A Research Paper on
Competitive Advantage of Indian IT Industry

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Abstract: Indian Information Technology (IT) Industry changed the economic landscape of India over the last quarter of century. The industry made phenomenal multi-fold contribution to the economy. The IT and IT Enabled Services (ITES) constituted to 8% of India’s Gross Domestic Product (GDP) in 2013 and provided direct employment to about 3 million people and indirect employment to 9 million people. The journey that started around 1980 grew rapidly over the years propelled by availability of talent pool, improvements in telecom technology and favourable government policies. From a gross USD 100 million in 1992, it grew to USD 147 billion in 2015. The growth curve went through peaks and troughs driven by series of events across the world, like dotcom boom, recessions and WTC attack. In 2013, the industry had a market share of 53% of the worldwide IT spend. The industry fuelled entrepreneurship in the country that resulted in 16,000 IT firms. This research paper analysed the intrinsic and extraneous elements leading to growth and sustenance of competitive advantage of the Indian IT Industry. It did an exploratory research of Indian IT Industry over the last two decades in terms of growth, impact on Indian economy and factors leading to its growth. It used strategic management tools to analyse the strategic competitive position of the industry compared to BRIC countries and other close competitors like Philippines.

Cost advantage, vast pool of skilled workers and increasing entrepreneurial activity were the factors fuelling growth. High dependence on US and European market was assayed complemented by growth of domestic and emerging markets. Threat from emerging IT provider economies increased the competitive landscape. The country’s physical and network infrastructure needed improvement. Agility in identifying and servicing new opportunities and innovation were imperative for sustenance of the industry’s competitive advantage.

Keywords: Indian IT Industry, competitive advantage, PESTLE analysis, SWOT analysis, Porter’s 5 forces method

INTRODUCTION

Indian Information Technology (IT) Industry changed the economic landscape of India over the last quarter of century. The industry’s revenues grew from USD 100 million in Financial Year 1992 to USD 147 billion in 2015. In 2005, the industry serviced 3.3% of global IT market, serving nearly half of all Fortune 500 companies (Bhatnagar, 2006). In 2013, it constituted 8% of India’s Gross Domestic Product (GDP) and a quarter of total exports and provides direct employment to about 3 million people and more than 9 million in indirect employment (Mittal, 2013). The industry had a market share of 53% of the worldwide IT-BPM spend (Chandrashekar, 2014).

The Indian IT journey began around 1980 (Mathur, 2007). Since inception, the industry has seen steady growth. A series of events over the last three decades changed the face of Indian IT industry. The evolution of IT industry in India is a prime contributor to India’s economic
growth. Until 1990, the industry was limited to a handful of players. It primarily served software development needs for India’s core industry. At that time IT hardware/software was an expensive proposition. Most industry players in a developing country like India did not opt for use of software in their operations. The same time, some US companies looked towards India as a source of cheap labour, which provided a new opportunity to India. New software companies started. Availability of low cost resources provided competitive advantage to Indian IT companies (Jhamb, 2011). The cost of an Indian offshore developer was about 25% and onsite Indian developer about 50% of that of US developer (Nagala et al, 2006). During 1980 to 1990, the Indian government under the leadership of Prime Minister Rajiv Gandhi brought significant changes to facilitate development of Indian IT industry. Import duties were reduced which made hardware/software a viable option for the core sector. IT gained special status, licensing procedures were simplified and access to foreign exchange for software firms made easier. At the same time, the cost of hardware/software went down drastically with the advent of PCs (Personal Computer) and DOS (Disk Operating System) and other desktop Operating Systems. There was a paradigm shift from mainframe and mini computers to desktops. Until this time, most of the revenue for Indian IT firms came from body-shopping, supplying English speaking and IT literate human resources to foreign shores. In the late 1980 and early 1990, telecom solutions became available providing direct connectivity from India to US. More work started moving offshore. In early 1990s, US immigration policy changes forced Indian software exporters to look beyond the body-shopping model. The onsite-offshore model of software services took shape. By 2000, the Indian IT industry was ready with some home grown software for the international markets. The Y2K problem brought huge demand for software services from the advanced countries. India, with its skilled, English speaking work force, had the unique advantage as supplier of software services. The dot com boom helped in further growth of the industry. The Business Process Outsourcing (BPO) business also brought in an additional revenue stream. Indian IT serviced countries across the globe across continents. However, majority of the revenue continued to come from US. This made it dependent on US economic conditions. After the boom, the World Trade Centre (WTC) attack hit the US market hard, which was already reeling under dotcom bubble burst. The following recession had an impact on Indian IT industry. However, the industry came up with innovative propositions like quality benchmarking, managed services, etc. to overcome the issue. During this time, the BPO sector grew steadily. Indian IT companies contributed to other economies, generated 410,000 plus jobs in America (NASSCOM, 2015), which reinforced India’s position as IT major.

