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## International outsourcing and the supply side productivity determinants

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# INTERNATIONAL OUTSOURCING AND THE SUPPLY SIDE PRODUCTIVITY DETERMINANTS

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# INTERNATIONAL OUTSOURCING AND THE SUPPLY SIDE PRODUCTIVITY DETERMINANTS

## Abstract

A service provider firm in an outsourcing relationship is distinct from a typical firm because it is not a stand alone organization and fits somewhere in between the value chain of its client's business. Thus, conventional factors like wages, capital, rent, energy consumption cannot appropriately determine a Business Process Outsourcing (BPO) firm's productivity. Academic research is silent on the factors that influence the performance of a BPO firm even though the issue is pertinent from the perspective of the host country, the sourcing firm, the global outsourcing industry and of course the service provider firm. In this paper, we embark on to explore these factors.

JEL Code: L22, L23, L60.

Keywords: productivity, outsourcing, third party vendor.

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## **International Outsourcing and the Supply Side Productivity Determinants**

### **Section 1: Introduction**

Firms in the western countries can potentially take advantage of cheap labor in a low wage nation by strategically offshoring the provision of some services/tasks to suppliers in these nations. However, given that wage inflation in these countries is now picking up, the existence of international outsourcing in the long term is clearly beyond labor arbitrage<sup>1</sup>. It is about delivering consistent quality and productivity gains to the client and adding value to the process. There is a lot of literature available that explores the demand side of outsourcing relationship and specifically the impact of outsourcing on the performance of sourcing firms<sup>2</sup>. Per contra, academic research is silent on the supply side and particularly the factors determining the performance of the business process outsourcing<sup>3</sup> (BPO) service providers (it is deficient even when compared with research available on Information Technology (IT) outsourcing, as pointed out in Dibbern et al. 2004 and Rouse and Corbitt 2004). In this paper, we attempt to explore the factors that impact a service provider's performance.

The performance drivers of the supply side of outsourcing relationship directly affects the growth of global outsourcing industry as well as the growth, employment and trade in the host country. For example, in India, the BPO industry together with the Information Technology (IT) Outsourcing industry contributed about 20 percent of its export revenue and about 4.8 percent of GDP in 2005-06. The issue is of utmost significance to the BPO firm because a knowledge of how different factors affects its bottom-line helps in making informed decisions concerning resource allocation which can act as an additional source of productivity gain for the sourcing firm. In this paper, we highlight the set of factors that crucially impact the performance of a BPO firm.

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<sup>1</sup> In the last three years, employee salaries have gone up by an average of 20 per cent every year, the average revenue per hour (for a single terminal) has declined by about 15 per cent. Tools like Six Sigma can help optimize service usage, continually improve processes and hence lessen the cost pressures.

<sup>2</sup> See for example, Amiti, and Wei (2006), Görg and Hanley (2005), Egger and Egger (2006).

<sup>3</sup> Appendix A.1 lists the kind of services provided by the BPO industry in India.

We are inclined to highlight the non-conventional factors<sup>4</sup> in explaining a service provider's performance for two important reasons. First, a vendor's firm fits somewhere in between the value chain of its clients and hence depends on them for its existence. Second, the BPO industry is still not mature and is constantly evolving which inhibits its performance to be captured by conventional static factors<sup>5</sup>. Most firms in the BPO industry have different levels of access to capital, (not capital usage, which is one of the key conventional productivity determinants) which changes with time. A venture capital (VC) backed firm or a firm which is an offshoot of a software firm is likely to have a different growth path vis-à-vis firms with other means of capital. Most leading service providers have consolidated their leadership position by investing in infrastructure, quality standards, employee training and re-skilling, expanding service line/process offerings, investing in marketing front-ends and personnel with domain and process skills<sup>6</sup>. These are some of the unique factors that affect the performance of firms in the BPO industry vis-à-vis firms in other industries.

The paper beyond this point is organized as follows. Section 2 reviews the performance measures that can help evaluate the BPO industry, section 3 analyses the importance of BPO industry from the Indian economy's perspective. This section also gives details on performance of the industry by various verticals (service lines) that a firm in the Indian BPO industry can service. Section 4 discusses the factors that affect the performance of a service provider and the corresponding economic mechanism involved. Section 5 concludes the paper.

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<sup>4</sup> Conventionally, it is the rent, leased capital, energy consumption and wages which determine firm productivity.

<sup>5</sup> For example in India, there are new trends observed every year. 2006-07, was marked by high attrition rates of average magnitude of 40 percent and resources were devoted to design strategies to sustain the human capital of these firms. Dynamic evolution of BPO industries continues and in the coming year, 2007-08 and we expect to see the increasing importance of quality certifications and information security certifications to appease the prospective clients about the security of their data in the host country and quality of the delivered output.

<sup>6</sup> A number of small innovative cost cutting techniques are also being encouraged and implemented. For example, in a Delhi-based BPO and IT services provider Tecnovate eSolutions IT works in tandem with the human interface which approximately cuts down the number of employees required in a process by half. Hero-ITES, a part of the Hero Group, hires telecom equipment rather than invest. It works out to be cheaper in the long run since it can easily be returned when the technology gets a little outdated.

