



India's Knowledge Process Outsourcing (KPO) Sector: Origin, Current State, and Future Directions



05 July 2007



This is an updated report on Knowledge Process Outsourcing with figures that analyse the predictions for the future growth of KPO in India that we made more than three years ago. In this new study, we review the evolution of KPO to date and update our predictions for the industry for the rest of the decade.

Origins of Knowledge Process Outsourcing (KPO)

During the late 1990s, the success of Information Technology and Business Process Outsourcing to low-wage countries and the resulting cost savings prompted several multinational companies to experiment with outsourcing higher-end knowledge-based work. For example:

- In 1997, General Electric's captive unit in Bangalore, India, started providing services related to risk analytics to GE Capital (worldwide).
- During 1998-99, American Express' wholly owned subsidiary in Delhi-Gurgaon, India, started performing risk and credit analytics for several of its credit card divisions worldwide.
- McKinsey and Company started its own captive centre (called McKinsey Knowledge Centre) in 1998 in Delhi-Gurgaon, India, which started providing market research, business research and data analytics services to more than 6,000 of its consultants worldwide.

Although a few companies began providing higher-end, knowledge-based services as early as 1997, this trend did not gain much momentum until 2003, and it was Evalueserve's Chief Operating Officer, Ashish Gupta, who coined the term Knowledge Process Outsourcing (KPO) in September 2003, in an effort to differentiate between his firm's services and those of the established BPO firms. "KPO" has since come to refer to those outsourcing activities that require significant domain expertise (e.g., market research, business research, investment research, and data mining).

Shortly afterwards, in January 2004, I gave a seminar at Telcordia Laboratories in New Jersey titled, "Moving Up the Value Chain in Broad Based Outsourcing Services," wherein I provided Evalueserve's forecasts regarding the growth of the KPO industry from 2003-04 to 2010-11. The contents of this talk were later summarised in a July 2004 report, titled "The Next Big Opportunity – Moving Up the Value Chain – From BPO to KPO" which essentially stated that the entire KPO sector worldwide would increase from a revenue base of US \$1.2 billion in 2003-04 to US \$17 billion in 2010-11. Furthermore, within India, this sector would increase from a revenue base of US \$1.08 billion in 2003-04 to US \$12 billion in 2010-11, and employ approximately 250,000 professionals in 2010-11.

Since this seminal report in 2004, the acronym KPO has become part of the lexicon of the outsourcing industry worldwide. Indeed, more than fifteen independent articles have been written on this topic (including those from Deloitte Consulting, TPI, and PriceWaterhouseCoopers); at least twelve firms providing such services have KPO as part of their name; there are at least five annual conferences worldwide that are solely about KPO (and some even have "KPO" as part of their names); about 120 captive units of large multinational companies are providing KPO services to their offices in North America and Europe; the majority of the mid-sized and large IT and BPO companies in India have a KPO division; and there are at least 282 "niche" companies in India providing third-party KPO services.¹

In this article, we revisit our July 2004 report and analyse how this sector has changed during the last three years and how it is expected to grow during the next four. We also delve deeper into the sub-sectors within the KPO industry that are expected to do well (e.g., banking, finance, securities and insurance research; data mining and analytics; and contract research organisations and biotech services) versus those that are still at a nascent stage (e.g., legal and paralegal support services; remote logistic services and procurement support services; and network optimisation and analytics services.)

Characteristics of KPO

A business process that is repeatable, scalable and that does not require the physical presence of a worker near the client can theoretically be outsourced and offshored; this forms the basis of Business Process Outsourcing or BPO. A Business Process Outsourcing or Offshoring firm's function can be simply defined as follows: it acquires a process from the end-client and runs it at its site until the process has reached its logical conclusion, after which it sends the

¹ For a detailed discussion on evolution of the KPO industry, please also read EVS whitepaper titled, "The Future of Knowledge Process Outsourcing - Make or Buy in KPO" available on Evalueserve's website: www.evalueserve.com.



results – if any – to the client. In contrast, a KPO or Knowledge Process Outsourcing firm functions at a higher level and can be differentiated from BPO firms in the following ways:

