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Office of Economics Working Paper
U.S. International Trade Commission

**Growth in Services Outsourcing to India: Propellant or
Drain on the U.S. Economy?**

William Greene*

U.S. International Trade Commission

January 2006

*The author is with the Office of Economics of the U.S. International Trade Commission. Office of Economics working papers are the result of the ongoing professional research of USITC staff and are solely meant to represent the opinions and professional research of individual authors. These papers are not meant to represent in any way the views of the U.S. International Trade Commission or any of its individual Commissioners. Working papers are circulated to promote the active exchange of ideas between USITC Staff and recognized experts outside the USITC, and to promote professional development of Office staff by encouraging outside professional critique of staff research.

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Introduction

In recent years, one focus of globalization - the transfer of certain manufacturing processes overseas - has expanded to include the offshore outsourcing of many business process services. The offshore outsourcing of business process services to other countries has generated much debate in the United States and presents broad implications for American consumers and equity share holders, corporations, and the U.S. workforce.¹ Critics of offshore outsourcing contend that it will destroy the American middle class and seriously undermine America's economic future. Opponents of business process outsourcing (BPO) fear that millions of U.S. workers will become jobless from competition in the services sector and accuse U.S. corporations of exporting high paying white-collar service jobs overseas at the expense of the American worker. Others fear that outsourcing will exert downward pressure on U.S. wages and that the income distribution gap will broaden as more middle-class jobs go offshore.

On the other hand, proponents of outsourcing and globalization believe that it will benefit the U.S. economy by lowering the prices of certain services, increasing profit margins, expanding exports, raising dividends to shareholders, providing greater job security and higher wages for remaining workers, and generally resulting in economic efficiency. Advocates contend that the benefits to the U.S. economy derived from offshore outsourcing will more than offset any pain and suffering caused by the dislocation of U.S. workers. Likewise, proponents predict that the economic activity associated with offshore outsourcing will create hundreds of thousands of new jobs in the U.S. economy and that U.S. real gross domestic product (GDP) and U.S. exports will be billions of dollars higher than in the absence of the offshoring.²

Outsourcing critics and proponents engaged in passionate debate throughout 2004, even though little empirical evidence exists to support many claims made by either side.³ According to Dan Davison, a Meta Group analyst, "the issue [was] going to be exaggerated and manipulated by both sides in the political debate. There are distinct differences of opinion in what corporations should do to take

¹ The outsourcing of business process services first became a hot-button issue during the 2004 U.S. Presidential campaign. Throughout the campaign, newspapers and television reports continuously presented stories tying the economic recession and the so-called U.S. "jobless recovery" to the loss of high-paying white-collar information technology (IT) and service sector jobs to developing countries. These stories captured the attention of many Americans who had generally believed that their white-collar middle class occupations were immune to international competition. Many subsequently expressed the fear that the U.S. economy was being "hollowed out" by international competition, and that their jobs were no longer safe from being sent offshore. In *The New Wave of Outsourcing*, Bardhan and Kroll (2003) state that many Americans fear that "we are witnessing what maybe the largest out-migration of non-manufacturing jobs in the history of the U.S. economy." However, others contend that the impact of offshoring of services on the U.S. labor market is relatively minor. Outsourcing advocates acknowledge that some low-skilled workers will be temporarily dislocated due to outsourcing, but maintain that the U.S. economy will gain in the long run. U.S. consulting firm Gartner Research maintains that less than 5 percent of all U.S. IT and service related IT positions have been sent offshore. It also estimated that U.S. jobs lost to offshore outsourcing in 2002 represented less than 3 percent of the total U.S. labor force.

² Proponents assert that U.S. exports would be billions of dollars higher because outsourcing would enable U.S. companies to lower their prices in foreign markets and take advantage of growing incomes in those nations.

³ Literature related to the offshoring of business process services is growing and includes: Jensen and Ketzer (2005); Bhagwati, Panagariya, and Srinivasan (2004); Bardhan and Kroll (2003); Arora, Ashish, and Gambardella (2004); Amiti and Wei (2004); Brainard and Litan (2004); Kirkegarrd (2004); Schultze (2004); Bronfenbrenner and Luce (2004); Dossain and Kenney (2003, 2004); Mann (2003); and Samuelson (2004).

responsibility, and what kind of public policy should be implemented.”⁴

The degree to which offshore outsourcing has either positively or negatively affects the U.S. economy is still being debated.⁵ Some of the negative aspects of outsourcing are clearly visible with the increasing transfer of U.S. information technology (IT) and services offshore, whereas the positive benefits are more difficult to demonstrate. Today, U.S. companies account for approximately 70 percent of the global offshoring market.

The destination for much of U.S. business service outsourcing is India. U.S. firms now account for about 80 percent of India’s BPO market.⁶ The driving force behind much of this U.S. outsourcing trend to India is the lower labor costs provided by the Indian BPO sector. India’s comparative advantage lies in its highly developed and successful IT sector, its reputation for low-cost but high-quality work. India can provide a large pool of low-wage English speaking IT knowledge workers who are highly educated. Additionally, India can count on growing Internet and telecommunications capabilities and favorable time zone differential.⁷

This paper presents an overview of India’s participation in the provision of business process outsourcing services to U.S. companies. The paper will describe the dynamism behind the Indian BPO sector and will discuss key related issues, including the factors that influence U.S. corporate decisions to outsource - competitiveness, job growth and productivity.

Business process outsourcing

Outsourcing is a generic term used when companies contract non-critical, but essential, business processes and services to third-party vendors, either domestically or offshore. Over the past several decades the world’s economies have become increasingly interdependent, and many CEOs have come under increasing pressure to raise productivity and profitability while lowering operational costs. Outsourcing has emerged as a popular competitive strategy for large and small companies that believe they must perform their business processes offshore in order to survive in the domestic and international marketplace. Criteria for successful offshoring of business process services include:

⁴ “Democrats hopefuls, lawmakers denounce outsourcing,” The Indian Express, Feb. 7, 2004, found at http://www.indianexpress.com/print.php?content_id=40640, retrieved Feb. 15, 2005.

⁵ Despite the attention, relatively little is known about how many jobs may be at risk from relocation or how much job loss is associated with these business decisions (Kletzer 2005). Nevertheless, a number of papers and studies have emerged during the last few years related to the offshoring of business process services. The most frequently cited projections estimate that between 300,000 and 3.3 million U.S. services jobs will go offshore by 2015. Bardhan and Kroll (2003) estimate that 14 million workers are vulnerable to job loss from services outsourcing. Whereas, Mann (2003) stated that these predictions failed to consider that the U.S. economy will generate stronger demand for IT proficient workers due to offshoring and the infusion of IT in new sectors of the economy. She also contends that these predictions also fail to factor in such issues as the business cycle, the overvaluation of the U.S. dollar, and the dot.com bust when compiling projections. Likewise, Amity and Wei (2004) asserted that they did not find evidence to support the prevailing level of anxiety in the United States over massive job losses caused by offshoring.

⁶ See page 18 for a discussion of competing international business process outsourcing services (BPO) destinations.

⁷ Depending on daylight savings time, India is either 9.5 or 10.5 hours ahead of the U.S. (Eastern standard time) that could enable U.S. companies to operate on a 24/7 basis. For the typical Indian call center, manpower typically accounts for 55 to 60 percent of total costs. In contrast to the United States, where many call center workers are high school graduates, India’s call center workforce consists primarily of college graduates with excellent linguistic skills. This provides an overall improvement in the quality of services.

- no face-to-face customer servicing requirements;
- high information content that can be standardized and digitized and performed at a distance;
- work processing that can be transmitted via telephone or Internet;
- high wage differentials between countries;
- job processes that can be separated and documented step-by-step;
- low set-up costs;
- low social networking requirement and the availability of appropriate skills.

Bhagwati, Panagariya, and Srinivasan define offshore outsourcing as the arms-length or long-distance purchase of services abroad, principally, but not necessarily, via electronic mediums such as the telephone, fax, and Internet.⁸ The management consulting firm, Gartner, defines business process services as “the delegation of one or more IT intensive business processes to an external service provider (third party), that in turn, owns, administers and manages the selected process(es), based upon defined and measurable performance metrics to improve overall business performance.

Offshore business process services function by delegating one or more business processes such as call centers, computer help-desks, market research services, and accounting services to an external service provider from a country that is geographically remote from the clients’ enterprise.”⁹ For purposes of this paper, the term “business process outsourcing” will be used interchangeably with offshoring, offshore outsourcing, and information technology enabled service-business process outsourcing (ITES-BPO). Benefits and potential liabilities associated with offshoring business process services offshore are presented in Box 1.

Box 1: Benefits and potential liabilities associated with outsourcing	
Benefits	Potential liabilities
<ul style="list-style-type: none"> • Labor arbitrage (profit from labor wage differential). Offshore workers cost generally one-third to one-fifth that of U.S. workers). • Opportunity to build a global production chain. • Labor productivity and economies of scale, efficiencies, flexibility, and streamline operations. • Ability to focus on core-competencies to create stronger companies. • Greater flexibility to respond to unexpected changes in the business cycle or in the market. • Access to latest technologies, business practices, and other skills not available within the company. • Lower operations costs. • Ability to provide around the clock services to customers. • Ability to convert fixed costs to variable costs. Overall cost savings can range between 20 to 60 percent. Savings from reduced costs can be translated into lower prices for consumers. 	<ul style="list-style-type: none"> • Lack of intellectual property - weaker data security in many developing countries (no data protection laws to ensure data security), sharing sensitive data and proprietary technology. • Loss of institutional knowledge. • Weakness in internal controls of 3rd party players. • Hidden costs: staff training, redeployment costs, lost productivity during transition, temporary staff costs, cost of selecting a vendor, cost of layoffs, cultural costs, cost of managing an offshore contract. • Loss of management control. • Dependency on political stability in the host country. • Loss of production and customer knowledge base. • Vendor underperformance. • Loss of flexibility. • Loss of bargaining power. • Quality-delivery issues.
Sources: Nasscom, IT PRO, C/NET News, The Times of India, Hindustan Times.	

⁸ Jagdish Bhagwati, Arvind Panagariya, and T.N. Srinivasan, “The Muddles over Outsourcing,” *Journal of Economic Perspectives*, Vol. 18, No. 4, Fall 2004, pp. 93-114.

⁹ “Gartner Says Offshore BPO Industry to Grow 65 percent in 2004,” Gartner, Media Relations, found at http://www.gartner.com/5_about/press_releases/asset_79327_11.jsp, retrieved May 5, 2005.

The initial wave of IT and business process outsourcing began in the late 1990s in response to a tight U.S. labor market caused by the “dot.com” boom and by the “year 2000 (Y2K)” crisis.¹⁰ This created an upsurge in demand for computer coders, testers, and software programmers to analyze and correct legacy software that was not available in the United States. India’s emergence as a technology “powerhouse” proved to be the frontrunner for U.S. companies to meet this challenge. The Y2K crisis also provided many Indian companies with their first outsourcing contracts as U.S. corporations began to shift their IT enabled business services abroad.

Today, U.S. corporations are sending many of their routine labor-intensive service tasks to developing countries that offer significant cost savings advantages with little or no apparent drop off in quality. Labor cost differentials have allowed U.S. corporations to save between 30 and 70 percent on labor costs.¹¹ According to Carol Bartz, Chief Executive and Chairman of software firm Autodesk, “when you get great talent at 20 percent of the cost, it isn’t about waving the American flag. It’s about doing what’s right to have a good company.”¹² These savings can be passed on in the form of lower prices to consumers and higher dividends to shareholders.

Offshoring business process services also allows American companies to focus on their core profit making activities (competencies) while improving quality and productivity and expanding into new lines of business or activities. By shedding non-core business process activities, U.S. companies can focus on those parts of their production chain that are profitable and that provide a competitive advantage. Wider benefits offered by offshoring business process services include improving efficiencies, economies of scale, elimination of company-specific non-revenue generating activities, provide greater business flexibility, and reduce indirect costs. In many instances, offshoring allows a company to either eliminate certain internal fixed costs or transform them into external variable costs to be born by the offshore vendor at a fixed price.¹³

Many U.S. corporations view offshoring of business process services as a business necessity. Others have followed suit only after seeing competitors going offshore to search for inexpensive talent and lower costs. Bruce Mehlman, executive director of the Computer Systems Policy Project (CSPP) said that, “because U.S. companies are operating globally, they must hire qualified workers around the world to meet customer demands and expand their capacities - a business model that makes sense, given that increasing corporate revenues come from abroad.”¹⁴ Likewise, according to Vail Dutto, CEO of InTelegy of San Ramon, CA, “it’s just really expensive to do business here in the U.S., particularly from a customer support standpoint.”¹⁵

¹⁰ Saurabh Jawa, “Balancing cost and quality imperatives,” *The Financial Times*, Dec. 25, 2004, found at http://www.financialtimes.com/fe_full_story.php?content_id=77847, retrieved May 5, 2005.

¹¹ Thomas L. Friedman, “The Great Indian Dream,” *The New York Times*, March 11, 2004, pg. A29.

¹² Carrie Kirby, John Shinal, “Offshoring’s giant target: The Bay Area Silicon Valley could face export of 1 in 6 jobs - - worst in nation,” *SF Gate*, March 7, 2004, found at <http://www.sfgate.com/cgi-bin/article.cgi?file=/c/a/2004/03/07/MNGRT5g2c11.dtl&typ...>, retrieved June 3, 2005.

¹³ According to former Federal Reserve Bank Governor Ben Bernanke, “outsourcing has proved profitable primarily for clearly defined jobs involving routine activities and most-high-value service jobs require workers to have physical proximity to each other.” *Trade and Jobs, Remarks by Governor Ben S. Bernanke, Fuqua School of Business, Duke University*, March 30, 2004.

¹⁴ CSPP is an umbrella organization made up of prominent U.S. IT companies such as IBM, Hewlett-Packard, Intel, Dell, EMC, Motorola, NCR, and Unisys. Ashu Kumar, “US IT Cos join fight against BPO backlash,” *ExpressIndia*, May 19, 2005, found at <http://expressindia.com/print.php?newsid=27731>, retrieved May 18, 2005.

¹⁵ “The Case For, and Against, Shifting Back-office Operations Overseas,” *Knowledge Wharton*, found at http://knowledge.wharton.upenn.edu/100902_ss1.html, retrieved Feb. 2, 2005.

The first wave of business process services outsourced by U.S. firms consisted principally of entry-level, low paying jobs that included business processes that could be electronically transmitted. Although many of these jobs lacked financial status in the United States, they were considered high-paying, high-status jobs in developing countries. These tasks included voice and e-mail processing, customer and financial services, market research, pay roll, computer help desks, credit card collections, account reconciliation, and transcription.¹⁶ Over the past few years, however, business process outsourcing has grown to include a variety of higher value-added services such as financial and accounting, engineering, and research and development services.

Link to telephony technology development: The popularity of offshoring business process services accelerated over the last few decades by falling international telecommunications costs, new fiberoptic links between the United States and the developing world, the computerization and digitization of many business services, standardized interactive software packages, and reliable and affordable international bandwidth connections.¹⁷ These new developments effectively leveled the playing field, enabling foreign workers to compete directly and effectively with U.S. workers for a wider assortment of occupations. The emergence of new telecommunications technologies also removed the need for physical proximity at the point of sale, allowing U.S. corporations to send large amounts of data nearly anywhere in the world instantaneously. Consequently, hundreds of U.S. corporations moved portions of their non-core customer services and other financial and administrative functions, to countries like India, China, and the Philippines to take advantage of substantial labor cost differentials.

