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Will the next great wave of globalization come in services? Increasingly, components of back-office services, such as payroll and order fulfillment, and some front-office services, such as customer care are being relocated from the U.S. and other developed countries to English-speaking, developing nations especially India, but also other nations such as the Philippines.¹ Though moving service activities offshore is not entirely new, the pace has of late quickened.² The acceleration of this offshoring is intertwined, though not synonymous, with another phenomenon, namely an increasing willingness by firms to outsource what formerly were considered core activities.³ The importance of the fact that a substantial number of service activities might move offshore is that it was service jobs that were thought to be the future growth area for developed country economies as manufacturing relocated to lower labor cost regions offshore. This is especially important, because these services commonly known as “business processes” (BPs) are among the fastest growing job categories in the US (Goodman and Steadman 2002). Should these jobs begin to move offshore, a new tendency may be underway in the global economy that will be as important or more important than the relocation of manufacturing offshore, and might necessitate a rethinking of government policies across a wide spectrum .

The reason for relocating offshore is, of course, the potential cost savings even while retaining quality that is acceptable and, potentially, better than that currently provided by the developed nation facility. According to our interviews with India-based

¹ In India, the phrase information technology-enabled services (ITES) is used interchangeably with such relocated service fulfillment.

² For example, credit card processing and some call center activity for the U.S. market has been done in Latin and Central America and the Caribbean for approximately two decades

³ Greenemeier (2002) reports that the Gartner Group believes that business process outsourcing services will reach \$128 billion in 2002 and rise to about \$234 billion in 2005.

outsourcers,⁴ it was a given that savings on the activity being relocated would have to be at least 40 percent (See Table One). Often it is higher. One Fortune 500 firm that consolidated several fulfillment operations to Bangalore reported that the overall cost savings were 80 percent.⁵ These represent significant dollar savings. The NASSCOM-McKinsey report (2002) found that General Electric (GE), one of the pioneers of outsourcing service operations to India, had achieved an annual savings of \$340 million per year from its Indian operations, now seven years old. Even if these numbers are inflated, the savings are remarkable (and accrue directly to the firm's profitability).⁶

This essay examines the role of India in the offshoring of services. According to an Indian trade body, Nasscom,⁷ the most reliable estimates of offshored BP employment was 171,500 in March 2003, up from 106,000 in March 2002 (Nasscom-McKinsey Report, 2002). The Nasscom-McKinsey report estimates that the ITES operations will employ, at least, 900,000-1,000,000 persons in 2008. This assumes a compound rate of growth of approximately 45 percent per year for the next five years, an assumption yet to be validated. However, India has the labor pool, the enabling technologies exist and are improving, and the pressure on firms in developed nations to lower costs is great. If these factors continue, offshoring may prove to be of great significance to nations and regions that could experience substantial job losses as service jobs are relocated.

⁴ Interviews were conducted by the authors with 46 India-based firms, which together employ 40% of the total number of workers in the BPO industry.

⁵ Personal interview with authors, April 2003

⁶ However, the authors' interviews with outsourcing firms seemed to validate the savings potential

⁷ Nasscom (2003), p 56-71

The Importance of Business Processes

From Daniel Bell (1973) onwards it has been predicted (correctly) that developed nations' economies would evolve towards service-based economies. Implicit in this prediction was that these service jobs would be located in the U.S. and provide jobs for the entire spectrum of labor skills. Whereas earlier thinking about a post-Fordist economy centered upon the factory floor (Aglietta 1979), by the 1990s, the locus of value creation in capitalism had experienced a profound shift to the value created by “think” workers or what Reich (1991) cleverly termed “symbolic analysts.”⁸ Even as the importance of these think workers increased, there was an even greater swelling in the number of other less-skilled service workers, a consequence of the nature of many services as linked, inseparable sets of activities provided with different levels of skill (see below).

The modern corporation as described by Alfred Chandler was a Weberian bureaucracy that collected, organized and processed data and information, which until the 1950s was almost entirely stored locally on paper. As the economy involved, more data was collected, and as information technology evolved, the volume and digitization of data increased. For a host of reasons, both technical and operational, firms also had increasingly large amounts of customer interaction. Today's corporation is awash in data, and inundated with customer interaction.

Business processes (BPs) is the catchall term used for the myriad white-collar processes that any bureaucratic entity undertakes in servicing its employees, vendors and

⁸ Cohen, Zysman, and DeLong (2000) term the computer and telecommunications networking technologies as “tools for thought.” They argue that these technologies operate much like the application of inanimate energy to tools, thereby extending the capabilities of their users far beyond what would have been possible had thought remained bound by the human actors.

customers.⁹ These include human resources, accounting, auditing, customer care, telemarketing, tax preparation, claims processing, document management and many other chores necessary for firm functioning. The completion of a BP is the result of an entire chain of bureaucratic activities. **Figure One** graphically portrays the complexity and large number of discrete activities required to process an insurance claim. All of these actions represent costs to a firm. Until recently, these processes were treated as a fixed cost and received little management attention. More recently, the emphasis on reengineering awakened management attention to the savings that could be achieved by reorganizing these processes. One part of this reengineering was to decompose, examine, and standardize the activities necessary to complete a process (Hammer and Champy 1993; Cole 1994). This was often accompanied by a digitization of, at least, some portions of the entire process. The reengineering permitted more detailed consideration of the most cost-effective way of completing each activity in a process.

The electronic digitization of the objects of service work increasingly permits changing its geography of provision. When a service activity is examined as a totality, then it appears to resist relocation. In fact, very few service operations can be done only on the computer (the modern form of “mundane work” in the terminology of Callaghan, et al. (2001)). Most services require at least some level of face-to-face interactivity, either among co-workers or with persons outside the organizations, such as vendors and clients. However, few considered that enabled and even induced by information technology, the provision of services could be parsed into components requiring different

⁹ We define a “business process” as a complete service, such as handling a customer complaint, processing a medical claim, or processing a purchase order. Completing a process requires undertaking a set of activities. For example, in handling a customer complaint it is necessary to understand the complaint, decide on a course of action, undertake the action, and follow-up to ensure the action solved the complaint.

levels of skill and interactivity and then certain portions of the activity – that might or might not be skill-intensive, but required low levels of face-to-face interactivity - could be relocated offshore. As Orlikowski (1996) demonstrated in her study of technical help desks, digitization induces workflows to be reorganized in the direction of dividing workflow into tasks that are separable in terms of technical skills and interactivity. This has significant implications for the possibility of offshoring, even in the absence of cost arbitrage opportunities such as are available when work is outsourced to developing nations like India. Hence, the offshoring of business processes is an interesting entry point for re-thinking the spatial fixity of services (Harvey 1982).

How significant can this be for developed country employment patterns? The number of employees in business processes is difficult to calculate. However, it is clear that their importance is growing even as services are becoming an ever-greater portion of the total workforce. As **TABLE 2 SERVICE EMPLOYEES** shows, in the Postwar period, general services has been the fastest growing part of the economy having expanded from 11.7 percent of non-agricultural employment in 1952 to over 31.5 percent in 2002. In 2002, Goodman and Steadman (2002: 3) found that more than 97 percent of the jobs added to U.S. payrolls were in services. Of these, business services and health care accounted for more than half of the growth. Moreover, business-oriented industries grew from 30 percent of the total service division employment in 1988 to 36 percent of the total employment, while consumer-oriented services fell from 55 to 52 percent and mixed industries decreased from 14 to 12 percent. The growth for business-oriented services was greatest in personnel supply (Goodman and Steadman 2002: 8). Recent

Each of these is an activity that is potentially separable from the others.

estimates for call-center employees show that they employ as much as 3 percent of the work force of the U.S. and the Gartner Group estimates that this will increase to 5 percent in 2010 (CRM Project 2002).