## Section 2: Measuring Performance of BPO Service Providers

Knowledge@Wharton (2005) suggests that the performance of outsourcing service providers can be appropriately measured by revenue per full-time employee (FTE). This measure can also ease comparison across firms with varied service line composition. For example, if a firm has a high proportion of customer care services while another firm has a large proportion of finance and payment services, then a productivity measure like output per worker would not help compare the performance of the two firms because that would essentially mean comparing productivity of apples with that of oranges. In this sense, revenue per FTE can help compare the performance of the two firms because it brings output to its monetary value. Arora and Asundi (1999) and Athreye (2005) have also suitably related the performance of software outsourcing firms to its revenue and employee strength. Other authors, like Yeaple (2003) also use revenue per FTE as a measure of firm productivity while Idson, and Oi, (1999); Bernard and Jensen, (1999); and Bernard, Jensen, and Schott, (2003) use a similar measure, that is, value added per worker.

A related measure, called the annual revenue per FTE for the “execution staff” in a company is also a valid measure for quantifying the productivity of BPO firms. In this measure, the “support staff” of the firm is deliberately filtered out. The distinction is important because lower wages in offshore locations tempt the service providers to disproportionately bloat their support staff. Alternatively, the ratio of support staff to execution staff<sup>7</sup> can also be an apposite measure of BPO firm performance and efficiency.

Revenue Distance, a concept coined in Knowledge@Wharton (2005, 2006), determines the value of a business process to the client, with a higher ranked process being more critical for revenue generation. Thus, a higher rank of the process indicates that the process has lower distance from the point where revenue is generated by the client and hence greater is the potential for value addition by the supplier. This measure of firm performance has the ability to appraise the extent of customization of the output delivered by the third party vendor (TPV) and hence capture the extent

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<sup>7</sup> Many companies have ratios of 1.2:1, however, it gets to healthy territory in the ranges of 0.4 or 0.33.

of “lock-in” or “switching” cost that a service provider has created with clients that limits the ability of rivals to make competing bids for the same business.

“Capital substitutability of labor” can also help measure a service provider’s efficiency by highlighting the way a BPO firm maximizes its technology and capital investments and therefore reduces the role of labor in delivering its services.

Provision of multiple services is typical of TPVs, and therefore “firm-level expansion of scope and specialization” can also be used to measure firm performance<sup>8</sup>.

### Section 3: Macro Picture of the Indian BPO Industry Performance

Indian BPO market has come a long way since 1996 when American Express established its first captive offshore operations. Revenue growth is between 40–70 percent, employment growth ranges between 35–60 percent and together with the IT industry, it contributes to 22 percent of exports and 5.4 percent to GDP in 2006-07. See table 1.

|                   | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 |
|-------------------|---------|---------|---------|---------|---------|
| Revenue (\$bn)    | 1.6     | 2.7     | 3.9     | 5.8     | 8.1     |
| Export (\$bn)     | 1.5     | 2.5     | 3.6     | 5.2     | 7.3     |
| Employment ('000) | 106     | 171     | 245     | 348     | 470     |

**Table 1:** Revenue, Export and Employment generated by the Indian BPO industry  
Source: NASSCOM<sup>9</sup>

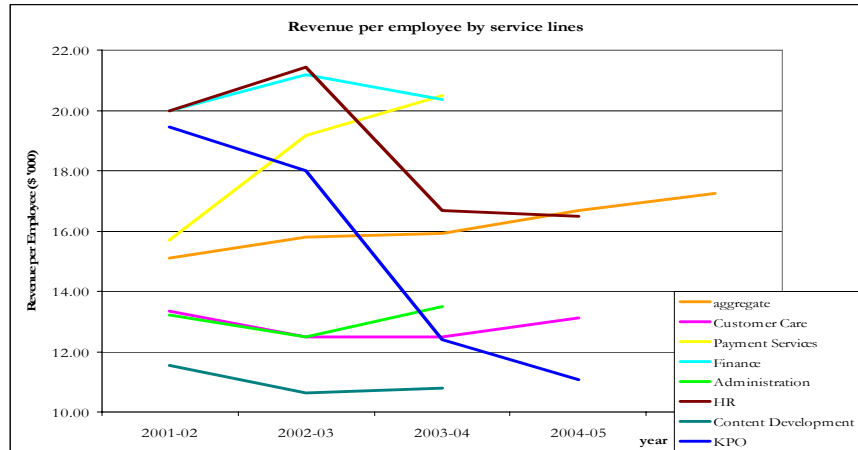
The revenue mix of the processes serviced by BPO firms often impact their performance as per hour billing rates vary across service lines. If we look at the revenue per FTE of the key verticals offered in the Indian BPO industry (figure 1), we can infer that finance and payment services are probably the most promising ones<sup>10</sup>.

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<sup>8</sup> TPI (2005) conducted a research initiative in the IT outsourcing industry (with 212 executives) to explore the quantifiable trends and key findings that directly impact global strategy, operational excellence, and attainment of real financial benefit. The study finds that “input-based” measurements such as “full time equivalents” (FTEs), cost per hour, or hours worked are more popular to measure the effectiveness of their operations.

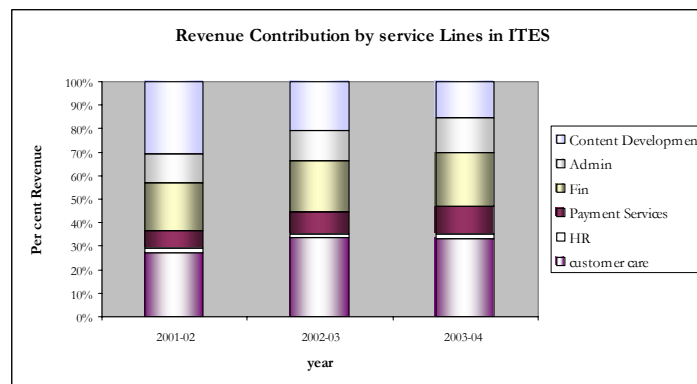
<sup>9</sup> NASSCOM stands for National Association of Software and Services Company. It is the apex body that oversees the IT outsourcing and BPO services firms in India.