Since the mid 1990s, India has progressively liberalized its telecommunications services and equipment manufacturing sectors and opened them to private sector participation. India's National Telecom Policy 1994 was the first significant government-sponsored effort to reform the Indian telecommunications sector by reducing barriers to entry, encouraging competition, accelerating modernization, and providing low-cost telephony to the largest number of Indians at affordable prices.¹⁸ A second Indian National Telecom Policy in 1999 established more ambitious universal coverage targets and presented service providers with greater choices of technologies and new tele-density goals, which allowed telecommunication service providers to shift from a high cost fixed license fee regime to a lower cost revenue sharing scheme.¹⁹ It also legalized Internet telephony, brought on an explosion in high-speed

¹⁶ Other jobs possibly subject to offshoring include: inbound and outbound call centers, medical records maintenance, computer programming, telemarketing, reservations, and data processing. As of 2004, offshoring has grown to include database design, software programming; credit card call collections; mortgage and insurance claims processing and services; e-commerce support; design and billing support; administering payroll, documents management, geographical information systems services for insurance companies, computer help desks; stock market research for financial firms; tax and compliance management, training and personnel, paralegal services; legal online database research; and data analysis for consulting firms.

¹⁷ "Mr. Mankiw is right," *The Washington Post*, Feb. 13, 2004, P. A26.

¹⁸ For further back ground see: William Greene, *The Liberalization of India's Telecommunications Sector: Implications for Trade and Investment*, USITC, Office of Economics Working Paper, No. 2004-09-B, Sept. 2004.

¹⁹ According to Nasscom, government liberalizations include: permission to use common infrastructure; domestic call centers permitted to use integrated services digital network (ISDN) for back-up of leased lines for better resilience in the system; stand-alone domestic tele-marketing centers; for making outgoing calls, termination of local PSTN lines on the PABX of the domestic call centers permitted; for the foreign end connectivity in the international call center, use of ATM/MPLS/Frame Relay based managed international networks permitted in addition to the existing provision of connectivity through point to point IPLC format for quantity information to be furnished by companies registered under OSP category for call center businesses. Latest in BPO Regulation, Nasscom, found at <http://www.nasscom.org/articlepring.asp?art-id=2488>, retrieved Dec. 28, 2004.

Internet connections and ended the state monopoly on international calling facilities that brought about a drastic reduction in long-distance telecommunications rates and ushered in a slew of inbound/outbound call centers and data processing centers.

Indian IT companies began entering the global market in the late 1990s. U.S. corporations looked to India and its abundance of well-educated English-speaking programmers and coders who were adept with increasingly obsolete programming languages to assist in addressing the Y2K problem. Some of the earliest U.S. services outsourced to India included medical transcription services, payroll accounting, credit card call collections, mortgage and insurance claim processing, and data processing.²⁰

Outsourcing models: The National Association of Software and Service Companies (Nasscom) of India divided the nation's BPO sector into five basic types: captive arms of global corporations, Indian start-ups, Indian IT service companies, global BPO majors, and broad-based global services companies.²¹

◦ *Captive wholly-owned subsidiaries of multinationals:* These early entrants were subsidiaries of foreign multinationals. The pure captives were founded to perform basic financial and administrative functions such as telephone banks, medical records keeping, computer programming, call centers, telemarketing, reservations, and data processing for the parent company. The captive partnership model offers companies long-term cost savings and high management control over their operations. Under this model, the risk of disrupting business continuity appears to be low and data security appears to be high. On the negative side, the pay back period for the initial investment in offshore outsourcing can be as long as 4-to-5 years. This is due to high initial set up costs and lead time needed to make the offshoring outsourcing transition. The model typically suits large companies that need to operate on huge scales. U.S. multinationals with captive centers in India include Dell Computers, American Express, General Electric, Delphi Automotive, NetScape, Hewlett Packard, Standard Chartered, Convergys, Citigroup, eServe, and Ernst & Young.

Nasscom estimates that during the 2000-2003, the number of Fortune 500 companies offshoring work to India grew from 125 to 285.²² Multinationals pioneering offshoring to India via captive centers include General Electric, Swissair, Lufthansa, McKinsey & Co., BechTel, Ford, Conesco, Dell Computers, Standard Charter Bank, British Airways, and American Express. General Electric pioneered the offshoring movement in 1997, and its GE Capital International Services (GECIS) is the largest business process outsourcing firm in India, operating 5 centers across the country. GE's wholly-owned captive centers have been the model for other multinationals.²³ GE also operates a joint venture called iProcess, that offers IT enabled business process outsourcing services, and the John F. Welch Technology Center, its first and largest research and development center outside the United States.²⁴

²⁰ "The Outsourcing History of India," Outsource2India, found at <http://www.outsource2india.com/why-india/articles/outsourcng-history.asp>, retrieved Jan. 12, 2005.

²¹ Indian ITES-BPO Industry-Fact Sheet (Nasscom-McKinsey Report), found at http://www.nasscom.org/download/ites_factsheet.pdf, retrieved Dec. 28, 2004.

²² "Scrambling to Stem India's Onslaught," Business Week, Jan. 26, 2004, found at http://www.businessweek.com/print/magazine/content/04_04/b3867094_mz063.htm?chan..., retrieved Apr. 15, 2005.

²³ "Out of captivity," The Economist, Nov. 11, 2004, found at http://www.economist.com/displaystory.cfm?story_id=3389328, retrieved Apr. 15, 2005.

²⁴ In 2004, GE's back office arm, GE Capital International Services (GECIS), employed approximately 13,000 Indian workers plus 4,000 located in the United States, China, Hungary, and Mexico. Also in 2004, GE divested 60 percent of its stake in GECIS primarily to U.S. private equity funds General Atlantic Partners and Oak

◦ *Indian start-ups:* Within the last 4 years, Indian entrepreneurs have launched their own business process outsourcing operations. These companies, also referred to as third-party providers, offer BPO services to external customers, both domestic and foreign. The first participants were niche players, like Talisman Corp, that offered CRM services. Subsequently, others such as Spectramind, Wipro, HCL Technologies, Hero, and Daksh entered this growing segment. There are approximately 300 third-party providers in India, and the larger startups were typically founded by former BPO workers and are not captive wholly-owned subsidiaries of multinationals. The vast majority of the firms participating in this sector tend to be small with around 50 to 100 seats-workers.

Indian owned third-party firms continue to dominate the industry in terms of numbers. Wipro, Infosys and several of others began as subcontractors to U.S. IT firms during the Y2K crisis and have expanded beyond IT maintenance and support. Many of these firms can perform end-to-end services for both foreign and domestic customers, including writing software applications and managing payroll. Although the majority of these companies are small, the Indian BPO industry boasted of having eight to 10 of these large services companies in 2005 that were capable of competing with multinationals.²⁵ In 2005, WNS became the largest third-party BPO company displacing Wipro Spectramind, which purchased Spectramind, India's third largest call center in 2002 (table 1).

Hill Capital partners for between \$380 and \$400 million. GE's presence in India continues through its John F. Welch Technology Center. "BPO Sector Symbolizes Dynamism and Change," Nasscom NewsLine, Nov. 2004, found at <http://www.nasscom.org/bponewslines/nov04/newsanalysis.asp>, retrieved Dec. 23, 2004.

²⁵ "At least eight BPO players may be \$100-m cos by 2005," The Economic Times, Feb. 17, 2004, found at <http://economictimes.indiatimes.com/articleshow/msid-500600>, retrieved Feb. 18, 2004.

Table 1: India's leading third- party business process outsourcing companies, based on FY2004-05 revenues		
Company	Employment	Services
WNS Group	3,500	Data management services, back office administrative services for airlines, travel and transportation, insurance, financial services, and healthcare services.
Wirpo Spectramind	14,400	Call centers, accounting, CRM, transaction processing, software design.
HCL Technologies BPO		Technology/IT help desk, collection services, GIS related services.
IBM-Daksh e-services	6,000	Call centers, e-mail support, outbound voice, telemarketing/telesales, transaction processing/back office processing, outbound collections, inbound technical support.
ICICI OneSource	4,000	Call centers, transaction processing for banking and insurance sector, asset management services, contact center services (inbound, outbound, web services).
Exl Service	4,600	Banking and financial services, insurance, IT help desk, collections, process consulting.
Mphasis BFL	NA	Financial, retail, logistics, transportation, healthcare services.
Internet Global	4,500	Network technologies, internet-web.
GTL Ltd	950	Technical support, IT help desk, customer management, customer acquisition.
Progeon	2,269	Financial, accounting, administration process, telecom, healthcare services.
24/7 Customer	4,000	Customer interaction services, telemarketing, e-mail management, back-office services, customer analytics.
Datamatics Technologies	2,250	Tax processing, claims processing, asset management, check processing.
Hinduja TMT	1,600	Telecom customer service, technical support-IT helpdesk, tele-marketing, insurance claims, health care, inbound call centers.
Transworks Information	2,000	Customer interaction, contact center services, order entry, help-desk support.
Tracmail Group	2,000	Customer service, technical support, receivables management, e-mail campaigns, new account activations, data entry.
Source: Nasscom, BPOIndia.com.		

◦ *Indian IT service companies:* To gain access to India's booming business process outsourcing market, Indian IT companies founded a number of companies as joint ventures, in-house divisions, or subsidiaries. These include Infosys and its wholly owned subsidiary Progeon, the TCL and HDFC Bank joint venture known as Intelent, Mphasis BFL's wholly owned subsidiary Msource, and Satyam's subsidiary Nipuna. Rather than following this model, other Indian IT companies chose to enter the market by purchasing existing BPOs. For example, Wipro acquired Spectramind, HCL Tech acquired the Apollo Contact Center of British Telecom, and Polaris acquired iBackOffice. Nasscom reported that many of these IT companies entered the Indian BPO sector because they could provide end-to-end services.

◦ *Global business process outsourcing majors:* Nasscom described these companies as focused BPO providers or as spin-offs of large global corporates. Some have established joint ventures to gain

access to India's BPO market. As one example, Sitel Corp set up a joint venture with the Tata Group and Stream set up one with TracMail. Other Indian firms, however, such as Convergys and Sykes established wholly-owned subsidiaries in India. The preferred route for global BPO majors has been to form joint venture partnership. The business press has stated that these joint partnerships combine "the best of the captive and the third party models and is the most appropriate for all categories of buyers except the very large ones."²⁶

◦ *Broad-based global service companies*: The broad-based service providers entering the Indian BPO sector include consulting firms such as PwC and Accenture and IT services companies such as EDS and ACS. Many have entered the market to take advantage of existing client relationships and to take advantage of an ability to provide bundled services as well as the high-growth potential this market provides.

Outsourcing development phases: India's business process outsourcing industry has progressed through three distinct development phases.²⁷

First stage: (1997-1999) The Y2K crisis also provided many Indian companies with their first outsourcing contracts because U.S. corporations began to shift their IT enabled business services abroad. General Electric Capital Services was the first multinational to pioneer business process outsourcing in India. GE Capital Services opened its first India-based international call center in 1997 to perform tasks such as money collections, credit-card services, and data management. Other multinationals followed, establishing their own 'captive' wholly-owned offshore facilities. Most of these centers were located in New Delhi, Mumbai or Bangalore. The absence of infrastructure, reliable power and telecommunications services, and restrictive government regulations created significant barriers to growth. Other pioneering multinationals included British Airways (World Network Services), HSBC, Swissair, and American Express.

Second phase: The second phase (1999-2000) witnessed the emergence of a number of joint venture, third-party Indian start-ups funded by venture capitalists. Many of these operations were started by former Indian employees of multinational business process outsourcing firms who resigned to launch their own ventures. Mumbai, New Delhi, and Bangalore continued to be the preferred location for BPOs. During the second phase a group of start-ups entered the Indian BPO market that were associated with India's large business houses such as the Hero Group, Reliance, Hiranandani, and Godrej. A significant percentage of these third party startups were small ventures with 50 to 100 workers (seats), and they "generally focus[ed] their outsourcing on low-skill, routine activities that compete primarily on the basis of cost. More developed IT outsourcing firms tended to move toward higher value-added products competing to a greater extent on specialized talent."²⁸

Third phase: (2001 to present) In the current phase, India's business process outsourcing sector continues to grow, mature, and consolidate. Nasscom stated that, "growth within the ITES-BPO segment

²⁶ "JV best BPO model: report," The Financial Express, found at http://www.financialexpress.com/print.php?content_id=75065, retrieved March 16, 2005.

²⁷ "India can rake in \$16 bn for outsourcing by '07," The Economic Times, Feb. 11, 2005, found at <http://economictimes.indiatimes.com/articleshow/msid-1017548,prtpage-1.cms>, retrieved March 14, 2005.

²⁸ William Chadwick, *Global Trends in the Information Technology Outsourcing Services Market*, USITC, Industry Trade and Technology Review, Nov. 2003.

is centered around the large players that can offer clients benefits such as scalability, delivery capability, track record, customer referrals, etc.”²⁹ The captive units of multinationals, as a percentage of all BPO units, grew from 42.6 percent of the total to 57.8 percent, and the number of third-party vendors declined from 57.4 percent of the total to 42.2 percent during FY 2001-FY2003.³⁰

Prominent Indian software services companies such as Infosys, Wipro, and Satyam entered the BPO market during this current phase, which has been marked by significant numbers of acquisitions and mergers. Industry observers reported 574 acquisitions and mergers in 2003 and 353 in 2004³¹ valued at approximately \$500 million.³² With this market maturation process, many smaller BPOs found it difficult to survive. As a result, Gartner, Inc. calculates that 70 percent of the top 15 India-owned BPO call centers will either be purchased, merged, or marginalized by the end of 2005.³³ Forrester Research also reported that competing small and medium sized BPO suppliers with complementary skills are likely to merge their operations in order to compete with the larger global firms.³⁴

In addition to market consolidation, India’s BPO market has recently witnessed by a price war. Prices have dropped by 40 percent to 50 percent since 2002 as a result of excess capacity and growing competition. To fill their order books, some Indian business process outsourcing firms have slashed their wages to between \$19 and \$12 per employee, and many smaller companies are finding it difficult to compete. Some desperate BPOs have lowered their wages even further to the \$7 to \$8 range, which many consider suicidal pricing, in order to attract business. Companies that offer low-end voice and data services have been coping with the reduced margins for the last year chiefly due to undercutting of costs in the industry.

Gross margins have recorded a sharp fall of 60 percent to 40 percent, while billing for the traditional voice-based services have slipped from \$16 per hour per seat to \$12 per hour per seat. The second-tier players in the industry are facing some pressure on their margins. According to Eric Selvadurai, President, Global Services for WNS Global Services, the smaller operators are vying to increase their share of the market by offering lower prices and compromising on quality. Selvadurai noted that “since this is the lowest skill segment (voice-based services) with very low investments in infrastructure and human resources, it has been witnessing an overcrowding of players. Moreover, it is a

²⁹ “The Indian ITES-BPO industry - Overview,” Nasscom, found at http://www.nasscom.org/artdisplay.asp?cat_id=666, retrieved Feb. 3, 2005.

³⁰ National Association of Software and Services Companies (Nasscom).

³¹ Prominent acquisitions and mergers included: (1) CustomerAsset by ICICI OneSource; (2) Spectramind (India’s largest third-party call center) by Wipro; (3) British Airways’ equity share in WNS (formerly Speedwing World Network Services) by Warburg Pincus; (4) Daksh (one of India’s biggest call center firms) by IBM; (5) E-serve International by Citigroup; (7) iServe by U.S. based ECE; (8) PriceWaterhouse Coopers’ division by IBM (2002); and (9) ProBusiness by ADP. Also, Indian companies also began to purchase U.S.-based BPO companies such as (1) NervWire (Massachusetts-based IT consultancy) by Wipro; (2) Aegis Communications Group by Essar Group partnered with Deutsche Bank; (3) CorPay Solutions by Datamatics Technologies; (4) and a significant share of North American Benefits Networks by the Scandent Group. “Growing up,” *The Economist*, May 20, 2004. “Indian BPO industry headed towards consolidation,” Nasscom BPO Newslines, found at http://www.nasscom.org/bponeewslines/april04/news_analysis.asp, retrieved March 21, 2005.

