



Confederation of Indian Industry

Indian IT/ITeS Industry

Evolving Business Models for
Sustained Growth*



Contents

1.0 Introduction	06
2.0 Economy and the Indian IT/ITeS Industry	08
3.0 Industry Landscape	11
3.1 IT/ITeS Industry in North India	16
4.0 Small & Medium IT/ITeS Providers	18
5.0 Emerging Technologies	24
6.0 Geographical Scenario and Trends	33
7.0 Evolving Trends	50
8.0 Key Insights	51

Foreword

Dear Friends,

Wishing you a very happy and prosperous new year 2010.

India is referred to as the back office of the world owing mainly to IT and ITes Sector. The revenue of the information technology sector has grown from 1.2 per cent of the gross domestic product (GDP) in 1997-98 to an estimated 5.8 per cent in 2008-09. Today, Indian IT companies have carved a great niche for themselves in the global market and are known for their IT prowess. Global giants are using the successful outsourcing strategy and keeping ahead of their rivals - thanks to the competitive advantage gained by investing in India.

Realising the wealth of potential in the IT-ITeS sector, the central and state governments are also working towards creating a sound infrastructure for the IT-ITeS sector. CII aims to make the Indian IT and ITeS industry world class by continuously providing a platform for understanding and adoption of the new developments & best practices worldwide in this sector, taking up issues and concerns of the Indian industry with the relevant ministries at National and State level, coming up with studies, reports and surveys to help understand the potential of Indian IT and ITeS market and the issues faced.

Given the current economic slowdown, growth notwithstanding, the IT / ITeS industry in India stands at the water-shed moment in its history, from where steps in any direction would alter the economic landscape of the country in the days to come. The CII - PWC report "Indian IT / ITeS industry – Evolving Business Models for Sustained Growth", keeping the strengths and potential of the Indian IT scenario in view, strives to enhance these aspects so as to transform the Indian IT identity to an iconic status. CII believes that this report would help turn the goals envisaged by the Industry into realities, and result in directing the world's focus on India as the hub of IT.

We thank all the participants associated with this survey for their immense support and vital inputs. We hope that you find this report enriching and meaningful.



Partap Aggarwal

Conference Chairman,
Chairman CII Chandigarh Council & Managing Director
IDS Infotech Ltd

Foreword

Dear Friends,

We wish you a very happy and prosperous new year 2010!

An old Chinese saying goes “May you live in interesting times”. An extremely “interesting” 2009 having just gone by, it is a good time to take stock of where we stand and what we need to do in order to sustain the growth momentum that the IT/ITeS industry has built up over the last fifteen years.

The last few years have witnessed the Indian IT/ITeS industry evolve from executing projects at the lowest end of the value chain, to one where Indian players are aggressively bidding for and winning large scale turnaround projects hitherto the domain of global behemoths. At the same time we have also seen the Indian Small and Medium Providers (SMPs) in this sector holding their own during some very exacting times.

With a business model closely aligned to exports, the industry faced the brunt of the economic shake-up that has literally redefined the economic order amongst nations. The new decade would bring in a whole set of new opportunities and challenges that may necessitate fundamental changes in business outlook and culture. Our report “Indian IT / ITeS industry – Evolving Business Models for Sustained Growth” looks at this very aspect and tries to bring out the opportunities and possible pitfalls that lie just beyond the visible horizon. We have attempted to bring out the critical underlying factors through secondary research and analysis of a survey of IT / ITeS service providers and the client community that we had conducted with Confederation of Indian Industry (CII)

We thank CII for selecting us as the Knowledge Partners and for their immense help in getting this survey underway. We also thank all the participants of our survey, without whose invaluable inputs this report would not have been possible. We hope you find this report interesting, informative and insightful.



Jairaj Purandare

Executive Director & Leader,
Markets & Industries,
PricewaterhouseCoopers



Ambarish Dasgupta

Executive Director & Leader, TICE,
PricewaterhouseCoopers

1.0 Introduction

The year 2009 would, for many reasons, be marked as a watershed year in the history of India's IT/ITeS industry. The industry, that heralded the entry of India as a global economic super power, was significantly impacted by what was arguably one of the most severe economic contractions in decades. After over a decade of 30%+ compounded annual growth the industry "slowed down" to a growth rate in the high teens and India's largest employment growth sector was talking about "manpower rationalization". We are now seeing signs of recovery and optimism. The character of this recovery in the aftermath of the Great Recession will be very different from the recovery after the dot-com bust, which was a sector specific correction.

India has moved from being a major driver to "the largest player" in the off-shore delivery world. The processes delivered are amongst the highest in the value-chain of companies, the supply-side elasticity of skilled English speaking manpower across technology and non-technology spaces is unmatched, the economic surplus in the industry has shifted to the off-shore players who are now looking at acquisition targets worldwide and the Indian service provider community is being viewed as a "strategic business partner" – not just an IT services vendor.

While there could be alternate points of view, we believe that the "structural downturn" has opened more avenues for enabling Indian IT/ITeS industry to move further and possibly strengthen it. The slowdown forced many providers to consolidate their operations by focusing on productivity, efficiency and optimal utilization of resources, both human and hardware. Emergence of new disruptive technologies like cloud computing and sustainability and Green-IT have entered the mainstream dialogue.

The value proposition has shifted from labour arbitrage to skill availability, transformational objectives, innovation and non-linear models for growth. The recent downturn notwithstanding, India's success has given rise to competition from low cost economies which has encouraged bigger players to add offerings, move towards full service offerings with wider geo-diversity in their delivery models. The centre of gravity of consumption geographies are shifting from US and UK to emerging markets of India, China and Latin America.

The Small and Medium Providers (SMP) in the IT/ITeS industry have come into focus as a critical segment that needs to be developed if we are to see the growth of the industry as a whole. The interesting aspect is that in addition to the common issues plaguing the industry in general, the small and medium segment faces challenges unique to themselves. We take a close look at this segment of the industry under a separate section to study the various opportunities and challenges faced by them and the business strategies that could shape their future growth.

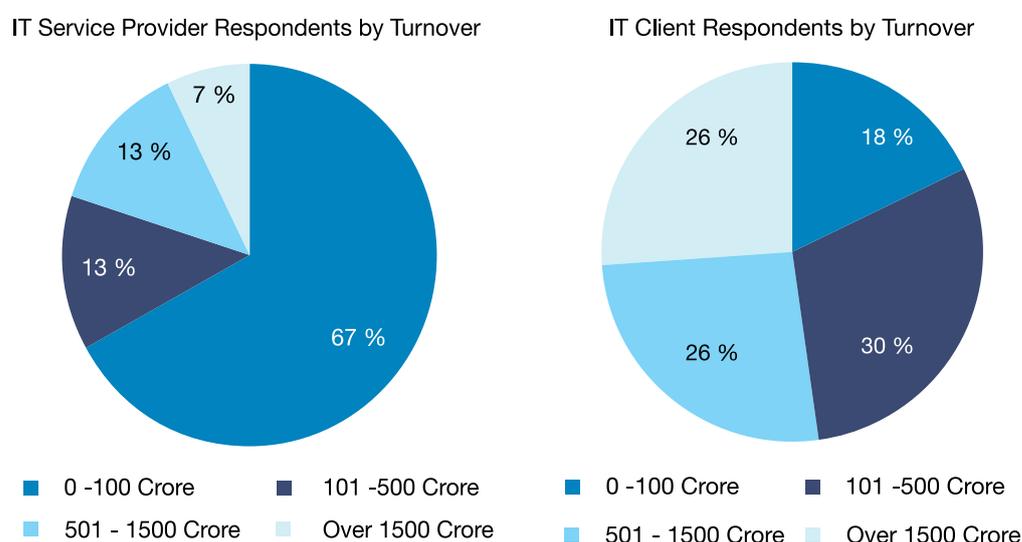
Box 1.0.1: CII-PwC IT/ITeS Survey

In order to collect responses we had prepared 2 sets of questionnaires, one focussed on the Service Provider outlook and the other aimed at getting inputs from the CIOs of their client companies.

80% of the Provider respondents have a turnover of less than INR 500 cr., while 52% of the Client respondents have a turnover of over INR 500 cr.

This report takes a critical look at the development of the industry and explores a few of the evolving trends for the future. To bring out a holistic perspective on the various aspects pertaining to the IT/ITeS industry in India, a survey was undertaken to identify the opinion and views of leading industry practitioners on the various opportunities and challenges they see in the future and also supplemented by secondary research.

Figure 1.0.1: CII-PwC IT/ITeS Survey Respondent Profile



Source: CII-PwC IT/ITeS Survey

As one of the integral components of the Indian and Global economies, the recent turbulence has also seen itself manifested through slowing industry growth rates. The earlier downturn in 2001 was primarily a result of bust of a part of the technology sector i.e. the dotcom bust. However this time, the slowdown in the IT/ITeS segment is due to unfavourable overall economic scenario. We have examined the various economic linkages with the Indian IT/ITeS industry and commented on the outlook. The Indian industrial scenario has shown remarkable resilience in the face of the global turmoil and no small credit is due to the regulatory rigour in the Indian economy coupled with the stimulus packages provided by the Government, the robust quality and process orientation in the industry in general and the IT/ITeS sector in particular.

Hari Rajagopalachari
Executive Director & Leader,
Technology Sector
PricewaterhouseCoopers

Shovon Mukherjee
Executive Director
PricewaterhouseCoopers

2.0 Economy and the Indian IT/ITeS Industry

The global economy has begun to pull out of one of the most severe recessions in several decades aided by a synchronized and massive government stimulus response across the world. The transition in the economic environment has been captured in the recent IMF projections for the global economy. After a number of downward revisions to its world growth projections, the IMF in its October 2009 World Economic Outlook has raised its GDP forecast for 2009 and 2010 by 0.3% and 0.6% respectively. Global activity is now expected to expand by 3.1% in 2010, after contracting by around 1% in 2009.

Prospects of recovery have improved for both advanced as well as emerging market economies as co-ordinated public intervention enacted during the depths of the crisis have helped revive domestic demand and reduce economic uncertainty.

2.1 Key IMF Projections

- Advanced Economies are expected to grow at a sluggish pace of 1.3% in 2010 following a contraction in growth of 3.4% in 2009.
 - US is expected to expand by 1.5% in 2010 after weathering a recession which saw its economy shrink by 2.7% in 2009
 - GDP is forecast to rise by 0.3% in the Euro Area in 2010 and 0.9% in the UK after contractions of 4.2% and 4.4% respectively in 2009
- Emerging and Developing Economies are projected to cross 5.0% growth in 2010, up from 1.7% in 2009.
 - China and India, the two fastest growing major economies globally and the chief drivers of global economic recovery are slated to grow at 9.0% and 6.4% in 2010 up from 0.5% and 1% respectively from the previous year.

Box 2.1.1: India on the Steady Recovery Path: Growth Beats Expectations

The Indian economy is firmly on the recovery path with GDP numbers in the current fiscal coming well ahead of expectations. GDP in the first half of 2009-10 stood at an impressive 7% in spite of the pervasive effects of the global crisis, boosted by significant traction provided by the industry and services sectors.

- Surge in Industrial Activity: Industrial production for April-October 2009 stood at 7.1% compared with 4.3% in the corresponding period of the previous year led by a surge in growth in the manufacturing sector.
- Growth tempo in Services on upswing: Q2 2009-10 GDP reverses declining trend in growth over the 3 previous quarters boosted by strong performance of 'Trade, Hotels, Transport and Communication' which accounts for 50% of the services sector output.

Stimulus Push: Growth has been powered by a rise in Government expenditure via fiscal stimulus measures and RBI's monetary accommodation through rate reductions which have together helped spur domestic demand.

- Investment Demand gains pace: rising from 4.2% in Q1 2009-10 to 7.2% in Q2 supported by a low interest rate environment and abundant liquidity.
- Private Consumption picks up: accelerating to 5.6% in Q2 2009-10 from 1.6% in Q1.

Business Outlook Optimistic: Surveys conducted by different agencies (NCAER, FICCI and Dun and Bradstreet) reveal a broad pattern of optimism and marks a turnaround from the bearish sentiments of the previous quarters.

Authorities likely to raise projections: The Prime Minister's Economic Advisory Council, Planning Commission and the RBI had projected growth for 2009-10 in the range between 6.0 and 6.5%. International bodies like the IMF and World Bank have been more conservative in their growth projections.

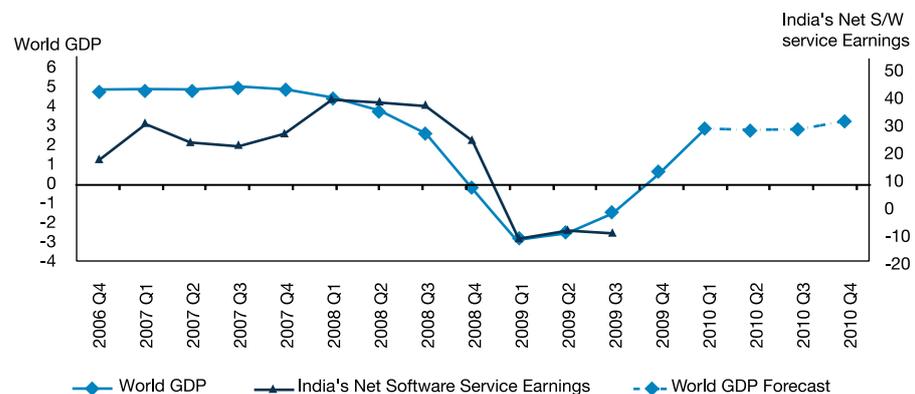
- The positive GDP releases have prompted authorities (Planning Commission and Finance Minister) to suggest an upward revision in 2009-10 GDP numbers.
- The Government of India in its recent Mid Year Review of the economy has indicated that growth in 2009-10 could now be around 7.75%, with H2 growth estimated at 8.5%

2.2 India's Software Earnings and Global Economic Activity

With exports accounting for the predominant share in overall IT revenues, the performance of technology sector is closely linked to the overall health of the global economy. The growth rates of global GDP and India's net software earnings have been observed to move in sync with each other as highlighted in Figure 2.2.1. The high correlation co-efficient of 0.81 over the period December 2006 to September 2009 underscores the strength of the association between the two variables.

Box 2.2.1: The recent upward revisions to global growth for 2010, including the significant improvements in the growth forecast of the advanced economies (US, UK and the Euro Area) along with the favourable GDP outlook for the Indian economy are likely to strengthen the growth prospects of the Indian IT sector, benefiting both export and domestic revenues.