Firms in the finance, insurance and real estate (FIRE) sectors have led the initial growth of offshoring. An examination of this sector suggests the potential for job shift. In health care insurance alone, approximately nine billion claims are filed each year, and only about 46 percent were filed electronically. The rejection rates for paper claims was approximately 30 percent (Advanced Billing Systems Inc. 2003). Consider the insurance industry, which in the 1997 Census of Services had 2,327,000 employees. If only ten percent of these jobs could be moved overseas that would account for 237,000 persons. What if more radical estimates such as 30-50 percent was achievable? Then as many as 1 million jobs would be moved. Note the cost driver as well: The lower level employees in the claims processing industry are not well paid in the U.S.. For example, the beginning salary for a State Farm claims adjuster in 2000 was \$1,500 per month (Frey 2000). In India, the same person would receive no more than \$300 per month.

Enabling Technologies and Environment

Digital technologies were essential for loosening the spatial constraints of where most information provision, processing, and retrieval can occur. Most important has been a dramatic increase in amount of telecommunications bandwidth that has been accompanied by a greater than 50 percent decline in the cost of transmission of a data bit during the last decade.¹⁰ Today, it costs little more to have a customer call India on a toll-

¹⁰ The decrease in rates was facilitated by technological change, but also by U.S. government pressures on other countries to decrease their fees for connecting international calls (Cowhey 1998; Melody 2000).

free number than it does to make the same call in the U.S.¹¹ These lowered telecom costs made it feasible to undertake communication intensive tasks outside of the U.S. This was further facilitated, when during the Internet Bubble of the 1990s firms installed enormous amounts of new international fiber optic cable capacity. With the collapse of the Bubble, there was a capacity glut that led to dramatic price declines. Of course, telecom prices declined in both the US and international markets, but the critical issue is that the relative difference between the two declined, and the share of telecom charges in the total cost picture has declined.

In the world of documents there is a similar revolution underway. Whereas, ten years ago scanners were expensive slow machines, today industrial-strength scanners can digitize documents at the rate of 200 pages per minute. This digitization is usually not optical character recognition, but rather conversion into an image file. Once the documents are digitized they can be viewed anywhere in the world on a computer that has a high-speed telecommunications connection. This removes the necessity of shipping the paper.

Hence, today, a firm's phones can be answered, and forms can be processed anywhere that has excellent global telecommunications linkages. Simply put, in a digital world any activity not requiring a physical presence can be undertaken almost anywhere that is connected.¹²

¹¹ Large call center operations have computer servers that can route the incoming call to anywhere in the world where there is an idle operator. These are often called "cloud" servers, because they operate as though they were hovering in the sky and directing calls.

¹² For a service-dominated economy, the implications of BP outsourcing are especially important since every activity in a service business can potentially be modularized and outsourced. This is unlike manufacturing where at least the final assembly of a product has to be done in-house.

Another technological development that facilitated offshoring is the increasing use of standard software platforms in corporate information systems. The success of software packages for database control on mainframes and workstations, such as IBM and Oracle for financial data, Peoplesoft for human resources management, Siebel for customer relations and SAP for the supply-chain, meant that firms offering outsourcing had to make less customer-specific investments.¹³ For globalization it meant that potential employees in developing nations could learn a standard set of portable skills lessening their risk. These standard packages encouraged investment in learning and facilitated the creation of a more global workforce. In this way technologies, provided the tools and opportunity whereby multinationals and Indian service firms could consider India.

Technology was necessary but not sufficient to convince firms that they should move BPs to India regardless of the potential savings. The second important force was the conviction that such relocation could be undertaken with minimal disruption. For this a level of comfort concerning appropriate levels of security and assurances on business continuity must be established. For India, an important factor in overcoming this discomfort was the already successful software establishment that had a long track record of satisfying international customers. A second, and equally important, factor was that the business process offshoring pioneers were large multinationals like General Electric and American Express that had established large Indian operations much earlier. These

¹³ This standardization was partially due the concerns firms had about Y2K that led them to replace their idiosyncratic legacy systems with standardized packages

activities formed a part of a learning and comfort building process that created the foundations for the current wave of offshoring.¹⁴

The final force driving the offshoring of BPs is the current profitability crisis being experienced by enterprises in the U.S. and Europe. The over-capacity in nearly every industry is putting intense pricing pressure on nearly all firms. With revenues largely stagnant for the last three years, firms are under intense pressure to cut costs while retaining service levels. Automation has been a response, but many “routine” activities are not sufficiently routinized, so that human intervention is still necessary. Recently, the pressure has even convinced firms that moving mission-critical, time-sensitive processes offshore are critical for their success despite the higher risks.

Globalization of Services

The segmentation of services and relocating parts of an entire process to a lower income nation began much earlier than the globalization of manufacturing.¹⁵ Until recently services globalization meant the provision of services by giant multinational service firms operating in nearly every nation. The range of global service providers is impressive, led by large banks and insurance companies, but also law firms, accountants and executive search firms and the like. However, these service firms perform activities for the local market and this remains the classic form of services globalization. In this

¹⁴ A standard for BPO has yet to be developed or specified by either ISO or other quality-certifying body. Some India-based call centers have been considering obtaining certification from an American trade body, the Customer Operations Performance Center, (www.copc.com). In our interviews, we noticed that market forces were compensating for the absence of certification. Thus, to reassure clients on business continuity concerns, Indian outsourcers often over-engineered their infrastructure and security processes. For example, some firms used internally generated power as the primary source of electricity, keeping another power generator as a primary back-up and the least reliable source, grid power, as the third option. Similarly, over-provisioning telecommunications bandwidth was also common.

¹⁵ Here we distinguish between the traditional “offshore” services such as a tourist hotel in the Third World,

case, globalization was an outcome of the need to support customers wherever they might be located and there is only a rudimentary division of labor. For example, Goldman Sachs might locate its strategist for Japan in Japan because such a person would need local information, networks, and other resources to function. During this phase service activities were normally not decomposed into separable and relocatable processes nor were segments of a particular service concentrated into a few localities. This simple form of globalization did not seek to create a value-chain composed of discrete activities that could be parsed and allocated to operations in different countries. Thus, it did not mimic what was happening in manufacturing, in which geographical de-integration of the value-chain was the norm.

The conventional explanation for the collapse of U.S. Fordism places at least some responsibility on the movement of manufacturing offshore that began in the 1960s. Though in economics there is still a debate about the relative significance of globalization versus technical change and other factors for the relative decline of manufacturing in the U.S. (Feenstra 1998). However, it is clear that the globalization of manufacturing has increased rapidly.¹⁶ Today, nearly every manufacturing industry has a part of its value chain located overseas (Gereffi 1994; Porter 1990).

Until recently, globalization included few service activities. The relative fixity of services was due to a variety of factors. First, the information to be analyzed had to be encoded and then stored. So its transportation created logistical and security difficulties. Transportation and telecommunications were significantly more expensive. Finally, only three decades ago there was a lack of infrastructure in lower-wage nations.

or the provision of offshore banking etc.

¹⁶ Perhaps, the most eloquent statement of the problems this offshoring might create was Manufacturing

The initial relocation of BPs was intranational. So, for example, call centers were relocated from high cost cities to lower-cost small towns and then to rural locations. The earlier efforts to lower wage costs for back office business processes saw firms move their back-office operations to smaller Midwestern towns where accents were neutral, education was adequate, labor costs were lower, and at that time, the labor relatively more reliable. The cost savings were likely in the 20-30 percent range when the low-cost land and labor costs were totaled. However, labor pools were shallow thus limiting the scale of operations.

From this perspective, the relocation of such work to other countries was an extension of a process already under way as firms sought to further cut costs, leveraging technical developments that had reduced the costs of digitization and data transmission.. These technical developments loosened the geographical constraints that encouraged the undertaking of BPs nationally. Reducing the physical and technical constraints meant that variables such as factor costs and skill availability increasingly became the determinants of where service activities were undertaken.

In choosing which processes to undertake offshore, it may be thought that the simplest processes would tend to be offshored first, since the skills for undertaking more complex processes might take a longer time to learn. However, overseas operations also experience learning—even it is simply catch-up (Kogut and Zander 1992). From the perspective of the source nation the initial transfer may be only the first stage in the absorption of an entire chain of activities. Returning to the insurance claims example, whereas initially the Indian operation might simply key in information from a digitized

Matters by Stephen Cohen and John Zysman (1987).

