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'Offshore Outsourcing of High Tech Jobs:
The View from India'

By

D. V. R. Seshadri
&
James A. Narus

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Please address all correspondence to:

Dr. DVR Seshadri
Visiting Faculty,
Indian Institute of Management Bangalore
Bannerghatta Road, Bangalore – 560 076, India
Phone: +91-80-2699 3260, Fax: +91-80-2658 4050,
E-mail: dvrs@iimb.ernet.in

Dr. James A Narus
Professor of Business Marketing
Babcock Graduate School of Business
Wake Forest University
Suite 150, One Morrocroft Center
6805 Morrison Boulevard
Charlotte, NC 28211-3551, North Carolina, USA
Phone: +1-704-365-6717, Fax: +1-704-365-3511,
E-mail: jim.narus@mba.wfu.edu

Abstract

In the recent past there has been considerable media attention on the exodus of jobs in various high-tech industries from the developed world (USA and Europe) to emerging countries, notably India. The phenomenon has strong economic justification for the companies that are outsourcing these jobs to offshore destinations. In the U.S. there is a growing resentment and backlash to "offshore outsourcing". Many people are complaining that far too many high-paying jobs are being "exported" abroad. Given that this new wave of job migration out of U.S. (and to some extent Europe as well) causes cataclysmic changes in the lives of those getting displaced out of their jobs, the issue is indeed loaded from an emotive perspective. If this movement grows and politicians in the affected countries respond with tariffs, quotas and outright bans on offshore outsourcing (and politicians do have a tendency to react to such outcries), then IT companies such as Infosys, WIPRO, and Tata Consulting Services from India and those from other emerging countries will be hard hit, since much of their sales comes from international markets. The purpose of this paper is to find out how the leaders of major Indian companies feel about the growing threat of protectionism in IT out-sourcing, a domain that has been witnessing of a lot of high-tech job migration in the past several years.

Phase-1 of the study (which is the scope of this working paper) is designed to understand the phenomenon from the perspective of top managers of Indian IT companies and key decision makers in the Indian federal and relevant state governments, as well as NASSCOM, the nodal Indian agency that is involved in promoting India as an IT outsourcing destination. The focus of this study is India, since it is in the vortex of the on-going debate on job losses. A more extended study (Phase 2) is contemplated subsequently, covering other emerging nations that compete with India for a share of the IT outsourcing pie.

As a part of Phase-1, several top managers of large India-based IT companies, leaders of Indian Industrial forums as well as key government officials were interviewed. Anecdotes, quotes, and ideas were collected from them, which we present in this paper.

This on-going research seeks to develop a "framework for international trade" that is based on the creation and sharing of jobs.

Offshore Outsourcing of High Tech Jobs: The View from India

Introduction

Outsourcing is the transfer or delegation of the operation and day-to-day management of a business process to an external service provider. Off shoring involves 'the relocation of labor intensive service industry functions' to places that are distant from the actual business center[1]. Offshore Outsourcing involves purchasing or outsourcing goods or services from an organization operating overseas[2]. India has been one of the most popular off shore destinations for outsourcing because of its burgeoning population, reduced labor cost and the knowledge of English among significant sections of the population.

There are a number of reasons why companies choose to offshore. These include tax benefits and incentives from foreign governments; the opportunity for breakthrough into new markets and most importantly lower wages for a highly skilled and knowledgeable workforce[2]. There is a very large and noticeable difference between the US and developing countries like India, in terms of wages paid for the same kind of skills. For example, a software developer who costs $60 an hour in the US may cost only $6 an hour in India[1]. In spite of the expenditure incurred on setting up the necessary infrastructure to carry out off shoring activities in these distant locations, companies are still able to make considerable profits due to this labor arbitrage.

The USA is the largest outsourcer in terms of both volume and value. According to the McKinsey Report, off shoring is expected to grow at the rate of 30-40% over the next 4 years. Forrester a leading IT analyst, projects that the number of US jobs off-shored will grow from 400,000 jobs today to roughly 3.3 million jobs by 2015, accounting for some $136 billion in wages. Of this Forrester expects 473,000 jobs from the IT industry to go offshore over the next 12 years, which would mean 8% of all current IT jobs in the US[1].

The next largest outsourcer is the UK [1]. However the governments of both these countries have different viewpoints on the benefits of outsourcing to their economies. While the

UK welcomes outsourcing as a profitable venture, the USA has seen an outcry from its citizens, the media and politicians against outsourcing.

The offshore outsourcing controversy

This outcry relating to offshore outsourcing has picked up remarkable momentum in the last year or so. In January 2004 the US Senate passed a bill with a provision that restricts US government contractors in the Department of Transportation and Treasury from outsourcing work offshore. US politicians have proposed measures to curb outsourcing in at least 24 states, through initiatives and legislations such as 'Opportunity Indiana' and 'Keep Jobs in Colorado Act' among others[3].

In early 2004, two anti-outsourcing bills were introduced in the US Senate. One bill introduced by Senator Chris Dodd aims at ensuring that American tax dollars are invested in American workers. Under this bill state governments would not be eligible to receive federal funds unless they certify each year that these monies will not go offshore[3].

The second bill called the 'Jobs for America' Act introduced by Senator Tom Daschle, would require any company that plans to lay-off fifteen or more workers and send those jobs overseas to disclose how many jobs are affected, where they are going and why they are being off-shored. The companies would be required to notify federal and state agencies responsible for helping laid off workers, according to the bill summary[3].

The issues being raised are that those states in USA with a high concentration of technology workers would be 'disproportionately affected by persistent joblessness'[2] if these high skilled jobs were to be outsourced offshore. There is additionally a concern about tax revenues with the fear that when a large number of high wage earners remain unemployed, it would result in a fall in tax revenues and consequently an increased burden on social security measures[2]. However there are others who feel that outsourcing is just an extension of the economic evolutionary process and that people who don't want to change and those who seek to keep the economy redundant and static tend to push bad protectionist policies[4].

The US media too has played a significant role in creating the hype about the debate by exaggerating American job losses and other consequences of offshore outsourcing while undermining the benefits such as cost savings to technology companies and to the US economy as a whole.

On the other hand some of the Indian IT leaders feel that the outsourcing issue is being blown out of proportion and that the layman's perception of the problem is larger than reality., According to a top Indian IT CEO Mr. Ashok Soota the Chairman and Managing Director of MindTree Consulting Pvt. Ltd (MindTree), the outsourcing controversy has become the 'favored punching bag' and a convenient point of blame for people losing their jobs in the US. It is reasonable to conclude that the outsourcing debate has turned into an issue with political and emotional hues.

The scope of this paper

Indian companies need to deal with this controversy now before severe protectionist measures and legislations are slapped on them. The anti-globalization protests at G-9, IMF, and WTO meetings illustrate how the "pot is boiling" on this issue. India has had a relatively moderate and sanguine response to the entire debate, which completely contrasts the rather harsh response of the average US citizen, the US media as well as politicians in USA.

In order to document the views of Indian corporate leaders on the outsourcing debate, a series of onsite and telephonic interviews with top executives of leading Indian IT companies, consulting firms, industry associations and relevant government agencies were conducted.

It was found that the top executives were more optimistic and circumspect, framing the offshore outsource boom strategically in the context of India's free-market economy.

These executives couched their thoughts and opinions around four crucial questions concerning the future of India:

I. India's strategy for creating and providing jobs for its increasing population during the 21st Century

II. The businesses that India should get involved with

III. Taking on leadership for India's economic development

IV. Creating and building an appealing and potent "India Brand"

In this paper we will recount, synthesize, and shape the thoughts of leading Indian IT executives around these four questions.

I. Creation of jobs to stoke the Indian Economy

As an emerging free market economy India needs a huge number of 'good jobs' for its population in order to improve the overall quality of life and to fuel economic growth. The Population Reference Bureau[5] states that India, with a population of 1087 million, ranks second next to China, among the ten most populous nations in the world. The population per square mile is 856. The population is expected to grow to 1628 million by the year 2050. Currently 36% of India's population is under the age of 15 and only 4% is over 65 years old[4]. 54 % of the population is below 25 years of age.

India's burgeoning unemployed population

An estimated 19 to 37 million of India's population will be unemployed by 2012 with currently 27 million unemployed people[6]. If we were to include in the unemployed category the ones who are employed in poorly paid jobs or those who are in temporary jobs looking for better breaks, this number would again shoot up dramatically.

The National Association of Software and Services Companies, which is the chamber of commerce of the IT software and services industry in India states that the employment provided by Indian software industry and the IT Enabled Services / BPO industry combined together has increased from 522,250 in 2001-2002 to 813,000 in 2003-04[7]. In

spite of this, with a 417 million Indian labor population[6], the increase serves as a mere drop in the ocean.

A dire need for job creation

Adding to this is the unequal distribution of incomes in the country. According to the World Bank, India has a per capita income of US\$ 530[8], resulting in a very meager standard of living for the average Indian. Asian Development Bank states that out of the 690 million extremely poor people in developing countries of Asia, 93 per cent are in India[9].

According to India's National Planning Commission, economic growth will fall below the target set in its latest five-year plan. The Indian economy, Asia's fourth largest, expanded by an average 6.1% during the first two years of the plan and will have to expand at more than 10% during the remaining three years to reach the target of 8%. The five-year plan aims at reducing poverty by doubling the nation's per capita income by 2012[10].

Although NASSCOM reports that the Indian software and services industry have made revenues of US 15.9 billion and registered a growth of 30.5 % in the financial year 2003-2004[11], it seems to have benefited a very miniscule part of the population. We are talking of a few hundred thousand jobs that may move to India as against a deficit of several million jobs says Mr. Som Mittal, the CEO of Digital Software and Chairman of National Association of Software and Services Companies (NASSCOM).

This stands in stark contrast to the image of a surge in employment and income that India is experiencing because of outsourcing.

Mr. K. M. Shivakumar, IAS, who until recently was the Principal Secretary to the Department of IT & Biotechnology and Science & Technology, Bangalore-headquartered Government of Karnataka opines that widespread poverty and unemployment continue to plague the country and hence it is quite inappropriate for Indian politicians, bureaucrats

and IT industry captains to brag about the 'Indian IT phenomenon' and thereby unnecessarily invite anti-outsourcing sentiments.

Mr. Ashok Soota (MindTree) believes that the rhetoric of claims of success in the IT industry by Indian politicians is very much misplaced. Mr. Sanjay Purohit the Head of Corporate Planning, Infosys Technologies Ltd at Bangalore (Infosys) points out that from India's standpoint it is a fact that if the Indian IT industry decelerates it would not make a significant impact on the country's GDP. However from a global perspective, the Indian IT industry is small indeed.

Job creation beyond IT

In a recent report, the All India Management Association (AIMA), the Boston Consulting Group and the Confederation of Indian Industries (CII) conclude that traditional options such as foreign direct investments and exports are inadequate to stimulate sustainable economic growth at the required rate[6]. They report that economic growth should address the problem of unemployment, particularly of skilled youth in order to find solutions at a systemic level.

They have speculated on an interesting range of services that may be offered by India to the rest of the world, which would be able to engage a larger portion of the population into the work force[6]. These include:

Remote individual services: Telemedicine, do-it-yourself support, Tele-plumbing, auto repairs, tax advisory services, horoscope reading, e-learning, home-schooling, Adult professional courses (re-skilling), providing server space to individuals for record maintenance, etc. would fall in this category.

Importing individual customers: Different kinds of tourism such as medical tourism, spiritual tourism, adventure tourism, etc., "Dollar" shopping centers, duty-free shopping zones, education which would include higher education for developed and developing countries, training courses revolving around India's heritage in areas such as Ayurveda, cuisine, yoga, etc., importing customers through nursing house services and retirement

services by providing customers the Ashram model or settlements for them to live near university towns

Remote corporate services: These include IT services such as IT consulting, software application development and knowledge networking. IT would also include IT enabled services such as data analysis and database consulting, outsourcing of human resources and administration functions, digital media and content development, CAD/CAM design, animation, bio-informatics, off-shore financial services, real-estate management, security services, research and development services, legal/advisory services for MNCs, etc.