³² “Offshoring triggers M&A deals,” *India Times*, Infotech, Jan. 17, 2005, found at <http://infotech.indiatimes.com/articleshow/992490.cms>, retrieved Jan. 18, 2005.

³³ “Many top Indian BPO outfits under threat: Gartner,” *Hindustan Times*, March 27, 2005, found at http://www.hindustantimes.com/onlineCDA/PFversion.jsp?article=http://10.81.141.122/news/181_1295726.00..., retrieved March 30, 2005.

³⁴ Neeraj Saxena, “BPO consolidation = 100 M&A?,” *Infotech*, Oct. 5, 2005, found at <http://infotech.indiatimes.com/articleshow/msid-1253485.prtpage-1.cms>, retrieved Nov. 1, 2005.

commoditized service, so people have no qualms about switching from one BPO company to another if the price is lower.”³⁵ Many BPOs, especially call centers, also reported having worker retention and absentee problems during this phase.

Nasscom estimates that the number of Indian business process outsourcing companies has grown from 285 in FY2003-04 to approximately 425 in FY2004-05. These companies include a combination of captive units and third party ventures. Nasscom also estimated that captive BPO firms dominate total business process outsourcing revenues by contributing 65 percent, while third-party players account for much of the remaining 35 percent.³⁶ The top 10 captive firms are said to account for approximately 26 percent of the sector’s revenues and more than 30 percent of its employees in FY2004. The two largest groups of companies include those owned wholly or in part by multinationals primarily from the United States, the United Kingdom, and Indian-owned third-party players.

Current world market: The global market for business process services outsourcing is projected to grow from \$123.8 billion in 2004 to \$133.7 billion by 2005.³⁷ Estimates also predict that the global call center help desk services market is expected to grow from \$3.5 billion to \$6.1 billion during 2003-08.³⁸ The North American market is the largest outsourcer of business process services followed by Japan and the EU (principally the United Kingdom). The U.S. market accounts for more than 70 percent of the global BPO market and 80 percent of India’s business process outsourcing business.

India’s business process outsourcing

Indian sector size and market share: Although business process outsourcing only accounts for 1 percent of India’s GDP and less than 2 percent of its annual job creation, it has evolved into the most dynamic sector of India’s booming economy.³⁹ According to Gartner, Inc., India presently accounts for 85 percent of the world’s business process outsourcing market.⁴⁰ India’s revenues from software and business process outsourcing services exports to the United States were roughly \$8.5 billion in 2004, accounting for 70 percent of its total services exports.⁴¹ Nasscom reports that revenues of the Indian business process outsourcing sector increased by 44 percent from \$2.5 billion in 2002-03 to \$3.6 billion in 2003-04 (table 2). This sector is projected to reach \$5.2 billion in 2004-05 and \$16 billion by 2008.⁴²

Nearly 70 percent of India’s business process outsourcing revenues come from call centers, 20 percent from other types of high-volume and low-value data work, and the remainder consisted of higher-

³⁵ Parvathy Ullatil, “Cut-throat competition puts pressure on BPO margins,” rediff.com, May 14, 2004, found at <http://www.rediff.com/cms/print.jsp?docpath=/money/2004/may/14bp...>, retrieved May 18, 2004.

³⁶ “BPO’s FY04 capex at \$1.5 bn, may beat IT soon,” The Economic Times, Aug. 18, 2004, found at http://economictimes.indiatimes.com/articleshow/msid-818705.prtpage_1.cms, retrieved Aug. 18, 2004.

³⁷ “Gartner sees seller’s market for BPO,” Business Standard, April 1, 2005, found at http://www.business-standard.com/iceworld/storypage_link.php?chklogin=n&autono..., retrieved Apr. 1, 2005.

³⁸ *IT and ITES/BPO Exports of India*, Embassy of India, Washington, DC, found at <http://www.embindia.org/articulos/IT%20and%20ITES.htm>, retrieved Jan. 12, 2005.

³⁹ Ibid.

⁴⁰ Parija Bhatnagar, “Is India’s outsourcing honeymoon over?,” CNN Money, Aug. 24, 2005, found at http://money.cnn.com/2005/08/23/news/international/india_outsourcing/index.htm, retrieved Aug. 30, 2005.

⁴¹ Robert D. Atkinson, *Understanding the offshoring Challenge*, Progressive Policy Institute, May 2004, found at http://www.ppionline.org/documents/offshoring_0504.pdf, retrieved March 17, 2005.

⁴² Nasscom.

value added functions.⁴³ Since 1998-99, the business process outsourcing sector has grown from 6.5 percent of India's software and services market to more than 29 percent in 2003-04. This growth was driven by "falling telecommunication rates, low labor costs, new interactive-design software, project management skills; and availability of a highly skilled, educated and English-speaking labor pool."⁴⁴

Time period	Revenues (\$million)	Percent Change
1999-00	565	
2000-01	930	65
2001-02	1,495	61
2002-03	2,500	67
2003-04	3,600	31
2004-05*	5,200	44
2005-06*	7,300	40

(*) Estimates. Sources: Nasscom, Economic Times.

Employment: Employment in India's business process outsourcing industry has grown from 42,000 in 1999-2000 to approximately 243,500 workers in 2003-04, to 470,000 in 2005-06, and employment is projected to reach 1.1 million workers by 2012.⁴⁵ During 2003-04, customer services (including call centers) continued to dominate India's BPO sector accounting for approximately 38 percent of total employment (table 3).⁴⁶ As shown in figure 1, call centers were followed by content development (21 percent), finance (17 percent), and administration services (16 percent).

Service line	Employment (2002-03)	Revenues (2002-03) (\$million)	Employment (2003-04)	Revenues (2003-04) (\$million)
Customer Services (including call centers)	66,400	830	96,000	1,200
Finance	25,000	540	41,000	835
HR	2,100	45	4,500	75
Payment services	12,000	230	21,000	430
Administration	26,000	325	40,000	540
Content development	48,000	510	51,000	550
Total	180,000	2,480	243,500	3,630

Source: Nasscom

⁴³ "The Place to be," The Economist, Nov. 11, 2004, found at http://www.economist.com/survey/printerfriendly.cfm?stroy_id=3351503, retrieved March 17, 2005.

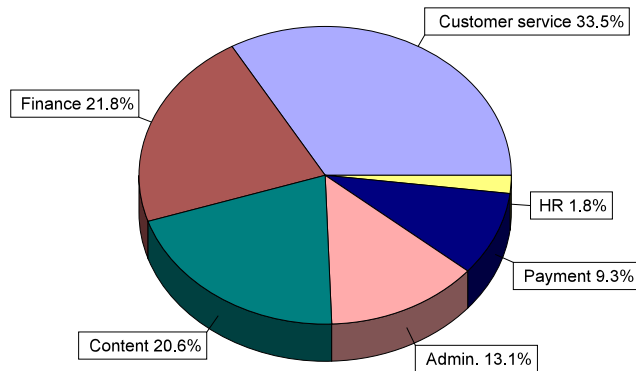
⁴⁴ Industry sources project that the worldwide BPO market would reach \$234 billion in 2005.

⁴⁵ *IT and ITES/BPO Exports of India*, Embassy of India, Washington, DC, found at <http://www.embindia.org/articulos/IT%20and%20ITES.htm>, retrieved Jan. 12, 2005.

⁴⁶ *Indian ITES-BPO Industry: Nasscom Analysis*, Nasscom Fact sheet.

Figure 1: Indian BPO market share by segment: 2002

Source: Nasscom - McKinsey Global



Indian companies appear to be moving up the value-added chain in the BPO market to provide higher skilled and more sophisticated services. Indian business process outsourcing firms are now performing tasks such as computer chip design, information technology services, architecture, engineering and design, business consulting, pharmaceutical research, and financial analysis.⁴⁷ The expanded scope of high value-added services comes partly with investments from U.S. multinationals. IBM, General Electric, Cisco, Intel, Motorola, Texas Instruments and other U.S. multinationals have established research and development centers in India.⁴⁸ For example, General Electric's second largest research center is located in Bangalore, and it was reported that the company will increase its research and development (R&D) staff from 1,600 to 2,400 technicians. Indian scientists are also returning from the United States to the country to work in these R&D centers, and the number of India patent applications grew from 4,000 in 1995 to approximately 15,000 in 2003.⁴⁹ According to Frost & Sullivan, the India business process outsourcing research and development market is expected to have grown from \$1.3 billion in 2003 to \$9.1 billion by 2010.⁵⁰

Locational advantage: India's comparative advantage lies in its highly developed and successful IT sector, its reputation for low-cost high quality work. India's BPO sector has a large pool of low-wage English speaking IT knowledge workers, a strong educational tradition, growing Internet and telecommunications capabilities, and a favorable time zone differential (Box 2).⁵¹ In 2004, the

⁴⁷ Rafiq Dossani and Martin Kenney, *Went for Cost, Stayed for Quality?: Moving the Back Office to India*, The Asia-Pacific Research Center, Stanford University, Nov. 2003.

⁴⁸ "R&D in India: The Curtain Rises, The Plague Has Begun...", Knowledge Wharton, found at <http://knowledge.wharton.upenn.edu/index.cfm?fa=viewarticles&id=1278&specialI=40>, retrieved March 17, 2005.

⁴⁹ Swaminomics/Swaminathan S. Anklesaria Aiyar, "R&D: India's New Star Industry," *The Economic Times*, April 10, 2004, found at http://economictimes.indiatimes.com/articleshow/misd-.prtpage_1.cms, retrieved June 3, 2005.

⁵⁰ "India to see R&D outsourcing boom," *rediff.com*, Apr. 26, 2004, found at <http://in.rediff.com/money/2004/apr/26bpo2.htm>, retrieved Apr. 26, 2004.

⁵¹ Depending on daylight savings time, India is either 9.5 or 10.5 hours ahead of the U.S. (Eastern standard time) that could enable U.S. companies to operate on a 24/7 basis. For the typical Indian call center, manpower typically accounts for 55 to 60 percent of total costs. In contrast to the United States, where many call center workers

International Labor Organization summarized these advantages by reporting that “whereas, the outsourcing of lower-skilled, less-paid jobs is not a new phenomenon, increasing educational and skill levels in developing countries enjoying labor cost advantages, India and China predominant among them, may be attracting jobs once thought relatively immune to relocation.”⁵²

The international business process outsourcing industry can be divided into two basic categories: English-speaking and non-English speaking. U.S. companies represent approximately 70 percent of global offshoring, giving India an advantage because it has one of the world’s largest English-speaking population.

Box 2: India’s comparative advantages

• **Human capital advantages:** Large pool of low-cost computer literate English speaking professionals (2 million college graduates per year) with strong technical and quantitative skills. India has over 270 universities and 2,400 professional colleges graduating large numbers of science, technology, finance, business, engineering students. India presently has approximately 200,000 to 250,000 computer literate workers. India system places great emphasis on science and mathematical skills.

• **Economic advantages:** Workforce of 482.2 million (2004) and purchasing power parity of \$3,100. Offer savings in the range of 40 to 60 percent with manpower cost between one-tenth to one-fifth of wages earned by American IT workers. Higher free cash flow due to reduced investments in physical infrastructure, telecom services and equipment, wage arbitrage has also led to increased cost savings. Compared to countries like China, the Philippines, and Malaysia, India has a comparative advantage in superior project management skills. Booming BPO sector where employment has increased by 479 percent since 1999 also has access to IT software technology parks and other central and state government incentives.

• **Telecommunications service:** India has the world’s fifth largest public sector telecommunications network. Reliable satellite and submarine communications links; significant reduction in telecommunication rates, privatization has brought greater access to competitive cellular, basic, paging, Internet, and international gateway services offered by the private sector vendors. Government has liberalized telecommunications sector permitting 100 percent FDI. Adequate physical infrastructure.

• Strong flow of global venture capital.

• Improved efficiencies and high service levels due to streamlined processes.

• **General institutional comparability:** India has a well developed banking system and capital markets. Democratic government and relative political stability. Independent judiciary with Western legal and accounting systems, media, and advertising.

• **Other important factors:** Leveraging time zone differential (GMT + 4.5) that enables timely turn around time and 24x7 services. Work practices largely comply with international quality assurance standards (SEI-CMM Level 5, ISO 9000, TQM, Six Sigma Quality, BS 7799, and COPC). Proliferation of software parks and Export Enterprise Zones. Information Technology Act 2000 brought e-commerce within the purview of the law and provides for stringent punishment of cyber crimes. Real estate and general and administrative expenses are low in comparison with the United States, Japan, and Western Europe.

Sources: Nasscom, Gartner, McKinsey Global, The Economist, The Financial Express, Business Week, Forrester.

are high school graduates, India’s call center workforce consists primarily of college graduates with excellent linguistic skills. This provides an overall improvement in the quality of services.

⁵² International Labor Organization, *World Employment Report 2004-05*, found at <http://www.ilo.org/public/english/employment/strat/wer2004.htm>, retrieved July 22, 2005.

Trade liberalization: Since the late 1990s, the Indian central government has liberalized the domestic and international telecommunications services, helped establish several Software Technology Parks and Export Enterprise zones, offered tax holidays similar to those enjoyed by the software industry. Various state governments have also provided assistance to companies in their internal recruitment, retention, and training programs to attract business process outsourcing firms to their states.⁵³ India's business process outsourcing (BPO) industry that began with data processing centers and customer call centers has rapidly progressed up the outsourcing value-added chain. The digital revolution and the 12-hour time differential between India and locations in the developed world opened up a range of services (customer interaction, back office operations, accounting, data entry, human resource services, market research and consultancy) that are provided in India.

Wage rate advantage: The wage gap between the United States and India is significant, and the outsourcing of business services functions has enabled U.S. corporations to achieve labor cost savings of 40 to 50 percent of those costs in the United States. Kenny (2003) has estimated the wage level for the typical call center worker in India is approximately \$10,354 per year, as compared to \$55,598 in the United States.⁵⁴ Likewise, annual salaries for computer programmers in the United States range between \$60,000 to \$90,000 whereas their Indian counterparts currently earn between \$6,000 to \$10,000 per year (table 4).

Profession	U.S. wage per hour	Indian wage per hour	Silicon Valley wage per hour
Telephone operator	\$12.57	Less than \$1.00	\$13.24
Health-records technologists, medical transcriptionist	\$13.17	\$1.50 to \$2.00	\$14.54
Payroll clerk	\$15.17	\$1.50 to \$2.00	\$19.50
Data entry clerk	\$20.00	\$1.50 to \$2.00	\$24.44
Legal assistant, paralegal	\$17.86	\$6.00 to \$8.00	NA
Accountant	\$23.35	\$6.00 to \$10.00	\$27.00
Computer programmer	\$28.90	\$3.00 to \$10.00	\$38.85
Financial research analyst	\$33.00 to \$35.00	\$6.00 to \$15.00	\$34.00
Software designer	\$60.00	\$6.00	NA
Software engineer	\$120.00	\$18.00	NA
Entry level programmers (annual salary)	\$50,000 to \$60,000	\$8,000 to \$10,000	NA

Sources: Nasscom, Hindustan Times, McKinsey Global Institute, U. Cal Berkeley, Department of Labor (BLS).

⁵³ *India's value proposition*, Nasscom, retrieved Dec. 28, 2004.

⁵⁴ Rafiq Dossani and Martin Kenny, *Went for Cost, Stayed for Quality?: Moving the Back Office to India*, The Asia-Pacific Research Center (APRAC), Stanford University, Nov. 2003.