Figure 2.2.1: Growth Trends in Global GDP and India's Net Software Service Earnings



Source: IMF, CMIE

Growth in exports which had plunged to a low of -33.2% at the start of 2009-10 has since seen a significant slowdown in the intensity of decline. It has subsequently bounced back into positive territory in November 2009 registering an impressive expansion of 18.2% after 13 consecutive months of negative growth. In fact, India and China's export growth has been partly assisted by the global crisis which has taken a greater toll on other trading nations.

2.3 Growth Trends of GDP and Technology Indices: Rising Sentiments

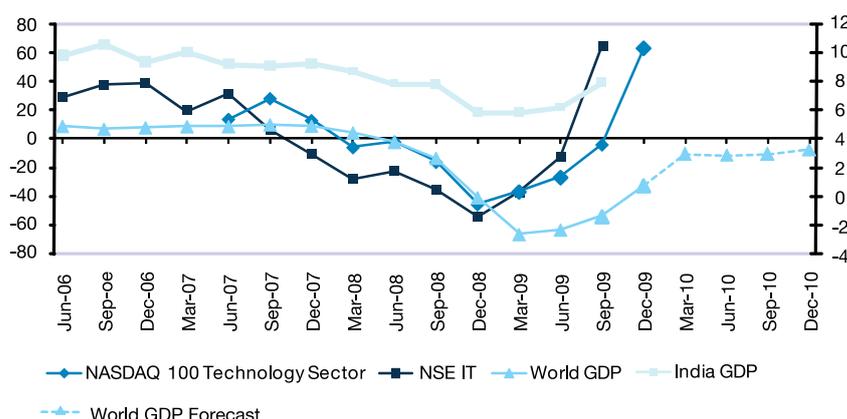
Growth rates of the NSE IT and NASDAQ 100-Technology sector indices were found to reach their inflexion points in the last quarter of 2008 which was a quarter before world (and domestic) GDP hit its trough (Refer to Figure 2.3.1).

Box 2.3.1: IT based Initiatives driving World Recovery

The technology indices reflecting overall sentiments and health of the IT sector appear as a lead indicator of world GDP growth suggesting IT based efficiency enhancing initiatives driving global recovery.

The revival in the growth of the technology indices in 2009 has been sharper than the rebound in GDP growth rates. With the upward trajectory in global GDP forecast for the coming quarters (Refer to Figure 2.3.1), the momentum in the recovery of the technology sector is likely to be sustained.

Figure 2.3.1: Trends in Growth of GDP and Technology Indices



Source: NSE, NASDAQ, IMF, Government of India

3.0 Industry Landscape

Over the past decade, the IT / ITeS industry in India has been a story of unparalleled growth. The compounded annual growth rate (CAGR) of the industry has been over 25 % in the last 5 years. Over these years four main components have formed the industry – IT Services, BPO, Engineering Services and Hardware, Figure 3.0.1 shows the component-wise breakup.

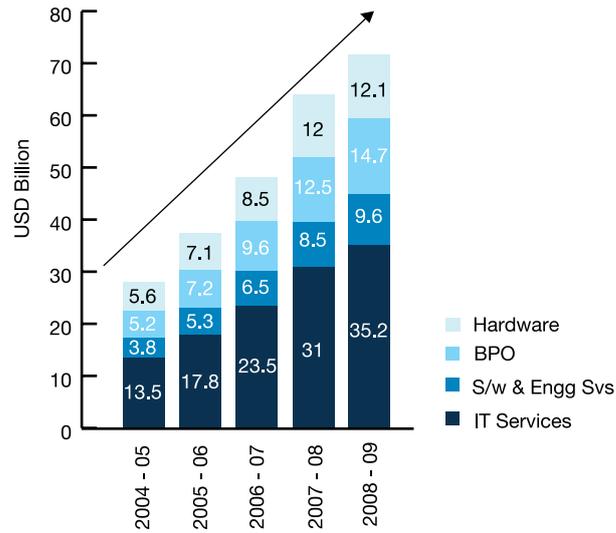
Box 3.0.1: The Indian Technology Sector – A Profile

- Key contributor to the Services Sector accounting for 5.8% of India's overall GDP
- Among the largest employment generators in the organized sector employing 7.5 million people, estimated to cross the 10 million mark by 2010
- Revenues estimated at USD 71 billion in 2008-09, consistent rise in growth with 5 year compound annual growth (CAGR) at 27%
- Exports constitute two-third of overall revenues with a marginally higher 5 year CAGR of 28.7%
 - US and UK remain the largest export geographies – 79%, steady expansion of other export destinations notably Continental Europe – CAGR more than 50% over FY 2004-08
- Domestic IT revenues estimated at USD 24.3 billion, with a 5 year CAGR of 24%
- Industry's vertical market exposure well diversified across several mature and emerging sectors
 - BFSI, Telecom and Manufacturing :Among the top 4 verticals for both export and domestic market
- ITeS-BPO sector the fastest growing segment of the IT industry in both the export and domestic market
 - Export earnings in 2008-09 estimated at USD 12.8 billion (a 5 year CAGR of 32.9%)
 - Domestic revenues at USD 1.9 billion – a growth of 45.3%

Source: CRISIL, Nasscom

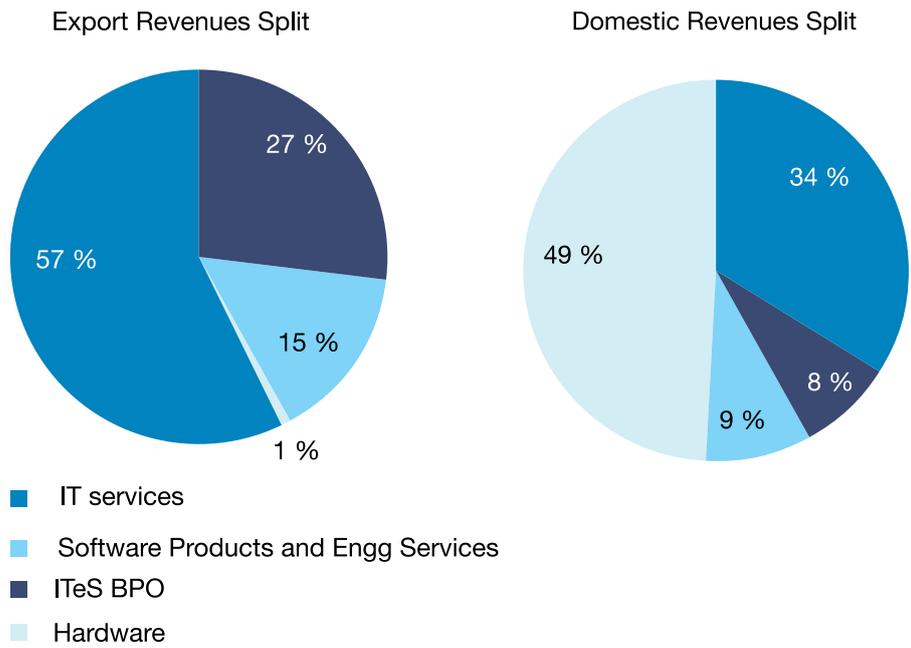


Figure 3.0.1: Industry Contribution by major components



Source: Nasscom

Figure 3.0.2: Component-wise breakup – Exports and Domestic



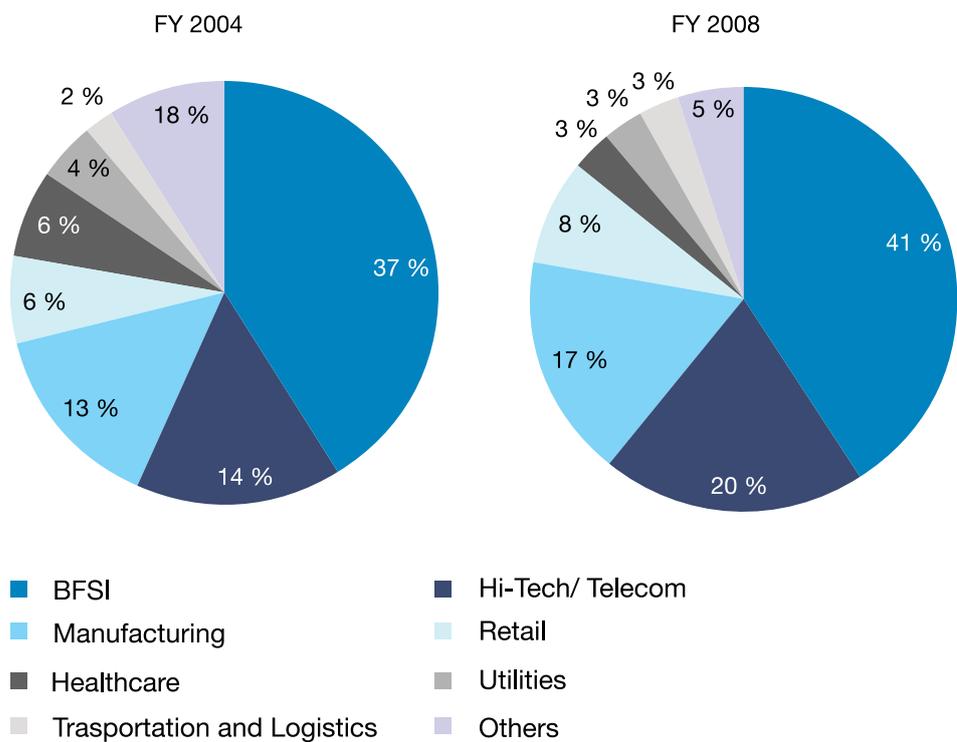
Source: Nasscom

While hardware dominates the domestic market, IT services tops in the overall industry. Also over the years, Business Processes Outsourcing has become the second largest segment in Indian IT/ ITeS and also the fastest growing. The scope of process outsourcing has widened over the past few years to include Knowledge Process Outsourcing (KPO) operations.

Banking and financial services account for the dominant share in India's total IT export revenues. The sector has seen a consistent rise in share from 37% in FY 2004 to 41% in FY 2008. Telecom and Manufacturing, the other consumers of India's IT services have also witnessed increase in share over this period resulting in a rise in concentration of the 3 sectors in the export pie from 64% to 78%.

With the intensification of the global economic crisis in fiscal 2008-09, there is likely to be a slowdown in growth of export revenues from the BFSI sector given its close linkages with the financial sector and overall GDP.

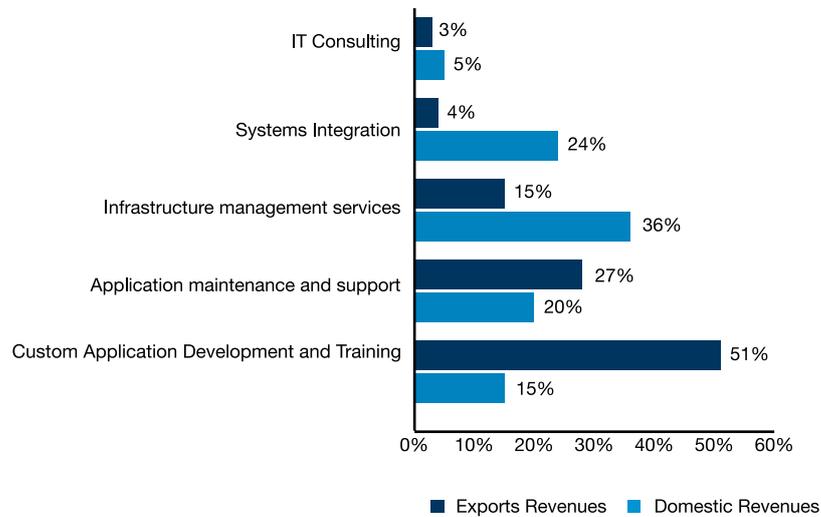
Figure 3.0.3: Changing Shares of Key Export Vehicles of the Indian IT/ITeS Sector



Source: Nasscom, CMIE

While Application Development and Maintenance contributes a major portion on the IT services side (refer Figure 3.0.4), Customer Care is the largest contributor in the BPO segments.

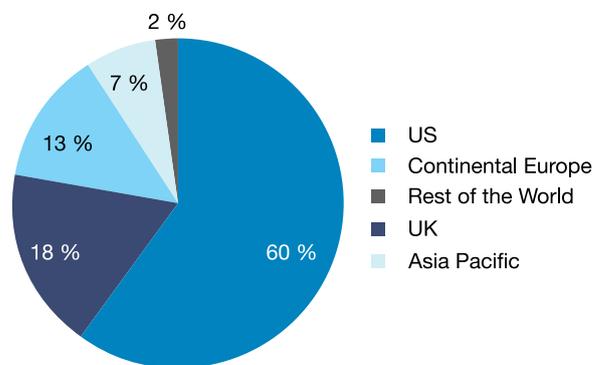
Figure 3.0.4: Offering-wise split up of Revenues for IT Services segment



Source: CRISIL

In terms of markets, the US and the UK remain the key markets for Indian IT / BPO exports (excluding hardware), accounting for nearly 80% (refer to Figure 3.0.5) of the total global market; we see these markets slowing down relative to the earlier growth rates.

Figure 3.0.5: Geography-wise split of India's IT Exports



Source: Nasscom

Over the years we have seen the IT/ITeS industry evolving from a “Lift and Shift” model of moving headcount in and out of India for projects at the lowest end of the value chain, to one where Indian players are aggressively bidding for and winning large scale turnaround projects hitherto the domain of global behemoths. The predominant models in use today are Fixed Price Model where a pre-determined price is charged for the project, and Time & Material (T&M) where the charge out rates are in accordance with the resources involved in the development. While 30% of the revenues come from Fixed Price billing, 65% is generated by T&M. The balance 5% comes in from non-linear forms like Outcome based pricing, per transaction/ticket pricing.

The Indian IT/ITeS sector traditionally began by tapping into opportunities in the mainframe space. Though this section still commands a major staple of the maintenance business, the development of the World Wide Web and corresponding internet based technologies have seen providers thriving amidst the explosion of opportunities in the rapidly shrinking world. Today, the emphasis is on minimizing the time to market and the first mover advantage cannot be ignored any more.

The Indian IT/ITeS industry has largely been India centric – both in terms of delivery centres and human capital. Within India, the activity is currently concentrated around Bangalore, Chennai, NCR-New Delhi, Hyderabad, Pune, Mumbai and Kolkata. In addition to central government intervention, we also see the IT/ITeS action including more and more state governments vying with each other to offer a favourable business environment in order to attract IT/ITeS companies to set up development units in their states.