Importing corporate customers: This would include services like tourism for corporate clients and education and training services for corporate clients.

Mr. Ramalinga Raju the Chairman of Satyam Computer Services Ltd. (Satyam) felt that the creation of new jobs in the western world to replace those being outsourced was already happening and it would accelerate further in the future. He felt that increasingly, new jobs would come from an increased level of customization and personalization. Mr. Kiran Karnik the President of the National Association of Software and Services Companies (NASSCOM) was of the opinion that there would be new technologies that would create new jobs in the developed countries. Nano-technology and biotechnology are potential areas that are fast opening up from the perspective of job creation. Simultaneously however, he felt that pressure for jobs would continue.

Mr.Lakshmi Narayanan the President and CEO of Cognizant Technology Solutions (Cognizant) felt that if people being displaced from their existing jobs in the western world due to offshore outsourcing could get trained in the emerging new areas of IT, there would be a lot of new job opportunities that would open up for them.

According to the High Level Strategic Group Report[6], select professions in the developed countries like IT, education, medicine and services are in shortage. It estimates that there may be an approximate shortfall of 32-39 million working people by 2020 in the developed countries. It also estimates that by providing remote services and importing of customers, India can create 10-48 million direct and indirect jobs by 2020

Benefits of outsourcing to the Indian economy

According to the Ministry of Communication and Information Technology, Government of India, the IT industry is one of the fastest growing sectors of the Indian industry, with a growth rate of 28% in exports during 2003-2004 with a CAGR of 30% in turnover and 37% in exports during the last five years. IT exports are likely to grow by 26% to 28% during 2004-2005 with global outsourcing as the key driver for exports[12]. The McKinsey report states that India gains an estimated net benefit of at least 33 cents for every dollar of spend offshored.[1]

Another important benefit of outsourcing to the Indian economy is a hopeful increase in employment. The Ministry of Communication and Information Technology, Government of India, estimates that the potential for employment in India by 2008 will be 2.2 million in the software sector, 1.1 million in the ITES/BPO industry and 2 to 3 million through indirect employment. In the hardware sector it expects that the employment will be 4.8 million though direct and indirect employment combined[12].

Three Indian IT companies namely Tata Consultancy Services, Wipro and Infosys Technologies Ltd. have now joined the billion-dollar club. Indian software and services exports earned revenues of USD 12.5 billion in the financial year 2003-2004[11].

India currently has been able to capture only 2% of the global software and IT services market. However this is expected to increase to 6% by 2008. The Indian software and services industry is expected to grow to 7% of India's GDP and 35% of exports by 2008. IT is projected to reach an export potential of US $ 57-65 billion for the software and services sector by 2008. This is inclusive of the ITES/BPO sector[13].

Why outsourcers choose India

Mr. Thomas Zuerrer the Managing Director of Swiss Re-Shared Services (India) Pvt. Ltd.(Swiss Re) while describing how India became their chosen offshore destination said that the company had looked at many other possible locations such as Singapore, Malaysia, Hong Kong and Sydney among others but India gave them the cost advantage

and also the convenience of reasonably being able to cover many time zones effectively. This in turn helped the company to provide services to various regions in Asia (as well as other parts of the world) that they were operating in. He went on to add that if the company was in a place like Australia, there would be difficulty in having time windows to cater to other regions.

Dr. Robert Hoekstra the Chief Executive Officer of Philips Software Center Pvt. Ltd. (Philips) found that India had a high level of educated people who fulfilled the competencies required for the company's innovation center. Comparing the employable population in India, Ireland and Israel, Mr. Hoekstra feels that although Israel and Ireland have good people resources for software, the number of people available were limited and hence long-term sustainable competencies would get affected, especially if the company planned on scaling up the size of its operations. Likewise in Eastern Europe, although there is a lot of talent, in general, people are hesitant to relocate from one place to the other. This again poses a challenge when the company seeks to scale up and requires more people to be employed.

But in India there are qualified people willing to relocate from all over the country. Dr. Hoekstra is confident that scaling up is something which is not difficult to do here and that sustainability from the point of view of availability of people is very much possible in India.

B. India's selection of & involvement in the right IT businesses

Top Indian executives are struggling to find a compelling and potent value proposition not only for the Indian IT industry but also for the Indian economy as a whole. For India economic growth is essential and it needs to accelerate beyond the current 5-6%. From a strategic perspective, Indian executives are pondering over the question: "What business should India be in?" There are tantalizing possibilities and perplexing trade-offs to address.

Serving the graying West vs. tapping Asian growth

The Population Reference Bureau states that developing countries like India will far outpace developed countries like the US in population growth because of a younger age structure as well as higher birth rates[14]. According to the McKinsey report, the US economy would see a significant decrease in the share of working age population. The report predicts that by 2015 the US would need an additional 15.6 million workers in order to equate to the working population of 2001[1].

Continued high birth rates guarantee several decades of growth for countries like India. Although the US has the highest birth rate among the developed nations, it is still significantly lower than that of most developing countries[14]. Very low proportions of youth and high proportions of older people contribute to a shortage of working class and an increased need to support an ageing population.

According to Mr. Som Mittal, costs related to social security, pension, healthcare, etc., for the graying population will increase in the West in the future, the burden of which will fall on the rest of the population. On the other hand, there would be a surplus of work force in countries like India, Indonesia and Pakistan, parts of which would be definitely involved in serving the graying western economies through outsourcing. He felt that India with its young and significant skilled English speaking population was in the right place to harness the potential of providing services to the huge graying Western market. On the other hand in order to tap the burgeoning population growth trends, India will have to seriously work at coming up with job creation strategies for well paid employment that will help improve the overall quality of life as well as fuel economic growth.

Value chain migration of Indian IT companies

The question then arises as to which end of the value chain India wants to become a provider of IT and IT Enabled Services. Overall there is a consensus among IT leaders that in the long-term, India needs to migrate towards providing services that create high

value and away from those at the bottom of the value chain, which can be easily replicated and offered at lower prices by many other nations that are entering into these domains.

Commenting on what is next for Indian companies in terms of moving up the value chain especially in the backdrop of growing wages in the Indian IT industry, Mr. Ashok Soota sees it as inevitable and necessary for Indian companies to move up in value. However considering the size of India and the level of unemployment, he said that the surface of the total work force talent has not yet been scratched and that outsourcing has not provided solutions for the massive unemployment and underemployment in the country. IT related jobs touched the lives of only a small percentage of youth, who were IT-savvy. India has to embrace as much of the total value chain as possible and it would be disastrous if India were to vacate the lower-end of the value chain as the pyramid is broadest at the lowest level.

Mr. Ramadorai, Chief Executive Officer, Tata Consultancy Services (TCS) felt that outsourcing should not be the only source of competency of the Indian IT industry. The Indian IT industry should look at leveraging intellectual assets by creating knowledge-based solutions and by spending research dollars to create these intellectual assets continually.

Mr. Som Mittal supports the commonly held view of perceiving value creation in the IT industry as a vertical pyramid. Customer firms typically initiate outsourcing of the low-end services to Indian IT firms. By demonstrating their skill and expertise and thereby building the confidence among the key managers of the customer firm, the Indian IT companies next begin to handle higher-end work. Usually this happens with the passage of time, due to the high quality and other important value elements delivered by the Indian IT firm. This constitutes the customer-driven life cycle, which enables the Indian IT firm to progressively move up the value chain. According to him, there is a lot of scope for value addition at each horizontal slice of the value pyramid.

The stages of value chain migration

According to Mr. Lakshmi Narayanan (Cognizant) moving up the value chain means different things to different companies. For Cognizant, it connotes taking greater ownership of a customer's problems. Building further on this perspective, the different stages of creating value are:

Stage-I: The outsourcing company has a problem. They also have the solution to the problem but want cheap implementation of the solution. So they decide to get a software company from India to implement the solution. This was the situation some years ago for many Indian IT companies.

Stage-II: The outsourcing company that has been telling how to implement the solution stops doing this. Instead, they leave it to the Indian IT firm to figure out how to implement it. Customer firms ask the service provider to take a greater ownership for the solutions and build them.

Stage-III: At this stage the client company merely tells the Indian IT firm about the problem and the latter is expected to figure out the solution and implement it, thereby solving the problem. This is where the Indian IT firm gets into a consulting mode.

Stage-IV: At this stage a very close relationship is established with the client company. It no longer even tells the Indian IT firm what the problem is. The expectation is that the Indian IT company would proactively anticipate, monitor, find solutions and implement them on behalf of the client company. The relationship becomes one of true partnership. This arrangement allows the client company to focus on its core business.

Substantiating this stage-wise move up the value chain suggested by Mr. Lakshmi Narayanan, Mr. V. Chandrasekaran the CEO of Aztec Software and Technology Services Ltd. (Aztec) felt that Indian IT companies were already moving to higher value adding work. In the case of his own company, a one-line problem statement from the customer firm was being converted into a solution. This was a clear demonstration of value creation. However he wasn't certain about this happening on a large scale and felt that

only companies with good brand names would be able to able to make the transition to higher value services, and more importantly only they will be able to extract commensurate price for such services.

Mr. Thomas Zuerrer (Swiss Re) felt that Indian call centers like Progeon (promoted by Infosys) were going well beyond being a BPO company. They leverage IT, IT development and IT maintenance as a part of the value proposition that they offer to their client companies. He felt that the realization of the need to move up the value chain was occurring in many of the Indian IT companies.

Mr. Raman Roy the Chairman and Managing Director of Wipro Spectramind (Wipro Spectramind) was of the opinion that many Indian IT and ITES companies were already moving up on the value chain. For instance, Wipro Spectramind was already involved in a lot of high value work such as claims adjudication, underwriting, mortgage processing, basic bookkeeping, accounting, etc. These were clearly high value-added work compared to for instance attending to a request to reset a password from a caller. In the quest to move up the value chain however, he warned that it is essential not to ignore the low-end work, since there were profit margins to be made even in a commoditized service.

The relevance of value chain migration to the Indian IT industry

Mr. Jerry Rao, Chairman and CEO of MphasiS BPL Ltd. and Chairman, NASSCOM (MphasiS) felt that there was a wrong mindset in India that Indian IT companies are on the lower end of the value chain. Reflecting on the comments that appeared in some of the media reports, he felt that it was completely erroneous on the part of these reports to regard Indian software professionals as 'cyber coolies.' He felt very strongly that these media reports were also wrong in doubting Indian IT companies' ability to move up the value chain.

Mr. Jerry Rao felt that any one who was in the service industry on a time & materials basis was in the body shopping business, and there was nothing wrong with it. This includes top global consulting firms as well as the more modest Indian IT service providers. He felt that every country has its own distinctive advantage for which there is

no need to feel apologetic. He reasoned that just as American companies were successful in products because they had beta sites and markets, Indian IT service companies had a labor pool that made them successful. Hence he sees nothing wrong in India doing what she was good at doing, and getting better and better at it. He said that somehow academicians and analysts in India had got the wrong notion that BPO services and IT enabled services were not a good place to be operating from and that somehow Indian IT industries must move up along some mythical value chain

Mr. Nandan Nilekani, CEO, President and Managing Director of Infosys Technologies Ltd. (Infosys) stated that IT was becoming a commodity and that innovation was required in terms of how best it could be put to use to make client companies more competitive and help them to differentiate themselves vis-à-vis their competitors.

According to Mr. Ashok Soota (MindTree) going by the Indian population and the level of unemployment, India has not even scratched the surface of the total workforce talent. Outsourcing is not the ultimate panacea to the massive unemployment and underemployment problems plaguing the country, as it touches the lives of a very small percentage of the population, which would include mostly IT-savvy professionals. India as a country - distinct from individual Indian IT companies - has no other option but to embrace as much of the total value chain as possible. It would be disastrous for India as a country, if it were to vacate the lower end of the value chain, as the pyramid is the broadest at the lowest level.