Since the new millennium, various socio-economic conditions around the globe are changing the face of business. Indian IT growth decelerated again in 2008-09 with the recession in US following the housing bubble. The economic downturn in US affected Indian IT industry in multiple ways. At a time when US people lost jobs in large numbers, US corporate were sending jobs offshore to India for cost cutting. This agitated the US citizens and the Federal government considered changes in regulations to retain jobs within US. US laid stricter norms on H1B visa, making it difficult for Indian companies to depute resources onsite. Other factors influencing performance of Indian IT industry included exchange rates fluctuation affecting revenues and entry of newer players in the market like China and Brazil, posing tough competition to Indian IT industry. Competition in the market for experienced IT resources and disproportionate increase in wages in the industry raised cost of operations. Overwork and stress related problems were on the rise among the work force leading to various kinds of health problems, which affected the society in general and quality of work within the industry.
Questions arise on the sustainability of competitive advantage of the industry in these changing times. Are the factors that contributed to growth of the industry thus far, good enough to provide the leading edge? What were the strengths, weaknesses, opportunities and threats affecting Indian IT industry? What environmental factors influenced the competitive advantage of the Indian IT Industry?

LITERATURE REVIEW

Talent: Cost advantage on account of skilled workforce (Nagala et al., 2006) and abundant pool of English speaking technical resources (Bhatnagar, 2006) formed the foundation of Indian IT industry. There is a growing demand of talent pool (Mathur, 2007). Knowledge needed included organization’s structural capital including processes, technologies, patents; human capital including ability, skill and expertise; and customer capital including information about customers, suppliers, and stakeholders. Intellectual capital is a preeminent resource of knowledge economy (Kavida et al., 2010). As an intangible asset, it occupied significance in assets portfolio of the knowledge intensive IT Industry. Skill requirements of the IT industry evolved with introduction of pervasive internet access and cloud computing (Misra et al., 2010), business technology consulting, business intelligence and analytics (Agarwal et al., 2012), Near Field Communication (NFC), mobile computing, business process and social media channel (Shaikh et al., 2015). Traditionally Indian IT companies provided services low on the value chain in software development life cycle. Over the years, Indian IT services went up the value chain, redefining the skill needs of the industry (Jhamb, 2011). Knowledge management formed a strategic resource and source for competitive advantage for organizations fostering a learning climate and providing excellent training facilities (Matthew et al., 2011). Availability of high skilled resources posed a problem as Indian skilled resources moved to other countries. Success of the Indian IT industry helped to reduce brain drain by creating rewarding opportunities within the country. Facilitated by the availability of venture capital, Indians returned to the country to start new software ventures. This facilitated “brain gain” reversing the “brain drain” and helped “brain circulation” (Singh et al., 2015). NASSCOM fivefold vision comprised of building innovation capability, new markets, addressing infrastructure and governance, inclusive growth and developing talent pool.