Geographic BPO concentration: Since its inception, India’s business process outsourcing industry has been concentrated in the cities of New Delhi (including Gurgaon and Noida), Mumbai, and Bangalore. These three locations account for approximately 62 percent of India’s total business process outsourcing firms as of February 2003 (table 5). Bangalore, commonly referred to as India’s Silicon Valley, accounts for more than 35 percent of India’s software exports (\$4.2 billion in FY2004-05), 50 percent of total U.S. investment, and employs the largest number of software professionals in the world except for Osaka, Japan.⁵⁵ Bangalore is also the R&D home in India for Hewlett Packard, General Electric, Google, Cisco, Intel, Sun Microsystems, Motorola, and Microsoft.

Table 5: Concentration of Indian business process outsourcing companies by city and state, 2003

City	BPOs	State	BPOs
New Delhi (including Gurgaon, Noida)	103	Maharashtra	69
Bangalore	65	Karnataka	67
Mumbai	59	Andhara Pradesh	43
Others	40	Haryana	43
Hyderabad	39	Uttar Pradesh	36
Chennai	34	Tamil Nadu	34
Pune	9	Others	34
Kolkata	9	New Delhi	29
Chandigarh	5	Punjab (Chandigarh UT)	13
Ahmedabad	5	West Bengal	9
Total	368		

Source: “BPO: Spreading Out,” Voice & Data, Feb. 26, 2003.

The Indian government is attempting to attract BPO investment into other cities. Since January 2005, Nasscom and the IT Ministry have been encouraging new entrants to consider locating in India’s smaller cities and rural areas since Delhi, Mumbai, and Bangalore are plagued with high employee attrition and absentee rates, the rising cost of labor, and taxed physical infrastructures. Nasscom expects that over the next few years nearly 30 percent of India’s outsourcing revenues will come from smaller cities.⁵⁶

Consulting firm Gartner Research divided India’s core BPO cities into four basic tiers based on factors like infrastructure, skills availability access, cost of living, political support, and quality of life (table 6).⁵⁷ Tier I cities, according to Gartner Research, are the most attractive in terms of skills availability, infrastructure, access, and lifestyle-factors. These cities continue to dominate in terms of the number of BPO units. Less congested Tier I-1 cities lag only slightly behind Tier 1 cities in what they

⁵⁵ It is estimated that over 110,000 Indians work as IT professionals in Bangalore primarily for multinationals from the United States, Europe, Japan, and China. “Karnataka plans to promote smaller cities as IT hubs,” found at <http://www.newindpress.com>, retrieved Aug. 14, 2004.

⁵⁶ Bangalore, like other Indian cities, suffers from water shortages, erratic power supply, and inadequate sewers, streets, and roads. *The Outsourcing History of India*, Outsource2India, found at <http://ezinearticles.com/?The-Outsourcing-History-of-India&id=62970>, retrieved Jan. 12, 2005.

⁵⁷ These categories were developed by Gartner Research and the factors it surveyed included: infrastructure (electrical power, water, telecom, roads, airport, real estate), skills availability (entry level, lateral recruits, global MNC experienced, language), skills retention (tack record of retention trends, maturity and stability of work-force, resource mix), access (international connectivity, domestic connectivity, hotel availability), cost of living, real estate prices, political support (central, state, local, software technology parks of India), overall quality of life. Partha Iyengar, *IT outsourcing to India - Analysis of Cities*, Gartner, Inc.

offer. For example, Tier 1-1 cities like Pune and Chennai rank low on infrastructure but have better labor retention rates, quality educational institutions, good access, competitive cost of living and ample space, and competitive quality of life compared to Tier I cities. Gartner predicted that Hyderabad and Chennai will surpass Bangalore and Mumbai as India's leading business process outsourcing center by 2010. Gartner Research Vice President Partha Iyengar, stated that "Bangalore and Mumbai will soon cease to be the default centers for outsourcing."⁵⁸

Tier	City	Tier attributes
Tier I	Bangalore, Mumbai and New Delhi	High costs, large talent pool, high attrition, good English accent.
Tier I-1	Chennai, Hyderabad, Pune, Noida, Gurgaon, Navi Mumbai (New Bombay)	Medium costs, large talent pool, attrition at 20%, needs more training in English accent
Tier II	Kolkata, Mangalore, Mohali/Chandigarh and Bhopal	Medium to low costs, medium talent pool, attrition below 15%, English accent needs training.
Tier III	Coimbatore, Mysore, Nashik, Kochi (Cochin), Nagpur, Jaipur, Indore, Shimla, Raipur, Lucknow, Kanpur, Panaji, Guwahati, Bhubaneswar, Patna, Srinagar, Thiruvananthapuram, Ahmedabad	Medium to low costs, medium talent pool, attrition less than 10 percent, English accent needs training.

Source: Gartner, Inc.

Tier II cities could emerge as leading destinations. By some accounts, the cost of living in these cities is lower - sometimes by as much as 30 percent compared to Tier I cities.⁵⁹ Tier II cities already account for more than 15 percent of India's total IT and business process outsourcing exports. Furthermore, BPO exports from these cities are likely to rise to 30 percent of India's total IT and business process outsourcing exports by 2007-08. The state government of Karnataka is encouraging investment and development outside of Bangalore in Tier II, and Tier III cities such as Mangalore, Mysore, and Hubli already have technology parks. Nonetheless, Tier II cities lag significantly behind Tier I cities in terms of telecommunications services, electricity, air links, and adequate infrastructure.⁶⁰

Services offered by Indian business process outsourcing firms

Today, Indian companies offer a wide range of business process services, and those services are constantly expanding and growing in complexity. In the past, India's business process outsourcing sector was most closely identified with relatively simple computer programming, call centers, medical records transcription, revenue accounting, and data processing. However, over the last few years the variety of services has grown to include higher value-added and more complex services such as financial and accounting processes and research and development (table 7). Call centers continue to dominate India's business process outsourcing sector, accounting for nearly a third of its revenues. Financial services

⁵⁸ "B'lore will soon be dethroned as BPO destination," Express India, Dec. 14, 2004, found at <http://expressindia.com/fullstory.php?newsid=39570>, retrieved March 17, 2005.

⁵⁹ Gartner Research.

⁶⁰ Ibid.

account for 23 percent of total BPO outsourcing revenues, while administration accounts for 14 percent and content development accounts for 15 percent.⁶¹

Segment	Processes outsourced
Customer care	Call centers (inbound and outbound), telesales and telemarketing, web sales, help desks (electronic and voice), clerical support, data entry, word processing, mass e-mailing, contact centers, IT and technical support help desks, e-CRM, collections, market research, customer phone support, warranty registration, catalog sales, order fulfillment, up-selling and cross-selling, customer relationship management.
Health care	Medical transcription, medical billing and coding, healthcare services, medical animation, tele-radiology, clinical services.
Finance	Accounting and accountancy services, billing and payment services, back office finance processing, 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 card processing, check processing.
Human Resources	Personnel administration, hiring and recruiting, training, and education, records and benefits payment administration, payroll services, health benefits administration, 401(k) administration, pension fund administration, retention, labor relations.
Payment services	Credit card and debit card services, check processing services, loan processing, electronic data interchange.
Content development	Engineering and design services, automation programming, digitization, animation, network management, biotech research, application development and maintenance, web and multimedia content development, e-commerce.
Administration ⁶²	Tax processing, claims processing, asset management, document management, legal and medical transcription, translation.

Source: *The Indian ITES-BPO activity by service line*, Nasscom, 2002.

International competition: As shown in Table 8, the world's outsourcing locations can be placed into four basic categories or tiers. Table 9 presents the strengths and weaknesses of the leading business process outsourcing nations.

⁶¹ Ibid.

⁶² Estimated that tax returns of around 300,000 Americans were prepared by India-based CPAs at Msource and other BOP firms in 2003. This figure was expected to double in 2004.

Table 8: The World's leading business process outsourcing locations, by importance.	
Tier	Country
Tier 1	India.
Tier 2: (Challengers)	China, Canada, the Czech Republic, Hungary, Ireland, Israel, Malaysia, Mexico, Australia, Chile, New Zealand, the Philippines, Poland, Russia, Spain, and South Africa.
Tier 3 (Up and coming)	Belarus, Brazil, the Caribbean, Egypt, Latvia, Mauritius, New Zealand, Ukraine, Venezuela.
Tier 4 (neophytes)	Bangladesh, Cuba, Sri Lanka, Thailand, Korea, and Vietnam.
Source: Deloitte Research. ⁶³	

For the foreseeable future India expects to be the leading destination for outsourcing of business process services. Sujoy Chohan, vice president and research director for Gartner Research asserted that no one country will rise to directly challenge India. Rather, India's share of the world business process outsourcing market will be challenged by a number of countries. Likewise, Kiran Karnik, president of Nasscom, said that India will not be challenged in the near term, although countries like the Philippine (call centers) will compete in certain specific niches. Over the long term, according to Karnik, China will become India's principal competition along with minor challenges from Russia, South Africa, and Eastern Europe.⁶⁴ Nonetheless, Karnik believes that "India is substantially ahead of China in terms of human resources across the board in terms of project management capabilities, basic technical skills, and fluency in language and comfort in dealing with customers in English language. However, the advantage in human resources is very considerably offset by the fact that Chinese infrastructure (power, roads, telecom) is far superior to us especially in those areas where IT companies go to [cities] like Beijing and Shanghai."⁶⁵

Mahendra K. Sanghi, president, Association of Software and Services Companies, indicated that India must diversify into other areas and improve the quality of its services if it is to meet this challenge. Sanghi noted that China will not challenge India in voice services for at least 25 years, whereas, English-speaking countries such as South Africa, Australia, New Zealand, and Ireland may. Sanghi asserted that "it is important for India to provide services which are not given by others and where there will be no significant challenge. To preserve the market share, diversification is essential. India should actively venture into new horizons and vertical services."⁶⁶

⁶³ Rumi Dutta, "Rising wages likely to blunt India's BPO edge: Deloitte," rediff, Aug. 13, 2004, found at <http://www.rediff.com/cms/print.jsp?docpath=/money/2004/aug/13bpo2.htm>, retrieved Aug. 16, 2004.

⁶⁴ "Outsourcing set to continue: Nasscom Chief," The Hindu, Feb. 29, 2004, found at <http://www.hinduonnet.com/thehindu/thscrip/print.pl?file=200402290401500.htm&date=...>, retrieved Aug. 11, 2004.

⁶⁵ Nasscom.

⁶⁶ Kanta Purushottam, "Competitive software and business process outsourcing- will India survive?" India Daily, Sept. 22, 2004, found at <http://www.indiadaily.com/editorial/09-22h-04.asp>, retrieved Aug. 16, 2004.

Table 9: Leading business process outsourcing alternatives: strengths and weaknesses		
Country	Positives	Negatives
South Africa	Low-cost economy, similar time zone to EU, English-speaking workforce.	More expensive than India, weaker technology skills, lack large talent pool.
Philippines	Skilled English speaking workforce; 94% literacy rate; educated workforce, cultural similarities; improved telecommunications infrastructure; compatible legal and tax structure; low absentee rates; sizable presence in call centers, medical transcription, animation.	Political instability, smaller and more costlier workforce than in India. Universities graduate only 70,000 IT graduates annually, lack of quality record in software.
Russia	Low-cost economy, good technology skills, large pool of engineers and scientists, competitive universities.	Weak infrastructure, limited linguistic capabilities, smaller workforce than India, limited global integration, poor business environment.
Canada	English-speaking workforce, cultural similarities, good technology skills, proximity, good infrastructure.	High cost of labor, relatively costly location, lack large talent pool.
China	Low-cost economy, advantages in manufacturing and IT, telecommunications, power, and road infrastructure better than in India; growth in software development and other areas where strong English skills are not necessary. Position in the global marketplace, special processing zones, political stability.	Limited English capabilities, weaker project management capabilities than India, lack of good quality record in software, lags in terms of experience with offshoring, high attrition rates, experienced engineers can be up to 25 percent more expensive than India, tax system, complicated legal structure, IPR problem, lack of standards.
Mexico	Low-cost economy, proximity; potential for Spanish-speaking call centers.	More costly than India, good mostly for low-end jobs, lack large talent pool, limited English capabilities.
Czech Republic	Competitive cost structure, good technology skills, stable business environment, strong education system, proximity to EU, good telecommunications infrastructure.	More expensive than India, lack large talent pool.
South Korea	Good technology skills, high literacy rate and well educated workforce, stable business environment, good telecommunications infrastructure.	Relatively costly location, smaller workforce than India.
Malaysia	Low costs, primarily for infrastructure; high level of global integration.	Smaller workforce, lack large talent pool.
Ireland	English speaking workforce, cultural similarities, stable business environment, well educated workforce, proximity to EU, good brand quality.	Relatively high compensation costs, lack large talent pool, has migrated to higher value-added activities.
Sources: Nasscom, HCL Technologies, Forbes, AT Kearney.		

Gartner Research predicted that India could lose between 40 percent and 45 percent of global offshore outsourcing, to Tier 2 countries, over the next six years if it fails to address the problem of rising

wages and the looming shortage of qualified business process outsourcing (BPO) workers.⁶⁷ Gartner also anticipates that India’s global market share for call center services will decline from the current 80 percent to about 55 percent by 2007. Forrester Research’s John McCarthy indicated that elementary routine labor intensive back office payroll and data entry tasks will eventually move from India to countries with much lower wages such as Vietnam and Uruguay. This will occur as India moves up the value-added chain to more complicated software and product development services.⁶⁸

Weaknesses of India’s BPO sector

The explosive growth of outsourcing in India has exposed some fundamental weaknesses such as high attrition rates, absenteeism, rising salaries, inadequate physical infrastructure, and the lack of data privacy laws and intellectual protection (table 10). In a study conducted by Deloitte Consulting nearly 75 percent of the U.S. companies reported having problems with their outsourcing partners and nearly 25 percent reported that they had brought functions back to the United States. Instances of U.S. firms recalling outsourcing projects from India are increasing. In 2004, companies such as Dell Computers, Capital One, Lehman Brothers, and AXA recalled portions of their business process outsourcing (BPO) operations from India.

Table 10: India’s Weaknesses
<ul style="list-style-type: none"> • State owned companies continue to dominate telecommunication services market. • Weak protection of intellectual property rights. Potential loss of sensitive corporate information. • Regional political uncertainty (Kashmir and Pakistan). • High illiteracy since 41 percent of Indians over the age of 15 are illiterate. • English is spoken with a heavy accent. • Lack of customer service culture. • Poor infrastructure, which increases costs. Underdeveloped and unreliable electrical infrastructure, roads, railways, power, inadequate housing, inadequate and expensive telecom infrastructure, poor PC and internet access rates. • Process implementation and marketing are generally still in their infancy. • Rising operator attrition and rising training costs. • Corruption. • Low-quality middle and floor management (one prime cause of attrition). • Absence of legislation for intellectual property and data protection. • Margins may come under pressures as competition increases from other countries. • Most Indian BPO companies are small by world standards. • Price wars. Small and desperate players drive down prices, causing irrational pricing behavior and poor service.
Sources: Nasscom, Gartner, McKinsey Global, The Economist, The Financial Express, Business Week, Forrester.

Wage inflation and manpower availability: Salaries at captive units have increased between 9.7 percent and 14.3 percent during the July 2004-January 2005 period. The growing demand for workers in Tier 1 cities is driving up wages and thereby driving down potential costs savings. Deloitte reported that the majority of India’s IT workers received a wage hike of at least 10 percent during the 2004-05 time period, with the top 10 percent of wage earners receiving an average 40 percent increase,

⁶⁷ Gartner’s estimates refer to work outsourced to 3rd party providers and does not include work sent offshore by U.S. and European MNCs to their wholly owned business process outsourcing subsidiaries. K. Yatish Rajawat, “Is India’s BPO sector in danger?,” The Economic Times, Aug. 17, 2004, found at <http://economictimes.indiatimes.com/articleshow/msid-817526,prtpage-1.cms>, retrieved Aug. 17, 2004.