Operational Excellence

In order to maintain their competitive edge and simultaneously register growth, Indian IT companies need to ensure operational excellence.

Mr. Thomas Zuerrer (Swiss Re) narrated some of his experiences in setting up Indian operations for Swiss Re. When he first started operations in India, he found that concepts such as adherence to time schedules, taking end-to-end responsibility, etc. were differently perceived in India compared to what he was used to. He attributes these differences to different cultural contexts. He bridged these differences through suitable

training programs for his employees and now finds no difference between them and their peers in the developed countries. He also found that there were some preconceived notions among people in the western countries about Indian workers, such as that they tend to follow pre-defined processes and that they are not very creative. He cautions that some of these perceptions could be a result of stereotyping people of a whole nation, and may not be accurate.

Maintaining competitive advantage

Mr. Lakshmi Narayanan (Cognizant) alluded to the reality of job-hopping as a tendency of the Indian IT professional, which makes it difficult for those managing these companies. However he felt that it was a free market and anything that was restrictive in this regard would not have desired results and this was something that companies will have to learn to cope with. Effectively addressing this issue provides significant competitive edge to a software provider.

Mr. Ashok Soota (MindTree) warned that a country's competitive advantage could become its liability unless critical issues that confront the industry are effectively handled. To illustrate this, he discussed the situation of how Indian salaries for IT professionals were going through the roof. These hikes in salaries began in the early nineties. However at that time, the salary hikes were matched by commensurate price increases by client companies in the western world for services provided, and hence the impact of salary hikes was not felt by the Indian IT companies. The subsequent recession in the industry for two years (2000-2002) curbed these upward revisions to some extent. Currently the industry was again witnessing a situation where salary increases, with the difference however that now client companies, under pressure to reduce costs, are not willing to consider rate increases. The margin of profits for IT solution provider companies was consequently getting under pressure. During the last few years, the appreciation of the rupee vis-à-vis the US dollar, at about 6% per annum, as against 6% per annum rupee depreciation in the past, resulting in a 12% spread, was another source of pressure. The reason for the about 14% per year salary hikes was clearly the demand-supply gap and consequent high manpower turnover rates. Unless this is addressed and a

solution found, Indian IT companies may be beginning to erode their own competitive advantage. India faced competition from Philippines, China and East Europe among others. He was optimistic that the desire for self-preservation would eventually prevail and this would ensure the continued competitive advantage of the Indian IT work force.

Mr. Soota (MindTree) also felt that China had done a good job in retaining its competitive advantage in manufacturing by creating areas of prosperity in the coastal regions. To keep the labor costs from increasing, China ensures continued supply of manpower from the hinterland into these industrial belts. He felt that in similar fashion India too had a large untapped workforce in the smaller towns and in order to stop the widening of demand-supply gap for skilled knowledge workers, there was a need to ensure that the additional workforce filled the gap in a way that wages would not go up. Mr. Soota cautioned that India must not lose sight of the fact that future technological advances could make presently outsourced jobs redundant.

According to Mr. Ramadorai (TCS), for some types of businesses such as call centers, where the primary differentiators were cost and reduced number of errors, sustainable competitive advantage would be more difficult to create. India must find a way to continually provide cost competitiveness in these areas. Such services were predominantly cost–driven. In such businesses, the only way by which India could be competitive was continual focus on operational efficiency, accuracy and timely delivery. On the other hand, for other types of services such as the complete rollout of SAP or Oracle, understanding the business processes that drive the client company's industry was vital. Consequently, expertise in implementation of packages, customizing solutions, providing value-added services and implementation support would continue to command a premium.

Commenting on the BPO industry Mr. Lakshmi Narayanan (Cognizant) said that the current growth rate of the BPO industry is not sustainable. He said that correction was already beginning to take place, with issues such as quality, work ethic, turnover of people and performance coming under pressure. The industry is growing too fast. He predicts that it will reach stability after the hype cycle ends and from thereon the industry

would achieve steady growth. The Indian IT industry's competitive advantage was sustainable in the long run because of the head start that the country had over others and the scale in terms of the number of people in this industry. It is not easy for another country to overtake India at this stage. India is unlikely to be challenged in the short-term but in the long-term, Indian firms may have to accept a lower level of growth and share the pie with other countries. That will be better than the present situation since the pie is indeed very big.

III. One billion people in search of leadership

The Indian National Planning Commission has called the services sectors and the emergence of knowledge-based industries as one of the 'brightest spots' in India's economic performance. Services expanded an average of 76.9% between 2002-03 and 2003-04 and accounted for more than half of India's GDP[10].

However, for India's IT industry and economy to sustain its positive momentum, organizations and individuals must lead the charge. This would have to include the Indian government, Indian companies and Indian trade associations.

(a) The Indian government

The Indian government has been at the receiving end of a lot of flak worldwide. It has been often criticized for being bureaucratic, snail-paced, and anti-business. Foreign businesses have had to deal with a government of coalitions and frequently changing policies as well as policies that look good on paper but have not been implemented properly in reality.

There have been complaints of corruption and bribery. According to Transparency International's Corruption Perception Index of 2003[15] India was ranked 83rd in a group of 133 countries with a below average score of 2.8 out of 10, where 0 represents highly corrupt country and 10 represents a corruption-free country. Ten developing nations including India were measured on this index. Among the 10 nations five were found to have below average scores and India was one of them[15].

The liberalization process

India has experienced liberalization only over the last one and a half decades. In the early 1980's a conscious effort was made by the central government regulatory agencies and state-run institutions to encourage private growth and entrepreneurship. The most significant changes occurred with the progressive introduction of pro-liberal economic policies from the early nineties[16]. However the country has a long way to go in terms of setting right regulatory frameworks, and ensuring that well-drawn out rules don't remain paper tigers. Simple issues such as ensuring continuous flow of electrical power can become long-drawn out affairs, compounded by uncertainty and lack of transparency. The silver lining is that some sectors, notably the telecom sector have seen considerable improvement over the last several years.

One of the major policy initiatives of the government of India was the formation of the National Task Force on Information Technology and Software Development in 1998. The major recommendations of the Task Force included opening of internet gateway access; encouragement for private sector software technology parks (STPs); zero customs and excise duty on IT software; income tax exemption to software and services exporters; 1-3 per cent of budget of every government ministry/department for deploying in IT applications; networking of all universities and research institutions; and new schemes for students including an attractive package for buying computers[12].

In 1999 the Ministry for Information Technology was set up as the nodal agency for facilitating IT initiatives by the central and state governments, academia, private sector companies and successful Indian IT professionals abroad. The EXIM (Export-Import) policy, announced in 2003 simplified procedures for re-export of equipment for testing and development with regard to embedded software; free movement of laptops; higher rate of depreciation on hardware and software and easy disposal of used computers.

The IT Act (2000) was another major initiative of the Indian government[12]. The Act provided for legal recognition of transactions carried out by means of electronic data interchange and other means of electronic communication. It also legalized electronic

filing of documents with government agencies and the delivery of government services by means of reliable electronic records. It also made provisions for recognizing and penalizing cyber-crimes.

The new Indian government

Dr. Manmohan Singh, the prime minister of the new Indian government elected in 2004 seems to hold much promise for the Indian industry as a whole. Being a world-renowned economist himself, he is well known for his role in initiating a comprehensive policy of economic reforms during his stint as India's finance minister between 1991 and 1996, for which he is now recognized worldwide. In fact the New York Stock Exchange (NYSE) Chief Executive Officer John A. Thain welcomed Dr. Singh during his visit to the NYSE in 2004 saying that Dr. Singh had been instrumental in directing an economic agenda that had become the foundation of India's economic growth in the past decade[17].

In May 2004, the minister of communication and information technology in India's newly elected government released a 10-point plan to encourage the development of the country's information and communication technology[12]. Despite these developments, with inadequate budgetary allocations, the IT section of the Ministry of Communication and Information Technology has limited resources for IT projects.

Allocation of funds for infrastructure

Mr. Kiran Karnik (NASSCOM) reiterated that the government had a major role to play in creating the right eco-system for continued development of the Indian IT industry, by ensuring adequate infrastructure like transport, roads, power and education. Mr. Raman Roy felt that the government couldn't leave it to just agencies like NASSCOM, which did not have the required financial resources to provide all infrastructures that the Indian IT industry needed. He felt that the government and the administration have to work in tandem with the industry and industry associations like NASSCOM. Expressing his anguish at the lack of emphasis on focused education and training for the population, he said there was a need to introduce into the regular curricula those topics that would help Indian youngsters to obtain jobs in the IT and ITES/BPO industry.

Mr. Lakshmi Narayanan (Cognizant) felt that the government should put to proper use the money that it was making from the IT industry and take concerted steps to root out corruption without frittering it away. He also felt that the government should emphasize use of English in education, thereby capitalizing on an inherent advantage that the country enjoyed, rather than taking a retrograde step of imposing local languages in education. He also expressed that the government needed to provide greater thrust on education, which would ease the pressure on Indian IT companies to find adequate numbers of competent professionals.

Mr. Jerry Rao (MphasiS) felt that the government had a major role to play in setting up the necessary infrastructure like airports, conference centers, and roads including approach roads to airports, where India was lagging far behind. He felt that the government did not seem to understand the seriousness of these requirements and how important world-class infrastructure was in order to keep global customers satisfied and happy. He was also unhappy that the government was not doing much about soft infrastructure like language skills and English education. Currently most of the English education is being provided by the private sector. By creating two classes of people, those who knew English, and those who did not, the government was condemning those who did not know English to perpetual poverty.

According to Mr. Raman Roy (Wipro Spectramind), inadequacy of national infrastructure contributes to poor operational excellence. To illustrate this, he cited how in Mumbai there was one single road that linked the city with new residential areas in New Bombay. The road often faced blockages for various reasons. This created stumbling blocks for timely transportation of employees. Traffic hazards were also an issue to contend with. Such issues result in fewer agents being available to answer customer calls, and pose challenges in maintaining consistent service levels. This required needless redundancies to be built into the system, raising costs.

He felt that India as a nation needed a proper infrastructure game plan. He pointed out that in contrast, China has put in place a specific, well thought-out game plan that looked far ahead in terms of infrastructure and manpower needs. He felt that this was a very

fundamental issue on which there needed to be a serious national-level intellectual debate followed by an action plan and time-bound execution. This was not just about an individual company succeeding. Instead it was about the country succeeding as a whole.

Changing the focus of education

Mr. Kiran Karnik (NASSCOM) emphasized that education was one of the most critical factors that would have to be geared more towards teaching Indian youngsters how to learn. Today's world made it imperative for professionals to constantly re-educate themselves every few years. Although some of this re-educating would happen through attending training programs and courses, most of it would be through self-learning using well-documented and packaged study material. Learning would increasingly have to be done by the individual, as opposed to the current predominant mode of being taught by someone. Thus 'learning to learn' and enabling people to undertake self-learning are essential skills in today's fast-changing world. In order for people to remain employable through their lifetime, they would continually have to be in learning mode, renewing their education and knowledge base all the time.

Mr. Karnik felt that Indian education was dismal at imparting self-learning skills, both at school level as well as in the universities. He however felt that with the emergence of the Internet, this was slowly changing making self-learning much easier. The concept of searching for information is uncommon in Indian education. In his view, the hype about Indian education being created in the West was to some degree misplaced.

According to him, there was too much of structure and rigidity in Indian educational programs. Streams of education such as science, arts or commerce were excessively compartmentalized. Once a student opted for a choice, they were slotted into it for the rest of their lives. According to him, getting into interdisciplinary fields, which is a need in today's context, was very difficult due to these inherent systemic inflexibilities. In Indian schools and colleges, everything was pre-set and pre-programmed for students, leaving them little latitude for exploration. He felt that Indians were fairly good at analyzing data, but not very good at discovering new information because the concept of

going out and searching for data is not common to India. Although the Indian educational system had its advantages and strengths, it is not geared to meet the needs of the future. Imparting skills relating to adaptability and flexibility was missing in the educational system, making retraining, continual self-learning and inter-disciplinary learning more difficult. These aspects are going to be vitally important to India's future.