The Indian IT/ITeS industry is dominated by large players; however the Small and Medium Providers (SMPs) form a significant portion of the industry, contributing over 30% of the exports. The classical “scale” vs. “scope” debate is now playing out in the strategies of companies in the Indian IT/ITeS industry sector. While most of the large players have established their brand positions in the global market place and are ready to take on the largest global service providers in a “full-service” mode, the SMPs still face the challenge of having to evolve their own focused, niche and differentiated value propositions. Both segments will have to focus on high growth rates, retain their sharp focus on profitability where they have set an enviable global and local “gold standard” benchmark and minimize risk which can broadly be defined as “predictability of cash flows”.



3.1 IT/ITeS Industry in North India

Boasting of excellent national and international connectivity, reasonable real estate rates and enjoying among the best infrastructure in the country, North India is fast emerging as an attractive hub for the IT/ITeS sector. The prospect of 2010 Commonwealth Games have also given an impetus to infrastructural investment from both, the central as well as the state governments. We see the connectivity between the states of Haryana and Uttar Pradesh improving tremendously thanks to the development of roadways and flyovers. The sanctioning of the Gurgaon-Delhi-Noida Metro Project has also ensured that while there is enhanced inter-state connectivity, the roadways infrastructure is sufficiently freed up to take on the increased needs of a highly mobile workforce.

The supply of manpower is also taken care of thanks to the presence of various technical and management institutes in this region. The “Golden Triangle” of Delhi, Gurgaon and Noida have been successful in luring many National and Multi-National IT/ITeS companies to open up their corporate offices here. One of the critical magnets for these companies to set up their offices in the National Capital Region (NCR) would be the proximity to the national decision making authority in Delhi.

NCR-Delhi has formally approved 28 (approved as of 15 January 2009) IT/ITeS Special Economic Zones (SEZs). Already 260 companies have registered with the Software Technology Parks of India and 135 out of these are exporting their services actively. In 2007-08, software exports from this region were a staggering 117 million USD.

Simultaneously we see neighbouring northern states, who do not enjoy the evident pull factor of central government proximity that NCR enjoys, like Rajasthan and Himachal Pradesh focussing on building up their capabilities on lines of the Andhra Pradesh model where government initiative has been largely responsible in setting the foundation for the private sector to build on. As in the case of Hyderabad, the governments in these states are pushing their flagship cities like Chandigarh (Punjab / Haryana), Jaipur (Rajasthan) and Shimla (Himachal Pradesh) to the forefront of IT.



The Punjab government is offering various sops to information technology (IT) companies operating in the state, including a 24-hour uninterrupted power supply, in order to boost the sector. Chandigarh is emerging to be a prominent destination for the ITeS-BPO segment for its advantages of savings in administration, maintenance, real estate and infrastructure costs and human resource availability and costs. Software exports from Chandigarh and its adjoining towns of Panchkula and Mohali grew 31 percent to cross Rs.1,050 crore in 2008-09, compared to Rs.800 crore the year before. Growth results show that software exports in the union territory, particularly from the Rajiv Gandhi Chandigarh Technology Park here, rose from Rs.504 crore in 2007-08 to Rs.750 crore last year. Chandigarh's growth alone was nearly 50 percent. It is expected that the that total software exports from the park will cross Rs.4,500 crore by the end of 2011

Another case in point would be Himachal Pradesh where NASSCOM has estimated that the IT industry can achieve an annual turnover of USD 4.7 billion by 2009-10 subject to implementation of its recommendations. The state government has established a Software Technology Park and an Earth Station at Shimla, which are proposed to be co-located at a later date with the Hi-Tech City. At the same time, an international gateway has been commissioned at Shimla and an IT hub is being developed in Solan (around 25 Kms away from Shimla). At the same time, with upgradation of three existing airports in the state at Shimla, Kullu and Kangra, this state is poised to become an attractive destination for IT/ITeS companies in the future.

Hence we see that the Northern India region is aggressively taking steps to become viable hubs for the IT/ITeS industry and we see more and more companies setting up their delivery centres and liaison offices in these locations in order to take advantage of high quality infrastructure, manpower, real estate and supportive government policies.



4.0 Small & Medium IT/ITeS Providers

Contributing almost USD 18 billion and generating employment for around 700,000 people directly and in multiple millions through cross employments, the Small and Medium IT/ITeS Providers (SMPs) in India are integral to the growth engine of the industry in particular and the Indian economy in general. The prevailing growth trends are expected to continue into the near future on account of the increasing maturity of this segment and the emergence of new opportunities into the future.

Figure 4.0.1: SMP in IT/ITeS Segment Contribution

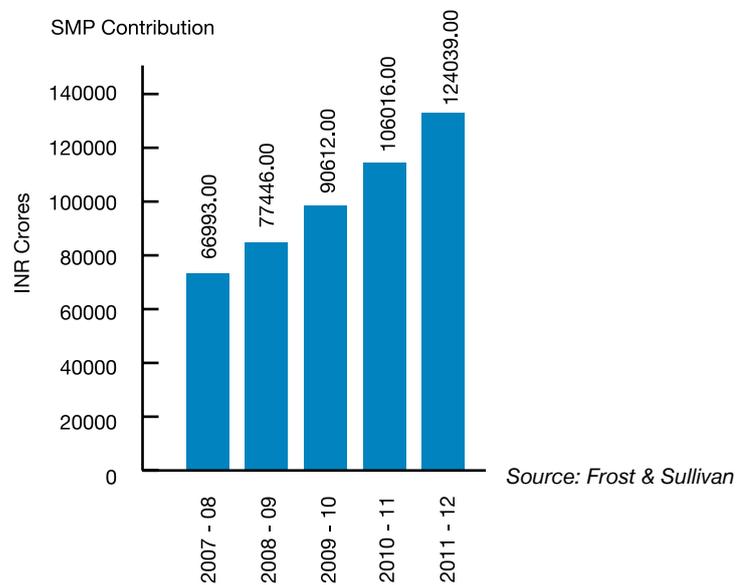
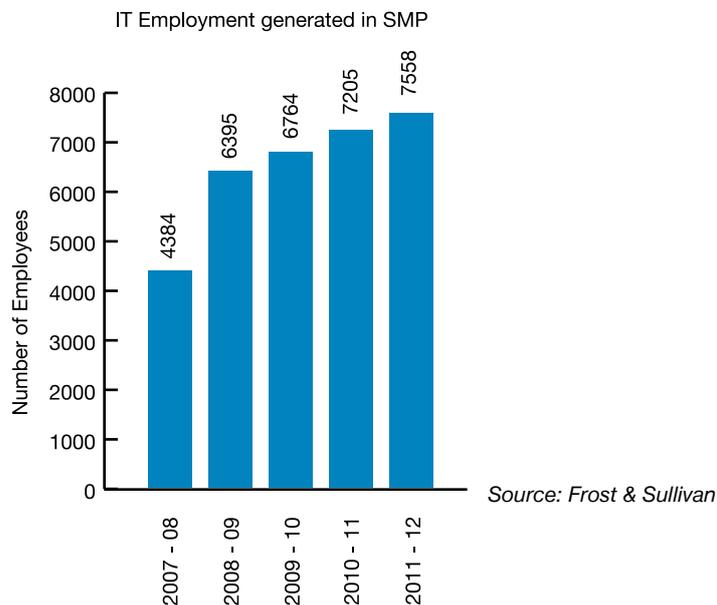


Figure 4.0.2: SMP in IT/ITeS Segment Contribution by Employment (00's)



IT/ITeS SMPs in India can be broadly classified in to following four distinct categories depending on the customer and market segment

Table 4.0.1: SMP Segmentation for the Indian IT/ITeS Sector

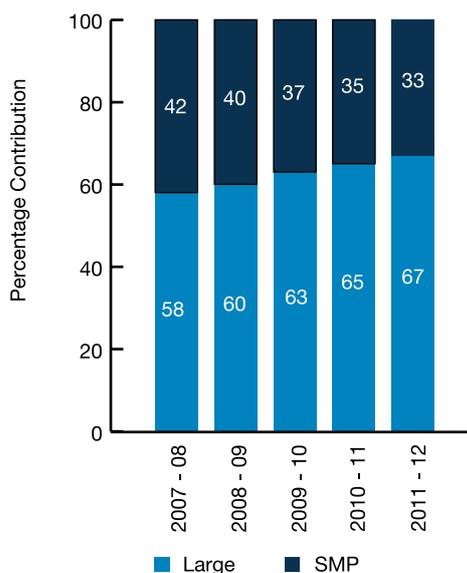
Niche Service Providers	Multi-Domain Players	Consolidators	Solution Providers
Focus on developing capability in a specific domain to compete with large-cap players	Multi-domain capabilities across high growth verticals like telecom, media etc.	Growth through equal sized mergers and significant acquisitions	Growth through well defined target product/solution segments

Niche service providers have recorded highest growth since they did not face significant competition from the large players who were still not present in those segments.

Currently SMPs are growing at 17% p.a. At the prevailing growth rates, the percentage share of non-SMPs to national exports will continue to increase by 2012. The share of non-SMPs is expected to grow from 63% in 2009-10 of the national exports to 67% of the national exports and subsequently, the share of SMPs will fall, from contributing to 37% in 2009-10 to 33% of national exports in 2011-12 (Figure 4.0.3). The Indian small and medium IT/ITeS providers will continue to experience growth in the domestic market as well given their lower cost structures, flexible business models and agility compared to the larger players.

Figure 4.0.3: IT/ITeS SMP Contribution to Exports

Share of SMPs in National IT-ITeS Exports up to 2011-2012



Source: STPI, And the 11th five-year plan (2007-2012)
- Working Group on Information Technology

However, we see an increase in the competition in the domestic space from larger players, many of whom had not focused on the Indian domestic market. We believe that SMPs, backed by the entrepreneurial spirit of their promoters, will be able to navigate through the various challenges. A few of the priorities for which the SMPs have to prepare themselves to optimally tap the potential that exists in the domestic and the export markets have been discussed below.

Identify the Right Markets – SMPs in India have largely targeted the same primary markets (UK and USA) as the bigger players. Driven by the volume-advantage, the established companies are capable of introducing considerable pricing pressure. The SMPs could focus on smaller, untapped markets both in terms of geographies as well as services provided. There are a few SMPs who targeted Europe and the Middle East much before the larger players did and the investments paid off.

Many companies take a myopic view on competition in the established markets by ignoring the phase of market assessment because of the investment involved.

Increase Focus on the Domestic Market – Tap the domestic market, as it will act as a test bed for innovation and new service lines and help in rapid accumulation of higher value-added skills through development of low cost, tailored solutions for domestic companies and the government. Moreover, India is predicted to be one of the fastest growing markets for IT /ITeS services as more and more Indian companies have started looking at IT/ITeS as an enabler for operations efficiency and cost management. The domestic IT-services market is expected to be worth US\$10.7bn by 2011, according to Gartner. The India market is still an order of magnitude smaller than the U.S. market, however, it is expected to grow, and even if SMPs can target some proportion of their revenue from this market especially within the other industries Small and Medium Businesses (SMBs), it will help diversify geography risk in the future. The domestic outsourcing market with respect to SMBs has a potential for a large number of sourcing agreements that are too small in value to interest the larger companies. IT SMPs could leverage these to establish long-term relationships with domestic clients who too are looking to grow.

Talent Retention – Enhance Recruitment and Retention of top talent through varying business cycles. In an industry where attrition rates vary from 15% to 50% between companies and recruitment and development costs form a significant component of the operating costs, good talent management practices are being seen as increasingly critical to survival. While the larger companies have full-fledged HR structures to handle employees, the SMPs struggle to retain talent and end up becoming training beds for their larger counterparts. Investment in talent management practices will lead to significant savings in terms of employee costs and lead to higher client satisfaction. While this can be done through various innovative employee friendly practices, one way could be to provide higher responsibility to capable employees – something which larger players cannot afford because of their layered structures.

Talent management is one critical area which is overlooked by many SMPs

Create a Niche – Identify a defensible niche in nascent verticals such as healthcare, education, transportation, utilities, e-governance, and technology areas like Geographic Information Systems (GIS), embedded software or web services and products. These new niches will be growth drivers. The estimates are that niche products could contribute over 50% to the revenues of these companies soon. A Bangalore-based BPO has launched a new software which will enable call centre operators to predict customer demand, and respond in a way that doubles customer satisfaction. From 15 customers last year this software has now got them 30 new clients this year.

Build Alliances – Make clear, strategic choices to secure alliances with Systems Integrators. Also on the products and technology front, SMPs are not very active. Another form of alliance is partnering between themselves. In the past, today's large Indian players used to bid along with MNCs, similarly SMPs could come together to provide a bouquet of services if required. The key thing would be to work out the operating arrangements for smooth delivery.

Financing for growth – According to market research firm Cleantech, the share of software in venture capital funding has shrunk significantly. Clean energy and technology currently takes the top spot in terms of venture capital share. In a scenario where the total VC spending has shrunk to 2003-levels, this is clearly a cause of concern for IT SMPs. At the same time, the technology funding space is once again getting active with the macroeconomic picture looking brighter. The total capital raised in private equity (PE) or venture capital (VC) funds for India is at \$2.5 billion in 2009 and will potentially balloon to \$4bn in 2010 – the same amount raised in 2008. External fund raising can be done through debt syndication and/or equity dilution. In either case, the promoters need to ensure that their companies are made attractive for consideration by fund disburseurs, by continuously optimizing on delivery quality while relentlessly streamlining processes to ensure faster turnaround while reducing costs and thereby increasing margins. A parallel approach could be to increase focus on niche segments.

Box 4.0.1: CII-PwC IT/ITeS Survey

IT Service providers are seeking additional funding largely for the purpose of Inorganic growth (55%) and they believe that the Private Equity (73%) route would be suited source of funding for their needs. This result underscores the fact that the Indian IT/ITeS industry can expect to see a wave of consolidation in the near future.

Also while we have the smaller players placing equal emphasis on using fund injects for inorganic growth and running operations, their larger counterparts require external funds primarily to fund mergers / acquisitions. This is in line with expectations.

Interestingly, we find larger players more reluctant to divest equity with 100% preferring debt syndication to SMPs who preferred equity dilution (89%). This could also be an indicator that big players feel more confident with the debt route than SMPs.

Increase Operational Efficiencies – While there has been a lot of activity on this from the larger players, SMPs need to shore up performance by curtailing costs, not by cutting down on important areas like training, but by bringing in genuine efficiencies in delivery. In short, SMPs need to take a hard look at their operations and improve efficiencies.