Services in the value chain: In early years the India IT industry serviced custom software applications market largely but lacked focus on packaged software another big market segment (Bhatnagar et al., 1991). Gradually the skilled and experience were hungry to serve the markets and move up the value chain for economic gains (Bhatnagar, 2006). Favourable economic policies floated and supported by the Indian government led to increase in entrepreneurship. Indian professionals built and leveraged personal network and reputation to gain foothold in the markets in developed economies. Indian IT organization benchmarked their processes with Global standards like Capability Maturity Model (CMM) (Ghemawat et al., 2007), ITIL and ISO standards. Adoption of open source technology with focus on usability was on the rise (Andreasen et al., 2015). There was a need for faster turnaround of ideas into executable software (Afshari et al., 2016). Processes to support faster development turnaround of high usability software remained inadequate. Indian IT companies created more IPs through Research & Development (R&D) resulting in rise in number of patents (Kavida et al., 2010). Indian IT industry needed to create more IP, not only for itself but also for the other knowledge intensive industries, to sustain the conviction of knowledge economy of India.
Technology: Success of IT industry was dependent on development of information and communication technologies (ICT) (Mathur, 2007). ICT adoption is India increased, India 996.49 million telephone subscribers and 302.25 million broadband users as of as of March 2015 (TRAI report, 2015). Development of e-governance, e-commerce and e-banking facilitated the growth of the domestic IT market. Research is the IT area focussed on changing the relation between technology and human agency (Dutta, 2008). India still ranked poorly in Network Readiness index, compared to its competitor countries (Refer Table 1) (WEFGlobalITReport, 2015).

Table 1. World ranking of BRIC countries on network readiness parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Country</th>
<th>India</th>
<th>China</th>
<th>Brazil</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network readiness index</td>
<td></td>
<td>83</td>
<td>62</td>
<td>69</td>
<td>50</td>
</tr>
<tr>
<td>Environment sub-index: Political and regulatory environment</td>
<td></td>
<td>82</td>
<td>52</td>
<td>95</td>
<td>79</td>
</tr>
<tr>
<td>Environment sub-index: Business and innovation environment</td>
<td></td>
<td>115</td>
<td>104</td>
<td>121</td>
<td>63</td>
</tr>
<tr>
<td>Readiness sub-index: Infrastructure and digital content</td>
<td></td>
<td>115</td>
<td>92</td>
<td>56</td>
<td>39</td>
</tr>
<tr>
<td>Readiness sub-index: Affordability</td>
<td></td>
<td>1</td>
<td>57</td>
<td>89</td>
<td>15</td>
</tr>
<tr>
<td>Readiness sub-index: Skills</td>
<td></td>
<td>102</td>
<td>59</td>
<td>108</td>
<td>52</td>
</tr>
<tr>
<td>Usage sub-index: Individual usage</td>
<td></td>
<td>121</td>
<td>80</td>
<td>62</td>
<td>43</td>
</tr>
<tr>
<td>Usage sub-index: Business usage</td>
<td></td>
<td>88</td>
<td>46</td>
<td>52</td>
<td>66</td>
</tr>
<tr>
<td>Usage sub-index: Government usage</td>
<td></td>
<td>61</td>
<td>39</td>
<td>71</td>
<td>47</td>
</tr>
</tbody>
</table>

Policy framework: India’s policy approach for IT comprised offsetting up science and technology bureaucracy to coordinate government administered projects in IT, building STPs to encourage cooperation between government, business, and universities, and creating policy framework to exploit connections with the successful Indian organizations (Nagala et al, 2006). The government strengthened infrastructure of existing tier I and emerging tier II and tier 3 cities to facilitate ease of doing business (Mathur, 2007).

Geographic distribution of Indian IT market: India exported IT services to 150 countries across the world in 2013-14 (ECS Report, 2014). Indian IT exports spanned across US, Canada, Europe including EU and non EU nations, Asia, Australia and New Zealand, Africa and Middle East and Africa almost spanning across the globe. The United States of America was India’s largest IT export market followed by Europe. European market constituted primarily of UK followed by Germany, Netherlands, Finland, Switzerland, Hungary and others (RBI survey, 2010). US constituted 57.59% of Indian IT exports followed by UK at 17% (ECS Report, 2014). US also topped the list in terms of annual growth of IT exports from India. This shows Indian IT Industry’s dependency on US market and economic conditions thereof.