- A KPO firm requires substantially more domain expertise (unlike a BPO firm, where the skills can usually be taught in a matter of days or weeks). In fact, Knowledge Process Outsourcing and Offshoring is an area where professionals continue to learn, just as doctors and lawyers undergo continuous training to learn new treatments and procedures and newer interpretations of existing laws. Hence, it is not surprising that training such professionals can range anywhere from two months (in Market Research & Data Collection) to a year or more (in Intellectual Property). Consequently, a good KPO firm is likely to care more about the depth of knowledge and experience and the judgment skills of its professionals than just its size.
- Not surprisingly, experienced professionals can leverage their expertise to generate more revenues for the KPO firm. Such professionals can earn anywhere between \$80 and \$500 per hour in the US, Canada or the UK and between \$20 and \$100 per hour in India. Clearly, the more experience its professionals have, the more the firm can earn. For example, an Indian Telecom Expert with ten years of experience can easily fetch up to \$100 an hour, whereas a corresponding professional with two years of experience only fetches about \$30 an hour.
- Since domain expertise is the key factor, not only companies but also countries can easily differentiate themselves from each other. The countries that will emerge as strong contenders in the KPO business are those that have large numbers of engineers, medical doctors, graduates in sciences and technology (including biotech and pharmaceuticals), MBAs, certified financial analysts, accountants, statisticians, lawyers, etc. Low-wage countries that seem to have these professionals in large numbers include India, China, Russia, Poland, the Philippines, Hungary, and many republics from the erstwhile Soviet Union.
- Most KPO projects are smaller by a factor of 5 to 10 than the corresponding BPO projects. Furthermore, the salespeople selling KPO services need to be well versed in these services and to have the required domain expertise in order to be credible. In this regard, a typical KPO firm lies somewhere between a BPO firm on one hand and a consulting firm on the other.
- The fifth facet of a KPO is the scalability factor of the process wherein the methodology is similar but there is a premium placed on domain expertise. Research and development departments of global high-technology companies (e.g., IBM Research) and consulting companies cannot be considered KPO firms and, not surprisingly, such organisations take substantial time to reach scale. For example, IBM Research took nearly 50 years to reach 3,000 researchers and McKinsey took 75 years to get to 6,000 consultants. In contrast, a pure KPO firm like Evalueserve may only take ten years to reach 6,000 professionals globally.
- The last but probably the most important distinction between a KPO firm and a BPO firm is that in a KPO firm, the client is involved during the entire execution process. Furthermore, the offshoring company providing KPO services may only contribute 70-95 percent of the work-product, with the Client contributing the remaining 5-30 percent by providing the appropriate direction to the KPO firm or by otherwise adding value to the work-product. In other words, the relationship between a KPO firm and its client is more of a partnership and less of an arms-length, client-vendor relationship.

As a final remark, it is worth mentioning that although most Knowledge Process Offshoring services are being provided from India, countries such as the Philippines, Russia, Ukraine, Poland, Hungary, China and South Africa are beginning to provide more and more KPO services. Indeed, in the near future, Knowledge Process Outsourcing and Offshoring is likely to be driven by factors such as breadth and depth of coverage, domain expertise, location advantage (e.g., near-shoring and language capabilities), sales and marketing capabilities, data compliance with respect to regulatory standards (especially those defined by the United States, Canada and the European Union) and the management of business risks. Hence, it is quite likely that companies – both those with their own captives and those that use third-party vendors – may use a “hub and spoke” model, in which a provider in India may constitute the “centre” and other units around the world may provide the appropriate “spokes.”

