

India's Emerging Status in the Global Knowledge Process Outsourcing Industry

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Abstract

The challenge of deploying the knowledge assets of an organization to create competitive advantage becomes more crucial as the marketplace is increasingly becoming competitive and the rate of innovation is rising, so that knowledge evolved has to be assimilated at an ever-faster rate. Moreover, there are trends for employees to retire earlier and for increasing mobility, leading to loss of knowledge. Moreover, competitive pressures are reducing the size of the workforce, which holds this knowledge.

In order to build competitiveness, it is necessary that companies cut costs and outsource those staff functions, which are peripheral, non-core activities and which add no value, to specialist, outside firms, who can do the same job at a fraction of what it cost the companies to run an in-house department. This would free them up to concentrate on matters more crucial to their businesses, like manufacturing or product management, or marketing, and concentrate on knowledge management in only the core processes. Some of the KPO services that can be outsourced include, research & development, business and technical analysis, learning solutions, animation & design, business & market research, pharmaceuticals and biotechnology, medical services, writing & content development, legal services, intellectual property research, design and developments for automotive and aerospace industries, data analytics, network management, training & consultancy.

A Confederation of Indian Industry study states that KPO would grow at 46 per cent to become \$17 billion sector by 2010. A report by Evalueserve predicts that India will capture more than 70 percent of the KPO sector by 2010. India has been ranked the most preferred KPO destination owing to the large talent pool, quality IT training, government policies, and low labor costs. Although countries such as Russia, China, the Czech Republic, Ireland, and Israel are also expected to join the competition, but India is well equipped to meet this emerging sector's challenges and in near future it is emerging to become the global KPO hub.

Introduction

Knowledge Management caters to the critical issues of organizational adaptation, survival, and competence in face of increasingly discontinuous environmental changes. Essentially, it symbolizes organizational processes that seek interactive combination of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings. An effective Knowledge Management System is the key to future success.

The challenge of deploying the knowledge assets of an organization to create competitive advantage becomes more crucial as the marketplace is increasingly becoming competitive and the rate of innovation is rising, so that knowledge evolved has to be assimilated at an ever-faster rate. Though knowledge takes time to experience and acquire, employees have less and less time for this. Moreover, there are trends for employees to retire earlier and for increasing mobility, leading to loss of knowledge.

A change in strategic direction may result in the loss of knowledge in a specific area. A subsequent reversal in policy may then lead to a renewed requirement for this knowledge, but the employees with that knowledge may no longer be with the firm. Corporations are thus organizing their businesses to be focused on creating customer value and staff functions are being reduced. There is a need to replace the informal *Knowledge Management* of the staff function with formal methods in customer aligned business processes. Thus, competitive pressures are reducing the size of the workforce, which holds this knowledge.

In order to build competitiveness, it is necessary that companies cut costs and outsource those staff functions, which are peripheral, non-core activities and which add no value, to specialist, outside firms, who can do the same job at a fraction of what it cost the companies to run an in-house department. This would free them up to concentrate on matters more crucial to their businesses, like manufacturing or product management, or marketing, and concentrate on knowledge management in only the core processes.

This paper is a critical evaluation of various issues relating to the competitiveness of the Indian KPO industry in the wake of increased competition and growing opportunities for Indian BPO firms. This paper is divided in five parts. The first part discusses India's moving up the value chain from BPO to KPO; while the second part examines India's status in the global KPO industry. In the third part, the opportunities and challenges faced by Indian KPO units have been discussed. In the fourth part, India's efforts to emerge as a KPO hub has been studied, and in the last part, conclusions have been drawn and strategies for the Indian KPO firms have been suggested.

Outsourcing moves to Knowledge Arena

Knowledge management is a key to the success of offshoring. No matter where service provider is located, identifying knowledge hotspots and ensuring that knowledge flows among all responsible teams involved is a critical task. It is even more critical and significant in

offshore outsourcing where provider is situated thousands of miles away. Knowledge for a business process is spanned across various levels within an organization. Depending upon complexity and importance, executives, managers, programmers etc. may have to acquire some knowledge about the process, which is often wrapped in different structures like technical expertise, process knowledge, subject matter, domain knowledge, business impact analysis, financial and competition analysis etc.

The evolution and maturity of the Indian BPO sector has given birth to yet another wave in the global outsourcing scene, i.e. Knowledge Process Outsourcing. The success in outsourcing business process operations to India has encouraged many firms to start outsourcing their high-end knowledge work as well. Cost savings, operational efficiencies, access to a highly talented workforce and improved quality are all underlying expectations in offshoring high-end processes to India.