Retain and Mine Customer – As a revenue-producing asset, it makes sense, especially for SMPs operating under stringent budgetary constraints, to account for the costs incurred for retaining clients than for acquiring new ones. Long-time customers are more profitable than new clients who generally would like to test the mettle before settling for the provider. Acquiring new customers costs anywhere between 4-6 times more than selling more products to existing clients. Profiling the existing customer basket to identify more profitable clients with highest potential requires periodic:

- Client Profile Analysis with regard to long term value potential. This may help trigger some long-overdue decisions that might help walk away from high-cost, low-profit customers
- Acquisition Trend Analysis for cost of new wins. If this keeps on increasing, it means that the market is getting tougher to penetrate, or the marketing organization has not figured out how to operate more efficiently
- Channel Analysis – Looking at customer acquisition costs by channel can be an eye-opening experience.

Box 4.0.2: CII-PwC IT/ITeS Survey

Increasing Operational Cost is seen as the biggest challenge by 67% of the service providers in the current market scenario closely followed by the pressures of keeping up with technology changes. A significant 50% of smaller companies have felt that they are finding it difficult to sustain the increasing competition from captives



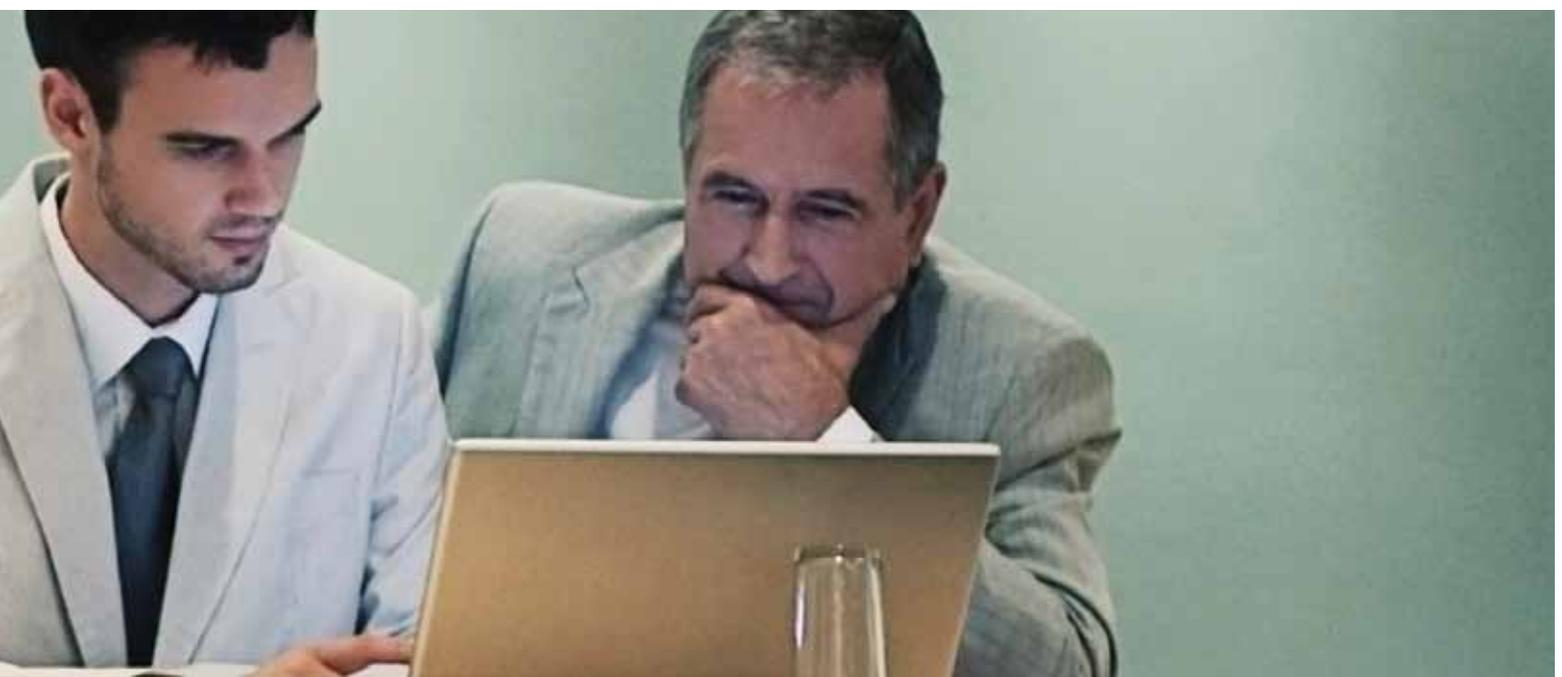
Once, the client hierarchy is established, steps need to be taken to proactively track and target them from a business development point of view. This would include proactively tracking client developments, identifying their needs, opening up communication channels and delivering sales and marketing excellence.

Partner with the Customer – SMPs have a far more flexible model than the bigger players and those that are able to reorient themselves quickly and become truly customer-centric will find more doors opening. While bigger players would move towards standardized solutions, SMPs need to play the customized solutions card. This would work particularly well in markets where offshoring/outsourcing is new

Enhance Industry-Academia Linkages – Involvement in shaping the curriculum aligns the goals of education with that of industry. Through a rigorous industry-academia engagement, companies can ensure that the curriculum is tailored to meet the needs of the organization. Particularly for SMPs, this exercise would also help reduce the on-the-board technology training costs that form a substantial chunk of the employee development costs.

Use Technology to level the Playing Field – Technology is great leveler; emerging technologies like Cloud Computing could nullify some of the advantages that larger players have in delivering services. The cloud model's advantages of lower capital outlay and operating costs, coupled with the reassurance of more major players coming on board and building capabilities (including enabling and educating the channel), will encourage more customers at the margin to invest in cloud offerings.

Comparable to the transition from standalone electricity generators to use of electricity grids in the early 20th century, cloud computing too includes an aspect of payment as per usage or on a subscription basis. This will lead to lower capital expenditure and lower overheads while improving access to more services and applications. The important thing here would be to choose the appropriate model to adopt.



5.0 Emerging Technologies

Currently in spite of a slowdown in the mature IT markets, we see growth potential in the under penetrated emerging IT markets like BRIC nations. However, the increased need for internet-oriented models and technologies face obstacles in the form of cost, speed and complexity pressures of conventional IT models and technologies. The opportunity has been usurped by major technology players like Amazon, Salesforce.com, Google etc. leading to a whole new world of cloud computing which could lead to business optimization and better ROI.

Box 5.0.1: Cloud Computing

What is Cloud Computing?

Unfortunately there is no industry consensus on a definition. Cloud Computing evolved in response to customer needs for better, faster, cheaper environment for services.

Cloud Computing is all of these

“A buyer centric view of technology, where applications are available through purchase or rental or even development, wherever and whenever.”

“An approach to consume technology in a pay-as-you-go model where consumers only pay for what they use.”

“A comprehensive virtualization model for technology from infrastructure through application delivery.”

Key elements of cloud computing

Speed, revenue based on consumption, clearly defined services managed to appropriate service levels, on demand availability and scalability, location independence, complexity hidden from view.

Cloud computing encompasses computing services being delivered to users of an organization. Server virtualization, service oriented architecture, software as a service etc. are the technologies enabling this. Users can access data and software applications from anywhere and virtually from any device. This allows enterprises to cut their capital costs of buying software and infrastructure as a service. The concept closely resembles the development of electricity network few decades ago when enterprises plugged themselves to electricity grids and stopped generating power themselves. Similarly individuals and businesses can now connect to the cloud of computing and storage resources rather than purchasing and maintaining their own software and infrastructure.

5.1 Cloud Computing Services

Infrastructure as a service (IaaS) - Utility computing data center providing on demand server resources: HP Adaptive Infrastructure as a Service, Rackspace, Amazon E2C & S3. Typical characteristics are as follows:

- Compute resources (processors, memory, storage, bandwidth, etc.) are provided in an as-needed, pay-as-you-go model
- Able to provide from single server up to entire data centers
- Creates new opportunities such as Cloudbursting: shifting usage spike traffic to alternate resources
- Infrastructure scales up and down quickly to meet demand
- Built on a utility computing architecture to host a SOA application layer

Platform as a service (PaaS) - Hosted application environment for building and deploying cloud applications: Salesforce.com, Amazon E2C, Microsoft Azure. Typical characteristics of PaaS are as follows:

- Applications are built in the “cloud” on the platform using a variety of technologies
- Simplifies orchestration of cloud services
- Development, testing, and production environments (servers, storage, bandwidth, etc.) are billed monthly like hosting
- Pay-as-you-go model
- Environments scale up & down at the click of a button
- Concerns include code & data privacy, security and scalability

Software as a service (SaaS) – Applications built on other cloud services are hosted in the cloud. The applications include enterprise applications like CRM, office applications etc. These are applications typically available via the browser: Google Apps, Salesforce.com. SaaS will disrupt the application management functions for both internal IT and outsourcers. A logical extension of Software as a Service is Process as a Service which can involve full provisioning of business processes such as claims processing, expense management and procurement. The characteristics of SaaS are as follows:

- Applications (word processor, CRM, etc.) or application services (schedule, calendar, etc.) execute in the “cloud” using the interconnectivity of the internet to propagate data
- Custom services are combined with 3rd party commercial services via orchestration (SOA) to create new applications
- Requires investment to build an enabling layer with governance, security and data management functionality
- May require integration with back-office systems
- Pay-as-you-go model

Box 5.1.1: CII-PwC IT/ITeS Survey Results

79% of the IT/ITeS providers felt that SaaS would be important in making their company more competitive. About 67% of the service providers plan to offer SaaS in the near future in order to increase customer base (90%), enhance their service offerings basket (80%) and for ease of product maintenance (70%). Refer Figure 5.1.1

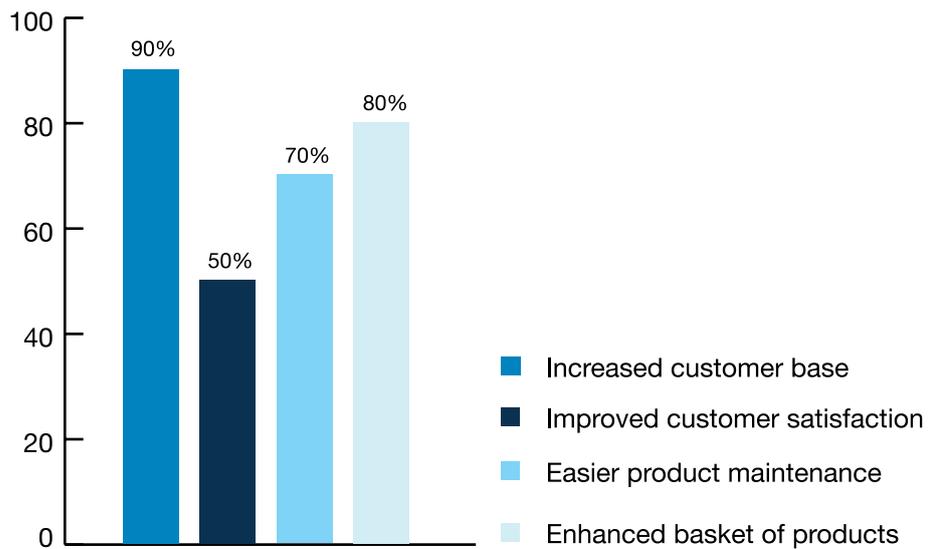
We also see that around 33% of the smaller players are sceptical of SaaS on account of higher implementation time and difficulty in maintaining the system.

Also we see an overwhelming acceptance to SaaS from the clients for the benefits like Lower Implementation time (71%), Faster Delivery (71%) and Easier Product maintenance (67%). Refer Figure 5.1.2

The results show that SaaS is increasingly gaining prominence as a change harbinger for the future. Also we see that the larger players are more enthusiastic about embracing SaaS than their smaller counterparts. The big players look at SaaS predominantly as a way to reach out to more customers while smaller players also see SaaS as a way to increase their basket of offerings.

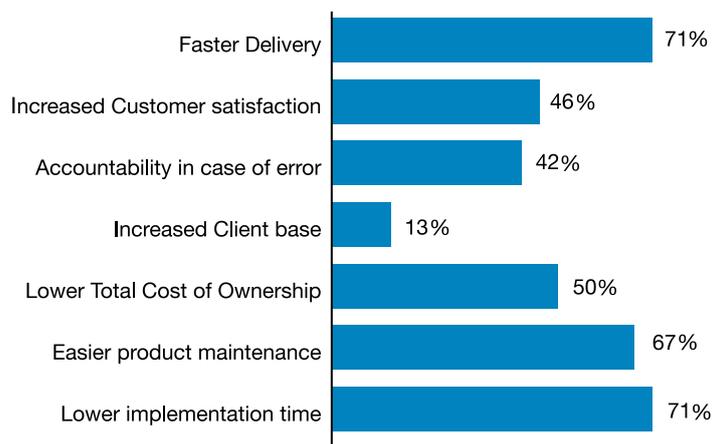
At the same time, with only a meagre 30% of the clients considering Brand of the service provider to be critical while adopting SaaS, we see that SaaS is also playing the role of levelling the playing field for Small and Medium Providers.

Figure 5.1.1: Reasons for Favoring SaaS (IT/ITeS Providers)



Source: CII-PwC IT/ITeS Survey

Figure 5.1.2: Reasons for Adopting SaaS (Clients)



Source: CII-PwC IT/ITeS Survey

What new capabilities/models will IT gain?

- Ability to overflow workload to external computing resources as needed when internal resource capacity is completely utilized
- Adopting in-network redundancy with automated recovery to eliminate disaster recovery risks and costs
- Data as a Service built on the concepts of Master Data Management and the Semantic Web
- Rapid deployment (SaaS) or development (PaaS) to meet the immediate needs of the business
- New models and tools for improving & evolving internal IT

New services will emerge as entrepreneurs identify new ways to leverage clouds to address corporate concerns. A few possibilities are:

- **Data Warehousing & Business Intelligence as a Service** – Today companies are challenged to find and build in-house expertise in both technologies, and expertise directly correlates with value. A service would obviate the large investment in people and technology focusing expenditures on results
- **Business Process Outsourcing as a Service** – Outsourcing business processes requires adoption for the outsourcer or migration for the customer. Service enablement obviates the need for platform changes focusing instead on pushing data through the process in a seamless stream
- **Business Continuity & Disaster Recovery as a Service** – Clouds break the link between applications and hardware enabling lightning fast responses to outages and disasters without disruption. Billions of dollars spent provisioning “just in case” environments can be saved while improving service.