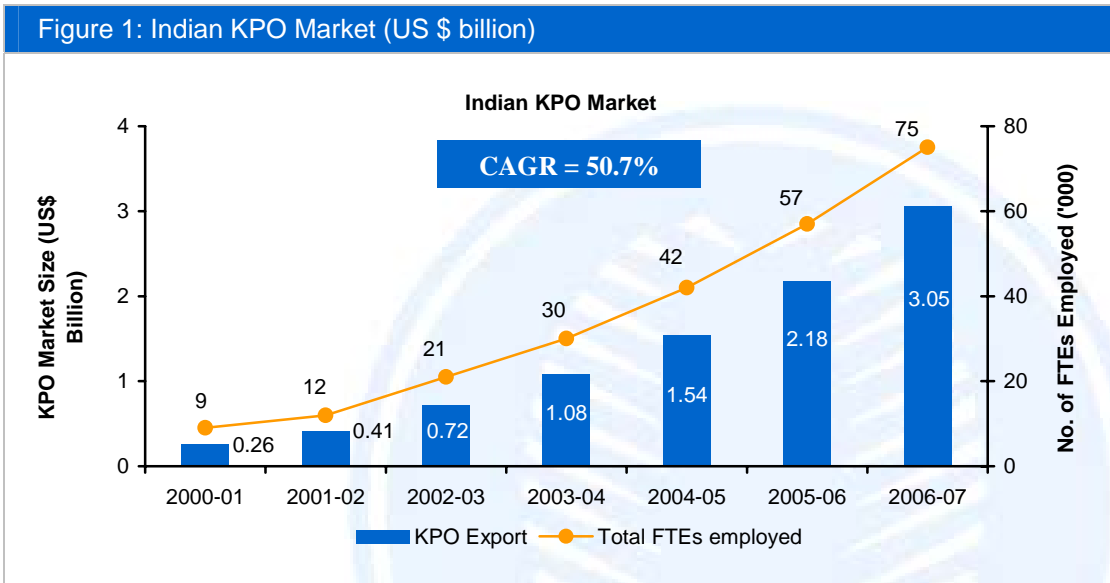
Current and Expected Growth of KPO

According to Evalueserve’s research, the revenue earned by the Knowledge Process Offshoring industry worldwide was approximately US \$1.2 billion in 2003-04 and US \$4.4 billion in 2006-07; this implies an annual growth rate of 54 percent. Furthermore, the Knowledge Process Offshoring industry employed approximately 34,000 and 106,000 professionals in 2003-04 and 2006-07 respectively. Our forecasts also show that the industry is expected to grow to US \$16.7 billion in revenue in 2010-11 (which would imply an annual growth rate of 39 percent during the next four years) and to employ approximately 350,000 professionals globally. In contrast, the rest of the Business Process

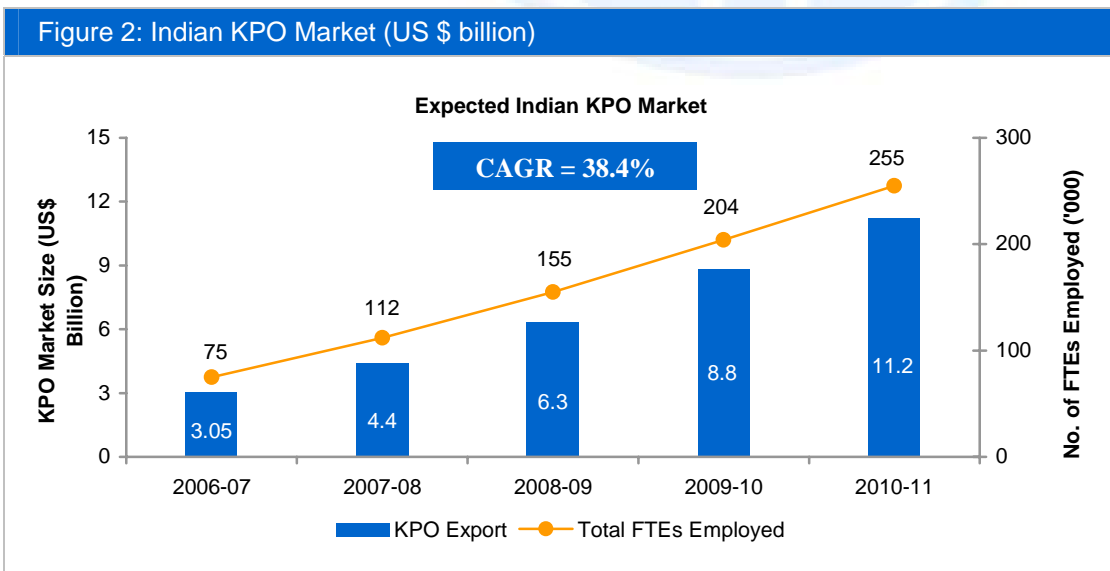


Offshoring industry worldwide grew from revenue of US \$7.7 billion in 2003-04 to US \$15.8 billion in 2006-07, which corresponds to an annual growth rate of approximately 27 percent. During the next four years, the BPO industry is expected to grow annually at 26 percent, thereby earning US \$39.8 billion in revenue during 2010-11.

Figure 1 shows the growth of the KPO industry in India from 2000-01 to 2006-07. According to Evalueserve's research, although this industry had only 9,000 billable professionals in India that generated total revenue of US \$260 million during 2000-01, this number had already grown to 75,400 by 2006-07 and these billable professionals generated US \$3.05 billion. This implies a cumulative annual growth rate of 51 percent in US Dollar terms and 43 percent with respect to the increase in the number of billable professionals during these six years.²



Interestingly, the growth of the KPO industry so far seems to be pretty much in line with Evalueserve's July 2004 forecasts, where we estimated that this industry would generate US \$2.9 billion in revenue during 2006-07. However, we believe that our original estimate of \$11.9 billion being generated by this industry during 2010-11 may fall short by 6-7 percent, primarily because (a) a few sub-sectors (e.g., legal, paralegal, intellectual property services, and medical content creation) have not been growing as rapidly as expected earlier, and (b) the KPO sector in India is experiencing substantial employee turnover, which hurts this sector in particular because these employees are unable to gain sufficient domain expertise and knowledge before they move on to their next job.