Mr. Raman Roy (Wipro Spectramind) lamented that there was not a single college, institution, polytechnic or university in the country that trained young people in the country about 'US GAAP' even though the country planned to do billions of dollars worth of back-office business this domain for US and other companies. His company had to train its employees involved in such projects on US GAAP, while simultaneously paying them a salary while they were learning. In contrast, competitor companies in the Philippines have access to ready talent in such domains. This is where the state had a pivotal role to direct education in focused areas. He fears that if this is not expeditiously addressed then "just like we told our children that we missed the industrial revolution, the manufacturing revolution and the textile revolution, we will end up telling our children that we missed the BPO revolution as well. The world is not going to wait for us to get our act together."

Revamping research and development

Mr. Kiran Karnik (NASSCOM) would like to see the quality of teaching staff, research facilities, etc. going through a serious revamp. Respect for the teaching profession in the society has deteriorated over the years. This does not augur well for attracting and retaining good faculty. The key for improving education in the country is to attract good faculty and ensure that research being done in academia is relevant to the industry.

From the perspective of students, there are no incentives for pursuing higher studies such as doctorate or M. Tech., since the general perception is that these do not add value in the job market. Although a small percentage of the faculty are committed and are high-caliber as teachers, a large majority of teachers are 'really not that great.' Prestigious institutes such as IIMs or IITs may be relatively better off in this respect. There is

shortage of facilities for good research. The education system is in a negative cycle, with unattractive salaries that fail to capture the best faculty. There is an urgent need to ensure high quality of the faculty if India has to generate large numbers of high quality graduates from the various Indian universities. A reality that must be addressed relates to the government's shortage of funds required for upgrading the educational system. It is important to foster a competitive spirit among schools and colleges with regard to attracting faculty. In the US, most state run universities have excellent facilities. Faculty in such a system knew that they always had the choice to move to a private university whenever they wanted to, and get better salaries, although they may never choose to exercise this option. The Indian government has a huge role in creating this kind of competitiveness within universities and teaching institutions, in directing and funding research in relevant areas and in ensuring a more market-based educational system.

Mr. Raman Roy (Wipro Spectramind) feels that nothing short of a fundamental retooling is required in the educational system if India has to successfully get its population ready for the emerging global BPO revolution.

Bringing in consistent policies and their implementation

Despite the presence of tax concessions and fiscal incentives in the form of zero import duty and 100% foreign direct investment in the software industry, some of the IT leaders felt that there were inconsistencies in policy implementation with every changing government. Moreover, despite these concessions, government agencies often harassed IT companies. The general consensus among IT leaders in India was that there was considerable 'rent seeking' attitude and corruption in the functioning of the government agencies, perhaps because many of these were monopolies. This would require the government to take some bold political decisions. The top leaders of the government must also face up to these realities honestly and make the badly needed changes.

Mr. Subrahmanyam Vempati, Vice President and General Manager, Systems Technology and Software Enterprises Systems Group, Hewlett-Packard (Hewlett-Packard), said that if the government does not increase its spend on the IT industry, long-term advantage of

India's IT industry will not be sustainable. In his view a strong and vibrant domestic IT market is a precursor for the country's sustained global competitive advantage in the IT sector. Some large IT companies, notably TCS have considerable portions of their revenues emanating from domestic IT services. More companies should emulate this approach.

Mr. Lakshmi Narayanan (Cognizant) outlined the following four roles for the government:

- Create the right kind of ecosystem including support infrastructure: power, roads, communication bandwidth, law and order, etc.
- Provide a strong thrust on innovation and incubation. Especially through setting-up facilities and infrastructure like STPI where someone with an idea could walk in and walk out of such a place with a running business.
- Avoid wrong policy decisions that could sabotage the IT industry as they are prone to do from time to time.
- Devote special focus on education and thus ease the pressure on companies in finding adequate numbers of the tight people to cater to the rapid growth of the industry.

The government's role in the current outsourcing crisis

With regard to the government's role in the offshore outsourcing controversy, Mr. N. R. Narayana Murthy, the Chairman of the Board, Infosys Technologies Ltd.(Infosys) felt that as a nation, India needed to maintain humility in its conduct, because of the fact that it had a mere US $ 12.5 billion of revenues[6] out of the total global IT spend. Since this constituted a miniscule part of global IT spend, rather than creating hype about it, India's response must be more mature, measured and low-key.

According to Mr. K.K. Jaswal, IAS, till recently the secretary to the Ministry of Communication and Information Technology, Government of India, New Delhi (Govt. of India), there has been a lot of public posturing in various international forums, especially by companies from the western world, regarding barriers to trade in India. He felt that the

allegations that India is a closed economy did not corroborate with facts. American exports to India particularly in the high-tech segments are growing significantly. He felt that the move by the Indian government with regard to lowering of tariffs and trade barriers is not a reaction or response to the anti-outsourcing sentiments in US but is part of a process that began a long time ago.

Most of the top IT executives felt that the Indian government has no role to play in the current IT outsourcing controversy and should not interfere in addressing the current backlash. They are of the opinion that the industry had enough capable people to address the problem. Some others felt that the government must have a body of skilled negotiators with sound domain knowledge in areas such as WTO and good articulation abilities, to interact with their counterparts in the developed world to put forth India's point of view.

They expressed that often the wrong people represent the country's concerns in international forums, with disastrous consequences. According to them, the Indian IT industry has a definite edge over the rest of the world in terms of the availability of a large knowledgeable and economical labor pool. However a well thought-out game plan is essential in order to capitalize on this resource base so as to be able to harness this enormous potential. This would be possible only with the active involvement and support of the Indian government.

Mr. Lakshmi Narayanan (Cognizant) hopes for a change in the mindset of the Indian government. If India continues to think of itself as a developing country, and feels the need to protect the local industry, then it would continue to remain a developing country. Instead, the Indian government must consider opening up the economy further. There would inevitably be consequences for and adjustments needed by the local industry, especially those in the traditional non-IT sectors. The local industry is strong enough to withstand these reforms and come up with appropriate responses to cope with the resulting challenges.

(b) The new breed of Indian companies

Indian companies have long been muzzled by crippling tariffs, trade-barriers, taxes and a state-imposed inspection regime that has kept them from fully exploring their potential. Over the decades, trade unionism and the traditional public sector approach to the market have further crippled its growth. The common perception about the average Indian company is that it is traditional, corrupt, slow and technologically obsolete. However, these images are slowly changing.

In 2004 Mr. Mukesh Ambani, Chairman of Reliance Industries, Mr. Nandan Nilekani of Infosys and Mr. Azim Premji of Wipro, were named in Fortune magazine's Asia's Power 25 list of the world's most powerful people in business. This reflects the fast-changing landscape of corporates in India, given that the year before; India had only one corporate chieftain in the prestigious list[17].

Globalization of Indian IT companies

As of September 2004 seven Indian companies were listed at the New York Stock Exchange. They include ICICI Bank, VSNL, Wipro, Dr Reddy's Laboratories, Satyam Computers, HDFC Bank and MTNL. Tata Motors is also in the process of listing on NYSE by the end of 2004[17]. Two Indian companies namely Infosys Technologies Ltd. and Satyam Infoway (a subsidiary of Satyam Computer Services Ltd.) are listed on the NASDAQ[18]. There are over 15 Indian companies listed on the London Stock Exchange. Indian companies have acquired 120 foreign firms during 2001-2003. These 120 firms had a combined worth $1.6 billion[19].

NASSCOM reports that at the end of 2003, 65 Indian companies were at SEI CMM Level 5 assessment. Indian BPO providers had a client level satisfaction of over 80%, while fatal defects were less than 2%[15]. According to a recent report by the Ministry of Communication and Information Technology, 175 of the Fortune 500 companies have R&D operations in India[20].

(c) Indian IT trade associations and the IT industry

A very important IT-related trade association in India is the National Association of Software and Services Companies (NASSCOM). Today it has around 850 members, of which nearly 150 are global companies. Some of NASSCOM's past chairmen include Mr. Narayana Murthy of Infosys and Mr. Som Mittal of Digital. Some of the current executive members include Mr.Lakshmi Narayanan of Cognizant Technology Solutions, Mr. Nandan Nilekani of Infosys and Mr. Rajiv Kaul, MD of Microsoft (India) Pvt. Ltd.[21]

NASSCOM has played a key role in enabling the government in India to develop industry-friendly policies. It has also been a proponent of free trade, arguing for zero tariff barriers, strong intellectual property and data protection laws, deregulation of the telecom market, creation of software technology parks and private sector participation in the education system – measures which have resulted in significant growth of the Indian IT industry[21]. While Indian universities churn out large numbers of graduates every year, a staggering 95 percent of them are rejected by the IT services industry. NASSCOM is trying to address this problem. Factors such as lack of communication skills, lack of confidence, etc., are making such a large proportion of people unemployable in the backdrop of new opportunities that the country is witnessing. NASSCOM is trying to identify the skill sets that the industry requires, and work alongside Indian universities to fill these needs. This would help increase the pool of usable talent. NASSCOM is working hard to bring about a change in the education curriculum at various levels to make it more relevant to the needs of the industry. Some Indian states like Karnataka have good certification systems for people aspiring to be employed by the BPO industry. Other states like Kerala and Andhra Pradesh are also coming up with relevant courses to prepare students for the IT services industry.

Currently NASSCOM is undertaking a study, working closely with several reputed institutions and experts. This will bring out credible facts and data to counter the anti-offshore arguments. NASSCOM realizes that what are needed are not emotional, but objective and rational arguments that present the economic realities of offshore outsourcing. These clearly establish that outsourcing nations and companies benefit from

outsourcing. If politics prevails over economic issues however, then the utility of such studies may be marginal. Some of the industry's key figures like Mr. Narayana Murthy (Infosys) are working alongside NASSCOM to dispel myths relating to the outsourcing issue[21].

Another important industry organization in India is the Confederation of Indian Industries (CII) .The CII is a non-government, not-for-profit, industry-led and industry-managed organization, founded over hundred years ago. It has a direct membership of over 4800 companies from the private as well as public sector companies and an indirect membership of over 50,000 companies from 253 national and regional associations [22] CII works closely with the Indian government and plays a major role in lobbying on behalf of the Indian industry in other parts of the world. It is the face of the Indian industry to the world. Recently the CII played a significant role in portraying an accurate picture of the Indian industry in the wake of severe backlash against IT outsourcing in the US. The main aim of the CII is to identify and strengthen the role of the Indian industry and its integration into the world[22].

Recently the CII in collaboration with the Boston Consulting Group, the All India Management Association and the National Planning Commission formed a High Level Strategy Group. This group formulated an action plan to enable the creation of 40 million new jobs and increase annual revenue up to $200 billion in India by the year 2020[6]. NASSCOM and CII have been meeting various important constituencies in USA such as opinion leaders, policy makers, influencers of thought such as editorial staff of various publications, various industry associations, congressmen, etc., to present them with accurate facts about outsourcing. Several Indian industry bodies and associations in the US have joined together to better represent IT outsourcing to the American government and public and to the rest of the world. NASSCOM is also working on evolving an action plan with software companies. Some of the initiatives being launched by NASSCOM include: dialoging with consultants, having highly credible academicians in USA to write up on issues relating to outsourcing in an unbiased manner based on facts; developing case studies; doing road shows; hiring a lobbying firm and engaging consultants to present the benefits to the developed world that accrue from IT outsourcing.

(d) Crafting the Indian Brand

For India to take its rightful place in the global economy, it must develop and promote a reputation for excellence. Assuming that the country can find jobs for its masses, shape a potent value proposition for its economy and select competent leaders, it still faces significant challenges in forging a positive image in the world.

