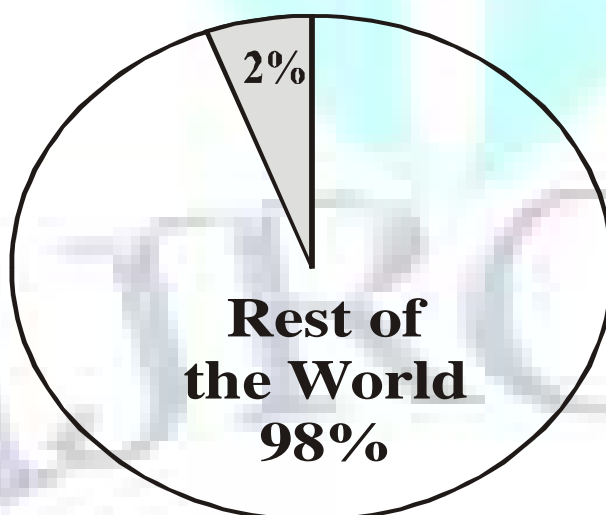
Source: www.nasscom.org, 2008

Table 7 conveys information on offshore market verticals in 2008. Offshore market verticals include customer interaction and support, finance and accounting, knowledge services, human resource management. Offshore market verticals have attained USD 10.9 billion in 2008. Table 7 conveys the contribution of information technology industry in offshore market verticals is customer interaction and support (43.5 percent), finance and account (22.1 percent), vertical specific BPO services (17.1 percent) and knowledge services (8.1 percent).

INDIA'S SHARE IN GLOBAL INFORMATION TECHNOLOGY MARKET

Growing domestic as well as foreign market has facilitated rapid development of Indian information technology industry. The size of domestic market was USD 1.9 billion in 2000 and which has become USD 12.5 billion in 2009. In 2000, the foreign market of information technology stood at USD 4.0 billion which has become USD 47.0 billion in 2009.

FIG. 1: INDIA'S SHARE IN WORLD INFORMATION TECHNOLOGY MARKET



Source: Ganguly, Debtyoti and Sandipan Roy, 2004, *I.T./ITES Business Paper*

Despite, the growth of information technology industry in India, its share in world market stands at only two percent in figure 1. In spite of all this, the large size of world market will throw tremendous opportunities for Indian information technology industry for future growth.

INDIA'S TOP MOST EXPORTER COMPANIES IN GLOBAL MARKET

India's IT exports are increasing rapidly. The Indian information technology companies such as Tata Consultancy Services, Infosys Technologies, Wipro Technologies, Hindustan Computer Limited Technologies, Patni Computer Systems, Mphasis, Mahindra Tech., I-Flex Solutions etc are producing world class IT products and services. Three Indian information technology companies – TCS, Infosys and Wipro have all crossed the billion dollar mark. Now a days Indian information technology companies are recognizing among world class information technology companies. India can sustain its global leadership position, grow

its offshore IT and BPO industries at an annual rate greater than 25 percent, and generate export revenues of about USD 60 billion by 2010 (Does not include exports of software products) (www.mckinsey.com).

TABLE – 8: INDIA’S TOP EXPORTER INFORMATION TECHNOLOGY COMPANIES IN GLOBAL MARKET

Rank	Company	Rs Crore	USD Million
1	Tata Consultancy Services	7449	1644
2	Infosys Technologies	6806	1502
3	Wipro Technologies	5426	1198
4	Satyam Computer Services	3377	745
5	HCL Technologies	2664	588
6	Patni Computer Systems	1548	342
7	I-Flex Solutions	1110	245
8	Mahindra British Telecom	913	202
9	Polaris Software Lab	697	154
10	Perot Systems TSI (India)	657	145
11	Hexaware Technologies	583	129
12	Larsen and Toubro	557	123
13	MASTEK	546	121
14	iGATE Global Solutions (Formerly Mascot System)	534	118
15	Siemens Information Systems	502	111
16	Mphasis BFL	465	103
17	Tata Infotech	463	102
18	NIIT Technologies	448	89
19	Flextronics Software Systems	424	94

Source: Balakrishnan, Pulapre (2006) based on NASSCOM Data (www.nasscom.org)

Table 8 conveys the exports of Indian information technology companies to the foreign countries in 2004-05. Tata Consultancy Services Company, Infosys Technologies, Wipro Technologies and HCL Technologies are exporting USD 1644 million, USD 1502 million, USD 1198 million and USD 588 million to the rest of the world. The Indian IT industry has already created a brand image in the global market. A large number of Indian software and IT services companies have acquired international quality certification. Out of top 400 companies, more than 250 have acquired ISO 9000 certification. (http://faculty.washington.edu.)