“picture” of the claim into a standard form, it might later be possible to transfer some of the “Investigation and Valuation” activities to the Indian operation. With experience Indian accountants or engineers may be trained to “Determine fraud/exaggeration of claims” or, at the least, flag unusual claims. Here, the Indian employees would have to make decisions requiring greater judgment and with a greater impact on the firm’s bottom line. **FIGURE One** focused on the activities that are more easily offshored, however anything that does not need direct face-to-face human interaction has the potential to be outsourced.

Business process offshoring directly targets staff, particularly the back office and administrative functions. The staff functions within a firm are a polyglot of different activities ranging from marketing, human resources, accounting, facilities management, purchasing, finance, customer relationship management, and a plethora of other activities. **Figure One** indicates the large variety of activities that are amenable to relocation. For most firms, these activities can account for up to 15-20 percent of total costs and headcount. Basically, nearly any service activity that does not require in-person contact may be transferable.¹⁷ In **Figure One** the claims process is decomposed into separate activities that might be offshored. Presently, the vast majority of these activities are conducted in the U.S. A large insurance firm such as Aetna would employ thousands of persons to undertake these functions, many of whom are involved in either routinized activities or those not requiring face-to-face contact.

There are several additional dimensions to the offshoring decisions, other than the complexity of tasks and the need for face-to-face interaction. Some of these are internal

¹⁷ For a discussion of in-person services and their vulnerability, see Reich (1990).

to the firm and some part of the environment. It may happen – as we have noticed in India – that highly technical, complex tasks in customer support which require interaction between, say, a corporate client in the U.S. and the vendor’s technician, may be more easily offshored than a simpler task requiring interaction with a retail customer because the latter requires a kind of interactive skill that might be weaker in India compared with the former, while India offers technical skills of high quality capable of handling the former task..

We identify the following six internal factors that firms consider prior to offshoring an activity, in addition to environmental factors such as technological enablers and the savings in direct labor costs (which we consider later):

- The knowledge component of the activity. A higher knowledge component makes the firm more concerned about whether the quality of the service will change due to a locational change and greater difficulty in the transfer process. There may be reasons to worry about quality slippage if the remote location cannot understand the quality or qualities needed, or (even if it understands) cannot match the quality needed. Sometimes, if quality is acceptable, a firm may not only shift to a remote location, but also outsource the activity so as to mitigate the possible political difficulties of an internal transfer. A firm also might be concerned about a loss of competencies in a certain location that would be costly (or even impossible) to reacquire in the same location if ever needed. If unique skills atrophy, then any disruption of access could have dire consequences.
- The interactive components of the process. There are two dimensions of interactivity that affect the location of BPs: (1) interaction with other persons in

the production of the service, and (2) interaction with the customer. The greater the need to interact with other persons within the firm and the greater the interaction across different services and processes, the higher the cost and risk threshold of offshoring portions of the work. Of course, it might be possible to offshore the entire process, thus retaining interactivity at the new location. But, if some activities cannot be offshored, then offshoring the others might not be feasible. In cases where offshoring and outsourcing were both being considered then the risks might be even higher. Many firms as a core skill view interacting with customers. Offshoring might disrupt such interaction.

- The level of separability of the process. In some kinds of work, such as customer care, the entire process can be offshored, because it does not require face-to-face interaction. Usually, most of the activities are routinized and even scripted. For example, much software support is provided through scripted decision trees. Consider less scripted activities. Consider a process within which 70 percent of the work is web or database research, while 30 percent is interacting directly with clients. Unless it is possible to separate these processes into activities, it may be impossible to transfer the process. Separability is not dichotomous but rather a matter of degrees. It may be possible to reengineer a process to make it more separable, though this may be at the cost of some level of service quality.
- Savings from concentrating an activity in one location. Often firms will have a number of offices performing the same function. This is often the case because as firms expand they often tap-out local labor pools and must establish offices in other regions leading to an inefficient spatial posture. Often it is too expensive to

concentrate these facilities in a single location in the developed countries.

However, relocating to India can overcome this sunken cost issue. The advantages of concentration can be significant. There are benefits of size due to scale and scope economies. For example, a larger facility is more capable of taking on overload. A larger facility requires a smaller excess cushion to manage a “peak-load,” thereby creating both a manpower and facility savings. Of course, there may also be diseconomies of size. The advantage of concentration can also favor outsourcing, because a service provider can pool the business of many clients. The classic example is medical transcription, which is still mainly outsourced to small local firms or even individuals in the U.S. The large firms in India can offer guarantees of quality that smaller domestic operations could not offer, because they have large labor pools thus reducing the effects of absenteeism and offering the typical efficiencies that Adam Smith pointed out regarding even a simple division of labor.

- Reengineering as part of the transfer process. To transfer a business process, it is necessary to study it intensively and script the transfer. In the process of study, often there will be aspects of the current methodology for discharging the process that do not add value. Very often these aspects are legacies of earlier methodologies that were not eliminated as the production process evolved. During the act of transfer these are easier to abandon than at an existing facility where they have become a “natural” part of the daily routine. Our interviews identified other unexpected benefits that can be reaped from the transfer process that go beyond the efficiency effects. This process of examining and the

transferring a process can yield significant efficiencies. Processes often evolve in a path-dependent manner, and as Arthur (1994) and David (1986) have shown path-dependent outcomes may not be the most efficient configuration. During the transfer process, these inefficiencies can be addressed without disrupting work patterns as the workers in the new location are met with a fait accompli.

- The time-sensitive nature of the work. Some work such as payrolls has deadlines. What is remarkable is that Indian operations can permit deadlines to be shortened. The most obvious of these is work that needs to be completed overnight in Europe or the U.S. can be undertaken during the day in India. For example, technical calls by high-end clients may need to be answered within 15 minutes. For medical transcription, doctor's notes for patients in intensive care might have turnarounds as short as two hours. Indian operations are able to undertake these high priority tasks, because they can afford more slack resources to meet peak loads than their Western counterpart can. This dimension of quality is far more expensive to offer in developed nations where labor is more costly.

The Indian Connection

The combination of low labor costs, project management skills, and technological sophistication make India a particularly attractive candidate for overseas BP outsourcing.¹⁸ The genesis of the relocation of business processes to India can be traced to the emergence in the mid 1980s of India as an offshore site for software production.

¹⁸ For an early discussion of the role of India in business process offshoring, see Aron and Singh (2002).

By the late 1990s India had become a leading supplier of contract software programming due to its combination of skilled, low-cost manpower and project management skills.

Indian labor costs are significantly lower than those in developed nations are. For example, a trained CPA in the U.S. earns \$75,000 a year, while a GAAP-certified account resident in India typically earns \$15,000 a year. The differential for less skilled workers is even greater as the Indian wage rate for entry-level call center employees in metro areas is \$2,400 a year. Moreover, these jobs are attractive.

Nasscom statistics indicate that in India the direct costs per employee are \$10,354 (or \$5.20 per billable hour, of which \$3.10 is the estimated labor cost), yielding a 33.7% return on the direct cost of each employee seat. Comparably, direct costs in the U.S. are estimated at \$55,598 per employee (or \$27.80 per billable hour, of which \$21.50 is the estimated labor cost). Since the median size of firm is 1000 persons (see Table 6 below) with typical fixed cost investment of \$7,500 per seat, the annual return on capital is 46.6 percent and average gross profit (which is tax exempt under current law) is about \$3.5 million.

Labor cost differentials are not the only difference. In the U.S., call centers have been relocated to low labor cost areas, which are most often rural areas. There they are limited by labor shortages, high attrition rates, and relatively poor educational levels. In contrast, Indian cities like Mumbai or Bangalore offer access to enormous labor pools of potential employees and have the complementary urban services that permit the establishment of operations employing thousands. The call centers in India we visited varied in size, but the median size was 1000 employees. The average size in the U.S. is under 400, and many are between 150 and 300 employees.