² As mentioned in prior sections, we have assumed that 1 USD equals 45 Indian Rupees through out this report.



Figure 2 depicts Evalueserve's current forecasts with respect to the revenue earned by this sector during the next four years, as well as the number of billable professionals it employs. These forecasts imply a cumulative annual growth rate of 38 percent in revenue and 36 percent in the number of billable professionals (during the next four years). Clearly, the future is very hard – if not impossible – to predict and any forecast comes with some associated assumptions. Some of the assumptions associated with the forecasts given in Figure 2 include:

- The growth of the KPO sector in India could be stymied further if the resource crunch with respect to the availability of highly educated professionals (e.g., MBAs, chartered accountants, medical doctors and architects) becomes worse.
- On the other hand, the unique capability of the KPO industry to provide benefits to SMEs (Small and Medium Enterprises) may drive its growth even faster. In fact, Evalueserve estimates that out of approximately 10 million SMEs in the US and Europe, about 10 percent (i.e., approximately one million) could benefit even in the short run from KPO services, due to reduced complexity, ability to compete effectively with their small or large competitors, shorter time-to-market, higher flexibility, overall lower costs, and potentially higher quality for the same costs.
- Although we have assumed a constant conversion rate of one US Dollar to 45 Indian Rupees, during the last four months the US Dollar has actually depreciated by 9 percent with respect to the Indian Rupee and on 4th May 2007, US \$1 equalled approximately 41 Indian Rupees. Clearly, since the backend costs are all in Indian Rupees, one on hand this depreciation of US Dollar may imply a higher annual revenue for the KPO industry in India (if the captives and third parties are able to charge in US Dollars), but on the other it is also possible that India will become less cost-competitive and hence lose some of its revenue to other low-wage countries, like China, the Philippines, Poland or Russia.
- Finally, because of attrition and rising costs, companies with existing captives are also beginning to work with third-party vendors that can provide complementary skills and handle “spikes” in workload. During the next 4-5 years, this trend is likely to accelerate, which implies that these companies may move from a fixed cost model to a variable cost model – and hence start working with several vendors in several low-cost countries – and transfer their business from their own captive units to third-party vendors.

Important Sub-sectors within KPO

Figure 3 provides estimates for the number of billable professionals likely to be employed in various sub-sectors within the KPO industry in India during 2010-11 and the revenue generated within these sectors. Of course, the delineation between some of the sectors is somewhat arbitrary and both the revenue and the number of billable professionals among them are fungible. Of all the sub-segments of India's KPO sector alluded to in Figure 3, we describe three in sections 4.1, 4.2 and 4.3 that seem to be poised for substantial growth and one in section 4.4 that still seems to be at a nascent stage of development:

Banking, Securities and Industry Research Services

There are currently 3,500 billable professionals in this sector in India, of which approximately 1,100 are doing research related to risk management for credit card and capital leasing companies as well as insurance research. The remaining 2,400 billable professionals are involved in helping sell-side and buy-side analysts in bulge bracket banks (e.g., Citigroup, Merrill Lynch, Morgan Stanley, and JP Morgan), mid-tier M&A banks, independent research providers, hedge funds, mutual funds, pension funds and private equity groups. Given the strong M&A activity that is ongoing worldwide, the demand for investment research analysts has been growing at a furious pace and clients in high-wage countries would use an even higher number of high-quality professionals, if low-wage countries like India could train and provide them.

Contract Research Organisations and Bio-Pharmaceutical Services

Given the cost pressures related to research and development of new drugs, biotech and pharmaceutical companies – both large and small – are outsourcing a lot of clinical research trials to countries in Eastern Europe, India and China. In fact, according to a recent study by McKinsey and Company, the clinical trial segment in India is expected to earn US \$1.5 billion in revenues by 2010. Furthermore, our forecasts reveal that the Indian Biotech sector is expected to attain \$6.6 billion in revenue during 2010-11, and about one-fourth of this revenue will come from biotech services' exports, particularly in the agricultural biotech and bio-pharmaceutical services areas.