As part of an IT transformation, adopting cloud would look something like this...

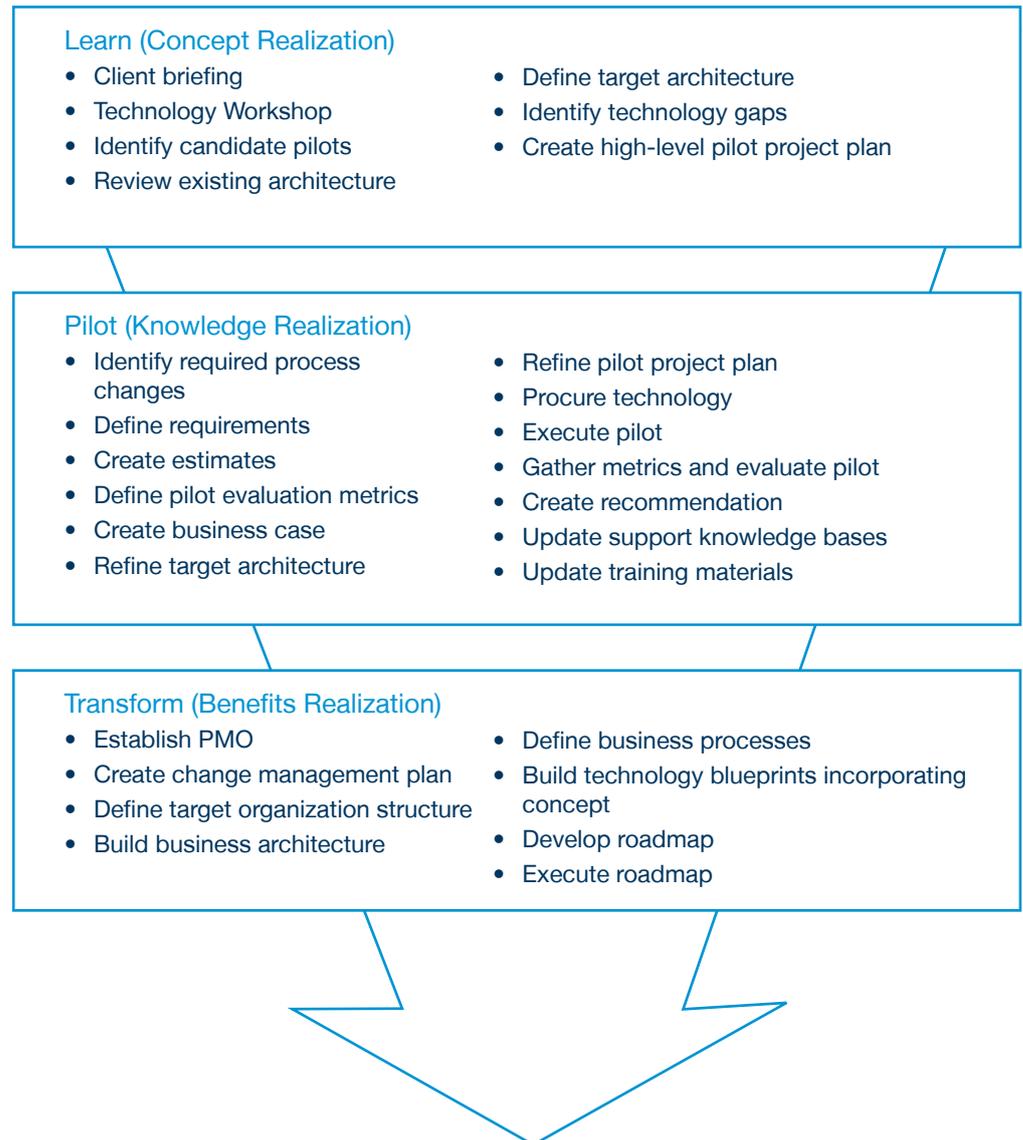
- **Rationalizing infrastructure & applications** - Reducing the complexity by identifying redundant, outdated, or underperforming components and consolidate servers.
- **Defining the cloud architecture** - Creating a cloud architecture leveraging SOA for applications, utility computing for infrastructure, and ESB for integration with appropriate standards, governance, and reference architectures.
- **Building cost profiles for each application** - Identify the costs to support, update, and operate each application on a per user basis.
- **Identifying and assessing SaaS alternatives** - Target SaaS alternatives offering a better economic model than internal hosting. If not available target SOA alternatives.
- **Migrating infrastructure to a cloudbursting model** - Further consolidate servers from just-in-case to average load provisioning using the internal pool of servers left over or an external IaaS provider to handle peak loads. Identify systems management gaps and discuss with vendors
- **Building new applications on a SOA foundation** - Applications requiring significant development or new applications are constructed on a SOA foundation with a particular focus on application virtualization.
- **Creating a cloud enablement roadmap for retained applications** - Defining a development roadmap which migrates retained applications to a cloud model through outsourcing (SaaS), replacement (SaaS or SOA), or development (SOA).

... And there are many on-ramps to Cloud Computing:

External SaaS
<ul style="list-style-type: none"> • Driver - Quickly gain new capabilities, Select best in class point solutions with already well defined integration methods (EDI) • Requires - Nothing • Challenges - Governance, Data security, privacy, and ownership, 3rd party SLA's, Integrated support
External IaaS
<ul style="list-style-type: none"> • Driver - Cloudbursting – overflowing from internal to external compute resources, Storage on demand, New compute intensive services • Requires - Scheduler to move jobs to cloud, Internet bandwidth • Challenges - Security
PaaS
<ul style="list-style-type: none"> • Driver - Development of external facing web solutions • Requires - Understanding of SaaS application and data models • Challenges - Integration to backend systems, Data security, privacy and ownership, 3rd party SLA's
Internal IaaS
<ul style="list-style-type: none"> • Driver - Agility, Maximize efficiency, Maximize ROA • Requires - Server virtualization, Service level agreements, Automated infrastructure provisioning and orchestration, Integrated systems management suite • Challenges - Application silos
Internal SaaS
<ul style="list-style-type: none"> • Driver - Agility, Maximize reuse, SOA • Requires - Internal IaaS, Application virtualization • Challenges - Application monitoring tools

Preparing for the Cloud

Getting started to Cloud Computing follows a standard technology adoption methodology as shown below:



5.2 Benefits & Challenges

Benefits: As no dedicated capital investment is required and users only pay for what they use, the fixed costs are reduced. Due to sharing of computing resources, utilization of IT resources improves and servers are not left idle unnecessarily. This gives cost benefit to all the players in the value chain. The service providers will incur upfront costs and would spread these costs over a span of time. This is all the more important in the wake of the slowdown in economic activity as companies suffer IT budget cuts. This is all the more relevant with reduced cost driven by less hardware, less floor space from smaller hardware footprint, higher level of automation from fewer administrators and lower power consumption.

Users can choose the specifications of computing resources to be used by them. This increases flexibility and simplifies the deployment model. Cloud computing will enable transferring some or all of support obligations; eliminate licensing risk and version compatibility.

Cloud computing would allow leveraging the proven data centers and IT infrastructure of the service providers leading to greater reliability. The redundancy built in the IT infrastructure of these service providers will result in decline of the threat of outages.

Due to cloud computing, companies can increase or decrease hardware and software according to customer needs thereby enhancing scalability. Systems managed by SLAs should equate to fewer breaches.

Challenges: In the cloud computing world, data is managed by cloud computing service providers. This could lead to loss of control of personal information.

A major risk of cloud computing is the possibility of getting locked-in to a vendor. Users of a software application could find it tough to switch providers due to familiarity of the service or non-availability of the application elsewhere. Social networks and other web 2.0 services could create hassles for users to retrieve their data creating a lock-in.

Using the cloud means total opacity regarding data location. The users have a little idea of where the data is hosted. This could create security issues as users cannot mandate the service providers to abide by local security and compliance regulations. The service level agreements (SLAs) will have to be defined differently. Ideally this should include mention of planned and unplanned unavailability of service and penalties associated.



Cloud Computing Issues

For Cloud Computing Customer

- Defining standard requirements for cloud service providers
- Defining minimum design, development and performance standards for service
- Develop a cloud aware IT and security infrastructure and architecture
- Establishing a role based user identity service to manage users on the internet, trusted infrastructure
- Regular risk assessment of cloud computing environments
- Educate users about the risks of working in the cloud
- Aligning services with the business requirements
- Cost benefit analysis of the services
- Alternate plans for service interruption
- Infrastructure level compatibility with cloud services
- Loss of control of business information
- Defining and implementing Security policies & standards
- Protect Intellectual Property
- Transfer of regulatory obligations
- Use of untried technology
- Migration & Termination
- Conducting due diligence of service providers prior to service purchase
- Tax and Regulatory issues in terms of characterization of cloud computing transaction, transfer pricing issues, inbound and outbound tax consideration, local taxes etc.

For Cloud Computing Service Provider

- Providers of SaaS and PaaS have to implement best practice malware monitoring and protection solutions
- Compliance with current industry best practices and certifications
- Incidence response reporting including remediation arrangements
- Assess performance against agreed KPIs and take corrective actions when necessary
- Regular audit of systems and infrastructure
- Set minimum design, development, operational and performance standards for service
- Timing of revenue recognition based on various revenue models
- Cost for set up / implementation and amortization thereof.

Source: *Security Implications of Cloud Computing June 2009, Information Security Forum*

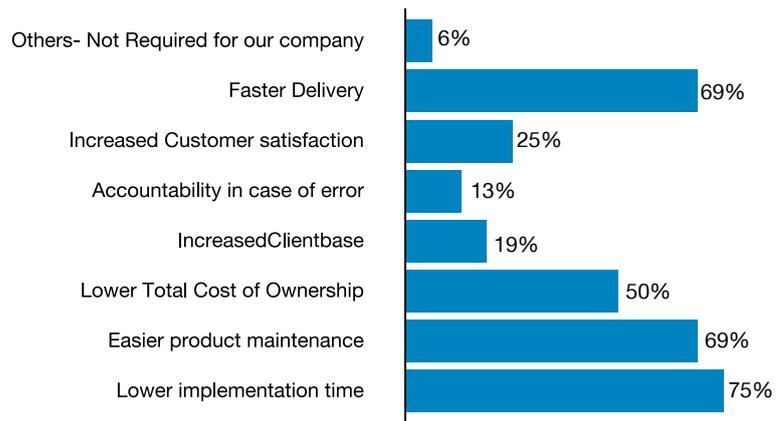
Box 5.2.1: CII-PwC IT/ITeS Survey

56% of clients surveyed would be open to the concept of cloud computing primarily for its advantages like Lower Implementation time (75%), Easier Product Maintenance and Faster Delivery (each 69%). However, scepticism also abounds on account of Data security concerns (78%), increased response time and Accountability in case of error (each at 56%). Refer Figure 5.2.1

On the other hand, about 60% of the service providers are open to using Cloud Computing.

This shows that though there is awareness both at client end as well as provider end on the importance of cloud computing, there are critical issues that need to be resolved before this can be considered an industry DNA.

Figure 5.2.1: Reasons for Adopting Cloud Computing (Clients)



Source: CII-PwC IT/ITeS Survey



6.0 Geographical Scenario and Trends

A 100 million English speaking demographic was one of the key reasons why it was initially easy for Indian companies to align themselves with businesses in US and UK. However, with the pipeline slowing down, we see the emergence of new growing markets across Continental Europe, Latin America and the Asia Pacific poised to fuel the growth into the coming years. Europe, the Middle East, and Africa (EMEA) are expected to reach 35.8% of the worldwide offshore IT services market in 2013. At the same time, we see the domestic market in India opening up with the government push substantially for better governance through increased transparency and speed of operations. With increasing competition, homegrown industries are scrambling to keep up with the external entrants through systems automation and process re-engineering, giving the Indian IT/ITeS industry a greater geographical spread to target. This trend towards a broader geographic market exposure is positive for the industry, not only as a de-risking measure but also as a means of accelerating growth.

Box 6.0.1: CII-PwC IT/ITeS Survey

US and UK are still considered attractive markets for expanding into as we see significant 71% of service providers keen to expand or plan to enter US/UK market. Eastern Europe is also an attractive destination as evidenced by around 57% of the service providers planning to tap the market in the near future.

The interesting aspect is that we see the smaller players more excited about US and UK while the bigger players prefer Eastern European countries as attractive markets to target. This signifies that there might be an impact owing to the recent protectionist measures announced by these countries which see a drying up of big ticket projects that would traditionally be targeted by the big service providers. At the same time, there still seem to be plenty of value at the bottom of the pyramid for the smaller players to target and grow.

On the delivery front, we observe several emerging countries — where wages are low, competencies are high, and foreign investment is encouraged — that are making increasingly sophisticated efforts to enter the market and take a share of this fast-growing industry. Other developing countries with a significantly underutilized university-educated population are trying to replicate what India has done by providing incentives to attract outsourcing business. China, for example, has designated 20 cities as outsourcing hubs to attract more international investment and has provided them with tax breaks, labor hour systems, and employment subsidies. Similarly, the Philippine government has declared outsourcing a priority industry and has implemented policies (e.g., formation of economic zones and income-tax holidays) to boost foreign investment.

The increase in government intervention with private sector industries, such as finance and manufacturing, coupled with rapidly increasing unemployment, particularly in the United States, is heightening citizen reaction to the use of offshore resources as undermining employment opportunities. The impacts of these events are moving governments to consider greater levels of protectionism in Europe and the United States. Hence we see on-shoring / near-shoring gaining momentum among companies currently offshoring and those considering it. Media reports point to a substantial number of companies making changes or planning to bring their offshoring closer to their home country.

The emergence of new service providers in on-shore / near-shore locations and the toll of time zone differences and geographical distance in offshoring are also likely to have influenced this trend. Incumbent service providers are under pressure to establish delivery centers in multiple locations in order to serve an increasing demand for on-shore / near-shore locations. However, this introduces the challenge of managing increasing operating costs.

6.1 Emerging Overseas Markets

The five-year CAGR (from 2008 to 2013) for the offshore IT services market will be lowest in the United States, increasing at just 4.0%, with EMEA growing at 8.8% over this same period of time. Canada and Asia/Pacific will be growing the fastest over this five-year period at 16.5% and 19.0%, respectively. While the United States continues to compose about 65% of the market over the forecast period, EMEA is expected to grow to 35.8% of the global total in 2013. Due to the economic slowdown in the United States, many offshore providers have increased their strategic focus on EMEA in a bid to shift their mix of customers to include a greater percentage of European companies.