<sup>10</sup> We use revenue per employee as the measure for BPO firm performance since data on revenue and employment is easily available.



**Figure 1:** Revenue per employee by key verticals of the Indian BPO industry  
Data Source: NASSCOM, CRIS INFAC

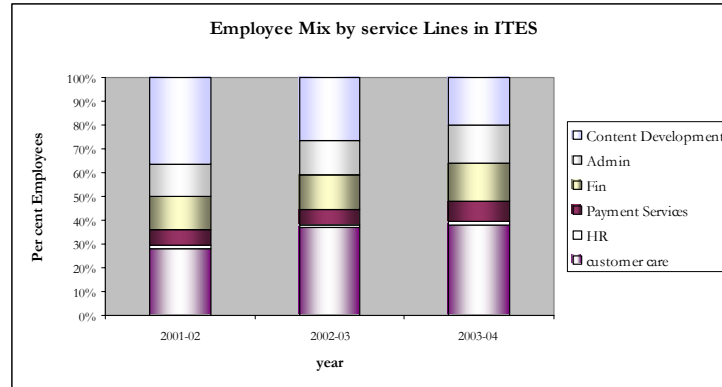
In figure 2 and 3, we note that the customer care industry<sup>11</sup> is the largest contributor to both revenue and employment in the BPO industry. At the same time, the customer care service line is more volatile and therefore, a firm with a large proportion of customer care service line is expected to show more volatility in performance. The contribution of Payment services and human resource (HR) services to total revenue and employment is growing rapidly. Given that their contribution currently stands at a very low level, between 1-10 percent, there is a larger scope for their growth.



**Figure 2:** Per cent contribution to Revenue by key verticals  
Data Source: NASSCOM

<sup>11</sup> Customer care industry is usually understood to be voice based processes. However, non-voice processes have also become an important part of this vertical.





**Figure 3:** Per cent contribution to Employment by key verticals  
Data Source: NASSCOM

The revenue per employee of a particular service line depends a lot on the level of specialization and therefore the per hour price charged by the firms. The billing rates for some of the service line released by NASSCOM are enlisted in table 3.

| Service Line                                 | Billing Rate (\$/hr) |
|--|----------------------|
| Customer Care                                | 10-14                |
| Finance, Administration and Payment Services | 12-15                |
| HR Services                                  | 15-17                |
| KPO  | 25-35                |

**Table 3:** A comparison of billing rates across key verticals for FY 2003-04  
Source: NASSCOM

Customer care services charge low billing rates because their extent of customization is low relative to, say, service offerings of a niche BPO, also referred to as Knowledge Process Outsourcing (KPO). The pattern in billing rates can well explain why customer care industry has lower revenue per FTE, even though it can take advantage of economies of scale through an expansion in employment.

### Section 3: Factors Impacting Firm Level Performance of the Indian BPO Industry

Customer care services, which includes both voice and non-voice tasks, is the largest service line in India. Therefore, we begin with a variable – the proportion of voice processes contributing to total revenue for a BPO firm – that crucially affects the customer care service line. Then we move on to discuss other factors – attrition rate, seat utilization, type of firm and the factors which help in attracting more customers. These factors affect the performance of all firms in the BPO industry.

### ***Voice versus Non-Voice***

BPO firms with a high proportion of voice based process are expected to show low productivity because it operates at a disadvantage on both the cost as well as the revenue side. On the cost side, the fixed as well as the variable costs are relatively high, for example, the dialer running and maintenance alone costs \$1.5 per person per hour which is compounded by 12-15 percent higher average salary<sup>12</sup> for a voice based employee vis-à-vis their non-voice counterpart. On the revenue side, voice processes are among the ones with low billing rates, about \$9 per hour, per agent.

The fact that a high proportion of voice based process lowers a firm's performance can be explained using the Aghion et al (1999) endogenous growth model. The intermediate good firms in their model supply slightly differentiated inputs in a monopolistically competitive setting, just like the outsourcing service provider. An important feature of their model that matches with the BPO industry is that firms need to regularly upgrade their technology else the profit margin falls with the age of the firm's vintage. The model concludes that higher the pace of technology adoption, higher is the firm's steady state long run profit flow. In this regard, higher variable and fixed operational costs dampen the pace of technology adoption and hence lower firm performance. A higher proportion of voice based services entail a higher fixed as well as variable costs of operation which not only scales down the expected profits from technology adoption but also increases the cost of technology adoption itself and hence lowers firm performance.

### ***Attrition Rate***

Besides lower margins, voice based processes is also distressed by high average rates of attrition in the range of 40-45 percent, as against 30-35 percent for non-voice work. Voice based processes are characterized by high levels of stress and odd working hours for its employees which naturally leads to a high employee turnover thereby increasing the recruitment and training costs<sup>13</sup> in such processes. Unless these firms graduate to more value-added business they are bound to become financially unviable given the rock-bottom prices and high costs in the business. Indian BPO Firms

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<sup>12</sup> A premium has to be paid for odd working hours to match the time zone of the clients.

are trying to lay down strategies to accommodate more value-added businesses like transactions processing, HR and consulting to get better margins. For example, Progeon, Infosys' BPO arm is consciously trying to minimize its dependence on voice-based BPO.