Reflecting on the brand identity India should build; Mr. Ashok Soota (MindTree) feels that things have changed dramatically to India's advantage over the last few years. The perception of the rest of the world some years ago about the country was that it was going nowhere and lagging far behind China. This perception is changing very rapidity. At one point India was desperately looking to create a strong brand image in the western world, especially about its competencies in IT. The outsourcing controversy is now reversing this trend. India now seeks to convey to the rest of the world that it is not a threat to anybody.

Mr. Nandan Nilekani (Infosys) is of the view that larger Indian IT companies needed to build strong brands in world markets. Smaller IT companies would not be able to spend as much as the larger ones on advertising, marketing and brand building. In the case of these smaller companies, it would be their ability to demonstrate their staying power and their ability to deliver value to their customer firms that would provide them niche markets to operate in the global marketplace.

The Indian Brand Equity Fund

The Indian Brand Equity Fund (IBEF) is a unique public-private partnership between the Ministry of Commerce Government of India and the CII. IT is currently managed by the Confederation of Indian Industry. The objectives of this brand fund include the promotion of Indian brands in overseas markets with the focus on brand promotion rather than export promotion. IBEF also seeks to make the "made in India" label a symbol of quality, competitive price, reliability and service to the customer and thereby project India as a reliable supplier of quality goods and services. The IBEF also runs a website

which provides updates about the progress of Indian industry, as well as acts as a watch on Indian industrial policy changes and achievements [23].

Re-invention and re-skilling: the need of the hour

According to Mr. Jerry Rao (MphasiS) there is no magic bullet that would guarantee the long-term success of any company. While eventually all companies would be challenged, the task before them is to find ways to continually re-invent themselves so as to strengthen their position in the marketplace. He stated that IBM is a great example of a company that had reinvented itself on more than one occasion. Large Indian IT companies such as TCS and Infosys would need to grapple with these issues in the coming years.

Mr. Subrahmanyam Vempati (Hewlett Packard) feels that companies in India need to reskill in order to meet the challenge of value creation. If this does not happen, sooner or later India will go through the same problem that the US was currently facing. The ability to make these transitions is essential because the cost and quality advantage that India currently has are not sustainable in the long-term as eventually other countries would be able to overtake India on this dimension. China, Philippines and other nations are options as outsourcing destinations that are opening up to client firms of the developed world. Language barriers are fast breaking down as more and more people are picking up English in these countries, consequent to a lot of government focus being given to this issue in these countries.

Need for brand building

Mr. Nandan Nilekani (Infosys) is of the view that India in general and Indian IT companies in particular need to create strong brand identities. This will enable market access, resulting in more power and the ability to function based on a market strategy as opposed to being a sub-contractor, which is the current predominant mode of operation. Indian IT companies would then be able to better define and choose their markets. Their consequent increased local presence and resulting domain expertise in global markets would enable them to negotiate better and thereby facilitate moving up the value chain.

Mr. Subrahmanyam Vempati (Hewlett- Packard) feels that there are many challenges to make this happen including process-related challenges and mindset changes that Indian companies have to contend with. The current position of the Indian IT industry does not hold much promise for India in the long run and only serves as a means of brain drain.

Tapping IT application markets within the country

For the country as a whole, in the long-term, the key would be to develop a strong local market for IT, since IT applications in the local markets would have significant pay-offs. Mr. Jerry Rao (MphasiS) feels that given its size India has the potential to create a large IT market equivalent to that in the US. Unless such a vibrant market is created, India will not be able to fully capitalize on the emerging global opportunities in the IT domain. Giving the illustration of Reliance Industries and its foray into telecom, Mr. Subrahmanyam Vempati (Hewlett- Packard) explained how the company started from its market objective to offer telecom at a very affordable and extremely low cost and then actually went on to make it happen. In the process, it had to design and implement an incredibly tough value chain. In this way, Reliance was creating great value for their customers. This would go on to ensure their competitiveness in the world markets.

There are huge opportunities in India to create a local IT application base. If India is not able to ramp up the local IT spending, it will affect the country's ability to compete in global markets in the long term. India cannot be competitive if the local spend on IT applications is as low as it is at present. By contrast, China has made considerable progress in surging ahead with local applications. This approach has provided it with significant sustainable advantage. Mr. Subrahmanyam (Hewlett Packard) feels that there are many areas where there is a dire need for increased IT spending in the country. For instance IT can greatly enhance India's ability to harness the potential resulting from removal of GATT restrictions on textile exports. Indian textile manufacturers should intensify application of IT in order to take advantage of this emerging opportunity.

Mr. Subrahmanyam adds that if India is claiming to be the IT powerhouse of the world, it is essential to practice what it is preaching to the rest of the world. This could only

happen by more intensive application of IT within the country. In the absence of this, India may not be able to adapt to the global markets. This would result in significant problems relating to its competitiveness in the IT space in the future.

Excellence through partnerships

Increased local partnerships among Indian IT firms would help in developing a strong local IT eco-system. The recent example of two rivals in the global IT marketplace, Wipro and Infosys is illustrative. Wipro obtained a contract to maintain Infosys' computer systems. According to Mr. Subrahmanyam (Hewlett Packard), this is an extraordinarily positive development. More such partnerships among Indian IT companies at the local level are necessary.

Indian IT companies are also learning to partner with each other for increased and sustained competencies in foreign markets. Mr. Subrahmanyam provides the example of Hewlett Packard partnering with Tata Consultancy Services (TCS), which enables HP to have an edge in Asia Pacific, Latin America and other markets, because of the very strong local presence of TCS in these countries.

Mr. Subrahmanyam calls the emergence of such partnerships as the evolution of an ecosystem, due to which everyone stands to gain i.e., the company, the partnering firm as well as the consumer. Managing such partnerships and creating the right environment for such partnerships to flourish is an art and a challenge.

Demonstrating value 'on the ground'

Mr. Sanjay Purohit (Infosys) feels that Indian companies have never aggressively marketed themselves. He is of the view that in the current global business situation, aggressive marketing will not help very much. The only way to get the Indian position across is to demonstrate value 'on the ground'. This will be possible for example when Indian companies are able to present a technologically superior point of view at important global intellectual forums or through a display of competence by executing projects in

quick time. Showcasing and demonstrating value is something that will be difficult to negate.

India's attempts at building a brand image have to go beyond the externalities. The current infrastructure including roads, power supply, airports along with the bureaucracy and red-tapism tell a different story than the one being projected to the outside world. Mr. Rajeev Karwal, CEO and MD, Electrolux very rightly puts it very aptly: "a brand is much more than what the marketing communications machinery is able to convey to the outside world. A brand image is pushed in every e-mail written by an employee to the outside world, in every presentation made by an employee to another organization and in every negotiation or interaction with an external contact." [24] Clearly India has a long way to go in being able to achieve this kind of brand image.

The outsourcing controversy: Myth vs. reality

A recent article in the Electronic Design journal poses a pertinent question to the American population: 'How Safe is Your Job?' It goes on to state that unemployment rates of American engineers have shot up from 4.2% in 2002 to 6.2% in 2003. The article attributes this to outsourcing. It quotes a recent Gallup poll finding that 83% Americans believe outsourcing is an important issue in the 2004 presidential election and 47% are concerned that either they themselves or someone they know may lose their job because of outsourcing[30].The article also states that in a study conducted by the US Bureau of Labor Statistics, it was found that over the span of 2 decades (1979-1999) 31% of people who 'were displaced by international trade' were not fully re-employed and 55% of those who found new jobs were at best working for 85% of their former wages[25].

Contradictory to these views, a Computer Systems Policy Project (CSPP)[26] bulletin quoting a study published by the US Bureau of Labor Statistics (BLS) in February 2004 states that the US is expected to create 21 million new jobs by 2012 and goes on to state that US service jobs will grow by 24% this decade. According to this report, from March 2001 to January 2004, in the US, 240,000 service sector jobs were moved abroad but the US gained a net of 376,000 service sector jobs. Most importantly according to this BLS

report, the current US unemployment rate of 5.60% is lower than the rate in the 1970's (6.22%), 1980's (7.28%) and 90's (5.76%) [26].

Job losses: A valid concern but not a new phenomenon

Mr. V. Chandrasekaran (Aztec) feels that much of the hype and uproar is not based on numbers and statistics but emotion. Attrition in the call center industry in the USA even before outsourcing became a big phenomenon had traditionally been very high. Therefore blaming outsourcing as the culprit for unemployment would be unfair.

With off shoring expected to grow at the rate of 30-40%[1] over the next five years, Mr. Som Mittal (Digital) agrees that the concern over current and future job losses in the western countries is a valid concern. However to understand the situation in its totality, it is also necessary to study trends in job creation. The dotcom bust followed by the stock market crash and the 9/11 catastrophe disrupted the world economy, with which countries are grappling even today. Economies can succeed in sustaining jobs only if the economies themselves grow. The growth of an economy in today's global context would not be possible if the country clamped protectionist measures and pursued isolationist policies, and in this manner attempted to artificially bolster the economy. Such measures would result in increased costs of services and a non-competitive economy.

Mr. K.K. Jaswal (Govt. of India) feels that job losses have been a fact of life the world-over. He quoted Mr. Alan Greenspan, Chairman of the US Federal Reserve as saying that it is was not unusual for a million jobs to be lost and more than a million jobs to be created in a week in the US. Mr. Jaswal feels that this churning is typical of a vibrant economy. He also points out that 33 million jobs were destroyed in 1999 in USA, although it was supposedly the boom year for the US. Given this background, IT outsourcing is being unnecessarily blamed for job losses while there are other reasons as well. For instance, in USA, if the regulatory measures relating to telemarketing became operational, 2 million jobs would be lost. This would have far greater impact on job losses compared to global IT outsourcing. The outsourcing debate tends to catch media attention because of its emotional and political aspects involved.

Mr. Sanjay Purohit (Infosys) endorses this view, stating that the genesis of the media hype on outsourcing began with isolated American individuals exchanging views in Internet chat rooms on the common theme of lost job opportunities for them as Indians supposedly took away their jobs. The media then picked up on these stories. Coincidentally 9/11 occurred, which again put the focus on domestic recession and national security. Thus it is more of an emotional outburst rather than a rational reaction. Another distinguishing aspect of the service sector revolution that Mr. Purohit pointed out is the fact that customers get to directly interact with the people rendering services. This was not the case when manufacturing was outsourced to countries such as China in the 1980's and 1990's. In the case of manufacturing, the customer buys products manufactured in another country. However there would be much less emotion attached to it. Stores would display these products, which are priced considerably below those manufactured in high wage countries. The distance between the customer and the manufacturer mitigates any negative reactions relating to job losses. In sharp contrast, in the case of services, the American customer directly deals in real-time with the service provider such as a call center agent. This acts as a constant reminder to the customer that potential American jobs are being lost to another country. The common citizen in this situation may not realize that the US economy gains significantly from outsourcing.

Scarcity of IT professionals in the US: A reality

The current outcry against offshore outsourcing pre-supposes that call center jobs would remain in the USA if they were not outsourced. According to Mr. Chandrasekaran (Aztec) this is an incorrect assumption. Call center jobs in countries such as USA could vanish regardless of outsourcing. In fact even jobs being outsourced to India might disappear in the long run with the emergence of self-help technologies or creation of new ways of providing services. With regard to IT services, the situation is somewhat different. Indian IT professionals continue to go to US and find job opportunities there. This clearly shows that there is a scarcity of such professionals in the US. He feels that many large Indian IT companies continue to send their employees to the US with salaries that match that of a US citizen. This would not happen if there is an overflow of unemployed American IT professionals who could carry out these jobs. Mr.

Chandrasekaran (Aztec) feels that the current US outcry is stronger for job losses in IT enabled services (ITES) rather than for job losses in core IT software and hardware.

ITES includes information services that rely on IT as the means of production and the Internet as the transport medium. ITES covers a wide range of activities that include translation, data entry, financial & accounting services, back office operations, call centers, content development/animation, engineering and design, services, human resource services, insurance claim processing, legal databases, medical transcription, various types of support centers and web site services among others. A basic knowledge of how to use the computers and the Internet is all that is required to function effectively as a service provider in these domains. Employees are not expected to understand the intricacies of how the computer works[27]. On the other hand, core IT jobs like software development require in-depth knowledge of computer languages, networks and software programs. Likewise, doing database administration and providing technical call center support requires in-depth IT knowledge[27].