The traditional lower end BPO services included transcription services, forms processing, data capture, in bound and out bound call center services, technical support services etc. KPO services include healthcare, medical transcription, billing and coding, legal consulting service including documentation and research, accounting and financial services including back office, general ledger services, bank reconciliation services, insurance, virtual office services including IT staffing services and virtual secretary services. Other important KPO services include biotechnology, pharmaceuticals, animation design and development, engineering, education and training, design and development for automotive and aerospace industries, and even intelligence services.

KPO delivers high value to organizations by providing domain-based processes and business expertise rather than just process expertise. These processes demand advanced analytical and specialized skill of knowledge workers that have domain experience to their credit. Therefore outsourcing of knowledge processes face more challenges than BPO. Some of the challenges involved in KPO will be maintaining higher quality standards, investment in KPO infrastructure, creating a talent pool, requirement of higher level of control, confidentiality and enhanced risk management.

India's Status in the Global KPO Industry

India is all set to emerge as a Knowledge Process Outsourcing (KPO) destination, with a Confederation of Indian Industry (CII) study stating that KPO would grow at 46 per cent to become \$17 billion sector by 2010. It is estimated by CII that the growth of services sector would be over 8 per cent and its contribution to India's GDP would be over 51 per cent. Over the past decade, India has emerged as a preferred location for organizations planning to outsource a variety of services, e.g. insurance claims processing, payroll processing, medical transcription, e-CRM, SCM to back office operations such as accounting, data processing, and data mining. India could emerge as a global knowledge process outsourcing hub as the business requires specialized knowledge in respective verticals and the country's large number of engineering and technical institutes are geared to address the work force demand.

The global research firm, Deloitte's four tier offshoring countries' list (Dutta, 2004), puts India as a distant leader. India's capabilities in software off shoring include in addition to the low labour costs (for high quality), adequate supply of English speaking programmers and systems analysts in urban areas, project management skills, good communications, and other infrastructure. Moreover, there is a strong flow of global venture capital, MNC presence, technological sophistication, and a vibrant corps of Western expatriates embedded as managers in Indian information technology (IT) firms. India stands ready to maintain its position as the top outsourcing destination for many years to come. Despite negative press coverage that India has received for problems at a few outsourcing facilities, India is set to maintain its lead as the high-tech outsourcing destination of choice for overseas clients.

India churns out more than 2 million English speaking graduates, more than 300,000 engineering graduates and about 100,000 management graduates every year. While just over 5,000 IT graduates passout in Germany, and 25,000 IT graduates pass out in US every year, more than 125,000 IT graduates passout in India every year (Swami, 2005). An MBA in the US gets an annual average starting salary of \$85,000, while his Indian counterpart is content with \$12,000, resulting in cost savings in excess of 85 per cent. Likewise, a PhD in the US will demand anything in excess of \$75,000, while a PhD in India is content with \$16,000 (*Business & Economy*, 2005). The country's army of CAs, doctors, MBAs, and lawyers are going to ensure that India dominates in the KPO domain.

The drive for market share in the global IT outsourcing market has produced more CMM Level 5 software centers in India than anywhere else in the world. India's booming technology capital of Bangalore has become a global symbol for the outsourcing phenomenon. The city of 6.5 million accounts for at least one third of India's \$ 16 billion software and back-office service outsourcing industry, which employs more than 900,000 people (Reuters, 2005). India has a large pool of knowledge workers in various sectors ranging from pharmacy, medicine, law, biotechnology, education & training, engineering, analytics, design & animation, research & development, paralegal content and even intelligence services.

There is global recognition of Indian competency as foreign firms consider the advantages of outsourcing to India in terms of cost savings of 40-60 per cent, quality improvement of 3-8 per cent, and productivity improvement of 20-150 per cent. India has the advantage of experience & project management, particularly in the IT industry. India offers excellent network of research laboratories, well-developed base industries, rich bio-diversity, extensive clinical trial opportunities and trained manpower and knowledge base, which makes it an automatic base for KPO.

Opportunities & Challenges for the Indian KPO Industry

According to a study by Evalueserve, the global KPO market is expected to grow at a cumulative annual growth rate (CAGR) of 46 per cent, from \$1.2 billion in 2003 to \$17 billion in 2010, of which \$ 12 billion would be outsourced to India. During 2000 to 2003, the US offshored 238,000 IT service jobs, and this is likely to increase to 775,000 jobs by 2010. A report by Evalueserve predicts that India will

capture more than 70 percent of the KPO sector by 2010. According to a study by Gartner (PTI, 2004), by 2010, one out of every four high technology jobs in developed countries may be outsourced to emerging markets like India.