Factors that contribute to high attrition in the BPO industry are the low average age of a BPO firm employee (in India it is 24 years, which is the age of a number of changes in personal life – marriage, higher education), lack of growth prospects, odd working hours – night shifts, pay packets, quality of the work environment. The impact of attrition, however, depends critically on the service line in question. CRIS INFAC (2006) quantifies the impact of attrition on operating margins for three different service lines – voice based, Transaction Processing and KPO. The study finds that the drop in operating margins is much steeper at higher levels of attrition for all three service lines with KPO being the most sensitive of all three. This can be rationalized by the fact that in knowledge based services, employees undergo much more extensive as well as expensive training before they hit the shop floor.

Attrition is a big drain on the BPO resources. Genpact, for example, spends \$10 million and over 1.5 million man hours on training and even after spending \$1000 on training the new employee may take at least three months to reach an optimum productivity level. Firms have developed strategies to combat high attrition and absenteeism in the industry. Firms like Progeon and Genpact maintain a buffer of about 15 percent employees on bench since they expect attrition, which however raises the cost of operation. Other strategies to retain employees include high bonuses, salary hike, incentives, door-to-door transportation services and offsite team events, all of which pushes up the average labor cost of the industry by 15–20 percent per year. In the Aghion et al (1999) setting, a high rate of attrition is like an increase in the high variable costs that tends to dampen the pace of technology adoption and hence lowers firm performance.

High attrition rates in the Indian BPO industry are indicative of the yawning gap between demand and supply. Although India produces 2 million college graduates a year, the services industry

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<sup>13</sup> About \$1000 per employee is spent on training an agent and if he leaves, it increases overall costs of operations.

has a shortage of seasoned professionals. As of March, 2004, the number of people working in the BPO sector in India was around 245,500 which according to NASSCOM-McKinsey (2005) is expected to grow to 1.1 million by 2008. Clearly, a sustainable strategy to continue being the world's most attractive outsourcing destination calls for a deeper focus on raising the number and the standards of graduate education in India.

### ***Seat Utilization***

Better shift utilization can help combat the problem of poor firm performance arising from high proportion of voice processes or high attrition rates. A BPO firm spends about \$ 10,000 to \$ 15,000 to set up each seat in its premises. To maximize returns from fixed investment, the BPO firm must ideally use office seats throughout the day, that is, for three eight-hour shifts. However, reality is far from ideal, principally because 67 per cent of the outsourcing business in India comes from the US, implying that most of these seats are vacant for 16 hours. Therefore shift utilization of Indian call centers is approximately between 1.5 - 2 shifts a day. To sidestep this problem, Indian call centers should look at other English-speaking markets like the UK and Australia.

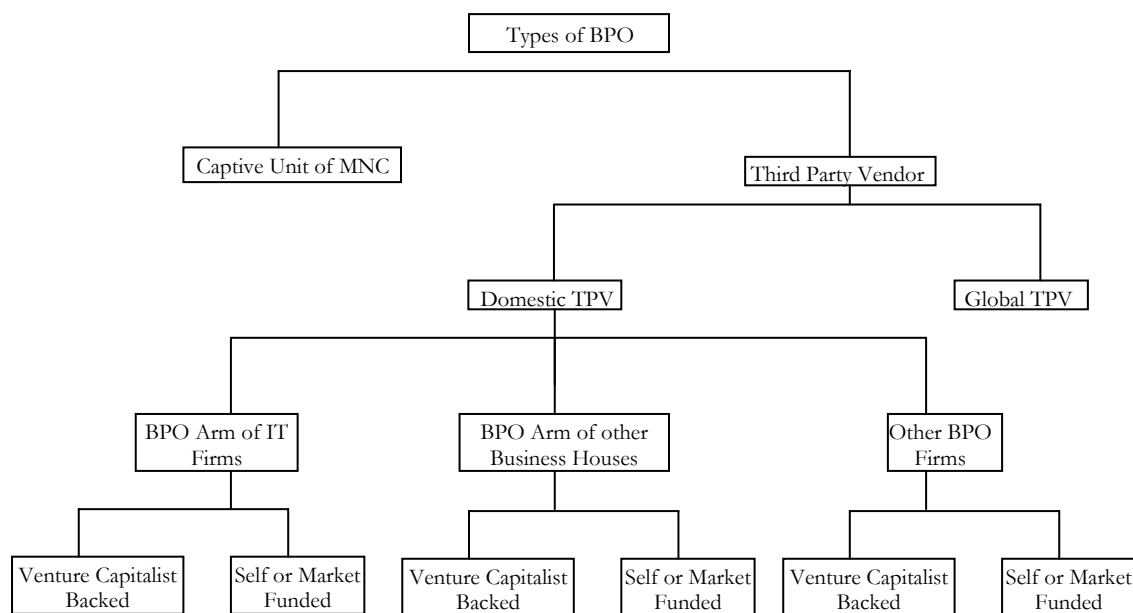
### ***Type of BPO Firm***

Firms in the Indian BPO industry can be segmented into two main categories:

1. Captive unit of a Multinational company (MNC): A multinational may set up its own subsidiary to perform its back office operations.
2. Third Party vendor: A BPO firm operating in the host country primarily performs back office operation for other firms. These client firms are also called the sourcing firm.