⁶⁸ Lisa DiCarlo, “Best Countries for Outsourcing,” Forbes, Aug. 27, 2003, found at http://www.forbes.com/2003/08/27/cx_id_0827bestcountries.html, retrieved March 15, 2005.

whereas in the United States most IT workers received a salary increase of 5 percent or less per year.⁶⁹ Many business process outsourcing firms fear that wage inflation will eventually erode the competitiveness of India's industry, as compared to China, the Philippines, and Malaysia. Between 2001-2004, the average monthly salary for a typical call center employee increased from between \$114 to \$136 per month to \$159 to \$204 per month.⁷⁰

Attrition and absenteeism: According to a survey conducted by Hewitt Associates, wages in India's business process outsourcing sector have been growing by nearly 15 percent per year as companies have increased wages to mitigate problems associated with attrition and absenteeism. Because of the tedious nature of the work in voice-based business process outsourcing, the annual attrition rate can run as high as 35 percent to 40 percent. The average tenure at an voice-based India BPO is approximately 18 months, compared to 3- to-4 years for other types of business process outsourcing firms. Debashish Das of Keane Worldzen reported that India's business process outsourcing industry is concentrated in a few 'hot spots' like Gurgaon, Bangalore, and Mumbai. Thus, companies in these areas are forced to compete for the same workers, which leads to wage inflation and high employee attrition rates. Consequently, many companies considered smaller cities in 2005 for establishing BPOs.⁷¹ A recent survey conducted by Hill & Associates, showed that the leading causes of attrition were "expectation mismatches, job stagnation, and lack of growth, quest for a better job, content and dissatisfaction with company policies."⁷²

Infrastructure deficiencies: India lacks an adequate network of modern roads and highways, bridges, railway, regular nonstop international air flights from a variety of different Indian cities, efficient postal service, and reliable supplies of electricity and water. To compensate for these deficiencies, many IT and business process outsourcing firms have been forced to develop and supply their own power and other utilities. BPOs relocating to Tier-II and Tier II cities encounter these and other obstacles that generate higher logistical costs.

Security concerns (piracy and the loss of proprietary data): Outsourcing critics point to national security issues and privacy concerns, particularly in the foreign handling of sensitive financial and medical data. These fears make some U.S. firms hesitant to outsource to other countries. "India has intellectual property and other security laws, but policing is not very effective," said Vamsee Tirukkala, the cofounder and executive vice president of Zinnon, an offshore consulting company. "Every company says they're secure – we have BS77099 certification, which basically means you can't get a fly through your door, unless it's been cleared – but theft still occurs."⁷³

⁶⁹ Rumi Dutta, "Rising wages likely to blunt India's BPO edge: Deloitte," rediff, Aug. 13, 2004, found at <http://www.rediff.com/cms/rping.jsp?docpath=/money/2004/aug/13bpo2.htm>, retrieved Aug. 16, 2004.

⁷⁰ Parija Bhatnagar, "Is India's outsourcing honeymoon over?" CNN Money, Aug. 24, 2005, found at http://money.cnn.com/2005/08/23/news/international/india_outsourcing/index.htm, retrieved Aug. 30, 2005.

⁷¹ Gaurav Bhagowati, "India 2005: Facing the Challenges of Labor Shortage and Rising Wages," Outsourcing Journal, Jan. 2005, found at <http://www.outsourcing-journal.com/jan2005b-india.html>, retrieved Feb. 2, 2005.

⁷² "Quitters plague BPO units," Business Standard, March 15, 2005, found at http://www.business-standard.com/iceworld/storypage_link.php?chklogin=183..., retrieved March 15, 2005.

⁷³ Mike Ricciuti and Mike Yamamoto, "Outsourcing: Where to draw the line," CNET News.com, May 5, 2004.

Hidden costs: The outsourcing of BPO functions requires additional time to administer. Costs for invoicing, auditing, travel and to establish communications may rise. Likewise, it may take longer to start up operations, choose business process outsourcing vendors, provide for security, or to bring Indian workers to the United States for training. The possibility of U.S. workforce layoffs may also lower morale and productivity of remaining U.S. workers. Because of these hidden costs, “large companies are scrutinizing new outsourcing deals more closely, renegotiating existing agreements, and bringing functions back in-house.”⁷⁴

Outsourcing’s effects on the U.S. economy

Economists like Bhagwati et al agree that trade in services, like all international trade, will generate large net benefits for the U.S. economy.⁷⁵ Global Insight estimated that outsourcing added \$33.6 billion to U.S. real gross domestic product (GDP) by 2003 and forecast that U.S. real GDP would be \$124.2 billion higher by 2008 than it would have in the absence of the offshoring of IT software and services.⁷⁶ Global Insight also estimated that U.S. exports were \$2.3 billion higher because of outsourcing in 2003 and projected that U.S. exports would be \$9 billion higher in 2008 because outsourcing would enable U.S. companies to lower their prices in foreign markets and take advantage of growing incomes in those nations. McKinsey Research estimated that the U.S. IT industry will save nearly \$390 billion by offshoring services and software development. Mann (2003) calculated that because of offshore outsourcing U.S. GDP experienced an additional growth of \$230 billion between 1999 and 2002.⁷⁷ Using the IT hardware industry as an example, Mann expects the offshoring of business process services to also lower prices to the consumer, make business-specific packages more affordable, and lead to higher productivity among U.S. workers.

Jensen and Kletzer and other economists also acknowledge that not all Americans will benefit from free trade and offshoring. Former Federal Reserve Governor Ben Bernanke noted that “to say that the U.S. economy benefits from trade is not to say that every individual American worker or family benefits, or that the structural changes induced by trade are not disruptive.”⁷⁸ Economic theory, according to Kletzer (2005), acknowledges “that not everyone benefits from free trade: positive economy-wide benefits result from the gains of the “winners” exceeding the losses of the “losers.”⁷⁹ Bhagwati, Panagariya, and Srinivasan (2004) wrote that the “U.S. economy loses low-wage call centers, but gains high-wage jobs in medical, legal and other services. On balance, therefore, the outsourcing phenomenon, seems likely to offer a transition to higher-value jobs.”⁸⁰

⁷⁴ David Wighton, “Companies question outsource benefits,” *Financial Times*, Apr. 19, 2005, p. 6.

⁷⁵ Daniel Griswold, “Foreign Outsourcing Invigorates US Economy,” Outsourcingcenter, found at <http://outsourcing-offshore.com/foreign.html>, retrieved Sept. 2004.

⁷⁶ *The Comprehensive Impact of Offshore IT Software and Services Outsourcing on the U.S. Economy and the IT Industry*, Global Insight (USA), Inc, March 2004.

⁷⁷ Catherine L. Mann, “Globalization of IT Services and White Collar Jobs: The Next Wave of Productivity Growth,” *International Economic Policy Briefs*, No. PB03-11, Dec. 2003.

⁷⁸ Remarks by Governor Ben S. Bernanke, Trade in Goods, Fuqua School of Business, Duke University, March 30, 2004, found at <http://www.federalreserve.gov/boarddocs/speeches/2004/20040330/default.htm>, retrieved May 23, 2005.

⁷⁹ Lori G. Kletzer, “Globalization and job loss, from manufacturing to services,” *Economic Perspectives*, Federal Reserve Bank of Chicago, 2Q/2005.

⁸⁰ Jagdish Bhagwati, Arvind Panagariya, and T.N. Srinivasan, “The Muddle Over Outsourcing,” *Journal of Economic Perspectives*, Vol. 18, No. 4, Fall 2004, pp. 93-114.

In the last several decades, U.S. trade in services has grown into a significant percentage of overall U.S. trade in goods and services.⁸¹ During the 1999-2004 period, trade in services accounted for approximately 22 percent of total U.S. trade in goods and services. In 2004, the United States exported \$343.9 billion in services to the rest of the world, while importing \$296.1 billion (table 16).⁸² Total U.S. trade in services increased by 33 percent from \$482.3 billion in 1999 to \$640 billion in 2004, with exports growing by 22 percent and imports growing by 48 percent. Although the United States has historically enjoyed a surplus in services trade, that surplus declined from \$82.6 billion in 1999 to \$47.8 billion in 2004, representing a decline of 42 percent.

	Exports			Imports		
	Goods	Services	Total	Goods	Services	Total
1999	683,965	282,476	996,443	1,029,980	199,857	1,229,837
2000	771,994	299,490	1,071,484	1,224,408	225,348	1,449,756
2001	718,712	288,426	1,007,138	1,145,900	223,967	1,369,867
2002	977,276	294,854	977,276	1,164,720	233,737	1,398,457
2003	713,421	309,146	1,022,567	1,260,717	256,664	1,517,381
2004	807,536	343,921	1,151,448	1,472,926	296,105	1,769,031

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Projected job losses: Bardhan and Kröll and other economists believe that the slow rate of U.S. job growth should not be linked to foreign trade or outsourcing because neither has a dramatic impact on either economic growth or job creation.⁸³ But other economists view outsourcing as the most

⁸¹ The Bureau of Economic Analysis does not provide breakouts in its data that would reveal the nature of the services that are traded.

⁸² According to the U.S. Government Accountability Office (GAO), there are significant differences in U.S. and Indian offshore outsourcing data. These variations can be explained by: (1) the two countries follow different practices in accounting for the earnings of temporary Indian workers residing the United States. (2) India defines certain services, such as software embedded on computer hardware, differently than the United States. (3) Both countries follow different practices for counting sales by India to U.S.-owned firms located outside the United States. The United States follows International Monetary Fund. (4) The U.S. Bureau of Economic Analysis does not report country-specific data for particular types of services. *U.S. and India Data on Offshoring Show Significant Differences*, U.S. Government Accountability Office, GAO-06-116, Oct. 2005.

⁸³ Former Federal Reserve Governor Ben Bernanke stated that “most economists believe that such job flows are a normal and healthy phenomenon since trade increases economic welfare. Trade promotes structural change that displaces some jobs, but trade creates many opportunities for increased employment as well, including high-wage employment, while recently many people have been concerned specifically about the outsourcing of business services, few are aware that the U.S. runs a healthy trade surplus in services. Quantitatively, outsourcing abroad simply cannot account for much of the recent weakness in the U.S. labor market and does not appear likely to be an important restraint to further recovery in employment. [That] empirical studies show that foreign trade is responsible for perhaps 2 percent of the 15 million gross jobs lost each year. Outsourcing might be responsible for a bit more than 1 percent of gross job loss.” “Interview with Ben S. Bernanke,” Federal Reserve Bank of Minneapolis, June 2004, found at <http://minneapolisfed.org/pubs/region/04-06/bernanke.ctm>, retrieved May 23, 2005. “Outsourcing not the problem, Bernanke says,” CBS Market Watch, March 30, 2004, found at http://www.always-on-network.com/comments.php?id=P3509_0_6_0_c, retrieved May 23, 2005. Remarks by Governor Ben S. Bernanke, Trade in Goods, Fuqua School of Business, Duke University, March 30, 2004, found at <http://www.federalreserve.gov/boarddocs/speeches/2004/20040330/default.htm>, retrieved May 23, 2005.

likely culprit for slow job creation. Others insist that factors like the collapse of the dot-com bubble, economic recession and the war in Iraq, increased worker productivity, jobs lost to automation and technology improvements (such as voice recognition software, the decline in U.S. competitiveness in the scientific and technical fields, and a downturn in the business cycle) are the main factors behind lagging employment.⁸⁴ Deloitte Research asserted that the 100 largest U.S. financial services firms will move approximately 2 million jobs to low-wage countries over the next 5 years, and 42 global telecommunications firms will offshore an additional 275,000 jobs.

Bhagwati, Panagariya and Srinivasan (2004) concluded that factors other than offshoring and international trade caused the slow U.S. job growth since the 2001 recession.⁸⁵ But in *The New Wave of Outsourcing* Ashok D. Bardhan and Cynthia Kroll (2003) identified a number of occupational categories, representing 14 million nonmanufacturing and manufacturing position, that are at risk of being outsourced.⁸⁶ The majority of these at risk occupations are back office jobs that represented approximately 11 percent of the total U.S. non-farm workforce in 2001.

Estimates of the employment impacts from outsourcing vary widely because the actual number of lost jobs is difficult to quantify. Those losses can range from only a few jobs to hundreds of thousands per year. Forrester Research estimated that 3.3 million U.S. jobs will be lost to outsourcing by 2015, representing approximately \$136 billion in wages.⁸⁷ Forrester's estimate translated into nearly 12,000 to 15,000 per month.⁸⁸ Forrester later revised that prediction, estimating that 3.4 million jobs would be lost by 2015. The firm also predicted that the number of jobs going offshore would accelerate dramatically during 2005-06 resulting in 830,000 job losses by the end of 2005.

Another frequently cited estimate comes from Global Insight, which predicted that 372,000 software and services jobs have been lost since the dot.com bust. The Institute of Electrical and Electronics Engineers stated that "American high-tech firms shed 560,000 jobs between 2001 and 2003,

⁸⁴ Peter Parry, former President of the San Francisco Federal Reserve Bank, believes that "increased productivity explains 98 to 99 percent of job loss over the last few years. A key driver of that normal churn is worker productivity. As the economy emerges from a recession, companies push employees harder - leaning on them to work more efficiently and longer - and that manifests itself as more output per worker. Greater productivity lets employers postpone hiring until they are confident that consumers will buy what the additional workers produce." "Puzzling through the Jobless Recovery - - OR Is It a Fundamental Shift?" Knowledge Wharton, March 5, 2003, found at <http://knowledge.wharton.upenn.edu/index.cfm?fa=printArticle&ID=955>, retrieved May 23, 2005. "US: Job cuts mount amid signs of upturn," WSWS, Nov. 8, 2003, found at <http://www.wsws.org/articles/2003/nov2003/jobs-n.shtml>, retrieved May 23, 2005.

⁸⁵ Jagdish Bhagwati, Arvind Panagariya, and T.N. Srinivasan, "The Muddle Over Outsourcing," *Journal of Economic Perspectives*, Vol. 18, No. 4, Fall 2004, pp. 93-114.

⁸⁶ Ashok Deo Bardhan and Cynthia A. Kroll, *The New Wave of Outsourcing*, Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, Research Report, Fall 2003.

⁸⁷ Forrester based its findings on employment changes in nine Standard Occupation Classification occupation categories used by the Bureau of Labor Statistics that are commonly associated with outsourcing. Forrester's findings claim that only 0.53 percent of the 56.7 million jobs lost for all reasons during 2002 came from the 9 categories. Kirkegarrd (2003) stated in that Forrester's estimates were potentially flawed because they do not factor in such influences as the business cycle and technological changes on the economy at large. Jacob F. Kirkegarrd, *Outsourcing-Stains on the White Collars*, Institute for International Economics, 2003.