Table 6.1.1: Global Offshore IT Service Spending by Importing Region

Worldwide Offshore IT Services Spending by Importing Region, 2008-2013 (\$M)							
	2008	2009	2010	2011	2012	2013	2008-13 CAGR (%)
US	20,125.0	19,918.0	20,439.1	21,379.6	22,677.8	24,429.3	4.0
Canada	375.0	462.2	518.8	590.4	687.7	804.6	16.5
EMEA	9,818.3	10,362.6	11,130.1	12,179.1	13,426.8	14,978.9	8.8
Asia Pacific	687.0	766.0	910.0	1,112.0	1,351.2	1,640.8	19.0
Total	31,005.3	31,508.8	32,998.0	35,261.1	38,143.5	41,853.6	6.2

Source: IDC - Worldwide and U.S. Offshore IT Services 2009
 – 2013 Forecast: A Transforming World

The five-year CAGR, ending in 2013, for the offshore IT services market in Asia/Pacific (including Japan) is 19.0%. The market is expected to grow from \$687 million in 2008 to \$1.64 billion by 2013. Over the five-year forecast period, application outsourcing represents the fastest-growing offshore IT service from 2008–2013, with a five-year CAGR of 23.4%.

Unlike the United States and EMEA, where application-related services represent the largest single block of offshore IT spending, Asia/Pacific leans more heavily toward offshore systems and infrastructure services, with systems integration and infrastructure outsourcing representing a combined 49.2%. Even by 2013, this combined percentage is expected to shrink to just 46.1%. However it is likely that language issues may make it more difficult and costly for Asia/Pacific to outsource application work.

Table 6.1.2: Global BPO Spending by Region

Worldwide BPO Services Spending by Region, 2008-2013 (\$M)							
	2008	2009	2010	2011	2012	2013	2008-13 CAGR (%)
Americas	69,998.8	73,762.9	79,953.2	87,378.6	96,349.2	105,358.5	8.5
EMEA	21,894.3	23,640.0	25,848.0	28,302.3	30,960.2	33,789.9	9.1
Asia/Pacific	19,489.5	21,544.7	23,870.8	26,502.0	29,384.9	32,630.6	10.9
Worldwide	111,382.7	118,947.6	129,672.0	142,182.9	156,694.4	171,779.0	9.1
Growth	9.1	6.8	9.0	9.6	10.2	9.6	

Source: IDC Worldwide and U.S. Business Process Outsourcing Services 2009-2013 Forecast

The worldwide BPO spending forecast for 2013 will increase to US\$171.8 billion at a five-year CAGR of 9.1%. The Americas continue to dominate the BPO spending landscape and is projected to spend US\$105.4 billion in 2013 at a CAGR of 8.5%. This represents approximately 61.3% of worldwide BPO spending. The overall EMEA region will contribute 19.7% of global BPO spend in 2013 representing a market value of US\$33.8 billion at a CAGR of 9.1%. The Asia/Pacific market will grow at a CAGR of 10.9% and will represent 19% of global BPO spends. The Asia/Pacific region continues to lead in growth over the other regions.

Smaller Emerging Markets are The “Little Engines that could” – The formation and recognition of the G-20 underscores that countries other than the G7 and BRIC are major players in world economic and financial affairs. Here are a few other reasons to pay closer attention to them:

- **The Next-11 (N-11) and others will provide growth opportunities.** With the BRIC story well known and the opportunities well priced, economists at Goldman Sachs have now identified the Next-11 (N-11). Of them, four have the potential in terms of population and conditions necessary to rival the current major economies and the BRIC countries – Korea, Mexico, Turkey, and Vietnam.
- **Internet penetration will be a catalyst for technology spending.** Some of the largest growth rates in Internet use are in non-BRIC emerging markets. For example, Vietnam, with more than 20 million Internet users, has experienced 10,000% growth from 2000 to 2008, and, with only 24% of its population connected today, there is room still for growth. Turkey, with almost 30 million Internet users, also registered impressive growth of more than 1,000% over the same period, yet it only has 37% of its population online today. More people online creates demand for more infrastructure and related services.

However, this means that Indian companies can no longer rely purely on the English speaking demographic to fuel the growth engine. In order to access the emerging BRIC and European countries, Indian companies need to up their investment in intensifying multi-cultural orientation and focus on developing new language competencies.

6.2 Tapping the Domestic Market – Government Intervention

The largest opportunity in the domestic market would be in the area of hardware and access to internet. While the internet penetration levels are at nearly 17% of the population, ownership of computers is still restricted to 2% of the population. Even a target of 50 % penetration would require an additional 5,00,000 computers. Governments at central and state levels in India have initiated policies to prepare the domestic market for consumption of IT/ITeS services. The National E-Governance Plan alongside several other initiatives will be instrumental in raising the pace of domestic IT growth. Actions planned by the government in order to enhance the support infrastructure include:

- Strengthening of the intra-city road network and public transport infrastructure to decongest existing hubs.
- Decentralization of the industry beyond existing hubs by developing new townships
- Introduction of faster public transport (high speed trains similar to Train à Grande Vitesse of France and Bullet of Japan) between important cities.

The government had mandated all the ministries to formulate a plan scheme with an outlay of about 2% of the total Plan outlay in the field of Information technology in order to give a boost to e-governance. Some key government initiatives to bring IT/ITeS closer to the masses and increase penetration in the rural market include:

- **Setting up a National e-Governance Plan (NeGP):** The NeGP unveiled by the government covers 27 Mission Mode Projects (MMPs) and 8 support components which are to be implemented at Central, State, and local government levels, at an estimated cost of Rs 23000 crore.
- **State Wide Area Networks (SWANs):** The scheme envisages establishment of SWANs across the country in all 29 States and 6 Union Territories from State headquarters up to the block level with a minimum bandwidth capacity of 2 Mbps, at a total cost of Rs 3334 crore.
- **Community Information Centres (CICs):** CICs numbering 487 in the North Eastern States, 135 in Jammu and Kashmir, 41 in Andaman & Nicobar Islands, and 30 in Lakshadweep Islands have been established and are providing e-governance services and training to the local populace effectively.
- **Common Service Centres (CSCs):** The scheme envisages establishment of more than 100000 CSCs across the country at a total cost of Rs 5742 crore. The CSCs will be established in a honeycomb pattern covering all the 600000 villages in the country for delivery of content and services such as e-governance, education, entertainment, telemedicine, agriculture, etc.
- **Accelerated Power Development and Reforms Programme (APDRP):** Different state governments are set to spend around Rs. 2,000 crore as part of the initiative.
- **Financial Inclusion push** by RBI and linking up the Regional Rural Banks (RRBs)

6.2.1 Growth Drivers in the Domestic Market

The BFSI, Government, Telecom and Manufacturing sectors are the key verticals driving growth in the IT service segment in the domestic market. They accounted for 34%, 29%, 11% and 8% respectively in 2008-09.

- According to CRISIL estimates the Government contribution is likely to expand to 35% becoming the top vertical of domestic IT service revenues by 2013-14. This can be attributed to increased use of IT for e-governance projects and defence.
- The share of BFSI is projected to come down to 30% by 2013. Nonetheless, IT spends will remain significant on account of greater emphasis on financial inclusion measures, expansion of ATM and bank branches along with growth of internet banking services.
- Telecom and Manufacturing are likely to see their shares fall marginally to 10% and 6% respectively.
- Retail, healthcare and education are some of the emerging sectors with IT adoption likely to increase as they become more organized.

With around 650,000 villages comprising close to 60% of the total population, the Indian Rural Market forms one of the largest potential markets in the world today. With rising demand for consumer products, healthcare, telecom, insurance, banking and micro-finance, we see immense opportunities for the IT/ITeS sector as an enabler for these services through supply chain automation, micro-finance / rural banking related solutions to address inclusive growth, mobile content / interface application development to help agriculture, weather forecasting applications, rural BPO, telemedicine etc.

Box 6.2.1: CII-PwC IT/ITeS Survey

The Urban Domestic market (64%) has emerged as the new hot destination for IT/ITeS service providers. Considering the fact that providers consider the domestic opportunity second only to the developed markets in US and UK, which were the traditional bread providers for the industry, proves that the IT/ITeS industry as a whole is waking up to the immense potential in the domestic space.

On the other hand, considering that about 37% of the End-Users plan to consolidate their IT operations to Indian Tier II and III cities for the sake of Lower Employee cost and Increased proximity to their client base, we might see more providers opening up development centres in these cities for the same reasons.

Box 6.2.2: CII-PwC IT/ITeS Survey

A significant 36% of IT/ITeS service providers plan to tap the rural Indian market. Interestingly, this focus is more from the SMPs than from the big providers. Prime factors that would motivate focus on the rural market would be Availability of Quality Manpower (83%) and the Extent of IT awareness (83%) in the rural market.

At the same time, we also see that the big service providers would be willing to consider the rural market on basis of manpower availability, road and transportation infrastructure and IT awareness. Considering the current scenario, the areas where government can play a critical role to develop the rural sector from the viewpoint of IT/ITeS penetration would be through infrastructure development and enable skill development through increased awareness and education in the rural sector.

Offerings like e-governance (75%) and distance learning / e-learning (67%) are considered to be most suited by service providers to enter the rural market.

6.3 Increasing Low Cost Competition

As one would expect, Eastern Europe, Latin America, and China made their move into the outsourcing space by penetrating areas in which they have developed skills and capability, such as software development and IT services outsourcing. The South East Asian markets have emerged as strong alternatives to India as offshoring options. Australia, Singapore and Hong Kong are ahead of India in terms of broadband penetration and IT infrastructure.

Armed with a notable technology-oriented education system and solid research and development foundation, Eastern European countries are positioned as an attractive IT and software development offshore and near-shore outsourcing destination for many Western European firms. Based on the PwC and Duke ORN 2009 survey findings, Eastern European providers account for 14 percent of software development providers, only slightly behind Western Europe and India-based providers at 17 percent.

Nations like Malaysia and China are emerging with competitive rates. While India would retain the first mover advantage and the cost differential might not be significant enough to force a change of location, it is almost certain that the low-value BPO growth will be hampered by competition. A way out of this would be by moving up the value chain to higher value processes or KPO (Knowledge Process Outsourcing). Product development (R&D) and Intellectual Property Creation can also be considered to avoid competition with low-cost alternatives.

6.3.1 Costs in India – Push Factors for Overseas Delivery Locations

- **Cost of manpower** – The current demographic status indicates that a large percentage (almost 45%) of Indians shall be under 25 in 2015. This pool of manpower, if tapped correctly can sustain the cost advantage.
- **Lack of infrastructure**
 - IT infrastructure is hardly a problem in the main locations in India any more. However, if rural growth is to be focused on in the next wave of Indian IT, infrastructural capabilities will have to be adjusted accordingly.
 - Insufficient physical infrastructure at the major centres has led to overcrowding of these cities. This could lead to a rise in the manpower costs as replacements are not available as easily as before.
- **Security and Intellectual Property protection**
 - While regulations have recently come into effect for both of these issues, completeness of such regulation and adherence will continue to be a challenge.
 - Physical security is also an aspect which must be considered when evaluating security.
- **Education**
 - Education in India is of non-uniform quality with bulk of the skilled resource pool supplied by a few pockets of excellence. The resulting demand for high quality talent has resulted in an ever increasing employee cost that is eroding India's cost advantage and creating a window of opportunity for other low cost competitors
 - Education in India needs to be more industry-oriented.

6.4 Expanding Delivery Network

Incumbent Indian service providers are under pressure to establish delivery centres in multiple locations in order to serve an increasing demand for near-shore location and also to take on competition from other global providers. Setting up an operation in multiple locations helps providers distribute their risk of relying on one major operating location and accommodates their clients' near-shore demand.

- While offshore providers have made investments in local (developed) markets and emerging low cost locations, they will need to make considerable additional investments and a focus on capacity management and utilization, especially for asset-intensive services requiring technology infrastructure, such as contact centre and IT services, to ensure continued and reliable growth in markets that require local investments (e.g., business consulting, infrastructure outsourcing) as well as to mitigate their risks in developed markets by having access to the total market and not just a portion.
- Replicating earlier trends when MNCs would set up captives in India in order to retain greater control on the output and generate revenue by tapping the emerging market in India, Indian players can look at setting up delivery centres in the emerging markets to move closer to both the supply side and demand side.
- Taking advantage of the knowledge orientation of the economy, Indian players have to invest in increasing their portfolio of innovation and knowledge-related offerings in order to lock in sustainable future growth.

From a domestic stand point, the current 5 year plan has seen the Indian government committing to holistic infrastructure development. This would lead to development of Tier II and III cities in India as viable options for expanding the delivery network.

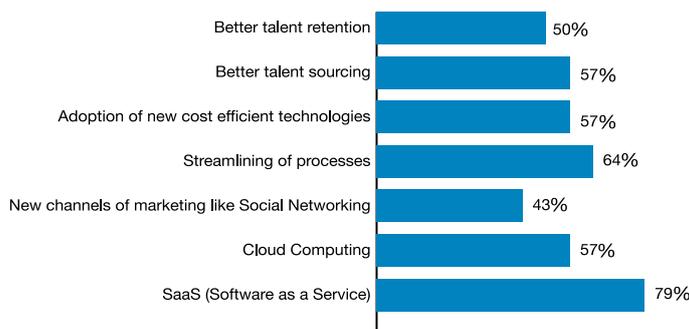
Given the rising cost in the established cities, and the increased interest shown by the government at the national as well as state level to develop the infrastructure in Tier II and III cities, we see a lot of established companies extending their development centres to Tier II and III cities to reduce costs, access manpower and to take advantage of the government support. Considering that many of the country's premier intellectual development institutions are set up in and around these cities, setting up the delivery centres here would, in addition to driving down the costs, also lead to easier access to the top talent of the country and a more holistic economic development. Some prominent upcoming locations are Chandigarh, Mysore, Mangalore, Bhubaneswar, Jaipur, Ahmedabad, Nashik, etc. For example, we see significant developments in North India across both National Capital Region (NCR) as well as satellite cities focussed on making the business environment more attractive for the IT/ITeS sector.

7.0 Evolving Trends

The combination of the current economic events and shift to both traditional and emerging set of utility-based outsourcing service options will require offshore providers to pursue the following to ensure their short- and long-term success. They have to take advantage of the economy and make strategic investments that will enable differentiation and alignment with the market in the future.