These low costs and adequate labor supply are fuelling the business in India. According to Nasscom, the BPO sector's revenue for the financial year ending March 2003 was estimated at \$2.375 billion compared with \$1.475 billion in the previous year. Note that this implies that revenue per employee was \$13,848 in 2002-03, unchanged from the previous year, indicating that there was no labor supply shortages despite rapid demand growth.

To date the firms that have most aggressively offshored work to India have been in the healthcare, banking, technology and insurance sectors. The business processes have been medical transcription, call centers, accounting, and claims processing. The initial activities have been highly routinized, and resemble the initial phase of software outsourcing, where the first phase was coding and remote project management. More complex processes such as preparation of receivables statements and managing collections have also proven to be amenable to transfer. The next phase may take several directions: (1) Processes linking the organization with customers or suppliers or supporting production processes that may be amenable to remote fulfillment. For example, one firm reported that, after beginning with answering calls from potential clients for loan services, they went on to pre-qualifying clients before handing these off to the loan officers located in the U.S. Another had moved from medical transcription to coding the transcribed work into a billable event. Also, supply chain management and customer care are possible candidates. In healthcare, clinical trials, gene testing, and algorithm-development might be offshored. (2) As BP outsourcing providers develop expertise through working for several clients, they may be able to move upstream and provide advice on business process reengineering.

The longer-term driver of the business in India has been the large-scale reform in the communications infrastructure (Dossani, 2002). Beginning in 1999, India reformed its public monopoly telecommunications system into a market-driven system through allowing a large number of private providers to enter the business. The private providers were allowed to choose their specializations, ranging from providing niche services, such as backbone and network management, to full-service integrated voice and data operations. The result has been the provisioning of a telecommunications network with quality and cost levels approaching that of developed countries, though mainly in the larger cities.

If BP outsourcing in India is restricted to call centers and financial data processing, while the business may grow sufficiently large to overtake software outsourcing, it will not have a dramatic impact on the employment situation in the U.S. and other developed countries. On the other hand, if it expands to the entire spectrum of services such as managing payroll, accounts receivable etc., then the impact on both the U.S. and India could be enormous. What if India were to parallel the importance China has achieved as a manufacturing destination? An indication of how significantly India can benefit is that, as of now, only 80 U.S. firms (almost all in the Fortune 500) have offshored BP outsourcing work to India. In our recent interviews with MNCs already operating in India, on average they predicted their employment would double during the next 12 months.

In the discussion of **FIGURE One**, the focus was upon the transfer of activities, which is most salient. However, the lower cost of more highly skilled personnel also permits a rethinking of earlier cost-benefit decisions. As discussed above, the cost of a

trained accountant in India is so much lower than in the U.S. that it becomes possible to audit a greater number of cases and/or lower the threshold for universal auditing. The result is a diminution of mistakes and fraud leading to greater cost recovery. Such opportunities could transform the Indian claims processing operation into a profit center.

An example from the travel industry is instructive of another possible growth trajectory. One Mumbai-based firm that we visited provides services to the airline industry. Its primary business is to tally the boarding cards issued by its client to travelers and declare the revenue arising therefrom. In the course of fulfilling this service, a client noted a long-suspected problem, that, on average, travel agents were underpaying the airline. However, the percentage of underpayment was believed to be minuscule to collect and had never been tracked by that airline. The Indian firm used boarding card information to tally the dues of the airline and compared this with the amount paid by travel agents, discovering a significant gap of 1 percent, much higher than the airline's expectation. The airline subsequently began collecting this underpayment and the provider expanded the service to other clients as well, and discovered that average underpayment exceeds 1 percent. Thus, it was able to verify and collect upon a long-suspected item because the low labor costs made this feasible. In both of these cases lower costs decreased the break-even point thereby creating a new revenue source. In these cases, India is both receiving transferred jobs and creating new jobs. Had the airline known the size of the gap earlier, it would have been worth its while to investigate its sources.

For Indian firms and policymakers where India ends up in the value-addition process is critical. Even today, the Indian software industry operates in the low value-

added segments, typically in applications development, testing, and maintenance, while the high-end work such as developing the IT strategy, identifying the software needs, designing the system, and integrating the project with other packaged and custom components is discharged by U.S. firms. If the Indian BP operations are not able to move up the value chain then BP offshoring may not prove to be so important to the development of the Indian economy.

India faces two key challenges in maintaining the pace of the business, although these are not likely to have a short-term impact. The first is a shortage of managerial talent. Such talent is needed for several activities, many of which are new to India. The first is managing the migration of a business process from an overseas firm to the Indian operations. The larger and, apparently, more successful BPO providers reported that it often took up to a year to make such a transfer for some of the more complex back-office operations, while the simpler ones, such as outbound call centers, could be transferred within a month. The second managerial task is to maintain a seamless relationship between the transferred entity and the organization back in the developed country. A third managerial task is raising and then maintaining the productivity of operator-level staff. While some firms, notably multinationals, had achieved productivity rates that matched or even exceeded those of their developed country counterparts, this was observed to be a bigger problem for independent firms. This problem has also been greatly exacerbated by high staff turnover levels. Although it is claimed that turnover rates are lower than in developed countries, some Indian providers reported attrition rates of 7% per month, although 3.5% per month seemed to be the average rate.

The second key challenge for India-based firms is the shortage of expertise, especially in the fastest growing BPO industries, finance, insurance, real estate, health care and logistics¹⁹. Given that India has recently liberalized, Indian expertise outside the long-established banking sector is outdated in finance and the other sectors above. Horizontal skills are also in short supply. According to the Outsourcing Institute (www.outsourcing.com), horizontal expertise is most needed for BPO in payroll, customer care, document management and benefits management. Apart from accounting skills, India has little experience with the other segments.

The Industrial Structure of Business Process Space in India

The number, size, and diversity of organizations offshoring business processes is great. The two important dimensions for categorizing these firms, are whether the Indian-owned and operated or a multinational, and whether they are a captive or firm that undertakes outsourced work (see **Table 3**). Because the potential market is so large, and the economics so compelling, there have been a plethora of entrants from a large variety of backgrounds **TABLE 4 Types OF FIRMS**. Because BP offshoring to India is only in its earliest stages, it is difficult to predict which organizational forms will become dominant. Moreover, it is not clear whether there will be a single BP offshoring industry, and whether the captives or independents will dominate, or even compete. There are niche areas such as medical transcription, geographical information system (GIS) data entry, and document conversion that may remain separate from the industry's

¹⁹ According to the Outsourcing Institute, these are high growth areas in the U.S. (www.outsourcing.com)

mainstream. The following general overview is not exhaustive, but does examine those of the greatest importance.

Like the IT outsourcing industry, MNC captives led the way in the establishment of the first BP offshoring operations in India. They are still viewed as the market leaders because of the capabilities that they have developed and the sophistication of work undertaken. Unlike IT outsourcing, where domestic firms soon became dominant, in BP offshoring, the Indian industry is unlikely to be dominated by domestic firms. The MNCs entered the market first, followed by the Indian specialists entering in the late 1990s. It is far more difficult to establish the entrance dates for the myriad other firms. The most recent entrants are MNC outsourcers such as Accenture, Convergys, and Sykes.

MNC Captives

The MNC captives include the oldest BP operations in India, and the number of them has proliferated greatly. The earliest BP operations were MNCs that had existing operations in India, and recognized the potential of using their Indian operation to undertake activities formerly done in other nations. The first back office BP operation in India was established by American Express in 1993. In 1996, British Airways established a back-office operation in India. In 1998, General Electric initiated BP operations in India. Today, General Electric is the largest BP employer with over 12,000 persons in its operations, and is meant to increase to 20,000 by the middle of 2004. Since 2000, an increasing number of Global Fortune 500 firms including AOL, Citigroup, Dell, Hewlett Packard, HSBC, and JP Morgan Chase have established operations to serve the Indian market.