Mr. Lakshmi Narayanan (Cognizant) concurs with Mr. Chandrasekaran's views that the outsourcing outcry is more towards BPO and ITES rather than targeted to the core IT industry. The US continues to experience severe shortages of programmers, developers, software architects, and project managers. These are core IT jobs. There are not enough numbers of people being generated with these skills in USA. This scarcity is forcing the US to bring in IT professionals from other countries. However in case of BPO and ITES, there are enough local people in the US to take up these jobs. A large part of the motivation to move these jobs to India and other countries is to cut down costs. Mr. Chandrasekaran (Aztec) feels that much of the feeling of helplessness or anger being expressed is from the common American citizen rather than the American corporate world. According to him, there are enough jobs for people in the USA if Americans are willing to relocate and re-skill.

Outsourcing for economic viability

Dr. Robert Hoekstra states that in his company, it is normal to locate facilities in those places which create the best economic viability for the company. Job security of software outsourcing companies is solely based on their ability to generate new and innovative ideas. If they did not deliver these innovations on an on-going basis, there is no basis for continuation of the relationship with the service provider. A global company such as Philips has no alternative but to put its resources where it made best sense. Hence location decisions are largely a matter of allocating these resources in the right places. Closing an outfit within the system because it does not make economic sense any more is something that happens routinely in his company and this is done without much emotion. Pointing out to the ageing population in the US and Europe, he suggests that a very complimentary relationships are possible between these countries and countries such as India, Pakistan and Philippines that can provide the necessary services to these western countries.

Outsourcing makes access to services affordable to the average American citizen according to Mr. Ramalinga Raju (Satyam) who says that the American citizen is not just an employee. He is also a consumer and an investor. Therefore he wears three different hats He is the person who works, who buys goods and services, and who saves. Even though he may not be benefited in the short-term as an employee, in the long run as a consumer and as an investor, he is definitely benefited by the reduced pricing of services and commodities that is made possible by outsourcing, thereby making American companies competitive. As a person who saves and invests these savings through various avenues such as stocks, mutual funds, etc., he gains if American companies are more competitive in world markets. These are the long-term benefits of free trade economies, although the layman may find it a little difficult to relate to this.

The outsourcing outcry: a political agenda?

Mr. Ranjan Acharya, Corporate Vice President (Human Resources) at Wipro Ltd. (Wipro) is of the view that the hysterical discussion and outcry relating to outsourcing

may not have taken place but for the fact that 2004 happens to be an election year in USA. The magnitude of job losses does not justify the heightened level of excitement. According to him, the US has a very vibrant and growing economy. Europe has reasons to be concerned about job losses. For USA, this should not be a long-term concern, due to the inherent resilience and entrepreneurial energy in the US economy.

Moreover, jobs lost through off-shoring were a small fraction of jobs lost through efficiency drives and productivity increases. Outsourcing is a part of the efficiency drive, and fits into the natural flow of events. Wipro has a growth rate of 40% per annum. 30% of the work being done by Wipro is done in US. This means creation of a lot of job opportunities in US for the local population. Many other non-American multinational companies such as Toyota, Siemens, Novartis and others had created numerous jobs for US citizens in the USA in the past, and the same is likely to happen in the case of Indian IT companies.

According to Mr. Som Mittal (Digital), although in the US outsourcing is one among many other pressing issues, it was being played up due to the election year. Mr. Ranjan Acharya agrees with this view, saying that there is a lot of hype emanating from the election rhetoric. He feels that this kind of 'hysterical discussion' would not have happened but for the elections. The number of job losses is not of a magnitude to justify the heightened level of excitement.

Mr. Shivakumar (Govt. of Karnataka) feels that while developed countries like US always put forth an agenda of free trade through the WTO/IMF/World Bank, the implicit policy objective has been to remain the knowledge superpower and run the global economy as 'engines', while the developing countries function as 'carriers' and follow these developed countries. However, a contrary trend is unfolding, wherein; the higher end jobs in the industry are also moving towards developing countries like India and China. In the IT and related industries, the only vital ingredient is intellect, which is widely available in the developing nations. In this sense, IT industry had now become the 'big   leveler'.

This is possibly causing a huge concern and leading to a wider debate on this issue in the advanced nations.

The globalization of Indian industry

According to Mr. Ramalinga Raju (Satyam), companies such as Satyam, Infosys and other large publicly-listed India-based IT companies have far greater investments by US investors than Indian investors, leaving aside the investment by the promoters. It is more appropriate to define them as global or American companies rather than Indian companies. He feels that the outsourcing is no longer an issue of India vs. USA but more an issue of the US investor vs. the US employee. In today's world, where distances for all practical purposes had vanished, and communication capabilities have increased 30 to 40 fold; it would be difficult to operate behind protectionist barriers. Protectionism would only hurt the people and companies in those countries that resort to this measure. It is much more difficult now to have protectionist barriers and still remain competitive, than it was a few decades ago.

According to Mr. Som Mittal (Digital), every industry goes through the type of changes that are now being witnessed in IT and ITES. A similar situation had arisen in India during the period 1991-98, when the Indian economy was opened up to foreign competition and domestic manufacturing had dipped, leading to unviable units in the small-scale sector and cottage industries being closed down. There was widespread restructuring but in the end it had only made the Indian industry more competitive and it also benefited the consumers.

Mr. Ramalinga Raju (Satyam) augments this by pointing out that more jobs have been lost in India as a direct consequence of WTO than jobs that had been created in India. It is just that India had accepted the inevitability of the globalization process. He feels that globalization has been more readily accepted in India than even in the US. India has understood that she has to live with it and deal with it. In the past, India had a protectionist economy with high import tariff barriers but in the current liberalized

economy, many companies had to close while many new companies now thrive on importing goods and services from the rest of the world.

According to Mr. K.K. Jaswal (Govt. of India), if India had adopted a populist stance regarding the reform process, it would have suffered a setback. Despite the pain involved in the restructuring of the Indian economy, the country took bold steps to liberalize the economy. Reforms are now well embedded in India's policy framework.

The outsourcing controversy: A 'false debate'?

Mr. Jerry Rao (MphasiS) terms the outsourcing controversy a 'false debate' since in reality the think-tanks, academicians, journalists, government officials, business leaders and others in the US know that free trade is inevitable and beneficial and would only serve to make the country more competitive and in the long run create more and better jobs for everyone.

Mr. Subrahmanyam (Hewlett-Packard) does not endorse the use of the word 'outsourcing' since it implies that the activity being outsourced is not a core competency. He feels that the term somehow brings in a lack of sensitivity and implies that the job could be done elsewhere with fewer headaches.

Mr. Kiran Karnik (NASSCOM) feels that the downturn of the US economy, unemployment and elections in USA have contributed to the controversy. After the elections, the issue should considerably wane. However it would not completely go away, since there is a long-term structural shift occurring in the global economy. The issue is likely to resurface after a couple of years when there is another economic downturn. However, next time around, people would have got used to the reality of job shifts across nations and consequently the reactions would not be so strong. In reality, outsourcing has actually created and saved more jobs in the US by making American companies more competitive and more efficient.

US continues to be the real driver of growth

Mr. Ramalinga Raju (Satyam) is of the opinion that at present most Indian IT companies are focused on offering services. Although there is enormous scope for innovation in these services, as a country India does not have a great deal of competency to introduce new products and services. Companies like Satyam Computer Services Ltd. are trying to establish leadership position in their chosen areas of services. However at an international level, India is not well poised to introduce new products. In contrast, countries such as USA excelled in this. This could be seen from the number of patents filed from India, which is miniscule compared to the number of patents filed from USA. It would make plenty of business sense for US companies to have commoditized services outsourced to countries like India. At one level the lack of depth in product and service innovation in India should pose less threat to the western countries that are outsourcing services to Indian companies.

Mr. Som Mittal (Digital) believes that the real drivers of growth have been and will continue to be US global giants like Intel, Microsoft, HP and IBM. India is only filling a part of the global delivery chains of these companies. The services being provided by the Indian IT industry is necessary for these MNCs and good for India. In fact, US had been outsourcing to Canada, Mexico, Israel and Ireland and only more recently has India entered into the outsourcing arena. The turning point was perhaps India's entry into the BPO space. The US has been a free economy and corporate America understands the need for outsourcing. The current problem has been blown up since the issues involved have been turned into an emotional and political debate.

The US economy's history of resilience and adaptability

Mr. Ramalinga Raju (Satyam) believes that the US has several strengths that result in it being a resilient economy. One of these strengths is the presence of several thousand established companies in various fields. These companies are world leaders in most instances and have created a number of products and services for worldwide consumption. These products and services are now getting commoditized because of

which there is a rapid drop of prices and the extent of penetration of these products and services in terms of geographical spread is getting extended. Mr. Raju presents the example of mobile phones to explain this phenomenon. Mobile phones models available now have many more features than what was available 5 years ago. These are now much more affordable to use. Companies from developed countries that are into this product space are extending their reach to the rest of the world through them. Thus the base of established companies in the US, which have an edge over many other companies in the rest of the world, is the biggest asset that the US has. If these companies could adapt to the changing environment, they would be able to survive and grow and thereby be able to sustain jobs and create new jobs in the future.

Mr. Raman Roy (Wipro Spectramind) draws a parallel of the current outsourcing outcry with the situation in the US toys industry several years ago. Many jobs were lost in the US as the manufacturing of toys shifted to China. Today China is the backyard to the world for manufacture of toys. When manufacturing first moved to China, there was a hue and cry in the USA about job losses. This did not however stop jobs from moving to China. Instead what had happened was that people in the USA who lost their jobs had re-skilled and retooled themselves and found alternate jobs.

Mr. Som Mittal (Digital) feels that concerns relating to job losses are not new to the world. In an economic downturn, jobs are bound to be lost and businesses are bound to close down or reduce their headcount. But in long run, once the economic activity picks up, the country's economy would grow, through which jobs too would grow once more. Mr. Raju felt that the US economy has constantly restructured itself in the face of such crises in the past and he felt confident that it would continue to do so in the face of the current outsourcing crisis as well.

Mr. Chandrasekaran (Aztec) points out that a much larger number of jobs were lost in the US in manufacturing over the last few years compared to service jobs lost. However the US economy has made the necessary adjustments to cope with these job losses. Job losses have occurred many times before in the US in the face of changes in technologies. For example, when FedEx enabled customers to track the status of shipment via the

Internet, many call center jobs were lost. These job losses were not on account of the company outsourcing these jobs. Jobs of many typists, stenographers, travel agents, stock brokers and others have been eliminated by technology, because of which there is a constant need to retrain. This is a reality that has to be understood and accepted in order to ensure that these transitions were less painful. At an individual level, coping with these changes requires preparation and re-training.

Instead of blaming the system, IT professionals in USA must display more flexibility according to Mr. Lakshmi Narayanan (Cognizant). Their unwillingness to be mobile and relocate is costing them their jobs. There are enough jobs available for them in USA, but this would perhaps require US IT professionals to move to a different city, which they may be unwilling to do.

Mr. Ashok Soota (MindTree) attributes the present hype and reaction to outsourcing to the sheer speed of the transition. In the past when the economy moved from agriculture to manufacturing, the transition was slow and over a longer time frame of several decades. Similarly when American automobile companies were losing markets to Japanese companies and later the Japanese came up and put up manufacturing facilities in U.S, the changes took place over several years. As opposed to this, the transition relating to outsourcing is taking place in a compressed time frame because of which the economy is finding it difficult to adjust.