TABLE – 9: RANKING OF INDIAN INFORMATION TECHNOLOGY COMPANY AT GLOBAL LEVEL

IT Companies

Rank	Rank	Rank	Rank	Rank	Rank	Company	Country
1999	2000	2001	2002	2003	2004		
2	5	1	7	2	1	Hewlett-Packard	US
4	2	2	1	3	2	IBM	US
6	0	4	3	1	3	Dell	US
1	1	3	2	5	4	Microsoft	US
0	0	7	6	0	5	SAP	Germany
0	4	6	4	4	6	Cisco Systems	US
3	3	5	5	6	7	Intel	US
0	9	9	9	7	8	Oracle	US
0	0	0	0	0	9	Infosys Technologies	India

Source: PWC SURVEY on "The world's most respected company"

Table 9 shows the ranking of information technology company worldwide. A survey conducted by PWC on "The world's most respected company survey" shows an Indian information technology company in the top most world's ten information technology companies has first time occupied rank in the form of Infosys. Indian firms have started to arrive in the global market (www.vservicesolution.com).

INDIA’S IT EXPORT TO DIFFERENT COUNTRIES

Countries like USA and Europe (Incl. UK) are the main exporting countries of Indian information technology industry accounting for about 60 percent and 31 percent respectively in 2008. Table 10 conveys that India's export in USA is decreasing whereas in other countries its exports are increasing.

TABLE 10: INDIA’S EXPORT TO DIFFERENT COUNTRIES (In Percentage)

Markets	2005	2006	2007	2008
America	68.30	67.18	61.40	60
Europe (Incl. UK)	23.10	25.13	30.10	31
Rest of the world (Incl. APAC)	8.60	7.69	8.50	9

Source: www.nasscom.org, 2009

TABLE – 11: INDIA’S IT EXPORT TO EU COUNTRIES

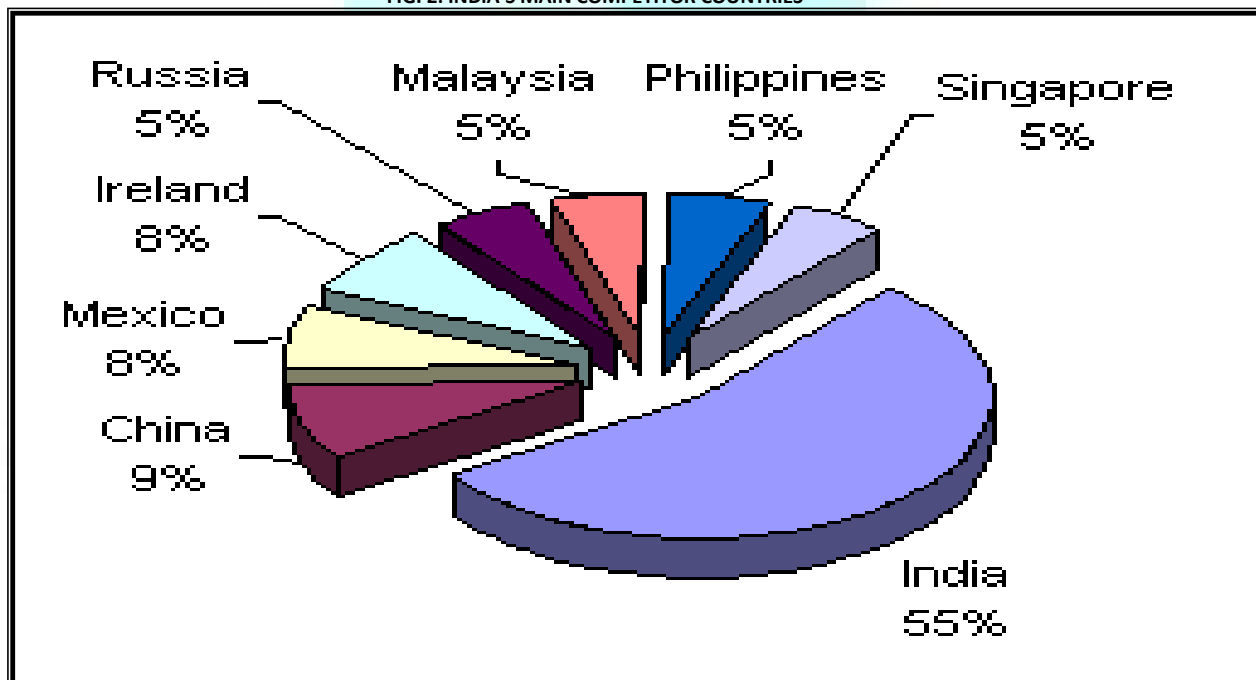
Country	Computer Software/Services 2006-07 US\$ Million	Computer Software/Services 2007-08 US\$ Million
United Kingdom	6474.53	6668.59
Netherlands	580.65	916.17
German F Rep	526.20	1173.31
Belgium	319.32	246.46
Finland	283.95	205.35
France	240.71	233.95
Ireland	223.60	94.99
Sweden	156.48	88.76
Denmark	107.73	96.42
Spain	67.62	282.85
Italy	32.82	104.40
Austria	14.40	99.87
Greece	6.14	19.92
Portugal	3.31	6.27
Luxemburg	1.13	12.65
Others	75.86	1269
Grand Total	9114.45	11518.88