Even as MNCs with existing Indian operations draw upon them to establish BP units, MNCs that previously had no Indian operations have begun establishing BP operations. These include a major US PC firm and a large online Internet service provider. The newcomers are also rapidly expanding their operations. For example, in June 2001, a PC maker launched its Indian call center operations with 200 employees. By April 2003, it had grown to a total of 3,200 employees in the original facility and at a newly opened facility in another Indian city. The operations included not only a call center, but also other activities including software development. The growth of the ISP was similarly dramatic. Operations commenced in July 2002, and already by April 2003 had grown to 1,500 persons and were expected to grow further to 2,000 by the end of July 2003. The compelling savings are difficult for the newcomers to resist, despite initial difficulties in managing rapid growth in a new operating environment.

Because the captives are internal operation they have significant advantages. First and foremost, they have guaranteed markets for their services, i.e., they have the advantages of hierarchy. Their business volume is a hierarchical decision and the information driving the decision is excellent. In the case of lower value-added, routinized work the advantages of captives may not be great and risks may be minimal, so that the decision to outsource or do the work in-house may be almost solely on price. In the case of higher value added processes, it may be more prudent to retain them in a captive operation. Surprisingly, the initial BPs transferred were at the low-end of the value addition spectrum. However, this need not be end state for the Indian operation. As both the Indian operation and the entire firm learn, higher value-added activities almost certainly will be transferred. For example, General Electric's Indian operation has

moved up the value-added chain and added employees doing actuarial support, data modeling, and portfolio risk management. On its health care insurance operations, it employs 40 medical doctors to evaluate and classify medical claims. This suggests that larger MNCs will ultimately prefer to undertake BPs in captive units, especially for work that requires interaction among global employees. However, call center work, which tends to be a self-sufficient process with limited interaction among global employees could well continue to be outsourced.

Another factoring favoring captives is that – while relocating back-office activities to India is complicated technically - the organizational issues can be even more problematic. Consider the unit that is surrendering the process: though it is under intense pressure to cut costs, there is, at a minimum, a perception of increased risk as it becomes dependent upon an Indian counterpart that is not under its direct supervision. This unease may be heightened in the case of mission-critical activities. Also, the contributing unit often must cope with redundancies and/or a managerial perception that it is losing power in the wider organization. The recipient unit must alleviate these concerns during the transfer process.

Operating a captive in the Indian environment requires significant managerial talent. For those with long-established Indian operations (typically serving Indian markets) this is more likely to be available internally, whereas the new MNC entrants are likely to experience significant learning costs. One difficulty they face is whether to staff the operation with expatriate executives or to hire Indians. Nearly all of the new entrants chose to send some expatriates despite the enormous expense. For these firms, the

expense of maintaining an expatriate may become an issue, however, at present, the savings are sufficiently large so as to offset the expense.

Another type of rationalization can be creating a multinational center of excellence. Frequently, an MNC's various national BP operations are nationally based and developed in different historical eras and thus there are varying practices for identical functions. Enforcing standard operating practices in different national environments can be difficult, because there is a constant tendency to "go native." This drift is endemic in even the best firms, and may be most pronounced in the less intensively "managed" parts of the national unit's operations such as the back offices. The transfer of these processes to a specialist organization dedicated to managing them, not only creates economies of scope and expertise, but also provides an opportunity for standardization, and the removal of the process from the national "drift." While this may be resisted at the national level, for global headquarters this may be seen as a way of exerting control and improving monitoring.

There is quite naturally concomitant risk with the centralization of particular process practices at one global center. The most significant of these is that the global operation will lose touch with the national environment. Here, the quality of communication and trust between the national operation is critical. Compelling economics and top executive support are critical.

The final advantage of in-house work is that, in the future, the captives could offer their services on the open market as merchant service providers. This would transform the captive from a cost center into a profit center. Already, a few of the largest captive BP operations are considering offering services to external customers. This could

become significant in the future when the number of activities being transferred from the parent firm decreases. In 2003, the number of internal activities available for transfer is so great that securing outside customers may not yet be justified. The opportunity to exploit the capabilities being built in India as a profit center may become significant in the future.

In 2003 the captives are the largest sector of the BP industry in India. There is every reason to expect this will continue for the foreseeable future. The advantages of retaining a captive are significant in terms of reducing risk and possible knowledge leakage, capturing profits internally, and using internal operations to benchmark outsourcing contracts. Since less than 10 percent of the Global Fortune 1000 firms currently operate in India, it seems likely that more firms will relocate activities and that the current operations will continue to expand.

Multinational Outsourcers

Business process outsourcing has a long history, and has grown rapidly during the last decade. Estimates of the total size of the BP outsourcing market vary widely. For example, in recent press reports consulting firms have estimated the global market to grow to \$140 billion by 2008, \$544 billion by 2004, and even \$1.2 trillion by 2006. In other words, the lack of consistency is remarkable. The remarkable divergence in estimates is perhaps due to the fact that definitions differ, and because business service outsourcers are a polyglot category including data systems outsourcers such as EDS and IBM, payroll and accounting processors such as ADP, call center and customer relationship managers such as Convergys, Sitel, and Sykes, large consultancy firms such

as Accenture, and many others. Globalization is not new when the entire business space is considered. Even prior to the emergence of India as an offshore location, these outsourcers had been opening service production facilities offshore in the Caribbean, Latin America, and, particularly, Canada. Beginning in about 2000 some began operations in the Philippines.

These outsourcing firms have not been the pioneers in establishing Indian facilities. For the most part, the international outsourcers established their Indian operations in 2001 or later as a response to competition from the MNC captives and the Indian independents. However, the MNC outsourcers have long established customers and enormous domain knowledge, making them formidable entrants in to the India from where they can service their clients using low-cost Indian labor. These capabilities and existing customers have permitted them to scale-up their Indian operations extremely rapidly. For example, in late 2001 Convergys opened its first Indian operation in New Delhi. By April 2003 this facility had more than 3,000 employees, and Convergys was building a second facility in Bangalore that was slated to grow to 3,000 employees. The growth of their Indian operations are not constrained by a lack of customers, though the further growth of their Indian operations may lead to the scaling back or closure of North American units. The Indian operations provide for substantial cost savings and serve as protection from incursion into their customer base by Indian firms.

The ability to transfer customers to their Indian operations while providing backup in the U.S. and other locations allows service level guarantees that firms operating only in India cannot provide. The conundrum for these firms will be how long their customers will support higher cost U.S. facilities -- and already there have been

closures and lay-offs by the MNC subcontractors. In the short-run, it may be cost-effective to continue operation of their U.S. facilities, but unless the facilities can be transitioned to activities that require spatial proximity their future maybe in doubt. U.S. facilities will be closed. For example, in February 2003 Sykes (2003) announced the closure of facilities in the U.S. and in Europe eliminating 1,800 excess seats, even while its Indian subsidiary was expected to grow to 1,200 seats by the end of 2003.

In summary, the MNC outsourcers have significant strengths, the most important of which is their close customer relationships. Having multiple locations provides the redundancy that some customers require. However, being U.S. firms their overhead may be higher than that of their Indian competitors. Also, managing in the Indian environment may prove difficult. Unfortunately, due to the intense cost pressures, it is certain that MNC outsourcers will have to transfer more activities offshore to remain cost competitive.

MNC Specialists

India is also attracting smaller MNCs that perform labor-intensive specialty services. These services are wide-ranging, but are based on specialized domain expertise. Though many of these are not really BPs, they are included under the broader category of ITES. Examples of this type of work includes medical transcription, map digitization, cartoon animation, document entry and conversion, and other labor-intensive tasks. In general, these businesses are involved in digitizing analog materials or converting information from one format and/or media to another, e.g., taking aerial photographs and entering them into a mapping program. Their sheer diversity is remarkable.

Taken individually, these activities have limited employment potential, however in aggregate they may be of much greater significance. For example, there are approximately 270,000 medical transcriptionists scattered around the U.S. Small local firms or even individuals undertake most transcription. Recently, there has been an effort to rationalize transcription, however there are few economies of scale so this has advanced haltingly. The rationalization process might be facilitated if the activity could be done offshore at lower cost. One difficulty is that not only are the transcriptionists decentralized, but so is the market—making sales and marketing difficult. Thus, it is not clear whether medical transcription ultimately will be transferred offshore, despite the possible savings. What is important is to understand that these niches offer opportunities.