According to a survey by NASSCOM, an increasing number of large western countries will look to places like India to keep down R&D costs. Currently much of this work remains in western nations. With the cost of such work increasing quickly, however, an increasing number of companies are ready to cut their overhead by moving the work abroad. Low-end outsourcing services have an expected Cumulative Annual Growth Rate (CAGR) of 26% by 2010. In contrast, the global KPO market is poised for an expected CAGR of 46% by 2010.

The figure demonstrates the expected growth in the BPO and KPO markets over the next seven years.



The Indian IT sector too could strike it rich in a new breed of high-end knowledge-based outsourcing as global corporations are moving processes like data and intellectual property researches to offshore locations and more specifically to India. Chip design and embedded systems is another critical area. The reason why all major integrated design manufacturers such as Motorola, Intel, Analog Devices, National Semiconductor, IBM, Cisco, Cypress Semiconductor, Nokia and Philips have set up offshore design centres. The compensation for a chip design engineer with a master's degree and five years' experience is about \$7,000 a month in the US. An engineer with the same qualification and experience in India gets about \$1,200 a month.

India could be an emerging healthcare hub, as India has the opportunity to provide the best of the western and eastern healthcare systems. The Indian pharmaceutical industry too has achieved self-sufficiency and global recognition as a low-cost producer of high-quality bulk drugs and formulations. Indian companies now offer custom synthesis services at 30 per cent to 50 per cent cost savings compared to global costs. According to a study by CII, India's biotechnology sector is expected to earn \$5 billion annual revenue by 2010.

US companies and law firms have started to ship legal work to India, like case study research, review, and analysis of legal documents, contracts, patent applications, and even the drafting of the contracts. According to Gartner Research, the arbitrage on legal offshoring is much higher than in call centers and transaction processing such as for mortgages or credit cards. Research from Hildebrandt, a global professional services firm, shows that legal outsourcing spending will hit \$6.5 billion in 2006. According to a study by Forrester Research, in 2004, more than 12,000 legal jobs in the US were shifted to low cost countries. This number is expected to more than triple to 39,000 by the end of 2010, and double again to 79,000 by the end of 2015 (Jain, 2005). Patent writing and evaluation services market is set to boom. Some 300,000 patent applications are written annually making for a market size of between \$5 billion - \$7 billion. Outsourcing patent writing services could significantly lower the cost of each patent application – now anywhere between \$12,000 - \$15,000 a piece, which would help expand the market (*Business Standard*, 2003).

India has become one of the most popular destinations for offshoring insurance processes and top insurance companies in Europe and the US like Cox Insurance Holdings, Aviva Life Insurance, AXA Sun Life, have moved their processes to India based captive or third party outsourcing firms. According to the Global Insurance Outsourcing report released by the Value Notes Outsourcing Practice, which looks at outsourcing, around 63 per cent of India's insurance outsourcing revenue comes from the US (*Business Standard*, 2004). A number of other countries including Japan, Canada, United Kingdom, Australia, and Europe are also keen towards outsourcing to India.

With the IT sector witnessing good growth in the past several years, there has emerged a shortage of civil engineers in the US. Companies in the industry had to look outwards in order to deliver projects in time to their clients. This is turning out to be a good business opportunity for Indian companies in the space. Though accounting for a fraction of the \$750-million overall KPO market in India now, existing companies are stepping up efforts to tap growing outsourcing requirements of clients. With the US undergoing a realty boom, orders are flowing in for designing both commercial and residential properties, even some mini-townships. Outsourcing contracts are also coming in from Europe, Dubai, and Singapore.

A Forrester Research report estimates that 3.3 million United States service - industry jobs will move overseas by 2015 (Viswanathan, 2002), but not all of it will come to India. Some will also head towards China, Russia, the Czech Republic, Ireland, the Philippines, Israel, or South Africa, which might challenge India's IT outsourcing lead. The threat against non-performance or sub-standard performance is bound to increase due to language barriers, incompetent delivery models, low quality output levels, and similar reasons resulting in client and customer losses. Another challenge that the Indian outsourcing companies are facing, is that of the security of potentially misusable personal or corporate information, particularly in banking, insurance, legal practices, and healthcare. Although India has an Information Technology Privacy Act, there is no industry wide system of checking employee background. Although security breaches occur even abroad, but incidents in countries like India are blown out of proportion and feed into the backlash in the West.

Although Indian telecom networks are state of the art, the technology and telecom costs are still very high. Moreover, the telecom infrastructure lags behind other Asia Pacific nations such as China, Singapore, among others that boast higher telephone/PC/Internet penetration, and excellent telecom infrastructure in terms of bandwidth availability, etc. so important for domestic IT market proliferation and software exports. Companies face other infrastructure related problems, like unreliable power supply, which force units to create their own back-ups. One of the most serious threats for outsourcing companies in India comes from the hidden cost of sub-standard infrastructure.