Source: www.indialawoffices.com

Table 11 depicts the India’s IT export to major EU countries during 2007-08. India is exporting to United Kingdom, Netherlands, German, and Belgium USD 6668.59 million, USD 916.17 million, USD 1173.31 million, USD 246.46 million in 2007-08.

India is currently the leading destination for offshore outsourcing. The countries like China, Russia are the tough competitors of India in this market. Figure 2 conveys that India is contributing near about 55 percent in outsourcing. Other countries – China (9 percent), Mexico (8 percent), Ireland (8 percent), Russia (5 percent) and Malaysia (5 percent) are the follower countries of India in outsourcing.

FIG. 2: INDIA’S MAIN COMPETITOR COUNTRIES



Source: www.nasscom.in

GOVERNMENT POLICIES FOR INFORMATION TECHNOLOGY INDUSTRY IN INDIA

Indian information technology industry, which was started by small group of entrepreneurs, without any government intervention, has grown into a large and growing industry providing all types of services and high end products. The government initially adopted non-interventionist role but provided all facilities and incentives as requested by the industry and its representative body, NASSCOM, from time to time. The stature of this industry has grown so large that government has come up with a long term information technology policy. Importance of information and communication technologies for economic growth was recognized far back in 1970, when Department of Electronics was set-up in 1970. National Informatics Centre was established in 1977 and Electronic Commission was set-up in 1991.

These steps were taken to promote the use of information based resources in facilitation of plan formulation and implementation, governance and for using information technology for social economic growth of the country. In order to promote the growth of export led information technology industry, Government of India has set-up Information Technology Task-Force in 1998 which has submitted three reports. In view of strategic importance of information technology industry, a new ministry was set up by merging DOE, NIC and Software Export Promotion Council in 1999 (www.iisc.ernet.in).

The Task-Force for information technology industry, set-up in 1998 has so far submitted three reports which form the basis for government policies for promoting information technology industry in the country. In the action plan III, Government has drafted a long term national information technology policy for the country. The main focus is on adding value, taking information technology to masses so as to not only promote external demand, but also internal demand proliferating the use of information technology in the country.

Government of India has taken important steps in promoting the growth of Indian information technology industry particularly in its initial stage during eighties and nineties. In 1998, the 'National Task Force' on information technology and software development was set-up by the Government of India. The report of the Task-Force, i.e. Information Technology Action Plan made many recommendations for promoting information technology industry, as well as for promoting extensive use of information technology in all sectors of Indian economy. To develop information technology industry, one to three percent of budget of every government department is earmarked.