The growing Asian Pacific market and the need for a localized presence

Giving the example of Hewlett-Packard (HP), Mr. Subrahmanyam Vempati (Hewlett-Packard) points out that the growth of HP India is not happening at the expense of jobs in USA. The growth of Hewlett-Packard's Indian operations is in response to the growing market in the Asia Pacific region and a growing need to be close to the customer. The IT spend is growing at double-digit figures in this region. The market has thus dramatically changed. The reality is that the incremental sales in this region are very strong. For this reason, it has become mandatory for HP to invest in the Asia pacific region. Tremendous

market potential is therefore the primary driver, with reduced costs serving as icing on the cake.

The Indian IT Industry's Response to the Backlash

Regarding what the appropriate response of Indian IT companies should be to the US backlash on outsourcing, some important and intriguing factors were enunciated by the various top executives of the IT industry. Some of the viewpoints are discussed in the following.

Need for a non-confrontational posture and informed discussions

Most leaders agree that taking a confrontational posture or the Indian government taking a retaliating stand in response to the outsourcing outcry would suggest that the Indian companies are on the defensive. Therefore in order to restore a sense of balance, it is best for the present to remain low-key. The Indian companies must live through this experience and continue to do the jobs they have been doing as best as they can. They must demonstrate the value generated by them to the organizations that are outsourcing jobs to them. Indian IT companies must also be sensitive to the negative emotions that are likely to be prevalent in the developed countries and let the present outsourcing controversy pass. Indian companies should engage in informed discussions with the senior management in the US companies that they deal with, while simultaneously maintaining a low profile. Indian IT companies will have to learn to live with the antagonism The best they can do is improve their ability to handle pressure groups in the developed nations through rational arguments based on facts and figures rather than through emotional outbursts.. The Indian government should also proactively communicate to the developed world about the benefits of outsourcing, and thus help to dispel any myths.

Mr. Narayana Murthy (Infosys) called on the country to exercise humility in its conduct and have a mature, measured and low-key response, going by the fact that it contributes a very miniscule proportion to the global IT market. India has just $12 billion of revenues

in IT. Likewise, Mr. Lakshmi Narayanan (Cognizant) would rather let the issue pass since saying anything at this stage would only be counterproductive. He prefers that the Indian IT industry should continue to carry on doing its job and continue to create value and become more competent so that customers will wish to continue outsourcing.

The overblown Indian IT 'phenomenon'

According to the Asia Monitor, despite having the second largest population in the world, as a trading nation India is still a global pygmy accounting for just 0.8% of the world's trade and per capita trade value of US $60, which is among the lowest in the world. India did not even make it to the top 30 exporters and is just 24th among the top 30 importers[10].

Indian companies should stop bragging about the 'Indian IT phenomenon' because this unnecessarily invites anti-outsourcing sentiments. Rather than lobbying, India can participate in the thinking process to solve the problem. There are some quarters within the country that feel that India is now an IT superpower. However all the Indian IT leaders interviewed in the study disagree with this thought. In their view, India is far from becoming a superpower and has a lot of ground to cover before it can become a superpower. Surely India has made her presence felt significantly, especially in the global IT industry. However, only the first few tentative steps have been taken and the country has much more ground to cover if it is to be counted as a significant player in the global IT industry. Hence there is a need to control rhetoric. The right approach would be to talk about the achievements of this industry after it has reached at least 20% of the world market share. As a nation, India is far away from that goal.

Maximizing local employment by Indian IT firms in the developed countries

Indian companies with offices abroad should maximize local employment so that they demonstrate that they help create jobs and are not seen as exploitative. They must address the issue as to how they can localize their work force in the countries where they have operations and ensure that more local people manage the operations overseas.

Mr. Shivakumar (Govt. of Karnataka) encourages maximizing local employment by Indian IT firms in their offices abroad. In this manner, Indian companies would be better able to handle the problem of cultural assimilation and thus become more acceptable in the host countries. He feels that it is important that Indian companies should not be seen to be exploiting the liberal trade policies of the developed countries to replace local workers. Mr. Ashok Soota (MindTree) would like Indian IT companies to project to the local communities the number of local people employed by them, in order to demonstrate that Indian IT companies do indeed help create jobs. Mr. Nandan Nilekani (Infosys) is clear that he would not like his company to be seen as a foreign entity that sucks out jobs from the developed countries.

Regulatory compliance

Indian companies should rigorously comply with any statutory and regulatory requirements that the outsourcing country may require. Thus articulation and compliance are the key appropriate responses for Indian companies. They must be ready for any scrutiny or assessment by the outsourcing countries and be willing to answer any questions in this regard as they arise. Mr. Ramadorai's (Wipro Spectramind) advise to Indian IT companies is to be completely prepared for any scrutiny or assessment relating to any compliance related issues and to be ready to answer any questions as they arise.

The process of liberalization must continue

Irrespective of the debate in the developed world, India must continue to pursue reforms and continue to liberalize, open more sectors to foreign direct investment and actively participate in the WTO.

Having come from a middle-class family background himself, Mr. Narayana Murthy feels that he is in an ideal position to understand the pain of the families of those rendered unemployed temporarily due to the outsourcing. However, it is a historical fact that the corporate world creates new jobs when old jobs vanish. Retraining those rendered jobless into new skills would create a critical mass of people with these new skills. This would facilitate the rehabilitation of the affected work force.

Most IT leaders point out that fortunately India has not taken a protectionist or retaliatory stance and has simply continued liberalizing its economy. This has proved beneficial to the country.

Collaboration of the Indian government, the IT industry and trade associations

Some leaders believe that senior officials in the Indian government must be well informed and prepared with the right information relating to outsourcing so that when they engage in discussions and negotiations with their counterparts in US and other developed nations, they would be able to better present the case for India. Most leaders feel that there is not much role for individual Indian IT companies to take any posture on public platforms in the developed countries. Instead, industry associations such as NASSCOM and CII have a significant role to play.

Mr. Ramadorai (Wipro Spectramind) feels that lobbying by India is going to be increasingly necessary, both by the government and industry associations. Networking with policy makers in USA and making India more visible is important. This is needed for both relationship building and for transacting business.

Mr. Ranjan Acharya (Wipro) stresses need for reasoned discussions rather than emotional discussions on the issue. This can be done through American industry leaders, US industry associations, and through US government functionaries. However despite all this, India has to be prepared to encounter false posturing by people merely to cater to their constituents.

Mr. Nandan Nilekani (Infosys) points out that his company is working on its own as well as through NASSCOM with several American trade associations to come out with factual reports so as to influence opinion makers and leaders. Infosys is also working through its customers, who in turn try and present the factual situation to the American political leaders.

Corporate America needs to step in

Mr. Kiran Karnik (NASSCOM) feels that the primary onus of addressing the outsourcing issue in the US is on corporate America, as they are the biggest beneficiaries from the outsourcing phenomenon. To address the outsourcing issue, the US government itself may not have as big a role to play vis-à-vis corporate bodies in USA. Corporate America must make the necessary arguments in appropriate forums and spend money on retraining and re-skilling the displaced work force. It is only fair that labor unions in USA ask the US companies to take care of displaced employees.

Mr. Narayana Murthy (Infosys) highlights the importance of corporate leaders in the developed world to rise to the occasion and educate the common man that outsourcing is part of a well-thought out strategy by their companies to make American companies stronger and more competitive in the global markets. They have the responsibility to inform the common man that outsourcing is not a knee-jerk action. They must demonstrate how outsourcing would improve operational efficiencies that that would ultimately benefit the economy. He is convinced and confident that leaders of corporate America, who are well known for their innovativeness and concern for the society at large, would be able to provide a well-thought out response. Their task is to leverage the advantages of outsourcing for the benefit of their shareholders and also contribute to re-skilling those who lose their jobs in the process of productivity and efficiency improvement initiatives. Corporate America has the ability to address the issue of re-skilling and rehabilitation of workers displaced from outsourcing.

US must recognize the inevitability of outsourcing and adapt

Most IT leaders feel that USA does not have much of a choice with regard to the transformation that is happening. In this sense, it is inevitable. Even in the past, where geographical boundaries mattered a great deal, the US shifted many of its manufacturing operations to where it made best economic sense. Multi-Nationals Companies (MNCs) arrived in India with superior technology and in a short time span replaced the Indian domestic industry in several sectors of the Indian economy. This has led to numerous job

losses. However the average Indian citizen who faced such job loss had to cope with it, re-skill and move on, since the liberalization and globalization of the Indian economy is an inevitable and irreversible phenomena. At final reckoning, economics will take care of the outsourcing issue. Globalization is an inevitable process in today's world where distances for all practical purposes have vanished. In such a world, it is difficult to operate behind protectionist barriers.

Mr. Ramalinga Raju (Satyam) sees the ability to seek cheaper and better ways of offering products and services as the only way for US companies is to keep ahead. The same applies to US professionals as well. US has some of the most mature educational institutions and research organizations in the world, which has lead to creating some of the most competent people. This is a major strength that the US must continue to leverage.

Mr. Kiran Karnik (NASSCOM) predicts that on a longer timeframe, there will be a huge shortage of people in many developed countries that would either require India to export people or import jobs.

Need for sensitivity toward the US outburst

There is a need to appreciate and understand that the US has gone through a lot of pain in the last few years due to events such as the 9/11 terrorist attack, the stock market downturn and the Gulf War, thus making the common American citizen more insecure and less trusting of outsiders. At a personal level, it is essential to empathize with and relate to the predicament of the people who have lost their jobs in the developed countries on account of outsourcing to India. Indian IT companies will do well to sensitize their employees to these issues.

Mr. Chandrasekaran (Aztec) feels that job loss is an emotionally draining experience and that the lesser media publicity it was given, the better. He feels that solutions to these job losses would emerge with new technologies and approaches.

Mr. Raman Roy (Wipro Spectramind) calls the outsourcing problem 'a battle between the heart and the mind'. It is gaining a lot of attention and has become very vocal since the battle of the mind, relating to the economic viability and superior quality, is a settled issue. The battle of the mind is unequivocal in its judgment: 'Outsourcing is the only way for survival of the company.' However the battle of the heart is far from over. There is a business side to the outsourcing story as well as a human side. Individuals who have lost their jobs will not be convinced of the need for outsourcing, despite all the arguments that are put forth to them about strengthening the economy of the country that is outsourcing the services. Losing a job entails a lot of pain at an individual level. Job transfers to offshore locations and consequent job losses are real. However companies are constrained by investment levels, market conditions and imperatives to remain competitive.

Benefits to the outsourcing countries

Outsourcing to India has helped companies in the developed countries to achieve 40-50% cost savings. These companies are also able to generate higher free cash flows due to reduced investments in physical infrastructure, telecom and equipment. Wage arbitrage has led to significant cost savings. At the core of India's great attraction as the outsourcing destination is the unbeatable value proposition - PQR (Productivity, Quality and Rate) factor[28].

The McKinsey report states that off shoring is just one more example of the innovation that keeps US companies at the edge of competitiveness. The more companies innovate, the more competitive they become and the more the benefits are passed on to the consumers. The study predicts that the US will capture economic value through several different channels like cost savings, increased revenues, repatriation of earnings and the redeployment of additional labor[1]. The report states that 'for every dollar of spend off-shored, 58 cents are captured as net cost reduction to businesses even as they often receive an identical level of service'[1]. Initially the savings will flow to the investors or be reinvested into new business or innovations, but eventually the forces of competition will ensure that the savings are passed on to the customers.[1] Further, for every dollar spend off

shored, offshore service providers buy an additional five cents worth of goods and services from the US economy. Off shoring created a 'full 12 to 14 cents that did not exist before on every dollar off-shored by way of net additional value for the US economy'[1].

Mr. Ashok Soota (MindTree) points out that low costs due to outsourcing have made many of the services affordable, which otherwise would not have existed. One of the strongest arguments in favor of outsourcing is that it serves to fill the "demand gap" for certain services.

Mr. Som Mittal (Digital) describes the time efficiency that US companies can create through off shoring. A recent survey by eLoan in the US illustrates the point. Customers were asked whether they would prefer a processing time of 24 hours for their loan applications, in which case the application would be processed in India or, would they instead opt for a 72-hour loan application processing time, in which case the application would be processed in the USA. 85% of the respondents voted that they would prefer the 24-hour processing time option[30].