Another labor intensive activity that is being relocated to India is map digitization. Firms and governments want digitized maps, because they are easier to update, maintain, and analyze. The difficulty is that the information is currently on paper maps so they must be converted, by hand, a time consuming process. Low-cost Indian labor makes this possible. Given the increasing use of geographical information systems, this could be a significant niche.

The variety of niches within which businesses could be built is remarkable given that transcription, paper-based document digitization, database-centric research, and many more activities exist in the pores of so many U.S. organizations and the economy as a whole. Still other possibilities include legal research using Lexis-Nexis, drawing of tables and figures, drawing and/or digitizing blueprints, etc. One drawback is that in terms of the total market size many niches may be too small to justify transfer to India. And yet, the cost pressures on these specialty firms are encouraging examination of the

feasibility of offshoring their more mundane work. There are numerous other niches that might be attracted to the low-cost Indian environment.

The MNC specialists are a fascinating group because of their sheer diversity and the likelihood that their decisions will be largely unnoticed due to each niche's relative insignificance. However, their aggregate importance could be great due to the sheer number of niches that exist. If these myriad firms begin transferring activities and processes overseas, in total it could have an important impact.

NRI-promoted firms

Among the first to understand the potential for undertaking services in India were the Indians living in the U.S. and the U.K., or who in India are termed “non-resident Indians (NRI). The NRI understood that there was a significant opportunity to undertake labor-cost arbitrage offshoring to India. So they moved quickly, beginning in the early-1990s, to establish outsourcing firms in the U.S. that would actually discharge the work in India. Initially, these operations entered specialized fields such as medical transcription and GIS. These operations have remained small.

The more recent entrants have offered a wider-ranging menu of services and are larger. In a number of cases, these firms received funding from venture capital firms or were funded by a wealthy NRI. Their competitive advantages differ. In some cases, they have the advantages of domain expertise and client access. In this case, they often compete with MNC outsourcers and MNC specialists. In other cases, particularly, the smaller ones they are handicapped because they lack domain skills. Often, these firms

resemble some Indian specialists in that they may be lacking sufficient financial resources to compete over the longer-term.

Organizationally, these operate as MNCs since their headquarters are located in the U.S. or the U.K. However, headquarters is usually confined to the accounting, marketing, liaison staff, and a few top-level executives, usually including the NRI promoter. Operationally, all the other functions are located in India. So they do not have the managerial talent in the U.S. that the MNCs have. Moreover, unless the promoter has industrial and marketing experience, these firms may not have competitive advantages.

Indian Specialists

Indian specialty firms are also entering fields such as medical transcription, map digitization, and manuscript preparation. The difficulty the Indian entrants encounter is their relative lack of domain knowledge. For those Indian firms with deep enough domain expertise to create offerings, it may be possible for the Indian firm to transform the business proposition from offering simple labor cost arbitrage to providing significant value addition. For example, a publishing firm that initially only prepared drawings for chemistry texts now offers a full range of back-office services, including copy-editing, formatting and technical support. It has expanded its product list to include academic and professional journals and even time-sensitive publications such as newsletters. The enhanced capability allows not only the addition of greater value, but also provides greater bargaining capacity.

An example of such capability development is the Mumbai firm, Kale Consultants, which specializes in providing services to the airline industry. Originally,

Kale offered specialized airline software packages; however in 2000 it extended its offering to include BPs. Coupling its specialized proprietary software tools with BP outsourcing operations meant that it could offer a more comprehensive package. For customers, this created an incentive to use Kale, and in the meantime created a more permanent or “sticky” relationship.

Developing domain expertise and becoming a specialist is difficult, and has risks because the firm becomes dependent on a single industry or activity. And yet, it also offers the potential to occupy niches that may not be drawn into the extremely ferocious competition found in highly commoditized sectors.

Indian Independents

A large number of Indian-owned and operated firms have been established for the sole purpose of offering BP outsourcing services to foreign firms. A number of these are venture capital-supported, and were formed during the Internet Boom with the objective of providing back office services to U.S. Internet firms, such as Amazon and Yahoo!. Not surprisingly, the collapse of the dot.com boom beginning in 2000 forced these service firms to rethink their corporate strategies. Since these firms were supplying back office services, such as answering emails and web-related questions, it was not difficult to switch their service offerings toward the voice sector. Still other independents were funded by venture capitalists as part of the enormous (and still-continuing) hype and excitement about BP outsourcing to India.

Some independents have experienced rapid growth as they have found customers among developed country firms. It was more difficult to ascertain how successful these

firms have been in terms of profitability, although many claim to be cash flow positive. There have been a large number of entrants and a shakeout appears to be underway in the industry as the smaller firms are having difficulty securing customers. Further, some independents that have obtained business from large MNCs have been forced to include build-operate-transfer provisions in their contract (the trend is more pronounced with time as MNCs feel increasingly comfortable about setting up their own operations once they understand the environment), thus limiting future growth prospects.

These independents are often dependent upon a few larger customers making them vulnerable to the termination of a contract. An important example of this is EXL Service, which was the largest Indian independent BP outsourcing firm until October 2002. At that time, 80-90 percent of its revenue (Express Computer 2003) and over 800 of its seats were dedicated to the U.S. insurance firm Consec. However, in December 2002 Consec filed for bankruptcy and the employees dedicated to Consec dwindled 175 persons by April 2003 (Verma 2003). Because of this EXL Service's growth stalled while other firms surged; though by mid-2003, EXL Service had recovered and was once again growing.

The strategic difficulties are significant. Because of the ferocious competition and the felt necessity to expand, the independents are under pressure to pursue any business prospects. However, this mitigates against their expressed desire to develop domain expertise. The call center-oriented firms may decide whether they want to specialize in in-bound or out-bound calling -- two different sets of skills. Another difficulty is that the U.S. market is the largest in the world, but sizing a facility for the U.S. market means that during the day in India, the facility is often idle. The

independents have been able to secure some business from Europe especially England that allows them to extend facility utilization, however it is still difficult to utilize the entire facility for more than 1.5 shifts. One method for securing greater capacity utilization is to secure activities that do not require real time processing. The MNC captives are at an advantage in this respect: they are able to more fully utilize the facility, because they also do less time sensitive work.

The ultimate fate of the independents is difficult to predict and for the smaller ones survival will be precarious. Their greatest difficulty is in marketing their services to foreign firms. The larger ones should be able to strengthen their marketing in the U.S., thus increasing their market share. The middle-tier independents might be acquired either by Indian firms or multinationals wishing to quickly enter the BP outsourcing field. The strongest independents may be able to create firms that resemble the independent multinational outsourcers.

Indian IT Industry Subsidiaries

The Indian information technology (IT) industry has grown remarkably rapidly over the last decade through the provision of outsourced programming and IT services to the global market (Arora and Athreye 2002; D'Costa 2003, Singh 2002). In IT outsourcing, Indian firms such as HCL, Infosys, Satyam, TCS, and Wipro have become globally competitive. Because of their ability to use lower-cost Indian software talent, they have made significant global market share gains. Further, their interaction with the global economy has contributed to the development of executive and managerial talent capable of securing overseas contracts, managing the interface with foreign customers,

and migrating activities across national and firm boundaries. In the process, these firms have cultivated close connections with foreign customers for IT services. This provides an entree and confidence on the part of customers that facilitates convincing foreign customers to trust them with other services.