⁸⁸ Critics of the projected job losses warn that "it is worth remembering that many predictions come from management consultants who are eager to push the latest business fad. Many of these consulting firms are themselves reaping commissions from outsourcing contracts. Much of the perceived boom in outsourcing stems from companies' eagerness to latch onto the latest management trend." Daniel W. Drezner, "The Outsourcing Bogeyman," *Foreign Affairs*, May/June 2004, found at <http://www.danieldrezner.com/policy/outsourcing.htm>, retrieved June 22, 2005.

and expect to lose another 234,000 in 2004.”⁸⁹ Another estimate comes from Mark Zandi of Economy.com, who calculated that offshoring was responsible for 700,000 to one million jobs lost since 2000. Zandi declared that “there is little reason to believe that the magnitude of jobs losses due to offshoring will abate anytime soon.”⁹⁰

The Information Technology Association of America contended that the Forrester’s predictions were exaggerated. The trade association insisted that no large scale job losses have resulted from BPO offshoring, because only 104,000 technology jobs have been lost to offshoring since 2000. The Association predicted that less than 10 percent of all technology jobs will be sent offshore over the next 10 to 15 years.⁹¹ Similarly, other critics insist that Forrester’s figures are overstated. Aron (2004) stated that “you hear [of] all these fantastic projections, but the real numbers are puny compared with the normal churn in the economy.”⁹² Likewise, Cathy Minehan, President of the Boston Federal Reserve Bank, said, “clearly, this is material, but it simply isn’t large enough to have had a major impact on U.S. employment levels in the aggregate, despite the rhetoric that suggests otherwise.”⁹³ Also, Bradford and Keltzer (2005) declared that there is no clear understanding of the relationship between job generation and the globalization of business process services.⁹⁴

Actual U.S. job loss: No one knows the exact number of U.S. white-collar business service jobs that have moved offshore.⁹⁵ Official U.S. government data on jobs lost to outsourcing is limited, and U.S. Government Accounting Office (GAO), statistics provide only minimal insights on job losses.⁹⁶ The Bureau of Labor Statistics (BLS) of the U.S. Department of Labor began tracking outsourcing job losses only in January 2004. By most accounts, the number of layoffs caused by offshoring constitutes only a small fraction of the millions of jobs destroyed and created each year. The availability of accurate job loss statistics is also hampered by the reluctance of U.S. companies to share this information.

Mann (2003) and Daniel Drezner both point out that many estimates of jobs loss use 2000 as the base year - a time the economy was at its peak during the dot.com boom. Mann believes that changes in the business cycle, declines in manufacturing employment, the dollar overvaluation, and the technology bust were overlooked when the job loss projections were made. Drenzer stated that the “technology sector because of Y2K fears and the height of the dot-com bubble had pushed employment figures to an

⁸⁹ “Outsourcing your job to earn more,” The Economic Times, July 7, 2004, found at <http://economictimes.indiatimes.com/articleshow/msid-757679,prtpage-1.cms>, retrieved July 7, 2005.

⁹⁰ Mark Zandi, “The Off-shoring Threat,” Economy.com, retrieved Oct. 24, 2003.

⁹¹ “Not many US jobs will be lost: ITAA,” Sify, Nov. 19, 2003, found at http://sify.com/prtner_friendly.php?id=1311958&ctid=2&lid=1, retrieved Jan. 13, 2005.

⁹² Ravi Aron, “Puzzling through the Jobless Recovery - - Or Is It a Fundamental Shift?” Knowledge Wharton, Sept. 26, 2004, found at <http://knowledge.wharton.upenn.edu/index.cfm?fa=printArticle&ID=955>, retrieved May 23, 2005.

⁹³ “Export of U.S. Jobs Seen Up-Report,” Reuters, May 17, 2004, found at <http://itpaa.org/modules.php?name=news&file=article&sid=703>, retrieved Apr. 12, 2005.

⁹⁴ J. Bradford Jensen and Lori G. Kletzer, *Tradable Services: Understanding the Scope and Impact of Services Offshoring*, prepared for the Brookings Trade Forum 2005, “Offshoring White-Collar Work - the Issues and the Implications,” May 12-13, 2005.

⁹⁵ According to the American Electronics Association, as of June 2002 there were approximately 5.3 million tech jobs in the United States. Victor Godinez, “More IT jobs will go offshore, study shows,” The Dallas Morning News, Jan. 14, 2003, found at <http://www.s-t.com/daily/01-03/01-14-03/102ho122.htm>, retrieved Sept. 13, 2005.

⁹⁶ *International Trade: Current Government Data Provide Limited Insight into Offshoring of Services*, U.S. General Accounting Office, Sep. 2004, GAO-04-932.

artificially high level. When 1999 is used as the starting point, it becomes clear that offshore outsourcing has not caused a collapse in IT hiring.”⁹⁷

In 2000, BLS projected in its *Occupation Outlook Handbook* that the number of computer and mathematical occupations would grow from 3.02 million to 4.07 million between 2000 and 2010. Subsequently, BLS modified those projections and lowered its estimate of job creation for computer and mathematical professions from 152,800 to only 10,600 for the 2002-2012 period.⁹⁸ Mann (2003) found that during the 1999-2003 period, employment in computer and related mathematical occupations rose by 6 percent, and financial and business-employment rose by 9 percent, whereas employment among architects and engineers was “stable” during the period.

A decline in U.S. employment clearly occurred between 2000 to 2002 when total non-farm employment declined by 2 percent (table 17). Even if McKinsey’s and Forrester’s projections were correct, they represented less than 2 percent of total U.S. non-farm employment in an \$11 trillion economy. In its first attempt to track offshoring related layoffs, BLS identified 4,633 jobs lost to offshoring during the first quarter of 2004, representing only 2.5 percent of total mass layoffs during the quarter.⁹⁹ BLS data also shows that 69 percent of U.S. non-manufacturing workers who lost their jobs during the last 20 years found new jobs within 6 months and on average earned nearly equivalent wages.¹⁰⁰

Forrester based its calculation on projected job losses in nine major occupational categories included in BLS’s Standard Occupational Classifications.¹⁰¹ Table 17 summarizes employment trends in those categories and it shows a decline of approximately 2.3 million, or 4 percent, in total non-farm employment between 2000 and 2003. However, when using 1999 as the base year, employment in Forrester’s categories increased by less than one percent. In those job categories identified by Forrester, employment decreased when comparing 1999 and 2003 include management and architecture-engineering.

⁹⁷ Daniel W. Drezner, “The Outsourcing Bogeyman,” *Foreign Affairs*, May/June 2004, found at <http://www.danieldrezner.com/policy/outsourcing.htm>, retrieved June 22, 2005.

⁹⁸ “BLS Employment Figures Show Impact of Outsourcing,” USWA, found at <http://www.uswa.org/uswa/program/content/1270.php>, retrieved June 17, 2005.

⁹⁹ Chris Isidore, “What outsourcing?” CNN Money, June 10, 2004, found at http://money.cnn.com/2004/06/10/news/economy/jobless_outsourcing/, retrieved June 17, 2005.

¹⁰⁰ Meenakshi Rishi and Sweta C. Saxena, *Is Outsourcing Really As Bad As It Is Made To Sound?*, Seattle University and University of Pittsburgh.

¹⁰¹ These SOC were as follows: 11-000: Management occupations; 13-000: Business and financial operations; 15-000: Computer and mathematical; 17-000: Architecture and Engineering; 19-000: Life, physical and social science; 23-000: legal; 27-000: Arts, design, entertainment, sports and media; 41-000: sales and related occupations; 43-000: office and administrative support occupations.

Table 17: Job categories identified by Forrester Research					
Occupational group	1999	2000	2001	2002	2003
Management	8,063,410	7,782,680	7,212,360	7,092,460	6,439,530
Business-financial	4,361,980	4,619,270	4,676,680	4,772,120	5,045,860
Computer & mathematical	2,260,080	2,932,810	2,825,870	2,772,620	2,830,550
Architecture-engineering	2,506,380	2,575,620	2,489,070	2,411,260	2,354,580
Life- physical- social science	909,530	1,038,670	1,067,730	1,078,630	1,102,070
Legal	858,320	890,910	909,370	934,850	945,440
Arts, design, ect.	1,551,600	1,513,420	1,508,790	1,503,680	1,583,250
Sales and related	12,938,130	13,506,880	13,418,240	13,339,570	13,522,460
Office and admin support	22,562,480	22,936,140	22,798,590	22,754,570	22,607,360
Total	56,013,909	57,798,400	56,908,701	56,661,762	56,433,103
Total non-farm employment	127,274,400	129,740,981	127,980,410	127,523,760	127,420,170
Source: Bureau of Labor Statistics.					

Table 18 presents data for those occupational categories most frequently tied to outsourcing. As expected, the data follow the same trend as the occupational categories cited by Forrester. As with Forrester, the number of jobs peaked with the dot.com boom in 2000 before declining to the 1999 level after the bust. The data show that the number of jobs for all occupational categories increased from 7,174,660 in 1999 to 7,374,310 in 2003, or approximately 3 percent. The number of jobs in computer related occupational categories increased from 2,347,030 in 1999 to 2,594,750 in 2003, or by approximately 11 percent. Those computer related occupations experiencing declines between 1999 and 2003 included computer programmers and database administrators.

The number of positions in the low-wage IT enabled occupations decreased from 4,827,630 in 1999 to 4,779,560 in 2003, or by less than 1 percent, due to a sharp drop in the number of telemarketers.¹⁰² Other low-wage IT enabled positions that experienced jobs losses included switchboard operators (including answering services), payroll and timekeeping clerks, credit authorizers, checkers, clerks, human resources assistants (except payroll and timekeeping), human resources assistants (except payroll and timekeeping), reservation and transportation ticket agents and travel clerks, medical transcriptionists, and medical records and health information technicians.

¹⁰² Annual employment in the “low-wage” IT enabled job classifications - 1999: 4,827,630; 2000: 4,633,710; 2001: 4,700,420; 2002: 4,738,720; 2003: 4,779,560.

Table 18: Occupations linked to outsourcing, 1999-2003					
Occupation	1999	2000	2001	2002	2003
Computer and mathematical	26,280	25,800	25,620	24,410	23,770
Computer programmers	528,600	530,730	501,550	457,320	403,220
Computer software engineers	496,630	639,250	623,210	611,800	703,100
Computer support specialist	462,840	264,610	493,240	478,560	480,520
Computer systems analysts	428,210	522,570	448,270	467,750	485,720
Database administrators	101,460	463,300	104,250	102,090	97,540
Network and computer systems administrators	204,680	108,000	227,840	232,560	244,610
Network systems and data communications analysts	98,330	234,040	126,060	133,460	156,270
Total	2,347,030	2,788,300	2,550,040	2,507,950	2,594,750
Telemarketers	485,650	119,220	437,510	419,740	405,060
Switchboard operators, including answering services	248,570	461,890	227,660	226,890	210,190
Bill and accounts collectors	383,090	387,870	385,800	407,280	417,430
Billing and posting clerks and machine operators	551,410	492,040	480,610	491,000	490,960
Book keeping, accounting, and auditing clerks	1,619,870	1,663,530	1,697,890	1,728,730	1,762,390
Payroll and timekeeping clerks	196,660	191,310	188,570	191,500	198,800
Credit authorizers, checkers, and clerks	82,900	82,980	78,450	79,400	72,930
Human resources assistants, except payroll and timekeeping	174,110	172,070	164,680	167,480	161,890
Reservation and transportation ticket agents and travel clerks	222,340	199,700	183,280	174,170	156,140
Medical transcriptionists	97,260	97,330	94,090	99,160	96,340
Credit analyst	61,580	63,420	66,710	657,000	68,420
Market research analyst	67,670	99,030	108,940	122,000	153,130
Radiologic technologist and technicians	177,850	172,080	168,240	173,540	175,800
Computer information systems manager	280,820	283,480	267,310	264,790	257,860
Medical records and health information technicians	177,850	143,870	142,170	145,270	Occupation
Total	7,174,660	7,422,010	7,250,460	7,246,670	7,374,310
Source: U.S. Department of Labor, Bureau of Labor Statistics.					

U.S. business competitive position: Adam Smith wrote in *The Wealth of Nations* “If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have some advantage. The general industry of the country, being always in proportion to the capital which employs it, will not thereby be diminished... but only left to find out the way in which it can be employed with the greatest advantage.” The specialization it engenders leads to the availability of cheaper goods and a greater variety of goods available to consumers. Gregory Mankiw, Chairman of President Bush’s Council of Economic Advisors, said that “when a good or service is produced more cheaply abroad, it makes more sense to import than to make or provide it domestically.”

Specialization leads to the availability of less expensive goods that are more readily available to consumers. Gregory Mankiw, Chairman of President Bush’s Council of Economic Advisors, said that “when a good or service is produced more cheaply abroad, it makes sense to import than to make or provide it domestically.”

In recent years, several prominent economists have come forward to challenge the long held view that international trade is good for advanced developed economies like the United States. These economists also believe that outsourcing invalidates the principle of comparative advantage. Economist Paul Craig Roberts is the most prominent advocate of this position and argues that free trade is no longer a win-win proposition and that if outsourcing is continued “the United States will be a third world country in 20 years.”¹⁰³ This group of economist believes that comparative advantage is legitimate only when the factors of production (land, labor, and capital) are fixed and immobile.¹⁰⁴ According to Roberts, “trade implies reciprocity. It is a two-way street. There is no reciprocity in outsourcing, only export of domestic jobs.... If there are no given endowments because business know-how, capital and technology are globally mobile, the advantage lies with countries with untapped pools of educated and skilled low-wage labor.”

Critics of outsourcing also complain that trade economists continually ignored the downfall of the Soviet Union and its satellites that flooded the worlds’ labor market with millions of unemployed or low-cost underemployed workers ready to be exploited by multinationals, who are constantly on the lookout for cheaper labor. Likewise, critics hold that exploitation of this cheap offshore labor combined with the introduction of the Internet, low-cost telecommunications, and outsourcing threaten to upset the balance in the demand and supply of labor and will eventually result in prolonged periods of job disruption and wage stagnation in the developed economies. Roberts and Senator Charles Schumer (D-NY) wrote a New York Times op-ed piece stating, “the case of free trade is undermined by changes in the global economy. Comparative advantage is undermined if the factors of production can relocate to wherever they are most productive: in today’s case, to a relatively few countries with abundant cheap labor. In this situation, there are no longer shared gains - some countries win and others lose.”¹⁰⁵

Roberts concluded that “today’s economists can’t identify what the new industries and occupations might be that will replace those that are lost, but they’re certain that those jobs and sectors

¹⁰³ Douglas A. Irwin, “Outsourcing’ is good for America,” *The Wall Street Journal*, Jan. 28, 2004, p. A16.

¹⁰⁴ Paul Craig Roberts, “Notes for free traders,” townhall.com, March 5, 2003, found at <http://www.townhall.com/columnists/paulcraigroberts/pcr20030305.shtml>, retrieved Apr. 20, 2005.