Challenges: India’s competitiveness index is showing a downward trend since 2007 (WEF Report, 2015). Cost advantage of the industry diminished with rising salaries (Ghemawat et al, 2007; Vastupal, 2012). With shifting service needs and existing scale, questions arose on the sustainability of growth, which was earlier proportional to headcount (Agarwal et al,
Developing countries across the world started replicating India’s IT business model. Software projects were plagued by high failure rate, cost and time overrun and content deficiency (Standish Group Report, 2015). Global Information Technology Report (2015) show India’s global kill ranking at 102, below IT service providers like Sri Lanka, Mexico, Malaysia, Philippines, Indonesia, et al. Most IT firms needed significant effort to deal with IP related challenges (Basant, 2004). Average IT firm in India perceived IP protection as important but prioritized access to market and complementary assets over IP protection. Indian IT’s innovation ability was weak compared to Silicon Valley, venturing into disruptive innovation like Apple or Google. In India, the focus was for technologies to reach the market and encourage entrepreneurship rather than create a market need (Krishnan, 2011).

METHODOLOGY
The objective this research was to analyze the Indian IT industry’s growth curve and ability to sustain competitive advantage with changes in global economic factors.

Research Questions
1. What were the strengths, weaknesses, opportunities and threats affecting Indian IT industry?
2. What environmental factors influenced the competitive advantage of the Indian IT Industry?

This was an exploratory research to study the Indian IT industry in terms of growth and factors determining its growth. Burgelman et al. (2008) proposed tools to analyse external and internal factors used in formulation of Competitive Strategy. It discussed Porter’s Five Forces Analysis as an effective tool that considered all stakeholders of the value chain. It also discussed use of SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis to determine company’s competitive positioning. The research used the following tools to study competitive positioning of Indian IT Industry:

1. SWOT analysis to study Indian IT industry’s preparedness to meet challenges from changing economic environment across the globe
2. PESTLE (Political, Economic, Social, Technological, Legal and Environmental) analysis to study environmental factors contributing to competitive advantage of the industry
3. Michael E. Porter’s 5 Forces Model to analyze the Indian IT industry’s positioning

The research sourced data from secondary sources.

ANALYSIS
The IT Industry in India achieved phenomenal success and growth so far thus securing India a branding as knowledge economy in the world market (Kavida et al, 2010). The research broadly classified the factors, contributing to growth and competitive advantage of the Indian IT industry into four categories:

1. Economic factors comprising of cost advantage and availability of large pool of English speaking, computer literate talent which were fruits of India’s background as a developing nation with colonial past and strong education system. Entrepreneurial drive in educated ambitious professionals and fostered incubation helped develop first generation entrepreneurs. Globalization across the world also fuelled this growth.

2. Technology factors like advances in Telecom Technology assisted in creating global network and collaboration across geographies.
3. Government policies like creating Software Technology Parks, tax holiday for 100% Export Oriented Units, Special Economic Zones and withdrawing import duties of telecom equipment stimulated growth.

4. Well planned strategic initiatives like Quality process benchmarking and certification and investing in Knowledge Management initiatives enabled growth in initial stages. Industry adapted to changing environmental needs developing offshore centres outside India and undertaking acquisitions to expand technology, expertise and customer base. India turned around the problem of “brain drain” by evolving “brain circulation”. All put together, Indian IT industry was branded as knowledge intensive service provider.