A third party BPO may further be divided into two categories.

- (i) Domestic TPV: This is a TPV which has its origins in the host country.
- (ii) Global TPV: This is a MNC vendor that has its headquarters in a foreign country but sets up its subsidiary in many countries to service back-office operations of its clients.



**Figure 4:** Classification of BPO firms

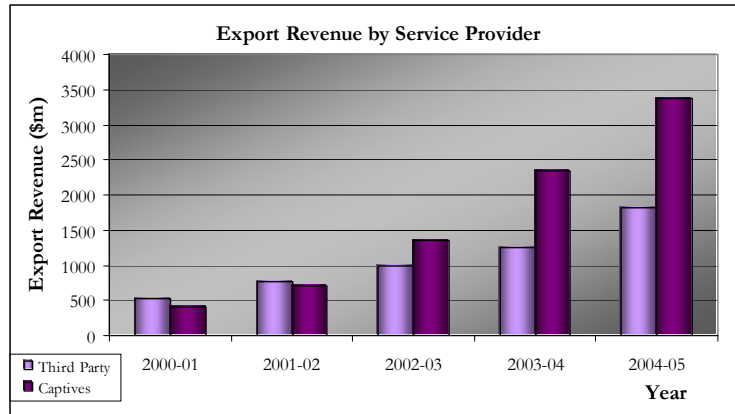
Within the domestic TPV, it is important to know if the service provider is an offshoot of an IT outsourcing firm, domestic business houses or is a new venture as the background of a BPO firm also affects its performance. One may further classify each of these TPV according to their source of funding, that is, if they are VC backed or market/self funded. Figure 4 depicts the classification of BPO firms. The categories are depicted in figure 4 above<sup>14</sup>.

Let us now examine how the difference in the type of BPO firm impacts their productivity.

#### *a. Captive versus Third Party BPO Firms*

For a firm considering production sharing with a host country, the organization of production is a key decision variable especially in host nations like India where the TPV group is strong and present an option worth exploring vis-à-vis setting up a captive unit.

<sup>14</sup> Examples of each type of BPO firms from Indian BPO space is enlisted in Appendix A.2.



**Figure 5:** Contribution to Export by captives versus third party BPOs  
Data Source: NASSCOM

Figure 5 shows that in India, captives snapped 58 percent of the BPO revenues in 2002-03 which increased to a whopping 67 percent in 2004-05. From \$710 million revenue in 2001-02, MNC subsidiaries crossed \$ 3380 million in 2004-05. TPV also registered significant growth during this period but not as phenomenal as the captives.

With such an exceptional growth pattern, we would anticipate that a multinational's integrated supplier would perform better vis-à-vis an unaffiliated supplier. Antràs (2005) model brings out the economic mechanism to justify our expectation of higher performance of a captive. In the Antràs model, final goods are assembled costlessly using two intermediate inputs – the high tech input and the low tech input with the assumption that only the low-tech input can be offshored (to an affiliated or unaffiliated supplier in the low wage nation). Introducing contractual incompleteness and using the Grossman and Hart (1986) and Hart and Moore (1990) result on property rights, the model proposes that it is optimal for a final good producer to offshore a good intensive in high-tech input through intra-firm transaction while a low-tech good must be offshored to an unaffiliated supplier. The result is a natural implication of optimality principle of property rights theory which dictates that the agent contributing more to the value of a relationship gets the residual rights of control. For a high-tech good, the sourcing firm's contribution is more valuable in total surplus and hence it is optimal to let the sourcing firm control the production of the good. Thus, the sourcing

firm prefers to integrate the supplier and intra-firm production transfer emerges vis-à-vis an outsourcing relationship. With this result in hand, it is easy conclude that captives have higher productivity relative to TPV because technology adoption and spillovers are more rampant for inputs of a high tech good (Denny, Bernstein, Fuss, Nakamura & Waverman, 1992) which are essentially produced by an affiliated supplier or captives.

A captive unit may be expected to have higher productivity also because it has the ability to amass large amount of capital, make new investments, and attract better talent. Captive units are backed by parent firms and hence are usually large. This further makes it easier for them to amass capital and offer a diverse set of service lines. Captive units also have an advantage over TPV when it comes to attracting better quality talent because they come with a brand name and pay better pay-packages. With higher wage, also comes stability and hence lower attrition rates<sup>15,16</sup>, which further improves the performance of a captive vis-à-vis a TPV. Table 4 makes a comparison of the wages paid by domestic TPV vis-à-vis the captives in India for two of the service offerings. From HR perspective, a TPV would therefore have to invest in brand building to attract good talent.

| Service Line                    | Monthly salary paid by Domestic TPV (\$) | Monthly salary paid by Captive (\$) |
|---------------------------------|--|-------------------------------------|
| Voice Based Services            | 270-330                                  | 330-400                             |
| Transaction Processing Services | 220-270                                  | 270-330                             |

**Table 4:** A Comparison of average monthly salary (\$) in TPV and captives  
Source: NASSCOM

#### *b. Domestic versus Global Third party vendor*

The BPO industry has also witnessed the entry of international players who have tremendous experience in handling back office operations of other firms. For example, global BPO players like Convergys, Accenture, Sitel have considerable domination in the Indian BPO space. These firms have a chance of performing better than the domestic third party service providers not just because of their vast experience but also because experience has helped them grow their size