- Integrated service offerings including Infrastructure Management and Analytics with strong domain focus
- Provide full array of cost savings options (e.g., labor, technology, new delivery models)
- Diversify geographic and industry targets as well as delivery locations. Invest in local (developed markets) to ensure full access to the market
- Target service areas that bring value, including operational excellence and business flexibility, and emphasize industry specific solutions for specific needs
- Focus on non-linear models like creating IP, Outcome based pricing
- Integrate new delivery models (e.g., software as a service [SaaS] and platform) to ensure competitive differentiation, focusing on SMB and emerging markets
- Explore innovative marketing and sales channels
- Target Niche solutions specific to individual geographies like Islamic Banking for Middle East, Distance English education for China and South East Asia etc.

Figure 7.0.1: Factors perceived as helping service provider competitiveness



Source: CII-PwC IT/ITeS Survey

Box 7.0.1: CII-PwC IT/ITeS Survey

64% of IT service providers believe that streamlining their internal processes is key to enhancing their competitiveness in the market. At the same time, the recently announced government decision to withdraw tax breaks is being seen by the industry as the single biggest threat to growth (27%).

At the same time, the frequent change in regulations (20%) and the weak orientation of the academia with industry requirements (20%) is also perceived as stumbling blocks for the growth.

Across the world, when it comes to utilizing third-party providers for IT services, the key client drivers include:

- **Driving down costs.** Customers are looking to cut costs, and in many cases, do so quickly. The impact of this to providers is the need to provide an array of cost savings vehicles from offshore (Outcome based pricing) to new technologies (e.g., virtualization) and new delivery models (e.g., SaaS, cloud computing, platform-based BPO).
- **Optimizing headcount.** Companies around the world are shedding jobs. The impact for enterprises is the need to find skills and talent. This has become a key driver for procuring services from third parties.
- **Focus on core competencies.** Customers' need to focus on their core competencies has never been greater. The impact of this is leading more customers to sourcing their IT services needs from third-party providers.

The days of standalone services are numbered. End-to-End Offerings would dominate the industry in the years to come. Providing independent Services such as Application Development, Application outsourcing or BPO services might no longer be as attractive. For example, we are seeing increasing instances of IT companies leveraging their rich IT capabilities to offer BPO services by standardizing delivery.

- **The death of the large-scale, pure-play integrator:** Increasingly, customers are looking to procure professional services (e.g., consulting, integration) as part of outsourcing/managed services engagements. In a U.S. survey on application outsourcing services, fielded in February 2009, more than one-third of end users want to procure professional services as part of their application outsourcing engagements. Further, customers want this type of support throughout the life of the deal, which is likely driven by the constant need for change.
- **Need to offer IT and business process services:** As highlighted in a recent end-user study on BPO in the U.S. market, customers increasingly look toward technology-led BPO firms to support them in key areas of cost optimization, integration of IT and business process, transformation to new technologies
- **Increasing shift to outsourcing/managed services and newer models of delivery:** The key message is that the direction of adoption is increasingly focused on the convergence of these two markets in the form of utility-based services (e.g., SaaS, cloud/utility computing, platform-based BPO). It is this trajectory for which offshore providers that compete in the "traditional" IT services markets need to prepare. This will require making significant changes to their business models, though this will apply to all traditional IT and business process services providers.

Box 7.0.2: CII-PwC IT/ITeS Survey

Integrated Offerings / End to end solutions is perceived to be the key factor, for growth of the industry, by both Providers (67%) and End-Users (89%). IT Service providers believe that with Integrated Offerings / End to end solutions they can charge a premium and similarly the end-users consider it as a critical factor while selecting the service provider.

Both Providers (93%) and End-Users (89%) agree that Integrated Offerings / End to End solutions is the key factor that would help growth of Indian IT / ITeS industry and also serve as the key selling point for the providers.

IT Service providers consider that Developing Unique IP (73%), Integrated Offerings / End to end solutions (67%) and their Past credentials (67%) would help them charge a premium on their products/services.

On the other hand, we see clients planning considerable increase in the investment in areas like System Integration (89%) and Infrastructural Management (67%). This is closely followed by Packaged Applications (48%) Application Development (41%) and Maintenance (37%).

Interestingly, we see the large companies planning on investment increases across the board as compared with their smaller counterparts who are more focussed on System Integration, Infrastructure Management and Packaged Applications.

This is a significant indication of growth in the economy post the recent turbulence. Also the focus on System Integration shows that companies, irrespective of size, are focussing more on optimizing costs through internal consolidation.

7.1 High Growth Areas

With regards to IT services, the fastest-growing markets are application outsourcing (AO) and infrastructure outsourcing, with five-year CAGRs (2008–2013) of 11.1% and 15.5%, respectively. This is partially because of its relatively smaller base and the growth in more robust outsourcing engagements with offshore players, particularly under current market dynamics. Conversely, custom application development weighs in with the smallest five-year CAGR of 2.3% over this same period, due in part to its large and mature size and the fact that customers are shying away from pursuing custom application development as a result of the economic downturn.

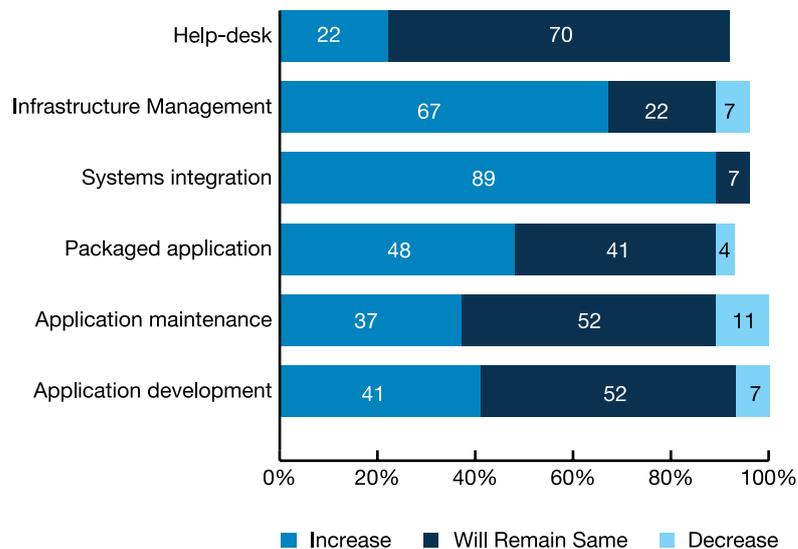
IT consulting represents a fairly stable share of the worldwide offshore IT services market. However, discrete, standalone IT consulting will experience slower growth because this consultative approach will be rolled up into bigger and longer-term contracts such as infrastructure or application outsourcing engagements. This dynamic also accounts for the growing share of infrastructure and application outsourcing engagements over the forecast period. In addition, the focus on transformation gives customers the opportunity to improve and streamline their IT environment over a longer-term period of time, while it is being managed by an offshore provider, rather than making a large capital investment up front.

Box 7.1.1: CII-PwC IT/ITeS Survey

Around 67% of the clients in India plan to increase their investment in the area of Remote Infrastructure Management (RIM) in the next year which is very much in line with the Providers' perception (73%) of Emerging services like Remote Infrastructure Management being a growth engine for the Indian IT/ITeS industry into the future.

However, with 60% of clients perceiving that the brand of the organization is a critical consideration for their choice of a service provider in this space, this might not necessarily be an area that should be considered by SMPs when they look to expand their basket of offerings.

Figure 7.1.1: Indian Client Spending Patterns in the Coming Years (CII-PwC IT/ITeS Survey)



Source: CII-PwC IT/ITeS Survey

Note : The totals do not add up to 100 for all the segments because all attributes were not equally applicable to all respondents

Table 7.1.1: Global Offshore IT Service Spending by Offerings

Worldwide Offshore IT Services Spending by Foundation Market, 2008-2013 (\$M)							
	2008	2009	2010	2011	2012	2013	2008-13 CAGR (%)
Application Outsourcing	4,770.6	5,145.8	5,631.3	6,267.3	7,054.3	8,069.3	11.1
Custom Application Development	8,138.5	7,977.5	8,084.4	8,342.5	8,691.5	9,136.4	2.3
IT Consulting	1,404.0	1,353.5	1,402.1	1,473.6	1,572.5	1,695.9	3.9
Infrastructure Outsourcing	2,169.7	2,410.3	2,725.0	3,157.4	3,694.1	4,452.7	15.5
Systems Integration	6,430.1	6,332.2	6,588.0	7,064.1	7,678.4	8,431.1	5.6
Other	8,092.4	8,289.5	8,567.2	8,956.3	9,452.8	10,068.2	4.5
Total	31,005.3	31,508.8	32,998.0	35,261.2	38,143.6	41,853.6	6.2

Source: IDC - Worldwide and U.S. Offshore IT Services 2009 – 2013 Forecast: A Transforming World

Table 7.1.2 highlights the worldwide BPO spending forecast, which for 2013 will increase to US\$ 171.7 billion at a five-year CAGR of 9.1%. Customer Care continues to dominate the BPO spending with a projected spend of US\$92 billion at a five year CAGR of 9.3%. This contributes to 53.6% of the total BPO spend. However, Procurement services leads in growth (16%) compared to the other key horizontal services.

Table 7.1.2: Global BPO Service Spending by Business Functions

Worldwide BPO Services Spending by Business Functions, 2008-2013 (\$M)							
	2008	2009	2010	2011	2012	2013	2008-13 CAGR (%)
Key Horizontal Services							
Customer Care	58,983.6	62,766.8	68,635.3	75,379.4	83,650.6	92,051.4	9.3
Finance and Accounting	25,208.3	27,369.0	29,863.4	32,720.8	35,894.9	39,442.6	9.4
Human Resources	17,696.6	18,896.1	20,388.8	22,303.4	24,423.9	26,571.4	8.5
Procurement	2,112.3	2,471.8	2,891.0	3,349.1	3,852.4	4,429.9	16.0
Sub-Total	104,000.8	111,503.7	121,778.4	133,752.8	147,821.88	162,495.3	9.3
Other							
Training	7,381.9	7,443.9	7,893.6	8,430.2	8,872.5	9,283.7	4.7
Total	111,382.7	118,947.6	129,672.0	142,182.9	156,694.4	171,779.0	9.1

Source: IDC Worldwide and U.S. Business Process Outsourcing Services 2009-2013 Forecast

7.2 Outcome Based Pricing

The two prominent delivery models in use today are the Fixed Price Model and T&M. Both these models suffer from the common drawback that in each case, the risks are unequally divided between the providers and the clients. Also given the high employee turnover that is characteristic of the IT/ITeS industry, we see the client delivery team frequently changing rarely giving the client a chance to get a comfort feel out of the service provider team. Hence we are increasingly seeing scenarios today where the clients insist on an in-house support training component with the project contract. Given the rising inflation coupled with the fact that the incremental benefits of individual innovation is not being harnessed sufficiently, the margin increments in these models comes at a high operating cost that further erodes the competitive nature of the organization. The way forward would be to build non-linear capability that would allow maximum returns by minimizing overheads.

An alternative non-linear model that can be used is an Outcome Based Pricing Model that seeks a partnership between the customer and provider in which both parties align their objectives and work with a shared vision and a shared risk-reward structure. This is done by ensuring pricing and penalties based on milestone outcomes achieved. In short this would be a combination of the Fixed Price and T&M models where both sets of stakeholders would have a proportional share in the success of the enterprise. At the same time, this would also allow providers with greater freedom to decide on optimal delivery mechanisms while opening up collaboration channels with clients for innovation and deeper engagements.

Outcome Based Pricing (OBP) allows providers to sell the “business value” of the project for the customer and take the responsibility for the delivery while clients can get a better surety on the success of the venture. Hence, if well managed, this model can also effectively cut down on the competition trying to reach out to the client. After having said that, Outcome Based Pricing in software development is a difficult paradigm to overcome and represents significant challenge and risk.

There are numerous variables that influence the outcome of a software/operations service. It would be disastrous to commit to an OBP model without understanding how these variables will play on the quality of the service delivered. The key step in ensuring a successful OBP strategy would be to clearly define the outcome. This has to be done in consultation with clients ensuring clearly defined accountabilities and milestones. The critical factor, in setting the initial scope, is a deep appreciation of the client’s business model, operations and industry nuances. In the absence of this clear initial definition, scope creep comes across as a major stumbling block.

Another key factor to note is the method of calculation of penalties, rewards and pricing variables. All formulae, variables, reports, data that will be used to compute these parameters on an on-going basis must be thoroughly discussed and documented prior to signing the contract. Otherwise, even minor “data interpretation and definition” issues can derail these calculations. Moreover, during the course of execution of any project, there will be external developments like change in leadership, change in teams, regulatory changes etc. that could substantially impact the engagement. Hence both parties need to involve experts to analyze these variables and arrive at a weight-based system to calculate pricing/penalties, during the contract negotiation stage. The aim being to maximize clarity of outcome by limiting the influence of external variables to the extent possible. Higher the unhandled external variables, lower would be the possibility of success.

Significant considerations that must be taken into account before considering OBP are:

- The OBP model would generally be used for risky and high pressure endeavors whose success is critical for the client. Providers need to take this into account before entering into any agreements.
- With the contractual structure for such services still not evolved enough to cover all possible eventualities and given the high stakes involved, the nature and chances of disputes are high.
- Clearly demarcated control parameters need to be set up along with support requirements in terms of speedier decisions from clients, etc.
- Regularly making the best project / programme managers available to be engaged in such projects can often be a challenge.
- For service providers, a good qualification criterion needs to be in place to give clients the confidence in the success of the outcome.

During the pre OBP negotiation stage, the following aspects should be kept in mind:

- Extreme caution and care should be taken when penning down the Service Level Agreements (SLA) in these projects. Making sure that the expectations are set clearly and both the parties are on the same page is essential.
- Frequent communication both email and oral is essential. Whatever is discussed orally should be written down and confirmation should be obtained from the other party.
- Also all the parties involved in the project should be aware of the agreement signed upon and requirements defined.
- Objective Third Party Review Mechanisms should be set up in order to ensure objective monitoring of milestone outcomes and mitigate disputes

And finally during the scope of an OBP project, care should be taken to ensure that:

- There should be a high level of trust between the clients and providers with regard to the capabilities of both sides and the interest in the ultimate success of the project. Both parties should be focused on the overall outcome / milestones and trust the other side to get their job done in the best manner possible
- Scoping issues are managed especially when multiple service providers are involved. For example, the application development service provider may have done its bit to help the buyer achieve the outcome but the infrastructure service provider may not have, because of which desired result is not achieved. It would be challenging for buyers to handle such situations from a time and success perspective.
- Service providers are not too accustomed with large projects turning 'red' while clients are desperate for the success of the project. The resulting high pressure and focus both ends might lead to serious conflicts which should be sensitively managed.
- With so many stakeholders, and contractors too involved, at times sharing the reward / distributing the penalties at the service provider's end can become a challenge. This has to be handled sensitively.