Future competitiveness of the industry is of critical importance for sustenance and further growth. IMD World Competitiveness Yearbook 2015 ranked India at 44 out of 61 countries, arankingbased on economic performance, government efficiency, business efficiency and infrastructure. India ranked 83rd in network readiness in The Global Information Technology Report 2015, published by World Economic Forum. India’s competitive positioning has direct bearing with the sustenance and growth of the Indian IT industry. As per OECD reporting factors for India were cost effectiveness, quality assurance, supply of technical graduates, availability of adequate telecommunication infrastructure and a favorable time zone relative to the United States and Europe. When compared to close competitors providing IT services to the advanced economies, Philippines closely followed India on productivity, cost and language skill parameters. Israel, Mexico and Ireland were close too. However, India led when it came to surplus work force.

**SWOT Analysis**

Table 2 below depicts SWOT analysis of the Indian IT industry.

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
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<tbody>
<tr>
<td>Cost advantage over competitors</td>
<td>High dependence on US and European markets</td>
</tr>
<tr>
<td>Availability of vast pool of skilled work force</td>
<td>Inadequate infrastructure deterrent to business investment</td>
</tr>
<tr>
<td>English speaking ability gives access to large market share</td>
<td>Lack of strong government leads to policy impasse</td>
</tr>
<tr>
<td>Brain circulation opening opportunities</td>
<td>Court delays and complicated laws leads to negative branding</td>
</tr>
<tr>
<td>Branding as knowledge economy</td>
<td>Increasing resource cost</td>
</tr>
<tr>
<td>Increasing entrepreneurial activity</td>
<td>Easily replicated models</td>
</tr>
<tr>
<td>Expansion to other offshore locations</td>
<td>Lack of disruptive innovation</td>
</tr>
<tr>
<td>Acquisitions give access to technology, expertise and markets</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity in services up the value chain</td>
<td>Competition from other developing economies</td>
</tr>
<tr>
<td>Growing domestic market and fast growing</td>
<td>Risk from foreign currency exchange rates</td>
</tr>
<tr>
<td>Asia Pacific market</td>
<td>Economic slowdown in export destinations</td>
</tr>
<tr>
<td>Government impetus to research and development</td>
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Source: Prepared by author from preceding exploratory study

**PESTLE Analysis**

India’s democratic system and imbibing globalization, privatization and liberalization in 1991 boosted IT business (Mathur, 2007). India’s open market stance led to enormous improvements. Yet procedures required long and tedious government approval processes.
Developed nations perceived India as easy target of terrorism, which tarred India’s image as business destination. Political instability and corruption, topped with rampant bureaucracy proved deterrent to business. Political instability was deterrent in decision-making process affecting business environment.

Availability of vast pools of low cost high skilled resources was of prime advantage. Financial factors like favourable exchange rates, availability of bank loans, venture capitalists and FDI to provide capital for entrepreneurial activity helped growth of the IT industry. High inflation and fluctuating exchange rates affected profitability over time. There existed regional variations in service offerings and cost structure.

Educated and ambitious middle class, aspiring to seek opportunity and secure respect in the world market through quality services, was the key asset. However, infrastructures including transport and telecommunication, which were indispensable to economic prosperity improved, a lot remained to be done to overcome overstressed road, rail, and air networks, unreliable water and power supply system, and a lack of public amenities. In spite of having a large base of scientific and technical workers, policies and investment to promote research and development, remained inadequate. The 11th five-year plan prioritized R&D for Universities. To sustain growth, Government needed to reduce the gap between academic research and business to maximize returns on R&D investment.

The Indian IT industry expected to be worth $225bn by 2020. IT productivity depended on availability of fast network and bandwidth availability. Many companies did not upgrade their technology infrastructure and continued to depend on outdated network, access points and bandwidth, impacting operational efficiency and competitiveness. During the Y2K, Indian companies were quick to respond to and seize the market opportunity taking India’s IT exports from USD 125 million in 1997 to USD 2 billion in 2001. With bubble bursts and economic recessions after 2001, many companies were slow and cautious to respond to fast changing technology landscape and losing on big opportunities like big data analytics, cloud and mobile computing.