<sup>15</sup> The employee attrition in captive firms is close to 35 percent, while for third-party players it is above 40 percent

<sup>16</sup> While attrition may be low in the captive centers due to higher wages, but a captive unit provides a limited opportunity for career growth and promotions in a less developed country like India, as top positions in the corporate ladder usually

above a critical level, accumulate capital, build customer relationships and other resources. Per contra, many Indian BPO service providers are still struggling to grow their manpower above one thousand employees and are in real trouble for lack of funds. Global third-party BPO majors are the biggest threat to domestic outfits in India like Progeon, Wipro, Datamatics. Even though some of the Indian BPO firms are on a high growth path, it is difficult to match the financial power these multinational vendors use to drive down prices. Besides, Indian BPO firms do not offer any special advantage that the Indian operations of these global BPO firms cannot offer, so we it is natural to expect global BPO firms to perform better vis-à-vis their Indian counterparts.

*c. Prior Experience (IT Outsourcing or Other Business in the host country)*

In the Indian BPO industry, some firms have prior experience either in outsourcing of IT services or other Indian businesses. For example, BPO offshoots of IT firms<sup>17</sup> like Infosys is thriving as Progeon, Wipro's BPO arm is called Wipro Spectramind and so on. Similarly, Hiranandani Group launched Zenta BPO firm, Kalyani Group also has a BPO arm called the Epicenter Technologies. BPO offshoots of Indian business houses have an advantage as far as capital accessibility is concerned and perhaps the story does not go beyond. Per contra, BPO arms of IT outsourcing firms have a competitive edge over other firms because they have prior experience in outsourcing business itself. In the eyes of the sourcing firm, there is a close fit between IT service offerings and BPO services which is what drives many IT outsourcing firms to foray into BPO space. Existing customer relationships, experience of working in overseas market, familiarity with outsourcing business model, and global reputation for quality output are some of the advantages for IT firms setting up a BPO arm.

Even though there are obvious synergies for bundling BPO with traditional IT outsourcing, one needs to understand the differences between the two and the additional challenges posed by the BPO front. One key challenge for offering BPO service is to plan for its business continuity as IT is

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remain occupied by the parent firm's nationals. Thus, either a transition of the captive to a TPV – like GE to GENPACT – or a high attrition rate at a later stage of maturity is inevitable.

<sup>17</sup> For more examples of Indian IT firms with BPO offshoots, see Appendix A.3.



project based while BPO is a continuous process. Unlike IT services, the BPO market can be tapped primarily in English speaking regions. Thus, the business model for a BPO requires different kind of skill sets and depth of domain knowledge for delivery. Moreover, the BPO model throws up a whole new set of HR challenges in which these IT firms have no experience.

#### *d. Venture Capital Funding*

BPO is a capital-intensive business, where firms have to invest in office space (\$8,000-10,000 per seat), technology, redundancy and communications. A large number of India's TPV firms lack ready access to capital which is mandatory to operate in this industry. VC funds<sup>18</sup> such as Oak Hill, General Atlantic Partners, Westbridge Capital, Warburg Pincus, among others have been very active in the Indian BPO space and have invested more than US\$ 300 million in Indian BPO companies from 2001 to 2003. Domestic third party BPOs that have mainly been set up by Indian entrepreneurs are usually backed by VC interests. However, to continue to get access to these funds, a TPV needs to attain a "sweet spot", that is, hit a critical mass of atleast one thousand employees and hence present an attractive opportunity for further VC interest. In this regard, first generation Indian BPO firms like Tracmail and Infowavz have suffered as they were way behind these magical numbers. Per contra, World Network Services (WNS), which is backed by a VC fund, Warbug Pincus, is doing very well in terms of export revenue and revenue per FTE perhaps because choosing the right VC fund, at the right time, is also important for growth. WNS entered late in the industry and had the opportunity to evaluate the interested VCs and therefore avoid the mistakes its predecessors made.

#### ***Concentration Risk in Revenues***

The total number of clients of a service provider and the percent contribution to total revenue by top client impacts the risk of earning revenue in the Indian BPO industry. A small client base of a TPV or a high revenue contribution by one client implies greater dependence on a few clients increases risk and hence lowers the vendor's bargaining power. According to voicendata (2003), Wipro faced a higher risk due to a heavy reliance on a single client that accounted for as

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<sup>18</sup> For more examples of venture capitalists looking at investment in India, see Appendix A.4

much as 44 percent of its revenue. In 2002-03, 61 percent of Daksh's total revenue came from one client and as Daksh targeted more clients and reduced the contribution by top client to 32 percent in 2003-04, its revenue per FTE increased from \$9000 to \$12000, a phenomenal 33 percent improvement in firm performance in one year.

Working with multiple customers also provides the vendor the opportunity to learn and develop best practices of each of its client and share them across their organization to improve quality and reduce costs. In the Aghion et al (1999) model, if suppose the cost of technology adoption can be passed on to the clients who inevitably benefit from frequent technology upgrades, then, the pace of technology adoption is likely to increase with an increase in the number of clients as each client has to bear less cost per technology upgrade. An increase in the pace of technology adoption resulting from an increase in number of clients would certainly enhance firm performance.

Attracting clients depends on a number characteristic of a TPV. Clients outsourcing high end work would prefer to hire a specialist rather than a generalist. Similarly, clients are also concerned about the security of their data, without which, high end work or confidential information cannot be entrusted with the vendor. Clients are also attracted towards high quality standards of a vendor. Above all, the exact location of the service provider affects its infrastructure and resource pool and the number of locations is a signal of its expansion and back-up plan which attracts clients and hence positively affects the productivity of a third party BPO firm.