¹⁰⁵ They believe that there has been a “seismic” shift in the world economy was cause by three major developments: (1) “new political stability is allowing capital and technology to flow far more freely around the world.” (2) “strong educational systems are producing tens of millions of intelligent, motivated workers in the developing world, particularly in India and China, who are capable as most highly educated workers in the developed world but available to work at a tiny fraction of the cost.” (3) “inexpensive, high-bandwidth communications make it feasible for large work forces to be located and effectively managed anywhere.” Charles Schumer and Paul Craig Roberts, “Second Thoughts on Free Trade,” *New York Times*, Jan. 1, 2004.

are out there somewhere. What does not occur to them is that the same incentive that causes the loss of one tradable good or service - cheap, skilled foreign labor - applies to all tradable goods and services. There is no reason that the replacement industry or job, if it exists, won't follow its predecessor offshore.... This is what is wrong with today's debate about outsourcing and offshore production. It's not really about trade but about labor arbitrage.... The U.S. loses jobs and also capital and technology that move offshore to employ cheap foreign labor."¹⁰⁶

Paul Samuelson, Nobel Prize winner and professor emeritus at Massachusetts Institute of Technology, contends that the prevailing defenses for free trade are too simplistic. He believes that the laws of economics do not guarantee that the United States will be a winner in the long term because of outsourcing and all other forms of international trade.¹⁰⁷ The assumption held by some economists that the United States will always be a winner, according to Samuelson, is "only an innuendo." William Greider, of *The Nation*, interprets Samuelson's argument: "in certain circumstances, when a very poor but ambitious nation is trading with a wealthy advanced economy, free trade can turn into a very ugly loser for the wealthy country--inflicting permanent economic loss, stagnant wages, greater inequality and other hurtful consequences."¹⁰⁸ Likewise, "a low-wage nation that is rapidly improving its technology, like India or China, has the potential to change the terms of trade with America in fields like call-center services or computer programming in ways that reduce per-capita income in the United States. The new labor-market-clearing real wage has been lowered by this version of dynamic fair free trade."¹⁰⁹ Schumer and Roberts stated that "when American companies replace domestic employees with lower-cost foreign workers in order to sell more cheaply in home markets, it seems hard to argue that this is the way free trade is supposed to work. To call this a "jobless recovery" is inaccurate; lots of new jobs are being created, just not here in the United States."¹¹⁰ Schumer continued, "if overseas countries can out-compete us, then maybe something is awry. We ought to reexamine our fundamental precepts that high-value added jobs will always be created here."¹¹¹

Nonetheless, mainstream economists continue to support unfettered free trade and believe that globalization will raise the living standards of most Americans. They believe that trade in services, especially BPO, like other forms of international trade, will benefit the United States. Neoclassical economists acknowledge that some will gain while others will suffer but insist that the gains for the winners will more than offset the pain suffered by the losers. For example, Jagdish Bhagwati of Columbia University believes that concerns over outsourcing are greatly exaggerated. Counter to Greider's argument, Bhagwati said, "that the assessment of the Indian education systems 'almost borders on the ludicrous' and yields net economic losses only when foreign nations are closing the innovation gap with the US."¹¹²

Judy Dean, International Economist at the U.S. International Trade Commission contends that arguments against comparative advantage fail on a number of levels. Comparative advantage is not static

¹⁰⁶ Paul Craig Roberts, "The Future of Work," Business Week Guest Commentary - The Harsh Truth About Outsourcing, Business Week, March 22, 2004.

¹⁰⁷ Paul A. Samuelson, "Where Ricardo and Mill Rebut and Confirm Arguments of Mainstream Economists Supporting Globalization", *Journal of Economic Perspectives*, Vol. 18, No. 3, Summer 2004, pp. 135-146.

¹⁰⁸ William Greider, "Defunct Economists," *The Nation*, Dec. 20, 2004, p. 8.

¹⁰⁹ Ibid.

¹¹⁰ Charles Schumer and Paul Craig Roberts, "Second Thoughts on Free Trade," *New York Times*, Jan. 1, 2004.

¹¹¹ *Event Summary: Free Trade in the New Global Economy*, Brookings Institution, Jan. 7, 2004.

¹¹² Steve Lohr, "Economist Samuelson wants to 'set the record straight' on globalization," *Indian American Center for Political Awareness*, *News India Times*, Jan. 24, 2005.

and “throughout history countries’ comparative advantage have changed, due to changes in their relative availability of capital, fertile land, labor, and technological knowhow. When countries follow this shifting specialization, they use resources most productively and share in gains of the larger global pie.”¹¹³ She asserts that the principle is not “undermined” when the factors of production move offshore. Dean stated that “improved technological know-how, better access to ideas, migration of workers, and foreign investment can all contribute to changing comparative advantage, but they are not necessary for changes to take place. When factors of production do move, they tend to accelerate the shift in comparative advantage that is already taking place.”¹¹⁴

Likewise, Dean believes that some outsourcing critics confuse low wages with low labor costs.¹¹⁵ “Low wages,” according to Dean, “still generally reflect low productivity. Thus, countries with relatively inexpensive labor typically have an abundance of very low-skilled workers. Workers who cost half as much but are half as productive do not save a company any money. In 2001, with 39 percent of its adult population still illiterate, India remains a country with relatively abundant low-skilled workers and, hence, low wages on average. This gives the country a comparative advantage in lower-skilled labor intensive products and in less-skill intensive aspects of industries like software.”¹¹⁶ Mary Amity and Shang-Jin of the IMF agree that “on the whole, welfare should improve as a result of outsourcing [but in the] process some groups or individuals could be made worse off. But in aggregate, outsourcing does not appear to be leading to net job loss - jobs lost in one industry often are offset by jobs created in other growing industries.”¹¹⁷

Knowledge base: The offshoring discussion has become highly polarized, and the opposite poles of the debate can be dividing into the “do-nothings” and the “do-anythings.”¹¹⁸ According to Senator Joseph Lieberman (D-CT), the do-nothings have an “abiding and absolute faith in laissez faire capitalism and see any government intervention as self-defeating. In fact, they argue that jobs flowing overseas is healthy, that they are evidence that the system is working, and that we have nothing to worry about.”¹¹⁹ On the other hand, the “do-anythings” will embrace almost any policy or platform that will save jobs in the short-term. “Protectionism,” says Senator Lieberman, “is their favorite tool - raising higher and higher trade barriers on the unproven argument that it will make it harder and harder for jobs

¹¹³ See any standard undergraduate textbook such as P. Krugman and M. Obstfeldt, *International Economics*, NY: Addison Wesley, 2005, for a discussion of the determinants of comparative advantage and how those change over time.

¹¹⁴ Ibid.

¹¹⁵ Stephen Golub, “International Labor Standards and International Trade,” IMF Working Papers, WP/97/137, 1997.

¹¹⁶ Asma Lateef, “Linking up with the Global Economy: A Case Study of the Bangalore Software Industry,” International Labour Organization, DP/96/1997/, ISBN 92-9014-599-4, section 2.1.

¹¹⁷ “India-bashing on BPO unfair: IMF,” *The Economic Times*, Dec. 3, 2004, found at <http://economictimes.indiatimes.com/articleshow/msid-944709.prtpage-1.cms>, retrieved Dec. 3, 2004.

¹¹⁸ *Offshore Outsourcing and America’s Competitive Edge: Losing Out in the High Technology R&D and Services Sector*, Office of Senator Joseph I. Lieberman, May 11, 2004.

¹¹⁹ The Senator Lieberman sees three basic problems with this view: “(1) not only does rising unemployment take a real human toll, it also eats at our ability to create new jobs. (2) advanced production capabilities and R&D jobs are strategic assets that have defined our nation’s competitive advantage. (3) while proximity to the point of sale is less critical, geography still matters in the innovative process. Countries are regions that cluster university and industry research, knowledge-based start-ups, capital for entrepreneurs support from larger firms, and advanced manufacturing - with the talent to support all this - capture new industries.”

to go overseas.”¹²⁰

Senator Lieberman concluded that, “in their attempt to build a wall to stop offshore outsourcing, the “do-anythings” are falling into a trap. Trying to keep jobs in our own borders through protectionist measures will only keep other jobs out. It will invite retaliation from beyond our borders that will cost us many of the millions of American jobs that are based on exports.” Neither group, says Senator Lieberman, can solve the outsourcing problem since “neither gets to the heart of the outsourcing problem - America’s failure to innovate. To stop offshore outsourcing and preserve American jobs, America needs to rise to the international competition and grow again through innovation. Leaving it all to the markets won’t work. Hiding behind a wall won’t work. Only education, innovation, investment, trade, training, and hard work will give us the growth and jobs we want and need.”¹²¹ BPO critics assert that offshoring of high-paying white-collar jobs threatens the United States by exerting downward pressure on wages, lessening the tax base, endangering national security, and by eroding America’s technological leadership and its competitive advantage in the global marketplace.

Education: Critics claim that offshoring eliminates entry level IT jobs and will eventually discourage American students from entering the computer science and engineering fields, thereby threatening the country’s leadership in technology and innovation. Enrollment in computer science and computer engineering programs at U.S. universities was down 23 percent in 2004 and in March 2004 the New York Times reported that MIT’s best graduates were leaving the computer engineering school. Enrollment in computer science declined by 33 percent in 2 years.¹²²

Wage depression: Conventional economic wisdom says that if a large number of less expensive and more highly-skilled workers becomes available around the world, competition may drive down U.S. wages for a great number of white-collar business process outsourcing services workers. Richard D’Aveni of Dartmouth College thinks that “the excess labor supply abroad is going to have [a] significant impact on the wages in service industries, just as it has had on manufacturing wages over the past 20 years. More broadly, I can see the offshoring phenomenon putting a lot of pressure on our educational system to develop better knowledge workers able to remain competitive with India and the rest of the world. A major question for us as a nation will be whether we will find extra resources for education in the face of increasing outlays for pensions and healthcare for aging baby boomers, interest on the national debt, or the demands of the war on terrorism. I believe we’re going to have a problem maintaining our lead as the best knowledge workers in the world.”¹²³

Protectionism: Fear of job loss has awakened anti-offshoring sentiments in the American public, which has called for limitations on companies moving jobs offshore. As of March 2005, a total of 112 anti-outsourcing bills were making their way through 40 state legislatures. In 2004, there were 107

¹²⁰ *Offshore Outsourcing and America’s Competitive Edge: Losing Out in the High Technology R&D and Services Sector*, Office of Senator Joseph I. Lieberman, May 11, 2004.

¹²¹ *Meeting the Offshore Outsourcing Challenge Remarks by Senator Joe Lieberman*, New America Foundation and Electronic Industries Alliance, May 11, 2004.

¹²² Paul Craig Roberts, “Outsourcing: A New Occupational Hazard,” NewsMax.com, March 10, 2004, found at http://www.newsmax.com/scripts/printer_friendly.pl?page=http://newsmax.com/arch..., retrieved June 1, 2004.

¹²³ Richard D’Aveni, Amos Tuck Business School, Dartmouth College, “The Outsourcing Threat Is: a) Big b) Small c) Both,” *The Washington Post*, June 13, 2004, p. B4.

bills in 33 states, five of which became law.¹²⁴ In the federal FY2004, Congress included a provision in the Federal Omnibus Appropriations Act that prohibited the use of foreign workers for some government jobs.¹²⁵ Dallas Federal Reserve President Richard Fisher said that “erecting barriers to competition through protectionism is risky behavior that may please some special interests momentarily but is certain to lead to economic decline over the long term.”¹²⁶

Loss of knowledge base: Some analysts have identified a trend where U.S. corporations have increasingly outsourced their research and development functions offshore as a significant factor that could affect U.S. global competitiveness. U.S. corporations now invest more than \$17 billion annually in offshore R&D services. George Gilbert, managing partner of Tech Strategy Partners, called this trend a “disturbing development.” A study conducted by the Administrative Staff College of India indicated that 77 global companies have established R&D centers in India. Other firms have formed R&D alliances with or have contracted research to local firms. “What is surprising is the list of industries doing R&D work out of India is varied, ranging from telecommunications service providers and equipment manufacturers, chip designers and IT hardware companies to plastics and pharmaceuticals producers,” said Manoj Kunkalienkar, executive director and president of Indian outsourcing company ICICI InfoTech. “I believe it’s just a matter of time before India is recognized as ‘the world’s R&D center’ or ‘the knowledge hub.’”¹²⁷

Offshore outsourcing literature

This section reviews research pertaining to the offshoring of business services to low-cost countries. Most of the reports on the outsourcing of business process services, particularly those appearing in the popular press, are based largely on surveys performed by management consulting firms. These stories focus primarily on job losses due to outsourcing, but not the potential for job creation and the possibility for a net job gain for the U.S. economy. The popular press also does not focus on the possibility that trade in services could generate net benefits to the U.S. economy, such as lower prices to consumers, higher dividends to shareholders, growing exports, greater job security and higher wages for the remaining workers, and greater overall economic efficiencies.¹²⁸

Bhagwati asserted that, “there is an emotion on outsourcing that runs through talk radio and popular media in the U.S. that is quite out of proportion to the number of jobs that have migrated. One reason is that it is easier to see the losses, whereas the gains to the U.S. economy, which clearly outweighs the losses, are less easily visible.”¹²⁹

The literature cited in the next section shows that the number of services jobs that U.S. corporations send offshore constitutes only a minor portion of the overall U.S. labor market. Despite all

¹²⁴ A New Jersey bill prohibits state contract work from being offshored and bills in Oklahoma and Mississippi deal with offshore call centers. “Outsourcing: 100 US Bills target India,” *The Economic Times*, May 12, 2005, found at <http://economictimes.indiatimes.com/articleshow/msid-1107048,prtpage-1.cms>, retrieved June 15, 2005.

¹²⁵ Other bills introduced in 2004 include: Defending American Jobs Act, United States Workers Protection Act, USA Job Protection Act, and Jobs for America Act.

¹²⁶ Danielle DiMartino, “Free trade has been a blessing,” *Dallas Morning News*.

¹²⁷ *Ibid.*

¹²⁸ Daniel Griswold, “Foreign Outsourcing Invigorates the US economy,” *Cato Institute*, Sept. 2004.

¹²⁹ Edward Luce, “Booming Bangalore will be backing Bush to win again,” *Financial Times*, Sept. 22, 2004, p. 14.

the attention outsourcing has generated, insufficient data exist to quantitatively analyze the job loss trend (Kletzer 2005).¹³⁰ However, a number of qualitative studies have been released during the past few years related to the offshoring of business services.

Business-industry and Consulting companies views and estimates

The analyses of the offshore outsourcing of business services and employment effects on the U.S. economy have been conducted primarily by management consultant firms. These consulting firms generally agree that the outsourcing of business services will grow tremendously over the next several years as U.S. companies export more of their back office functions to low-cost countries. The most prominent of these consultant reports were generated by Forrester Research, Deloitte Research, Global Insight, the McKinsey Global Institute, and Gartner Research. Two firms, Forrester Research and Gartner Research, provide forecasts of potential U.S. IT and business services jobs lost to low-cost countries, whereas Global Insight and McKinsey Global Institute provide a discussion of the net employment effects on the U.S. labor market due of outsourcing. Deloitte Research provides insights into potential job loss and cost savings in the international financial services industry. A summary of the findings and forecasts of these consulting companies are presented in Box 3.

Box 3: Summary of forecasts by leading U.S. consulting companies	
Company	Forecasts
Forrester Research	Forrester estimated that 3.4 million U.S. jobs will be lost to low-cost countries by 2015, representing nearly \$136 million in wages. Of these, between 315,000 and 400,000 were offshored between 2000 and 2004.
Deloitte Research	Deloitte predicted that \$210 billion in industry costs would be outsourced by the end of 2005 and \$400 billion by the end of 2010 and that approximately 2 million jobs in the finance industry would be sent to low-cost countries by 2008.
Global Insight	Global predicted that spending by U.S. companies on the offshore outsourcing of computer software and services would grow at a 26 percent compound annual rate from nearly \$10 billion in 2003 to \$31 billion in 2008. It forecast offshore outsourcing would create more than 90,000 net new U.S. jobs in 2003 and an additional 317,000 net new U.S. jobs by 2008.
McKinsey Global Institute	McKinsey predicted that approximately 90,000 net new jobs will be created throughout the U.S. economy, and \$33.6 billion was added to the U.S. GDP in 2003 and \$124.2 billion will be added through 2008. By offshore outsourcing of business services and software development McKinsey projected that the U.S. IT industry could save as much as \$390 million by 2010.
Gartner Research	In 2004, Gartner estimated that the global market for offshoring of IT and business services would grow to \$130 billion by the end of 2005. It also projected that the number of U.S. IT positions offshored will grow to 30 percent by 2015 and that 10 percent of U.S. computer services and software positions would be sent offshore by the end of 2004.

Forrester studies: Forrester is a widely quoted consulting firm that published a series of surveys and papers on business outsourcing to India and other countries. The most frequently cited Forrester report was published in 2002 and it estimated that 3.3 million U.S. jobs will be lost to outsourcing by

¹³⁰ Lori G. Kletzer, "Globalization and job loss, from manufacturing to services," *Economic Perspective*, Federal Reserve Bank of Chicago, 2Q/2005.