Favourable changes in India’s legal and regulatory framework over the years aided companies to grow businesses in the country. However, legal system was inadequate, compared to many developed and emerging countries, to sustain India’s competitive advantage as a business destination (Rani, 2015). The country lagged in protection & enforcement of IP rights. The taxation system was complicated. Complex laws governed mergers and acquisitions. The legal system was marred with court delays, corruption, different interpretations of laws in different regions and complex system of applicability of laws. India enacted Cyber laws, but both awareness and implementation of the same remained poor (Krishna et al 2015).

**Porter’s 5 Forces Analysis**

The research applied Porter’s Five Forces Analysis with respect to IT Industry. Figure 1 presents the analysis.
Threat of New Entrants: Threat of new entrants was high due to:

Emerging service provider countries - Other offshore locationssuch as Eastern Europe, the Philippines and China, emerged and posed threat to Indian IT industry because of their cost-advantage.

Low switching cost –Switching cost was low as IT services did not involve heavy use of physical assets. Buyers easily switched vendors across geographies to procure IT services.

Low customer loyalty– The IT services being B2B service, customers awardedbusiness based on merit and/or brand promise rather than brand loyalty. Organizational buyers trackedcontinuous increase of time, cost and quality efficiency.

Threat of Substitutes: Threat of substitutes was high for the IT industry as it thrived on innovation. E-commerce came up as a substitute to brick and mortar commerce. M-commerce wasprojected to substitute e-commerce in few years. The industry was dynamic and technology changed fast. Companies were launching new products every day, thus causing expiry of existing products within months, to launch newer and better product versions. Quick changing technology and product landscape put pressure on Indian IT companies to catch up.
Buyer propensity to substitute – IT individual buyers consisted of tech savvy customers. This segment was always open to test out new products and substitutes. Organizational buyers of IT were open to substitutes as IT budget was always under the scanner for cost optimization.

Ease of substitution - Information-based products and services were prone to substitution, just as online products easily replaced material product.

**Bargaining Power of Buyers:** IT buyers had high bargaining power due to:
Organizational buyers: IT industry customers were primarily organizational buyers. Many IT companies thrived on providing services to one to a handful of customer organizations. Therefore, the bargaining power of buyers was very high. Economic volatility increased customer bargaining power.

Buyer information availability – The IT industry thrived on information. IT buyers had easy and real time access to information leading to high bargaining power.

**Bargaining Power of Suppliers:** The IT industry did not require any raw materials. It only required hardware/software and human resources. Since the industry was dependent on skilled and knowledgeable work force, the bargaining power of the workforce was high. Demand and supply of IT professionals in the new millennium was less favourable to employees, but employees regained bargaining power with expanding job market. Professionals with niche skills continued to be in high demand and commanded high price.

Hardware / software suppliers: Other suppliers included the hardware and software vendors who had limited bargaining power. Cloud computing has further reduced bargaining power of hardware and software vendors.

**The Intensity of Competitive Rivalry:** The IT industry was highly competitive. Particularly in times of recession, when IT budgets were constrained, the organizations competed fiercely with each other for business. The threat of new entrants in IT arena is high due to:

Low capital requirements – Initial set up cost for software companies was very low as hardly any infrastructure or heavy machinery required. With cloud computing in vogue, the infrastructure cost using cloud technology became insignificant.

Large value chain – IT services spanned plethora of hardware, software, network and third party services. It involved system architecture, design, development, testing, maintenance and support. Small players gained entry in the domain by specializing in certain parts of the value chain. Aggregation of IT services from different service providers was easy, so buyers obtained services from multiple vendors as suited.

Favourable Government policy – IT business was largely cross boundary, i.e. spanning across different geographical and political boundaries. Government policy at times determined both setting up and operations. For example, some Indian state governments promoted new IT companies. On the other hand, visa restrictions by advanced economies affected business from India.
Sustainable competitive advantage through innovation – Most large organization created R&D involved in innovation and competency development centres to build competency. Training formed an important function for cross skilling and skill upgradation in a rapidly changing technology environment.

LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

This research did an exploratory study of the competitive position of the Indian IT industry. The research depended on secondary data only derived from industry standard reports and research papers. It stopped short of quantitative methods of the data analysis and hence any conclusive analysis.