Given the growth in ITES, the Indian IT firms believe BP outsourcing is a sector in which they can expand. Their strategic question has been how to enter this new industry. The major firms have answered this question differently (see **Table 5 IT/BP outsourcing**). Infosys and Satyam established subsidiaries, one of which Progeon has grown rapidly and recently split a five-year, \$160 million contract from British Telecom with HCL BPO²⁰. In contrast, the Satyam subsidiary has experienced only limited growth. TCS, the largest Indian software firm, entered the BP outsourcing sector through a joint venture, and there is little information about its growth and success. Finally, Wipro and HCL entered the industry through acquisitions. Wipro acquired a venture-funded Indian independent, Spectramind, which has grown quickly. HCL acquired the Northern Ireland call center subsidiary of British Telecom, though most of HCL's BP outsourcing growth has been in India.²¹

The Indian IT firms have significant advantages in terms of an ability to invest, linkages to customers, and various other strengths. However, the BP outsourcing business is quite different from IT. In terms of marketing, the customer's key decision maker is not the Chief Information Officer or Chief Technical Officer. Usually, BP outsourcing is sold to the various responsible divisions or departments. Further, the

²⁰ Formerly, HCL eServe

²¹ In June 2003 BT announced that it was establishing a captive Indian call center.

ultimate decision rests with the Chief Financial Officer or Chief Executive Officer. This means that the Indian firm must operate through different channels.

The BP workforce is also different. Whereas, in the IT sector the workforce largely consists of engineers; in BPs the workers' degrees are in commerce and social science. Since BP outsourcing work often requires direct interaction with customers, the workforce salient skills are interpersonal, rather than technical. Further, many BPs are undertaken in real time so errors and mistakes have an immediate impact. Service Level Agreements are tightly written and monitored in real time so problems are exposed nearly immediately. In contrast, in software bugs can be rectified later. Also, BPs that require customer interaction can be extremely stressful, putting a premium on skillful workforce management.

The ability of Indian IT firms to manage non-technical personnel in extremely price competitive environments will be tested. However, a test of their managerial prowess may not come until later as the rapid market growth ensures an appearance of success for many entrants. Difficulties may remain hidden until growth slows, though by that time they may have built such close relationships with their customers that exit by the customers may no longer be possible due to its depth and stickiness. There is also the possibility that the technical skills within the IT parent could be used to automate aspects of the BP outsourcing process creating another level of value addition that would improve profitability. This would also enable the IT firm subsidiaries to create advantages beyond routine labor cost arbitrage.

Indian Non-IT Industry Subsidiaries

There is a host of other established Indian firms interested in entering the BP outsourcing industry. Attracted by the “Gold Rush” aspects of the sector, these traditional firms with their roots in the large Indian business groups have invested significant sums. Already some of them appear to be experiencing difficulties in securing customers (Personal Interviews 2003). However, in contrast to the smaller independents, these firms have deep pockets, and can compete for as long as their parents are willing to provide subsidies. They will either find a successful strategy or they will exit the business because of an unwillingness of the parents to sustain further losses.

This genre of firms is interesting because often they have no particular advantages. In almost all cases, there are few synergies between the parent’s existing business(s) and the services they aim to provide. They nearly always have experienced management, though their experience may be in the relatively protected domestic market. Frequently, they have minimal experience in interacting with foreign clients especially in terms of providing services. The lack of inherent advantages beyond deep pockets means that these firms will have to build capabilities in the same way as the Indian independents. Their only significant advantage will be the relative deep pockets of their parent firms, though, oddly enough, this may inhibit their ability to evolve to market demands. In other words, protection from the vagaries of the market could contribute to an inability to learn from the market.

Concluding Thoughts

The relocation of business processes to India is coming through a variety of organizational forms ranging from captives to independent firms, domestic and international. Ultimately, the relocation of services could be as significant to the U.S. economy as was the relocation of manufacturing to East Asia. Alternatively, it could be a phenomenon whose dimensions are comparable to the rise of the Indian software industry -- of significance to the Indian economy, but with only a minor impact on the U.S. and the global economy.

For the English-speaking developed nations, the job implications of what some observers call “lift and shift” during the next five to ten years are clear – there will be some level of job loss though the magnitude is not yet certain. To reiterate, no one at this moment is sure of the dimensions of this transfer process. However, the numbers could be very large. For example, a recent report by Deloitte Research (2003) estimates that 2 million jobs (of which 851,000 will be from the U.S.) from the largest 100 global financial institutions will be moved to India by 2008.²² Though finance is one of the largest sectors, every large firm in the world has large numbers of employees discharging routine back office work that does not need to be located in the developing countries.

One troubling aspect of BP offshoring is the rapidity with which it might occur. Manufacturing’s movement offshore was a gradual migration that has been underway since at least the early 1960s. Though punctuated by dramatic factory closings, there was ample opportunity for the U.S. economy to adjust.²³ This may not be true in services

²² In the context of a 3% turnover rate in jobs in the U.S. service sector (see: <http://www.bls.gov/jlt/home.htm#data>), this does not seem overly worrying for U.S. employment rates.

²³ We are entirely cognizant of the hardships that were experienced by displaced workers, abandoned

where the “objects” are pixels and electronic pulses that can be transmitted by photons and radio waves (Cohen et al. 2000; Kenney 1997).

This paper has explored the implications of the offshoring of service work. These jobs, which formerly were rooted relatively close to where they were generated due to the sheer logistics of moving paper documents and formerly high telecommunications costs, have now been made mobile by the technological improvements and a willingness on the part of management to consider offshore processing facilities. It is possible that during the next decade the winds of globalization will sweep through the formerly cosseted ranks of white-collar workers. As enterprises seek to drive down their costs, a new round of globalization could take place within which a complicated multinational chain for data capture and processing emerges. The old image of the developed nations concentrating on information services, data processing, and knowledge creation will give way to a world in which knowledge creation will become the critical factor – data and information will simply be commodities processed in Third World factories.

Our results combined with those of other scholars examining industrial globalization provide grounds for further speculation.²⁴ Were the worst case scenario to occur, developed nations will have to further increase the creativity of their workers. For example, despite the fact that the world’s athletic shoes are produced in low-wage environments, their design remains firmly rooted in developed nations. Even today, despite all of the electronics manufacturing located in developing nations, the bulk of the value-added design remains in the developed nations (Leachman and Leachman 2003;

communities, and small firms unable to afford overseas operations. We are also aware that some workers, communities, and firms were unable to adjust.

²⁴ For further discussion of the structure of globalization in specific industries, see Kenney with Florida (Eds.)(2003).

Curry and Kenney 2003; McKendrick 2003). Similarly, even if much of the animation for feature-length films relocates to India or the Philippines, the design and marketing will remain firmly rooted in Hollywood (Scott 2002). For consumers, it may become routine for a U.S. customer to speak with an Indian customer representative as to get a foreign-born taxi driver in Washington, DC.

In aggregate international trade has been an enormous benefit to the U.S. and the continuing momentum toward ever freer trade appears unstoppable. However, there is the possibility that, depending upon how many service jobs are offshored, the current process could, in the short-run, contribute to U.S. unemployment problems, and possibly the problem of deflation. The historical record shows that in the past, such as the movement of manufacturing offshore, the U.S. economy responded by creating new jobs. Should the offshoring of services grow as large as some persons believe it might, the remarkable ability of the U.S. economy to create new jobs will be tested again.

When discussing the costs of moving work offshore, few recognize that these workers may also become consumers, and, often, they have many of the same consumption patterns as their developed country counterparts. These Indian service workers could provide a market for U.S. consumer goods, even as their workplaces consume Dell personal computers, Cisco switches, and Avaya telecommunications equipment. In the future, it may be important for policymakers in developed and developing countries to consider a more comprehensive initiative that increases the consumption opportunities in developing countries through trade liberalizations and the creation of institutions and mechanisms to speed development in these countries, thus reducing wage arbitrage opportunities. Increased wages would create greater purchasing

power in the developing nations making them consumers of imported goods, thereby creating a positive feedback loop. Though it is unlikely that such a radical notion can yet be placed on the global agenda, the current economic difficulties in the developed nations could alter current thinking and encourage interest in a more comprehensive solution.