In India, the average attrition rate in the outsourcing industry is approximately 30-35 percent. It is true that this is far less than the prevalent attrition rate in the US market (around 70 percent), but the challenge continues to be greater considering the recent growth of the industry in the country. In case of high attrition, getting replacements is also difficult. A Deloitte Research report (Dutta, 2004) indicates that India's biggest challenge in the short-term, ironically, is its own success. While on one hand wage inflation is retarding India's potential in terms of cost competitiveness, a rapid growth in knowledge process offshoring is creating a shortage of qualified and highly skilled workforce.

During the past decade, the Indian IT industry has been able to transform the social, economic, and trade pattern of the country. It has increased India's forex reserves, and has placed India on the world services map where the *made in India* label can be used with pride. The Indian outsourcing industry is different in many ways from traditional businesses in India and even from the IT industry with which it shares many attributes. Outsourcing represents a new commercial paradigm for international trade in services and India's unique positioning makes it beneficiary of the enormous gains, which are in its way (Bhargava, 2004). Outsourcing firms are working hard to prepare for converting the challenges into opportunities.

India's Efforts to Emerge as a Knowledge Process Outsourcing Hub

According to Gartner Research India, the market for outsourced services is estimated to be \$1.45 billion and growing at more than 15 per cent per year. Indian IT services companies, which had largely focused on outsourcing deals outside the country, are turning their attention to the domestic market. Despite the total growth potential of global outsourcing industry, certain services have been regarded as the centres of much activity in future. They include biotechnology, consultancy, banking, and financial services.

The Indian biotechnology sector is on an upswing, and is expected to earn 5 billion US dollars annual revenue by 2010. Noida based EXL Service, which focussed on banking, financial services and insurance has ventured into consultancy as well. Although insurance is the biggest KPO piece it has, contributing 60 per cent to the turnover, with banking bringing in 20 per cent, and the rest is specialised services and consulting (Singh, 2004). It is estimated that the Indian insurance outsourcing revenues are likely to grow to \$ 790 million by 2007, from an estimated \$ 367 million in 2003, reflecting a CAGR of 21 per cent (*Business Standard*, 2004).

Indian community of architects and civil engineers is well respected in the US, and two of the world's top names in engineering, construction and project management/maintenance sphere - Fluor Corporation and Bechtel have set up their local offices in India to cater to their worldwide clientele. Estimated 300,000-odd US jobs related to architecture, transport and civil engineering design are being outsourced to several countries with India estimated to be a major gainer. Overseas companies are also able to cut costs drastically, often as high as 50%-60% by outsourcing these services to India. With each successful project, the comfort factor of the foreign clients is increasing while getting work outsourced to India.

Nasscom has planned an HR training certification and an assessment programme for the KPO firms, which it hopes will become an industry standard, and will increase the supply of the talent for the industry. Nasscom is also working with QAI India Ltd to develop quality middle management for the KPO industry. Since most of the middle managers working in outsourcing firms have experience which is as low as six months, the programme will help to train middle managers in soft skills such as people management and group dynamics (Moses, 2004).

India's IT companies have stepped up efforts to improve security. Rigorous reference checks, relieving letter from the previous organizations, which act as service record and character certificate are some of the procedures to check the applicant's identity (Raghavendra, 2004). Under pressure from foreign clients to focus on comprehensive security and the option of charging higher rates for providing such security, many outsourcing firms have tripled their information security budgets in the last one year. The trend started with foreign clients imposing stricter conditions in their service level agreements. This required outsourcing firms to undertake security audits and adopt those classification standards that are being followed by their foreign clients worldwide (Mishra, 2005).

Indian outsourcing companies seem to have devised a novel method to work their way around the US-led backlash against offshoring. This latest buzz on the block is *dual shoring* – operating out of two delivery centres, one in the US, and other in India. Companies operate an office in the US, which employ a few American workers and let them handle 10-15 per cent of the project work. The rest can safely be

offshored to India. This gives the Indian companies a front office in the US to interact with the customer, and gives the customer a choice of the geographies. It also acts as a global disaster recovery centre to ensure business continuity (Ullatil, 2004).

India has been ranked the most preferred KPO destination owing to the country's large talent pool, quality IT training, friendly government policies and low labor costs. India is well equipped to meet this emerging sector's challenges and in near future India is all set to become the global KPO hub.