We now discuss each of these factors in detail.

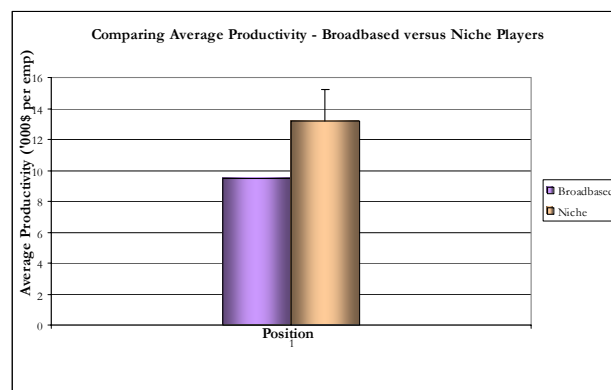
#### *Niche versus Broad-Based Firms*

Venture capitalists in the BPO industry critically examine the business proposition of service providers and usually shy away from commoditized, poor margin yielding low-end customer services. Therefore, it may be a signal for the existing TPVs to focus on areas where the billing rates are high and competition is less, that is, "get niche<sup>19</sup>". For example, one of the top Indian BPO firm, Wipro

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<sup>19</sup> Broad based service providers usually cater to low-end processes and typically charge clients based on the number of seats per hour used for the client's job. That's the input method. Niche players on the other hand use output based approach for billing, that is, they charge on the basis of the solutions they provide. A solution has incorporates domain

spectramind has moved away from customer service business to specific business verticals such as travel, insurance and healthcare. Similarly, another Indian BPO, Tecnovate, now focuses on travel and hospitality industry. The basic reason for this make over in the entire industry relates to large client firms which have specific requirements and seek an expertise treatment of their problem. Therefore, it is uninteresting for these large domain specialists to outsource to a broad-based service provider. This is a change from first generation outsourcing work where general and low-end work was transferred to India. Even relatively small players like Trinity focus are moving on to become pure-play specialists in mortgage banking. We analyzed the revenue per FTE for fifteen TPV of the Indian BPO industry and found that on an average, the performance of a niche player was higher relative to a broad-based firm. See figure 6 below.



**Figure 6:** Comparing Productivity of Broad-based versus Niche Players  
Source: Voicendata

### *Information Security and Quality Certifications<sup>20</sup>*

Arora and Asundi (1999) explain how an investment in quality enhances the performance of a software outsourcing firm. In their model, an increase in investment in quality, signaled through ISO (International Organization for Standardization) quality certification, has two effects. The first effect, called the “quality effect” raises the billing rate due to a direct effect on firm’s output quality while the second effect, called the “signaling effect” raises the firm’s profitability indirectly by

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knowledge, technology and processes built into it. This stops commoditization because not every call center can offer a solution and hence introduces high entry barriers.

attracting more clients and thereby increasing the firm size in terms of number of employees. Arora and Asundi (1999) find that the increase in billing rates due to an increase in investment in quality is usually not observed as price is fixed in a contract. Thus, quality enhancement can impact firm performance indirectly by attracting more clients. We believe that, besides, quality certification, other variables like information security certifications, the exact location and the number of locations of a vendor are also signaling variables and they are likely to influence firm performance in the long run by impacting the number of clients<sup>21</sup>.

Over the years, concerns over quality control used by Indian BPO vendors have rapidly increased. Indian vendors are moved on to become quality centric. Eighty-three per cent of the third party vendors surveyed in Ernst & Young's survey (2004) were found to invest significantly on an ongoing basis in obtaining quality certifications. These certifications are international quality standards such as SEICMM (Software Engineering Institute, Capability Maturity Model), ISO, TQM (Total Quality Management), Six Sigma Quality and COPC (Customer Operations Performance Centre). ISO certification is helpful for process mapping; Six-Sigma initiative is adopted for defect and cycle time reduction and eSCM (E-Sourcing Capability Model) is good for continuous quality process enhancement.

Maintaining client confidentiality, ensuring end-user privacy and preventing misuse of client information are some of the key objectives for all vendors, whether they offer voice services or higher-end non-voice services such as research and analytics. Many Indian BPO firms are opting for international security standards such as ISO-17799, BS7799, COBIT (Control Objectives for Information and related Technology) and ITSM (IT Service Management). These certifications certainly help to make a better sales pitch and therefore attract larger number of clients.

### *Location*

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<sup>20</sup> For a brief description of quality standards as well information security environment in India please refer to CRIS INFAC (2006)

<sup>21</sup> In the short run, however, these certifications may drain a firm's resources as they increase the sales cycle time when clients prefer to physically examine the vendor's site, check their references and conduct network checks to ensure that the necessary information security measures and quality certifications are in place.

There are two aspects of location which are important for the performance of a service provider. The first is the number of locations owned by a service provider and the other is the exact location of its operation.

Given the current security situation around the world, it is extremely important to plan for business disruption. Thus, a BPO firm with larger number of locations tends to attract more clients because more offices can be presented as plans for business continuity, that is, an alternative delivery service center in cases of high seasonal demand or any disruption in the main center. Recognizing this requirement, over 90 percent of the Ernst and Young Survey, (2004) survey respondents have a Business Continuity Plan (BCP) in place.