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Table 1: A Cost Comparison between a Call Center Operated in Mumbai, India and Kansas City, 2002

	Amortized Equipment Cost (\$/hour)	Other costs (\$/hour)	Labor (\$/hour)	Profit (20 percent mark-up in U.S., 100 percent in India)	Cost to Client (\$/hour)
Kansas City	0.25	0.14	10.00	\$2.08	12.47
Mumbai	0.35	0.21	1.50	2.06	4.12

Source: Authors' estimates

Table 2: Private Sector Employment Excluding Farm, Mining and Construction Sectors of the U.S. Economy, 1952-2002 (in millions)

Year	Total	Total Services	Transportation & Utilities	Wholesale Trade	Retail Trade	FIRE	Services	Manufacturing
1952	38,619	21,987	4,248	2,821	7,184	2,035	5,699	16,632
1962	43,043	26,208	3,906	3,207	8,359	2,754	7,982	16,853
1972	55,825	36,674	4,541	4,127	11,822	3,908	12,276	19,151
1982	68,675	49,895	5,081	5,295	15,158	5,340	19,021	18,780
1992	84,829	66,725	5,718	5,997	19,356	6,602	29,052	18,104
2002	102,419	85,695	6,773	6,671	23,306	7,760	41,185	16,724

Source: U.S. Government, Bureau of Labor Statistics, 2002
<ftp://ftp.bls.gov/pub/suppl/empsit.ceseeb1.txt>

Table 3: Indian IT Firms' Strategies for Entering the BP Outsourcing Industry

Firm	Strategy	BP Outsourcing Employees (April 2003)	Locations (April 2003) 1 st is HQ
TCS	Joint venture with HFDC: Intelenet	900	Mumbai
Infosys	Established a subsidiary, Progeon	3,000	Bangalore
Wipro	Acqd. Spectramind in 2002 for approx. \$93 million	3,200	Delhi Mumbai
HCL eServe	Acqd. British Telecom BP outsourcing subsidiary, now an HCL subsidiary	2,500	Delhi Belfast, NI Chennai
Satyam	Established a subsidiary, Serwiz	N/a	Hyderabad

Source: Authors' Compilation

Table 4: Sample Matrix of Organizational Forms

	Captive/Subsidiaries	Independent
Indian	Jindal IT subsidiaries: Progeon, Spectramind	Daksh Exl
MNC	Citicorp GE HSBC AOL Dell	Convergys Sykes

Source: Authors' compilation

Table 5: Firms Involved in Business Process Activity Offshoring to India

	Typical	MNC/NRI/Indian	Outsourced (Y/N)	Current Size
MNC captives (India experience)	Amex, Citi, GE, HP, HSBC, JP Morgan	MNC	N	VS/M/L
MNC captives (No experience)	AOL, Axa, Dell, Fidelity	MNC	N	VS/M
MNC outsourcers	Convergys, Sitel, Sykes, Teleperformance	MNC	Y	VS/S/M
MNC specialists: GIS, medical transcription, publishing	eBookers, Kampsax, TeleAtlas	MNC	Y	VS/S
NRI-promoted: General outsourcing, medical transcription, publishing	eFunds, Genisys, Heartland, Max Healthscribe, Techbooks	NRI	Y	VS/S
Indian independents	247 Customer, Epicenter, Daksh, EXL, First Ring, iSeva, Infowavz, Msource, Tracmail, Transworks, Vcustomer, WNS	Indian	Y	VS/S/M
Indian specialists: GIS, medical transcription, publishing, travel	ADS, BDCS, Kale, Thomson	Indian	Y	VS/S
Indian subsidiaries (IT industry)	Progeon, Wipro Spectramind, HCL BPO, TCS Intellenet	Indian	Y	S/M/L
Indian subsidiaries (non-IT industry)	ICICI Onesource, Ienergizer, Jindal Transworld, Zenta	Indian	Y	VS/S/M

Legend: Large (L) = >5000

Medium (M) = 2000-5000

Small (S) = 750-2000

Very small (VS) = <750

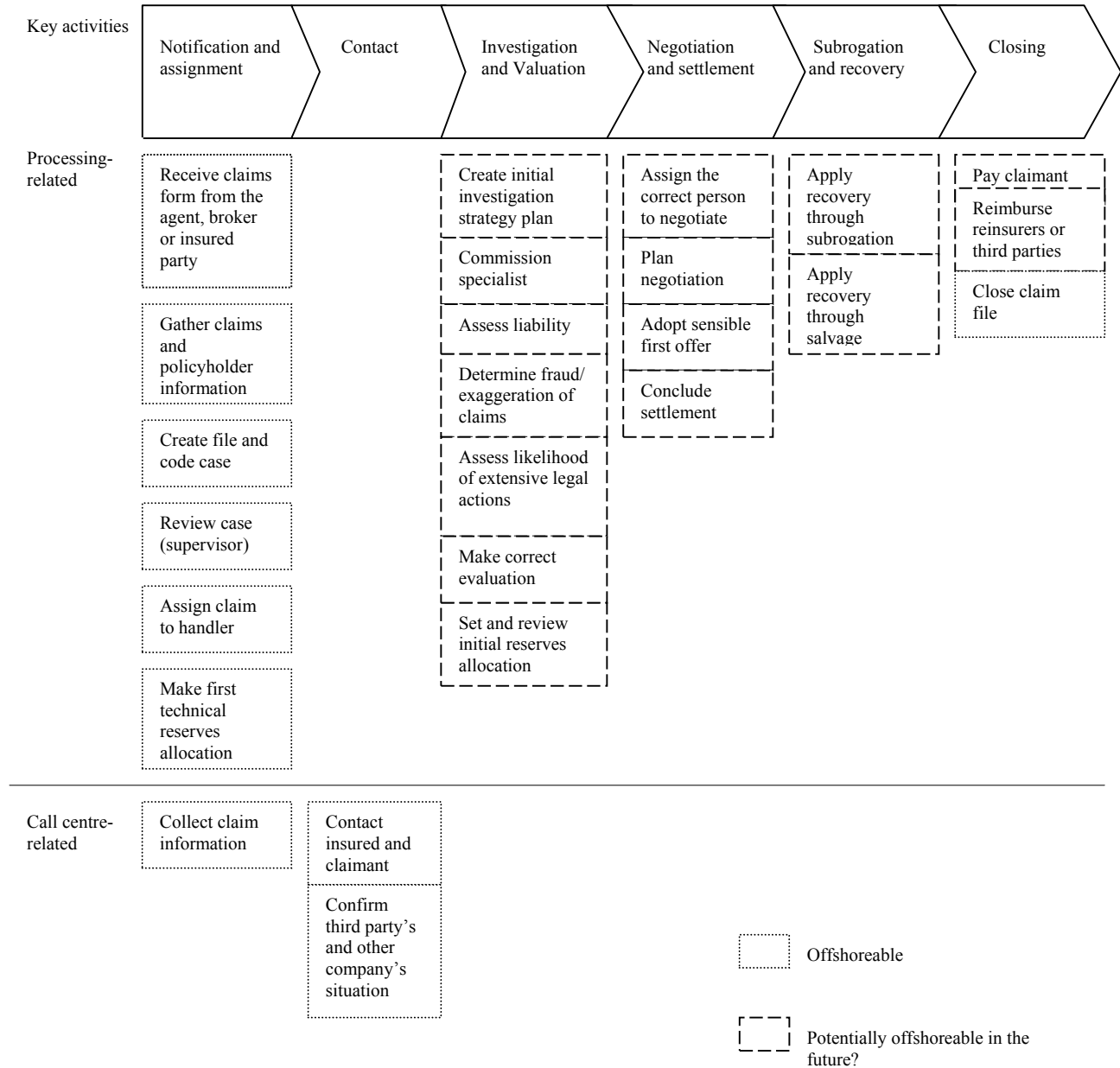
Source: Authors' compilation

Table 6 Sample Firm Size

A	B	C	D=B/C	E=B/A	F
No. of firms	Employment in sampled firms	Total industry employment	Sample % of industry employment	Average employees/firm	Median employees/firm
42	69,729	171,500	40.7	1660	1000

Source: Authors' compilation

Figure 1: A Typical Claims Processing



Source: Nasscom-McKinsey 2002, modified by authors