Box 7.2.1: CII-PwC IT/ITeS Survey

A significant 59% of the clients are not in favour of OBP while around 47% of service providers are open to engage with clients on an OBP model.

Interesting we also see that the larger clients and service providers (turnover >INR 500cr) are more resistant to move to an OBP model than their smaller counterparts. We infer that this could be because of the high switching costs both in terms of effort as well as mindset that might be the reason for this. Also OBP involves the adoption of a different company culture than that already in place and for larger organizations whose cultural context has been set over the years, this change might be difficult.

Also the overall results show that smaller service providers are hungry for business and willing to walk that extra mile to engage with the clients as compared to their larger counterparts. Also, the market still seems to be loaded in favour of clients with Providers seeming to be little more open to adopting Outcome Base Pricing (47%) compared to the End-users (33%). However, the End-Users expect around 33% of the IT spend to be from Outcome based pricing and the Providers expect around 22% of their revenues to be from Outcome base pricing in the next couple of years. Hence though OBP is being recognized as a tangible reality, there is still a long way to go before it is accepted. This could also be indicative of the fact that clients would still like to keep their options open with regard to service providers.

7.3 Creating High Value Intellectual Property (IP)

In the past, most of the Indian software activity was at the entry level in the value chain of the global industry's business. Programming at a client's workplace with on-site delivery required technically educated people, but it did not result in the creation of much new knowledge or a paradigm shift in the operating model. It was not advanced software development. The basis for competing was low-wage skilled workers who produced software services at lower cost and equal or better quality than US firms did.

With a view to facilitate the creation of IP, the government of India set up the Indian Patent Office to administer the law concerning protection of inventions in the country by way of grant of limited monopoly to the inventors or their assignees or legal successors. The Patent Office is currently functioning from its four branches located at Kolkata, Chennai, Mumbai & Delhi. Kolkata Office is the Head Office. The Patents Act, 1970(as amended) governs the grant of patents. Some key milestones that India has achieved on Intellectual Property Rights (IPRs) are:

- Online filing of the Patent applications introduced on 20th July 2007
- The first phase of the modernization project entrusted to NIC completed successfully under which the various modules have been developed in order to help in processing the patent applications electronically and also to simplify the procedures.
- WIPO declared Indian Patent Office as International Searching Authority (ISA) as well as International Preliminary Examining Authority (IPEA) and provided a time of one year to start functioning.
- A record number of patents (15261) granted during 2007-08 as compared to previous years.
- A number of patent examiners sent for training in the European Patent Office, United States Patents and Trademarks Office and Japan Patent Office. Apart from this, some senior officers went abroad to conduct research studies in the field of intellectual property.

The results have been encouraging so far:

- 35,218 applications for patents filed in 2007-2008 as compared to 28,940 applications in 2006-2007 representing an increase of about 22 % in the filing. The number of applications for patents which originated in India were 6,040 contributing approximately 17% of the total number of applications filed during the year.
- Out of the applications, which originated in India, Maharashtra accounted for the maximum number, followed by Karnataka, Delhi, Andhra Pradesh, West Bengal and Gujarat.
- 15,261 patents granted during the year out of which 3,173 were granted to Indians.
- 29,688 Patents in force as on 31st March 2008. Of these 7,966 patents are from Indians.
- 2,052 grants awarded to applications related to Computer/Electronics industry

These trends point to the fact that albeit slowly, the Indian industry is surely moving towards a culture of creating home-grown IP which can definitely justify premiums in the market going forward. However, we also see that the big Indian IT/ITeS players spend much lower on R&D when compared to benchmarks set by global behemoths like Microsoft (13.5 % of sales), Oracle (11.9% of sales), Adobe (18.5% of sales), SAP (14.1% of sales) etc.

Though it can be argued that the global players mentioned above are predominantly product companies, we need to come to terms with the fact that the transition and maintenance model are not as profitable as they used to be. Having established benchmarks of excellence, the evolved models of delivery can be used as engines for home-grown IP. By marrying India's cost arbitrage with value generation, we should move towards a "Value Arbitrage Revolution", possibly on lines of other economic paradigm change agents like the "Green Revolution", "Operation Flood" and "IT Revolution".

Box 7.3.1: CII-PwC IT/ITeS Survey

Over 87% of Indian IT/ITeS service providers feel that Intellectual Property Development is critical for the sustainable growth of the industry into the future.



7.4 Branding and Differentiation

Statistics presented at the 2009 NASSCOM event showed that the revenue per person of the Indian IT industry had remained constant over the past four or five years. One of the primary reasons for this has been the inability on part of the Indian IT/ITeS service providers to command a sustainable premium amidst perceptions of commoditization.

Box 7.4.1: CII-PwC IT/ITeS Survey

Clients have found the “Brand of the service provider” to be of utmost importance in the areas of Package Implementation (67%) and Infrastructure Management (60%). Smaller client companies seem to consider the importance of Brand in the area of Application Maintenance (62%) as well.

Interestingly a majority (58%) of smaller provider companies find that branding drives the premium, while only 33% of larger players find this to be the case. Hence clearly a strong brand is an aspirational attribute till a critical mass is reached after which, it ceases to add any specific advantage from the client’s point of view.

Box 7.4.2: CII-PwC IT/ITeS Survey

Around 90% of the clients plan to go in for Green IT primarily to reduce costs (74%) and improve productivity (63%). Also 67% of the clients see this as a regulatory requirement that needs to be complied with.

Interestingly, we see that the larger clients are more concerned with Green IT than their smaller counterparts. Also, we see that over 60% of smaller companies see Green IT as a differentiator that would help enhance their reputation and brand value.

Though we do have the offshore providers, particularly the larger players moving up the value chain of IT services from basic technical support to systems integration and outsourcing, the term offshore still drives the perception of using low-cost, labor-based resources. It is this perception which still is likely limiting offshore providers from gaining top-level recognition as front runners in IT services. As long as this scenario continues, we will have predominantly buyer driven markets where competition among companies with skilled resources doing work at increasingly lower costs would lead to a price war that would be unsustainable in the long run.



8.0 Key Insights

1. **Favourable outlook:** The growth rates of global GDP and India's net software earnings have been observed to move in sync with each other. The recent upward revisions to global growth for 2010, including the significant improvements in the growth forecast of the advanced economies (US, UK and the Euro Area) along with the favourable GDP outlook for the Indian economy are likely to strengthen the growth prospects of the Indian IT sector, benefiting both export and domestic revenues.
2. **Small is Large:** The Small and Medium players will continue to be an integral part of the IT/ITeS growth story. They will emerge as winners if they focus on the right markets, develop niche offerings, increase operational efficiencies, tap appropriate capital and improve talent management.
3. **Harvesting the Cloud:** Though adoption of cloud computing involves dealing with fundamental changes in the traditional business operation and outlook, this model has the potential to improve agility while streamlining costs through centralization of resources and multi-tenancy. This would be a boon for companies looking to expand their delivery reach and scalability while maximizing their operational economy.
4. **Emerging Consumption centres:** While momentum has to be maintained with innovation and climbing up the value chain to grow the large markets of US and UK and protect them from growing competition, Indian providers have to make investments to tap emerging overseas consuming territories like China and Latin America. The Indian domestic market is poised to be a significant growth driver, in addition to delivery capacities, providers should also invest in sales and account management structures for the India geography.
5. **Shifting centres of Delivery:** It is becoming imperative for Indian providers to expand their delivery presence beyond India. While some of them have started making investments, we believe this process has to accelerate accompanied by intake of local human capital. This would enable them to ramp up to speed and establish a presence across both the demand as well as the supply end of the business thus increasing client proximity while mitigating risks
6. **Thought Innovation:** The need for creation of high value IP to sustain growth is no longer a luxury. Having established the global benchmarks, the delivery engine should now be the channel to bring Indian IP to the clients
7. **Partnering with Clients:** Service Providers need to align themselves with client and market requirements and become one-stop Solution Providers for their clientele. For this purpose, they would increasingly need to use non-linear models (OBP) and services (SaaS) to maximize returns on investment
8. **Green Apple Strategy:** Indian IT/ITeS service providers need to differentiate themselves from the pack. The focus should be to avoid being perceived as a commodity services provider through a combination of niche markets and services and differentiated branding and marketing. The explosion in social networking also gives a great platform to reach out to prospective clients and employees.

Pradyumna Sahu,
Associate Director - Technology Sector,
PricewaterhouseCoopers

Premraj Pillai,
Manager - Markets and Industries,
PricewaterhouseCoopers

References

1. 2009 ORN Service Provider Survey Report by PwC and Duke University
2. Presentation on IT by Indian Brand Equity Foundation
3. Information Technology – Annual Report 2008-09. GoI – Ministry of Communications and Information Technology – Department of Technology
4. India Information Technology report – Q4 – 2009: BMI
5. World Economic Outlook (Apr'09, Jul'09, Oct'09) – International Monetary Fund
6. Macroeconomic and Monetary Developments Second Quarter Review 2009-10 – Reserve Bank of India Publications, Mumbai
7. Second Quarter Review of Monetary Policy 2009 -10 – Reserve Bank of India Publications, Mumbai
8. Press Releases on Index of Industrial Production – Ministry of Statistics and Programme Implementation, Government of India
9. Press Releases on National Accounts – Ministry of Statistics and Programme Implementation, Government of India
10. NASDAQ -100 Technology Sector Index Data – NASDAQ Market Indices
11. CNX- IT Sector Index – NSE Market Indices
12. IT Services Update – Crisil Research November 2009
13. IT Services Annual Review – Crisil Research July 2009
14. Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE) Database
15. Indian High Tech needs to get with IT – Business Week Online (4/15/2009)
16. Impact Evaluation studies on STPI scheme in Tier 2 and Tier 3 cities (other than metros) – Frost & Sullivan
17. Small Scale Industry and Technology in India – Hans-Peter Brunner
18. IDC Report on Worldwide and US Business Process Outsourcing Services 2009-2013 Forecast.
19. Worldwide and U.S. Offshore IT Services 2009–2013 Forecast: A Transforming World – IDC
20. The State of Development Of The IT Services Global Delivery Model(Forrester, 2007)
21. Eleventh 5-Year Plan 2007-12, Vol III – Planning Commission, Govt. Of India
22. 36th Annual Report Relating to Patents under Section 155 of the Patents Act 1970 (as amended) – Office of Controller General of Patents, Designs and Trade Marks including GIR and PIS/NIIPM (IPTI)
23. Global Services Location Index – AT Kearney
24. Top 50 Emerging Global Outsourcing Cities – Study by Tholons
25. Security Implications of Cloud Computing June 2009 – Information Security Forum
26. Newspaper quotes and Public data sources

About Confederation of Indian Industry (CII)

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the growth of industry in India, partnering industry and government alike through advisory and consultative processes.

CII is a non-government, not-for-profit, industry led and industry managed organisation, playing a proactive role in India's development process. Founded over 115 years ago, it is India's premier business association, with a direct membership of over 7800 organisations from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 90,000 companies from around 385 national and regional sectoral associations.

CII catalyses change by working closely with government on policy issues, enhancing efficiency, competitiveness and expanding business opportunities for industry through a range of specialised services and global linkages. It also provides a platform for sectoral consensus building and networking. Major emphasis is laid on projecting a positive image of business, assisting industry to identify and execute corporate citizenship programmes. Partnerships with over 120 NGOs across the country carry forward our initiatives in integrated and inclusive development, which include health, education, livelihood, diversity management, skill development and water, to name a few.

Complementing this vision, CII's theme for 2009-10 is 'India@75: Economy, Infrastructure and Governance.' Within the overarching agenda to facilitate India's transformation into an economically vital, technologically innovative, socially and ethically vibrant global leader by year 2022, CII's focus this year is on revival of the Economy, fast tracking Infrastructure and improved Governance.

With 65 offices in India, 9 overseas in Australia, Austria, China, France, Germany, Japan, Singapore, UK, and USA, and institutional partnerships with 221 counterpart organisations in 90 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

Northern Region
Block 3, Dakshin Marg
Sector 31 A, Chandigarh
Tel. : 0172-5083099, 6510188
Fax : 0172-2606259, 2614974
Email : chairman.specialevents@cii.in
Website: www.cii.in

*Reach us via our Membership Helpline: 00-91-11-435 46244 / 00-91-99104 46244
CII Helpline Toll free No: 1800-103-1244*

About PricewaterhouseCoopers

PricewaterhouseCoopers Pvt. Ltd. (www.pwc.com/india) provides industry - focused tax and advisory services to build public trust and enhance value for its clients and their stakeholders. PwC professionals work collaboratively using connected thinking to develop fresh perspectives and practical advice.

Complementing our depth of industry expertise and breadth of skills is our sound knowledge of the local business environment in India.

PricewaterhouseCoopers is committed to working with our clients to deliver the solutions that help them take on the challenges of the ever-changing business environment.

PwC has offices in Ahmedabad, Bangalore, Bhubaneswar, Chennai, Delhi NCR, Hyderabad, Kolkata, Mumbai and Pune.

Contacts

[Hari Rajagopalachari](#)

Executive Director & Leader, Technology Sector
Email: hari.rajagopalachari@in.pwc.com

[Pradyumna Sahu](#)

Associate Director, Technology Sector
Email: pradyumna.sahu@in.pwc.com

Acknowledgements

This report would not have been possible without the commitment and contribution of the following individuals:

[Pradyumna Sahu](#)

[Kanwal Gupta](#)

[Premraj Pillai](#)

[Sarah Koshie](#)

[Rajendran C.](#)

[Jibendu Narayan Mazumder](#)

[Pragati Chakraborty](#)

[Arnab Deb](#)

[Roshith Mohan](#)

[Prashant Bansal](#)

[Malvika Singh](#)

[Nandini Chatterjee](#)

We also thank Mr. Pikender Pal Singh, Mr. Ajay Dhyani, Mr Kunal Walia and Ms. Nidhi Tomar of CII for getting the survey underway.

pwc.com/india