Conclusions and Strategies for the Indian KPO Industry

India has the potential to become the number one knowledge producing centre in the world by 2025, going by the way that things are moving. Interesting transformation is taking place in the country. The demographic shift in the western world meant that a country like India with relatively favourable demographic profile with a large portion of working and talented young people could become a global innovation hub. More than 100 companies around the world have set up their R&D centres in the country in the last five years and India offers real and unique opportunities for becoming a true global R&D platform. Indian firms need to adopt the following strategies:

1. **Institutions should create intellectually Stimulating, Rewarding, and Hassle-free Environment:** India's emergence as a global R&D hub has a social, economic, political and strategic significance. The implication of this would be that there would be enhanced competition among institutions and firms to seek the best brains to work for them. This will automatically mean that the institutions will really have to create an intellectually stimulating, rewarding, and hassle-free environment.
2. **Add Value to the Base Offerings:** Since competition for a larger share of the global KPO pie is emerging particularly from countries like China, Russia, the Czech Republic, Ireland, the Philippines, Israel, etc, Indian companies will have to look at collaborating with lower cost providers and add value to their base offerings. Companies will need to specialize in an industry vertical and build deep knowledge of the business needs of the industry, by nurturing the talent pool.
3. **Plan to offer Services in New Domains:** Indian KPO units must continue to develop and adopt true marketing intelligence; by understanding their own objectives, and the domains they will be going to offer services in. This requires services of specialists that are a bit difficult to manage. India has the capabilities in terms of infrastructure, education, and skills to garner a share of the knowledge process outsourcing (KPO) pie, especially in domains such as banking, insurance, healthcare, legal services, design, and visual arts etc. Currently, the focus of KPO outfits is on financial management and equity research, market research, risk management, IP mining and filing, data mining, analytical research and consulting.
4. **Create New Solutions:** The revenue potential of the KPO industry in India has been pegged at \$ 12 billion in the next 3-5 years. Since KPO outfits were knowledge-driven businesses and not capital intensive and, as such, venture capitalists had an important role to play in KPO outfits. As the Indian outsourcing industry moves into a higher orbit, it will have to focus greater attention on creating new solutions, technologies and providing thought-leadership. This is very different from working within defined boundaries or servicing existing software products. This is critical for India's on-going success, even though only a small proportion of IT professionals work in such new and creative tasks.
5. **Ensure Perfect Security:** Indian companies are not missing business to competitors in KPO because of the less than perfect security scenario, but there is less room for complacency. Security checks and employee referrals practices should be made more robust. Companies will have to undertake other measures like rotating employees across processes every six months and compartmentalising information in such a way that no one gets a full picture. Although, this will push up the costs, but companies will have to measure this against the increased opportunity cost of likely security breaches.
6. **Geographical Diversification:** In order to avoid over-dependence on the US market, Indian firms also need to look at Europe, Japan, the affluent parts of Asia and Latin America. What Indians lack are foreign language skills, particularly in French, German, Spanish, Japanese, and Chinese. Both the government and top-notch companies need to invest in linguistic skills in a big way, if India has to maintain its edge in the KPO business. The future rests not in the hands of governments, which are doing all the facilitating they can, but companies, as governments cannot create competitive advantage, rather the companies.
7. **Move from Cost to Quality:** If India has to keep winning in KPO then it is India Inc., which has to get its strategy right. Indian companies currently engaged in executing processes for offshore clients need to build a strategic plan that allows it to move from cost to quality, and build a symbiotic relationship with its overseas clients. For most companies, doing what is best and most cost effective is the only tip for survival in these competitive times. However, it is not the cost alone, talent is the real issue. This is why companies like GE, Intel, Cisco, and recently Google have set up engineering centres in India. Because in a free market, companies that do not take full advantage of resources will do so at their own disadvantage.
8. **Adopt a Global Delivery Model:** Future deals will require Indian companies to get a fair degree of sophistication not only in technological skills but also in business skills, commercial skills and the ability to do different financial engagement models. Companies will have to hire people in the countries they operate in, who can engage with senior level executives in the client companies, since outsourcing decisions are increasingly being taken higher up the management hierarchy. Indian companies must also look at setting up outsourcing centres in different countries and opt for a global delivery model.

As Indian KPO companies grow, and enter new geographies, they will need to become truly international. Their delivery models too will need this, as customers push for multi-country disaster recovery sites. In addition, they will need to increasingly tap the best talent from whichever country it is available. India's true competitive advantage lies in the ability to apply technology to business processes. As of today, that potential is largely untapped. As the Indian outsourcing industry climbs the maturity curve, it is realizing that some of the factors leading to its success in the past may not result in a winner in the future.

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