Besides the number of locations maintained by a domestic vendor, the exact location of the TPV also matters for its performance. KPMG-NASSCOM (2004) survey revealed that within India, Karnataka is the most attractive destination for BPO firms to set up their operations. The reasons for this result can be found in the region's strengths in parameters such as large number of education and research institutions, telecom connectivity, quality of life, better state policy and perception among the investors. Firms in this region fared better on variables for assessment of HR like number of graduates, average salary, attrition rate; infrastructure based variables such as availability and cost of facilities/utilities and quality of life; the focus on BPO space in terms of number of companies and nature of work and policy support; availability of support group in the form of local industry associations and physical features.

## **Section 5: Conclusion**

In this paper, we explored the supply side performance drivers that are vital to ensure the future of international production sharing. We highlight the importance of studying the determinants of a BPO firm performance from the perspective of the global outsourcing industry, the host country, the service provider and the sourcing firm. We also make a brief discussion of the available metrics that can potentially quantify the performance of a service provider. We then move on to discuss the macro-economics of the BPO industry in India, where the industry is perhaps more

mature than in any other country. With the Indian experience in hand, we are able to point out that the proportion of voice processes and attrition rate negatively influence firm performance while better seat utilization and a larger client base achieved through an increase in specialization, quality and information security certifications and number of locations positively affect a BPO firm performance. Besides the above listed factors there are numerous small factors, which we have not been able to discuss but nevertheless are important for the productivity of a service provider. For example, the number and nature of alliances formed by a BPO firm with other firms has proved to affect the performance of Msource (Mphasis BFL BPO arm) which became profitable only in the second quarter of 2003-04 due to its alliance with Accenture's BPO arm. Not only did Accenture's domain expertise and contacts complement Msource's execution capabilities, the alliance also opened up Accenture's customers to Msource and allowed both of them to approach companies together.

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## Appendix

### *A.1: Description of key verticals in the Indian BPO Industry*

**Customer Care:** Call centers, telesales and telemarketing, web sales, help desks, clerical support, data entry, word processing, mass emailing, contact centers, IT and technical support help desks electronic- customer relationship management (CRM), collections, market research, customer phone support warranty registration, catalogue sales, order fulfillment, up-selling and cross-selling and CRM.

**Payment Services:** Credit card and debit card services, check processing services, loan processing, electronic data interchange

**Finance & Accounting:** Accounting and accountancy services, billing and payment services, banking processing, sales ledger, general nominal ledger accounting, financial reporting, customer supplier processing, document management, legal services, transaction processing, equity research support, accounts receivable, accounts payable, cost accounting, payroll and commissions, stock market research, mortgage processing, credit charge and card processing and check processing.

**Administration:** Tax processing, claims processing, asset management, document management, legal and medical transcription and translation.

**HR:** Personnel Administration, hiring and recruiting, training and education, records and benefits payment administration, payroll services, health benefits administration, pension fund administration, retention and labor relations.

**Content Development:** Engineering and design services, automation programming, digitization, animation, network management, biotech research, application development and maintenance, web and multimedia content development and e-commerce.

## A.2: Examples of BPO firms by Type

| Captive Units    | Global BPO | Domestic TPV - IT Experience | Domestic TPV - Other Experience | Domestic TPV - VC Backed |
|------------------|------------|------------------------------|---------------------------------|--------------------------|
| American Express | Convergys  | Intelenet Global             | Reliance Infocom                | 24x7 Customer            |
| Dell             | Sitel      | Wipro Spectramind            | Zenta - Hiranandani Group       | iSeva                    |
| World Bank       | Vertex     | HCL BPO                      | Intellecon - Jindal Group       | Cross domain             |
| McKinsey         | Accenture  | Nipuna                       | Hero IT serve - Hero Group      | ICICI One Source         |
| Hewlett Packard  | TeleTech   | Msource                      | iEnergizer - Pheonix            | Vcustomer                |
| Deloitte Touche  | Stream     | Hinduja TMT                  | Epicenter - Kalyani Group       | Tacmail                  |
| Ernst and Young  |            | Optimus                      | Call Net - Ansal Group          | India Life               |

## A.3: Examples of BPO firms which are offshoots of IT firms

| IT Firm                 | BPO Outfit          |
|-------------------------|---------------------|
| TCS                     | Intelenet Global    |
| Wipro                   | Wipro Spectramind   |
| HCL Technologies        | HCL BPO             |
| Satyam                  | Nipuna              |
| Mphasis BFL             | Msource             |
| Hinduja TMT             | Hinduja TMT         |
| Polaris                 | Optimus             |
| NIIT                    | NIIT Smartserve     |
| Hughes Software Systems | Hughes BPO Services |

## A.4: Venture Capitalists looking to invest in India

| Venture Capital Fund      | Assets under management (\$m) |
|---------------------------|-------------------------------|
| Mayfield                  | 2000                          |
| Greylock                  | 2200                          |
| SequoiaCapital            | n.a                           |
| New Enterprise Associates | 6000                          |
| JP Morgan Partners        | 23000                         |
| Austin Ventures           | 2400                          |
| Venrock Associates        | n.a                           |
| Bessemer Venture Partners | 2000                          |
| Draper Fisher Jurvetson   | 3000                          |
| Alta Partners             | 1000                          |
| Menlo Ventures            | 2700                          |
| Caryle group              | 17500                         |
| Oak Investment Partners   | 4200                          |

n.a: Not Available

Source: CRIS INFAC

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