Scope for further research emerged from this exploratory study:
1. Study the extent of impact of the factors contributing to growth of the IT Industry in relation with competition
2. Comparative study of growth of IT industry in other countries with Indian IT Industry
3. Study potential strengths and weaknesses in technology adoption in India
4. Study the correlation between process quality benchmarks and profitability in Indian IT companies
5. Study Knowledge Management process and practices in Indian IT companies and its effect on gaining and retaining competitive advantage
6. Study the effect personal networking in Indian IT industry
7. Study emerging market opportunities for the Indian IT Industry

CONCLUSION

On the technology front, digitisation of content and increased connectivity led to a rise in IT adoption by media. Emerging technologies presented an entire new gamut of opportunities for IT firms in India. Social media, mobile computing, data analytics and cloud computing were poised to provide US$ 1 trillion opportunity by 2020 (NASSCOM, 2009). Cloud represented the largest opportunity - around USD 650 billion to USD 700 billion by 2020. Social media came second - offering a market opportunity of USD 250 billion by 2020. Technologies such as telemedicine, mHealth, remote monitoring solutions and clinical information systems, expected to boost demand for IT service across the globe.

Demographic trends showed that Japan’s working age population was set to decline by 8 million by 2020. In the same timeframe, US aged population expected to increase by 16 million. Industry expected this resource gap to bring opportunities to fulfil, as well as require services to support the aging population. India needed focus to build high competence talent pool to service and compete with other nations vying for this market.

New strategies to serve the bottom of the pyramid, unleashing technology to service the underserved were deemed to increase opportunities to innovate products and services for
this new market segment. At the same time, industry projected increased needs for governance, risk management, IT security, and global accounting standards. IT operations needed to focus on automation and process orientation to increase efficiency and hence cost advantage. Global supply chains in human resource deployment were expected to increase collaborative virtual work force. India needed to improve innovation capability to compete with global innovation hubs like Silicon Valley, Japan and Tel Aviv. NASSCOM proposed enhancing human capital by serving domestic markets and improved government, infrastructure and regulatory support approach to build India’s innovation capability.

The primary risks and concerns that India needed to prepare for while embarking on the new fanged approach included internal factors like political uncertainty, policy environment, slow decision making as well as extraneous factors like Global economic uncertainties, restrictive data protection regime, and other macro-economic conditions including trade flows.

In the time of rapidly changing economic landscape of the world, Indian IT Industry was at cross roads. While the industry achieved phenomenal success in branding India from a slow moving, primarily agrarian economy with dim industrial activity to a knowledge economy with vast talent pool, entrepreneurial activity and innovation, India’s relatively poor infrastructure, slack legal system, political instability and corruption threat to tarnish India’s IT promise in the highly competitive world market. To compete effectively with the emerging countries like other BRIC nations, Philippines, Mexico, Israel and others, to grab a larger market share to keep and increase its contribution to growth of India’s economy, the Indian IT Industry needed to engage in acquiring domain knowledge and innovation in emerging market trends like telemedicine, mHealth, remote monitoring solutions and clinical information systems. The country needed to focus on building and effectively utilizing infrastructure, specifically network infrastructure to address efficiency and growth needs of the Indian IT Industry. Indian government need to improvise ways to foster India into an innovation hub. Industry needs to monitor economic conditions closely. Traditionally the IT industry had high dependency on US market. There was scope to expand to less tapped markets in Europe and Asia Pacific. Economic turmoil in other countries was likely to affect the industry. The industry needed to increase focus on providing effective solutions to the emerging markets including domestic and international markets. It needed to engage in inclusive growth and holistic development of society in the going forward. India needed to address risks including internal factors like political uncertainty, policy environment, slow decision making as well as extraneous factors like global economic uncertainties, restrictive data protection regime, and other macro-economic conditions including trade flows. Cyber laws needed to be stringent and implemented effectively to ensure security and instil confidence in international customers.

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