Table 1: India's KPO Industry in 2010-11

Description of Sub-segment	Revenue (in Millions)	No. of professionals	Revenue (in Millions)	No. of professionals
	2006-07	2006-07	Expected, 2010-11	Expected, 2010-11
Banking, Securities & Insurance Research	\$175	3,500	\$600	12,000
Data Management, searching, & analytics	\$590	15,000	\$2,500	60,000
Business & Consulting Research	\$125	3,200	\$450	11,000
Human Resources - Research & Analytics	\$25	600	\$120	2,500
Market Research & Comp. Intelligence	\$175	4,500	\$460	12,000
Eng. Design & Architecture, CAD	\$315	8,000	\$950	21,000
Game-design & Animation services	\$245	7,000	\$900	22,500
Legal, Paralegal & Intellectual Property	\$95	2,500	\$500	12,000
Scientific & Medical Content Publishing	\$165	400	\$100	2,000
Remote Education. Publishing, Tech. Writing	\$300	9,000	\$1,000	25,000
Contract Res. Orgs, Biotech services	\$580	15,000	\$2,500	50,000
Translation and Localisation	\$75	2,000	\$360	9,000
Marketing & Sales Support, Answering RFPs	\$20	500	\$150	3,000
Remote Logistic services & Procurement	\$40	1,100	\$160	4,000
Network Optimisation & Analytics	\$125	3,100	\$450	9,000
TOTAL	\$3,050	75,400	\$11,200	255,000

Data Management, Mining, Searching and Analytics

This sector has been growing quite substantially and is likely to grow even faster during the next 3-5 years, especially because it requires mainly quantitative skills and only limited English speaking and writing skills. Within this sector, three verticals – banking, finance, securities and insurance; biotech, pharmaceuticals and healthcare; and wireless, wire-line and cable – are likely to witness massive growth. Indeed, three large data providers in the financial services industry – Thomson Financial, Reuters and Standards & Poor – put together have approximately 8,000 professionals working in India in this sub-sector (out of the total of 16,000 professionals mentioned in Figure 3). Collecting and “scrubbing” data at a fairly low cost and with high quality seems also to be an irresistible proposition for other data providers.



Legal, Paralegal and Intellectual Property Support Services³

There are currently more than 60 firms providing legal research, and paralegal and intellectual property-related services from India; about 45 percent of these are established law firms who practice in India and have now started providing such additional services. Since the culture in these law firms is substantially different from that of the US, since Indian English is idiomatically different from American and British English, and since lawyers are usually risk-averse, it is clear that growth in this area will be slow, albeit pronounced (when compared to other sub-sectors within the KPO industry). Also, companies from the Philippines will compete strongly with those from India in providing legal support and paralegal services to the US, because the Philippines was an American colony until 1946 and its laws continue to be similar to those of the United States. Nevertheless, even within this sub-sector, some services, such as those related to intellectual property research, will be offshored more substantially than others, because of the availability of a large technical talent pool within India.



³ For more information about this sub-segment, please refer to Evalueserve's research papers titled, "Legal Process Outsourcing (LPO): Hype vs. Reality" and "Best Practices in Offshoring of Intellectual Property services" – both available at <http://www.evalueserve.com/>



About the Author

Dr. Alok Aggarwal earned his Ph.D. in Electrical Engineering and Computer Science from Johns Hopkins University in 1984, and “founded” IBM’s Research Laboratory in New Delhi, India during his 16 years at the IBM Thomas J. Watson Research Centre. Dr. Aggarwal is the Co-founder and Chairman of Evalueserve, and is an expert in the founding of successful service-based operations serving a global client-base.

About Evalueserve

Evalueserve provides the following custom research and analytics services to companies worldwide – Emerging Markets and Regions, Intellectual Property and Legal Process Services, Market Research, Business Research, Financial/Investment Research, Data Analytics and Modelling. Evalueserve was founded by IBM and McKinsey alumni, and has completed over 12,000 client engagements on behalf of global clients. Several hundred of these research engagements have focused on emerging markets and regions including China, India, South America and Eastern Europe. Nitron Circle of Experts, a recently acquired subsidiary, is an independent research firm which provides institutional investors with direct access to a network of senior industry executives in a wide range of industries. The firm currently has over 2,100 professionals located in research centres in India, China, and Chile. Additionally, Evalueserve’s 45 client engagement managers are located in the major business and financial centres globally – from Silicon Valley to Sydney. For more details, please visit www.evalueserve.com.

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