Information technology policies are mainly based on the recommendations of NASSCOM. The thrust of the policies is to provide key infrastructure for proliferating IT enabled services through out the country, liberalizing import of capital equipment by software and BPO companies, providing world class info-infrastructure with an extensive spread of Fiber Optic Networks, Satcom Networks and Wireless Network so as to ensure fast national wide onset of Internet, Extranets and Intranets. In order to encourage ITES business government has facilitated expansion of band width requirement, Inter Connectivity of Networks of different services providers, International Telecommunication links PSTN. Government of India has set the target of providing information technology for all by 2008.

The substantial tax benefits like exemption in income tax, excise duties, custom duties etc., have been given to this industry. Banks are providing finance to information technology industry at low rate of interest. SOFTEX forms to promote export of computer software are made very simple. RBI has permitted the import of software through internet and permitted the use of International Credit Card (ICC) for import of software through internet (upto USD 15,000) in advance even before the software is downloaded. To maintain India's domination in information technology industry, government of India is giving priority to Research and Development (R&D) centers in order to maintain its high quality at global level and to promote innovations and inventions in information technology sector.

Thus, the Government of India through Task-Force has adopted many effective policies to remove bottlenecks in the promotion of information technology services. The main aim of government of India is to excite and energize the people of India, creating the faith in them that information technology vitally aids personal and national growth. The Indian information technology sector continues to be one of the sunshine sectors of the Indian economy showing robust growth. According to a report of NASSCOM-Mckinsey, the export component and domestic component are expected to reach, USD 175 billion and USD 50 billion in 2020. Together the both markets are likely to bring opportunities in revenue USD 225 billion in 2020 (www.mit.gov.in; www.television.com; www.indiabudget.nic.in).

CONCLUSION AND POLICY IMPLICATIONS

India's key strengths are its large domestic market, its young and growing population (near about 59 percent), a strong private sector with experience in market institutions, and a well developed legal and financial system. In addition, India has highly trained English speaking engineers, businessmen, scientists and other professionals, who have been the engine behind the growth of the service sector. There is a highly bifurcated higher education system. The premier part consists of seven Indian Institutes of Technology, six Indian Institutes of Management, the Indian Institute of Sciences, the Indian Statistical Institute and the All Indian Institutes of Medical Sciences which are world class. Despite, huge success of Indian information technology industry, there are still many constraints in the expansion of information technology sector.

- Majority of Indian information technology firms, are small in size, hence cannot explore full potential of global opportunities in this sector. Thus, the industry needs a facilitating environment so that a large number of small firms can grow into large and medium size firms.
- Most of the present information technology firms are concentrated in few regions. Thus, there is need for locational diversification for future development.
- India's booming IT industry is set to face stiff competition from China and the Philippines in the next few years.
- Indian information technology industry is also dependent on USA, UK and Western Europe market for exports, which is another drawback of this industry. India has to increase its exports in new markets such as Brazil, Russia.
- Another constraint is poor infrastructure – in terms of power supply, roads, ports and airports. This increases the cost of doing business at global market.
- The international environment has become more competitive, demanding and fast paced. Hence, product life cycles have become shorter. Thus there is more international competitive pressure.
- Suppliers have to respond immediately to customer demand and delivered to the customer in a matter of hours or days, rather than weeks or months. This has led to a speed-up in production and distribution systems. But Indian market system is lacking behind in efficient communications and information system, plus excellent logistics to get goods and services in and out of countries.
- To compete at global level and to produce quality goods, there is need to invest in human capital. No doubt that India has abundant labour-force but there is still lack of efficient and skilled labour-force. Hence just to provide basic education is not sufficient, but secondary, technical and higher education and a system of life-long learning must be provided.

Hence, both the government and the industry must have to take effective steps for promoting research and development (R&D) and quality standards in information technology industry keeping in view its global competitors. To introduce, promote, retain and distinguish its brands in global market, Indian information technology industry will have to maintain the quality and reliability of its product and services. In order to remain competitive globally, Indian information technology industry needs to provide high quality product/service to global clients at reasonable price within short time period. At last India should reformulate its IT policy in the light of the emerging international economic environment, to accelerate global development and diffusion of technologies and keep pace with more demanding international standards for cost, quality and productivity (<http://planningcommission.nic.in>; www.un.org).

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