All of this translates into better standard of living for the American population. This point is also stressed in the report of the CSPP[29]. Referring to how off shoring ensures higher standards of healthcare, the CSPP report states that the expense of health care is an area of acute concern for many citizens in USA. This is an area that outsourcing is able to effectively solve. A study on hospital employees who typically spend 30 minutes on paperwork for every hour of patient care provided to a Medicare recipient found that off-shoring could reduce this time by 30 percent[29]. The report also discusses how revenues cycle back to benefit American workers directly and how US-based IT companies have more money to spend on research and development ($56.5 billion in 2002), the vast majority of which is based in the United States[29].

Mr. V. Chandrasekaran (Aztec) feels that if companies in the US do not outsource, they will become less profitable, which in turn would lead them to retrench employees. This would bring down productivity and eventually the company would most probably close

down. This would entail a lot more loss of jobs than the loss of call center jobs that is currently happening through outsourcing. The economic growth of countries that are doing the outsourcing comes by way of cost savings and by access to new and emerging markets.

Mr. Ranjan Acharya (Wipro) feels that getting jobs into countries like India and other developing nations through outsourcing is a good way of reducing the gaps and economic inequalities between nations. This would help reduce conflicts in the world and create a safer world. Mr. Nandan Nilekani (Infosys) provides examples of how large American firms had bagged large contracts in India in various industries including in IT. This would not have been possible if the Indian economy had not opened up.

The disadvantage of protectionist measures

The McKinsey report suggests that the US economy's flexibility and openness are two of its greatest strengths and these must be further reinforced. Protectionist measures would only turn out dangerous for America's well being in the long run[1].

According to Ms. Carly Fiorina, the Chairperson of Hewlett Packard, 'spending our time building walls around America will do nothing to help us compete for the millions of new jobs being created. Instead, we must focus on developing next-generation industries and next-generation talent -- in fields like biotechnology, nanotechnology and digital media distribution; around issues like IT security, mobility and manageability -- that will create long-term growth and jobs here at home, while raising all of our living standards in the process.'[31]

Indian IT industry leaders who participated in the study echo similar sentiments. Mr. Ramalinga Raju (Satyam) points out that the people in India, who are providing services to the rest of the world probably use a Ford car, have a GE refrigerator or eat American Pizza and watch American movies. In order for Indians and people in other developing countries to have purchasing power, a global economy is very important to developed

countries. He feels that the only way for US companies to keep ahead is to seek cheaper and better ways of offering these products and services.

Mr. Ashok Soota (MindTree) explains that at the macro level, there would be a shrinking of the global economy if the developed nations stop outsourcing since this will inevitably lead to a negative backlash and negative reactions against American products like Coke and Pepsi. This would unleash a series of moves by various countries resulting in creating further barriers.

Mr. Narayana Murthy (Infosys) stresses on communication as the key to address the concerns relating to outsourcing. US corporate leaders should rise to the occasion and educate the common man about the benefits of outsourcing. He feels that they should present outsourcing as a strategy to improve operational efficiencies that would ultimately be beneficial to the economy. Corporate America must simultaneously come up with strategies to re-skill the displaced workforce and rehabilitate workers who lose jobs as a consequence of outsourcing. Leaders of corporate America are very innovative and have great concern for the society at large and they have excellent abilities. All this will ensure that they will provide a well-thought out response to the current outsourcing outcry.

Mr. Som Mittal (Digital) reminds us that historically whenever protectionist measures have been taken; it has caused problems for economies. The US steel industry is a case in point. It has been reeling under the impact of protectionism, as against the automotive industry, which continues to boom. Protectionist tendencies also tend come at the cost of consumers.

Expected world changes consequent to outsourcing

Mr. Narayana Murthy (Infosys) feels that given India's relatively difficult living conditions, including the infrastructure, population pressure, and other factors, it is most unlikely that large numbers of people in the western world would move to India to where the outsourced jobs are moving. Despite these inconveniences however, there are some

people from the western countries who have chosen to relocate to India and are currently working with Infosys in India.

Mr. Zuerrer (Swiss Re) does not foresee too many people from Europe or US moving to India at the operating level. However there could be many senior managers who may relocate to India.

According to Mr. Ramadorai (Wipro Spectramind), with all the changes in technology that are taking place, everybody's jobs would come under threat at some point of time. Worldwide, the days of guaranteed jobs are over and in the changed world; many people may end up working out of their homes. Industry shifts are occurring rapidly and these shifts are not easily predictable. No one really has answers about what a job would mean a decade or two from now

Mr. Chandrasekaran (Aztec) is critical of the average American's lack of knowledge of the world outside of America. He feels that they are not as mobile or flexible as people in other countries. The job losses in USA due to outsourcing would force them to look outside. He foresees Americans becoming innovators and entrepreneurs in countries outside America, although this would perhaps not be on a very large scale.

Trust will become a fundamental basis for doing business between US companies and their service providers in India. Indian companies would have to work hard to build this trust over time. Dealing with credible companies and those with brand names in India would become important in the coming years. Over time, only those Indian companies that have credibility would be able to get these outsourced jobs from overseas, as companies in the USA would want to mitigate their risks. Certification and standardization would form the basis for the credibility of Indian IT companies.

Jobs such as analyzing radiology reports, drug testing, analysis related to new drugs discoveries, and more would also gradually be outsourced to India, as it would be more economical for companies to do so. Pricing models would also undergo significant changes in the future. Call centers in India would also perhaps progressively cut their manpower as the productivity pressures increase.

A time to innovate and re-invent

Mr. Sanjay Purohit (Infosys) feels that in the long run, Indian companies that demonstrate more capability globally would get the outsourcing jobs. A person displaced from a job in the US might opt to move to work in a place like India, for the learning experience. Such a person might also work for Indian salaries, and gain new exposure, rather than stay back in his home country doing nothing. This sort of a scenario was unthinkable a few decades ago.

According to Mr. Purohit, it is hard to predict the next set of job engines because they would most likely be driven by new innovations that are yet to unfold. With the available slack and spare time available in the developed world due to some jobs moving to India, the people displaced in the US would possibly come up with new thinking and innovative ways of performing various tasks. For instance, with more availability of time, the concept of service orientation could change, with increased human interface in service delivery. This would in turn provide a lot of new job opportunities. He felt that the current slack would certainly translate into some very innovative solutions.

Mr. Kiran Karnik (NASSCOM) perceives that on a longer timeframe, there would be a huge shortage of people in many developed nations. This would mean that India would either have to export people or import jobs. This situation would arise to a much greater degree in Europe and Japan and to a lesser extent in UK and to a much lesser degree in US. In many of these countries, there would be far fewer people available than the numbers required for jobs to be done.

One way to handle this is through large-scale immigration, which has its own set of problems. The other option is to allow jobs to move out. The outsourcing that is currently happening is a good preparation for the western world to address the expected severe manpower shortage in the coming years. Thus in the long term it would be a win-win situation for all countries.

The changing nature of employment

On the other hand, India has a lot to worry with the projected increase in population, especially with the expected numbers of unemployed people in the working age group of 18-65. Technology is catalyzing the changing nature of jobs. According to Mr. Karnik, in the long run, there are likely to be many more part time workers people around the world who are not employed on a full-time basis.

The idea of lifetime employment was clearly over and people have to start preparing themselves for future employability through constant learning and re-skilling. A significant shift is taking place from lifetime employment to lifetime employability. He feels that this change in mindset is especially required in Europe and India, where lifetime employment is a strongly entrenched notion.

Over time the concept of jobs and work would change very radically. This would necessitate huge policy shifts on the part of governments in terms of bringing about changes in social security, health insurance, education policies, and other such areas in order to facilitate a change from employment in an organization to a situation where each individual has to essentially fend for herself. In this respect, India has an advantage as a late starter, as it can watch and learn from others and adapt accordingly.

The next big areas for growth

According to Mr. Som Mittal (Digital), US will have huge opportunities coming from increased mobility. He also feels that the US will make giant strides in the improvement of its telecom infrastructure in which it is currently lagging behind. The real driver of growth is and will continue to be US-based global giants like Intel, Microsoft, HP and IBM. India is only filling a part of the US global delivery chains. US has been outsourcing to Canada, Mexico, Israel and Ireland long before India became an outsourcing destination.

According to Mr. Ramalinga Raju (Satyam), the belief of people in the western world that if service jobs move away, there would be no jobs left for the local people is

erroneous. The widely prevalent view in the developed countries, that jobs in the service industry have reached the end of the road is incorrect. Services should not be seen as a single, homogenous vehicle for job creation. Instead, within services there are several categories. Technology will throw up many new opportunities for services, although it would be difficult to envisage at present what these new opportunities might be.

The analogy of a prosperous homeowner illustrates this point. Despite already owing a home, such a homeowner could look at improving the house. He may want to extend the house by adding a gym, a swimming pool, a private theater, or add some other extensions to his house. An even wealthier homeowner would perhaps consider buying a farmhouse. Thus there were no limits to the products that people would want to access once they become wealthier. Likewise in services, when people become wealthier, they would start accessing things that they did not think of earlier. People would perhaps want to access hundreds and thousands of services that they did not want earlier. This would require a focused way of catering to those needs. Servicing those needs would bring in new opportunities.

Conclusion

Quite a few well-meaning and intelligent people in the western world find it hard to accept India's emerging knowledge base and capability of achieving progress. India's progress is often seen as a consequence of the success of the western countries in upgrading developing nations. The Western media end up focusing only stereotypical images of India, such as poverty, snake charmers, elephants, naked sadhus and cows[32].

Today India is far removed from these stereotypical images. According to Mr. Narayana Murthy (Infosys) the lifestyle of an average middle class Indian is full of consumer goods and consumer durables that have been provided by various multinationals corporations from the developed world. These include companies like Microsoft, GE, General Motors, Pepsi, etc. The urban Indian middle-class youngster today is more than likely to have Kellogg's cereal for breakfast, wear Nike shoes and Levi's jeans, occasionally eat out at

KFC or McDonalds and listen to Pink Floyd. He or she is likely to be well-read and ambitious, with aspiration to travel, study or work abroad.

The consumerism of this person may not be any different from that of a person in the US. The world is today a global marketplace, in which brands and manufacturing companies will compete for the customer's share of wallet. As Mr. Narayana Murthy puts it, India is increasingly opening up its economy. It has not budged from its reformist path, which started some fifteen years ago. It is fully committed to the principle of free trade. While attempting to continually lower trade barriers, India has not erected new ones in their place, despite fear of job losses in India and various political compulsions. The opening of the Indian economy has thus been an irreversible process. Although there has been considerable loss of jobs and accompanying pain caused by this opening up, the economy as a whole has benefited. The consumer has likewise benefited due to competition and resulting lower prices and enhanced value that he derives.

However there is still much scope in India for enhancing participation of corporate firms from the developed nations, more than what is allowed at present. Progress in some of the important areas has been slow and tedious, with India straining at the seams to manage the economy for a burgeoning population with large diversities in income and purchasing power.

India needs to step up the education system to meet the emerging gap in availability of skilled manpower to cater to these new opportunities. The education system should make available a workforce that is more employable to be able to harvest the emerging opportunities. It also needs to work quickly at improving infrastructure such as roads and essential services.

From the Indian perspective, the outsourcing controversy can be seen as both a huge opportunity as well as a huge problem: as an opportunity because of the large scope employment and income that it can potentially create, and as a problem because of the increasingly negative media attention it is receiving and the protectionist measures being taken by the developed nations in order to gag this potential.

India's story must be told diplomatically and creatively with facts and figures in a non-confrontational manner to the rest of the world. What initially seemed like isolated individual voices speaking out in defense of the industry have now gathered momentum with the active role of trade organizations like NASSCOM, CII and Indian governmental bodies like the Ministry of Commerce and the Ministry of Communication and Information Technology, working in tandem to control the damage.

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