2015, representing approximately \$136 billion in wages and about 8 percent of all U.S. IT jobs.¹³¹ On May 17, 2004, Forrester adjusted its estimates upward to 3.4 million U.S. jobs lost.¹³² John C. McCarthy, Forrester vice president, believes his company's estimates are "consistent with the sentiment in the literature that service outsourcing, although now very low, has been steadily increasing."¹³³

A Forrester study reported that between 315,000 and 400,000 IT and service sector jobs were offshored between 2000 and 2003. Due to changes in the U.S. Bureau of Labor Statistics' *Employment Outlook for 2002-2012*,¹³⁴ Forrester adjusted its near-term estimates of job dislocation by the end of 2005 upward from 590,000 to 830,000. Forrester indicated that 76 percent of all U.S. IT and business services jobs offshored were from Fortune 1,000 companies. However, Forrester asserted that approximately 63 percent of America's largest 1,000 companies have yet to participate in the offshoring IT and business services.¹³⁵

Forrester's findings were based on a detailed breakdown of nine major occupational categories from the Standard Occupational Classification system maintained by the Bureau of Labor Statistics (BLS).¹³⁶ The jobs are the ones most commonly associated with outsourcing of business services (table 11).¹³⁷ The projection of 3.3 million jobs lost to outsourcing may seem large, but relative to the total U.S. employment, these projections represented less than 3 percent of the total U.S. labor force in 2002.

¹³¹ Forrester estimated that, as of April 2004, only 300,000 white-collar jobs had been offshored that represented approximately 0.2 percent of the U.S. job market. Also, its 3.3 million projection represents approximately 2 percent of total U.S. non-farm employment. Of this total, Forrester estimated that only 500,000 are actually IT-related jobs. *Near-Term Growth of Offshore Accelerating*, Forrester Research, 2002. *3.3 Million U.S. Services Jobs to Go Offshore*, Forrester Research, Nov. 11, 2002.

¹³² Patrick Thibodeau, "Forrester adjusts outsourcing numbers upward," *Computerworld*, May 17, 2004, found at <http://www.computerworld.com/printthis/2004/0.4814,93217,00.html>, retrieved Sept. 13, 2005.

¹³³ "Behind Outsourcing Debate: Surprisingly Few Hard Numbers," *The Wall Street Journal*, Apr. 12, 2004, found at http://www.wsjclassroomedition.com/outsourcing/out_numbers.htm, retrieved Sept. 13, 2005.

¹³⁴ See, "The U.S. Economy to 2012: signs of growth," *Monthly Labor Review*, Department of Labor, Bureau of Labor Statistics, Feb. 2004.

¹³⁵ W. David Gardner, "Report: Offshore Outsourcers Seek Risk Balance," *TechWeb.com*, found at <http://www.techweb.com/wire/26804840>, retrieved Apr. 12, 2005.

¹³⁶ Namely: Management occupations (11-0000); Business and Financial Operations occupations (13-0000), Computer and mathematical occupations (15-0000), Architecture and engineering occupations (17-0000), Life, physical, and social science occupations (19-0000), Legal occupations (23-0000), Arts, design, entertainment, sports, and media occupations (27-0000), Sales and related occupations (41-0000), and Office and administrative support occupations (43-0000). "Offshoring increases at faster pace, Forrester says," *ITWorld.com*, May 17, 2004, found at <http://www.itworld.com/Man/2701/040517outsourcingup/>, retrieved Apr. 12, 2005.

¹³⁷ Forrester relied on a series of surveys of user companies and business and IT leaders, trips to India to meet with offshore companies, and vendor briefings. Forrester updated the baseline job data based on U.S. Department of Labor (BLS) data on *National Occupational Employment and Wage Estimates*. Forrester reassessed the growth curves for the four offshore rankings and added year-by-year (granularity) for 2003 through 2008. Forrester then re-evaluated the "offshoreability" of each job category based on: the nature of the work - is it knowledge or transaction intensivity; to what degree the process is automated; whether the skills are available offshore; and what third-party offshore investments in skills are needed to do the work. "Forrester Finds Near-Term Growth of Offshore Outsourcing Accelerating," Forrester Research, Press Release, May 17, 2004, found at <http://www.forrester.com/ER/press/release/0,1769,922,00.html>, retrieved Sept. 13, 2005.

Table 11: Forrester’s projections for U.S. jobs moving offshore to low wage countries				
Occupational category	2005	2010	2015	Difference 2005-2015
Life, physical, and social science occupations	4,000	16,000	39,000	35,000
Legal occupations	20,000	39,000	79,000	59,000
Art, design, entertainment, sports, and medical occupations	8,000	15,000	30,000	22,000
Management occupations	34,000	106,000	259,000	225,000
Business operations occupations	91,000	176,000	356,000	265,000
Computer & mathematical occupations	181,000	322,000	542,000	524,000
Architecture and engineering occupations	46,000	93,000	191,000	145,000
Sales and related occupations	38,000	97,000	218,000	180,000
Office and administrative support occupations	410,000	815,000	1,600,000	1,190,000
Total	830,000	1,700,000	3,300,000	2,570,000
Source: Forrester Research, Inc., May 14, 2004				

Deloitte studies: According to Deloitte, international banks and insurance companies offshore a broad variety of jobs in application development, coding and programming, accounting and finance, operations, processing and administration, contract support, and call-center operations. In two-reports, Deloitte predicted that offshoring in financial services will continue to grow throughout this decade.¹³⁸ The firm’s analysts predicted that \$210 billion in industry costs would be outsourced by the end of 2005 and \$400 billion by the end of 2010. Deloitte analysts also projected that the industry would transfer approximately 2 million jobs to low-cost countries by 2008.¹³⁹ As evidence, a Deloitte study stated that the share of global financial services companies with offshore facilities increased from 29 percent of the total in 2002 to 67 percent in 2003.

A Deloitte survey estimated that financial institutions that sent portions of their services to low-cost countries achieved an average cost savings of 39 percent.¹⁴⁰ Chris Gentle of Deloitte, concluded that, “industry executives believe that, by 2010, more than 20 percent of the industry’s global cost base will have shifted offshore, with average savings climbing to 37 percent from today’s 32 percent. Large financial institutions who can achieve significant economies of scale tend to be the biggest beneficiaries –gaining significant competitive advantages over their smaller rivals, many of whom remain wholly onshore.”¹⁴¹

In a second survey, Deloitte projected that the world’s financial-services institutions will outsource \$356 billion in services, or 15 percent of the industry’s cost base, to low-cost countries by the

¹³⁸ *Offshoring and Cross-Border Outsourcing by Banks*, Deloitte Research, 2004. *The Titans Take Hold*, Offshore Customer Management conference, Deloitte Research, Nov. 1, 2004.

¹³⁹ Results were based a Deloitte survey of 43 financial institutions in 7 countries, including 13 of the world’s most important financial services companies. *The Titans Take Hold*, Deloitte Research Report, Deloitte Research, Nov. 1, 2004.

¹⁴⁰ *Offshoring and Cross-Border Outsourcing by Banks*, Deloitte Research, 2004.

¹⁴¹ *The Titans Take Hold*, Offshore Customer Management conference, Deloitte Research, Nov. 1, 2004.

end of 2010.¹⁴² The survey revealed that by outsourcing to low-cost destinations the world's leading 100 financial services companies could achieve an annual cost savings of \$138 billion by 2008, or an average of \$1.4 billion per company. It also projected that the U.S. industry could achieve savings of 20 percent of the total industry cost base.¹⁴³

Deloitte's surveys identified India as the the leading location for international outsourcing for the world's financial services industry. Deloitte's analysts estimated that nearly 80 percent of all financial services offshoring takes place in India. However, Deloitte officials believe that offshoring will eventually expand to other countries in the Indian Ocean Rim, such as South Africa, China, Malaysia, the Philippines, and Australia. By the end of this decade, Deloitte expects 1 million jobs to be relocated by the world's financial services sector to the Indian Ocean Rim.

Deloitte's surveys also revealed that 70 percent of the world's largest financial services organizations have had negative experiences with outsourcing. Deloitte analysts noted that 20 percent of its survey respondents were dissatisfied with outsourcing and returned at least a portion of their outsourced work back in-house.¹⁴⁴ One survey also revealed that 62 percent of the respondents realized that outsourced work required more management in comparison to the original estimates; 57 percent of respondents said they could not free up internal resources for other projects, leading to more overhead; and 52 percent ranked cost-related issues as the main risk of outsourcing; 81 percent had limited or no transparency pricing and cost structure, resulting in increased chances of paying additional costs. A total of 83 percent of respondents said they have renegotiated outsourcing deals because of lower costs and changes to their business, technology, and regulatory environment; 53 percent have moved from long term contracts (6 to 10 years) to shorter contracts (up to 5 years) to increase flexibility and bargaining power; 73 percent are working with multiple outsourcing companies to reduce dependency; and 45 percent are forced to include gain-sharing clauses with outsourcing companies as motivation for innovation, highlighting continuous concern about vendor complacency.

Global Insight studies: Global's *The Impact of Offshore IT Software and Services Outsourcing on the U.S. Economy and the IT Industry* (2004), commissioned by the Information Technology Association of America, asserted that U.S. companies will continue to outsource IT software and business services for the foreseeable future in search of cost savings, quality, access to global markets and talents, and labor productivity gains.¹⁴⁵ The study also predicted that spending by U.S. companies on the outsourcing of computer software and services would grow at a 26 percent compound annual rate from nearly \$10 billion in 2003 to \$31 billion in 2008, while total savings from outsourcing would grow from \$6.7 billion to \$20.9 billion during the same period. Global predicted that this spending represented

¹⁴² *Outsourcing in Financial Services*, Bank for International Settlements, Feb. 2003.

¹⁴³ "Trends for offshoring grows," Finance Partners, Apr. 4, 2004, found at <http://www.financepartners.co.uk/fp/showNews.php?id=87>, retrieved Sept. 13, 2005.

¹⁴⁴ The study was based on a survey of 25 major "world class" companies from manufacturing, transportation, consumer business, energy, financial services, technology-media-telecommunication, health care, and the public sector. *Calling a Change in the Outsourcing Market*, Deloitte Research, 2005. "Deloitte: Most big companies report poor outsourcing savings," Indus Business Journal, May 15, 2005, found at http://www.indusbusinessjournal.com/global_user_elements/printpage.cfm?storyid=951699, retrieved Sept. 13, 2005.

¹⁴⁵ According to Global Insight, "the analysis was undertaken in the context of Global Insight's economic models and incorporates information from third-party research reports, members of the IT industry, and primary research surveys." *ITAA/Global Insight Study Finds IT Outsourcing Results In Net U.S. Job Growth*, Global Insight, March 30, 2004, found at <http://www.globalinsight.com/About/PressRelease/PressRelease855.htm>, retrieved Aug. 30, 2005.

2.3 percent of total U.S. firm spending on IT software and 6.2 percent on services, between 2003 and 2008. The study also asserted that offshore outsourcing added \$33.6 billion to U.S. real GDP in 2003 and predicted that U.S. real GDP would be \$124.2 billion higher in 2008 because of the offshore outsourcing of IT software and business service.¹⁴⁶

Global Insight's study also predicted that the benefits to the U.S. economy derived from offshore outsourcing will more than offset any pain and suffering caused by the dislocation of U.S. workers. It forecast that the economic activity associated with offshore outsourcing would create more than 90,000 net new U.S. jobs in 2003 and an additional 317,000 net new U.S. jobs by 2008 (table 12). Global predicted that the economy would create 516,000 additional software and services positions by 2009, but only 490,000 without its presence. Global's study estimated that 272,000 of the 516,000 positions will go offshore, while 244,000 will remain within the United States, representing a net gain from the U.S. economy. The study also asserted that real wages of U.S. workers actually increased by 0.13 percent because of offshore outsourcing and predicted that real wages would be 0.44 percent higher in 2008. According to Global, the major groups expected to gain from outsourcing included education and health services, transportation and utilities, construction, wholesale trade, financial services, professional and business services, and manufacturing.

Global predicted that nearly 372,000 IT software and services positions, or 10 percent of all IT software and services jobs, have vanished since 2000. Global analysts said that these jobs disappeared as a result of aggressive hiring practices in the late 1990s, the mild recession of 2001, labor productivity gains, and those advantages derived from changing technologies. Global stated that only 2.8 percent of all jobs lost was due to offshore outsourcing. The industry sectors cited by Global that were most negatively impacted by offshore outsourcing were the publishing and software and communications sectors. Global also asserts that real U.S. exports of IT services and software were \$2.3 billion higher in 2003 due to offshore outsourcing and will be \$9 billion higher in 2008.

Industry sector (NAICS code)	Net new jobs		Total employment with offshore ITO	
	2003	2008	2003	2008
Natural resources & mining (212)	1,046	1,182	562,953	466,367
Construction (23)	19,815	75,757	6,813,323	7,763,619
Manufacturing (31-33)	3,078	25,010	14,301,493	14,348,283
Wholesale trade (42)	20,456	43,359	5,817,096	6,301,966
Retail trade (44-45)	12,552	30,931	14,982,090	15,138,270
Transportation & utilities (48 & 22)	18,895	63,513	4,902,726	5,688,011
Publishing, software & communications (51)	-24,860	-50,043	3,325,202	3,507,217
Financial services (52)	5,604	32,066	7,807,356	8,167,050
Professional & business services (54)	14,667	31,623	15,946,375	19,651,930
Education & health services (61 & 62)	18,015	47,260	16,566,840	18,331,695
Leisure, hospitality & other services (71)	4,389	12,506	17,351,984	18,396,412
Government (92)	-3,393	4,203	21,490,648	22,372,105
Total employment	90,264	317,367	129,868,086	140,132,925

Source: Global Insight.

¹⁴⁶ *The Comprehensive Impact of Offshore IT Software and Services Outsourcing on the U.S. Economy and the IT Industry*, Global Insight, Executive Summary, sponsored by ITAA, March 2004.

McKinsey Global Institute studies: McKinsey's *Offshoring: Is it a Win-Win Game?* (2003) and *Nasscom-McKinsey Study 2002* are widely cited studies on the offshoring of business services.¹⁴⁷ McKinsey projected that by 2008 India's IT software and services sector will employ nearly 4 million Indians, account for 7 percent of India's GNP, and 30 percent of its foreign exchange inflows. India's IT software and services sector is projected to reach between \$28 billion and \$30 billion by 2008, with the information technology enabled services-BPO (ITES) segment accounting for between \$21 billion and \$24 billion.¹⁴⁸ The report predicts that the products and technology services industry will grow to between \$8 billion and \$10 billion and a domestic software market will reach between \$13 billion and \$15 billion. Export revenues from IT software and services exports are expected to grow from 8 percent of India's foreign exchange inflows in 2002 to more than 30 percent by 2008. McKinsey predicts that by 2008, the information technology enabled services segment of the industry is expected to create more than 1 million jobs in India.

By offshore outsourcing of business services and software development McKinsey projected that the U.S. IT and services industry could save as much as \$390 million by 2010.¹⁴⁹ In June 2005, McKinsey published a three-part report on how offshore outsourcing of business services will affect world industries, wages, and employment.¹⁵⁰ The report asserted that only 11 percent (160 million) of the world's 1.46 billion services jobs can be performed offshore.¹⁵¹ According to McKinsey, approximately 1.2 million jobs were performed in low-cost countries in 2003 and it projects that this figure will reach 4.1 million, or 1.2 percent of all service jobs, by 2008.¹⁵² The report identified two industry sectors it believes are the most vulnerable to offshore outsourcing; packaged software and IT service sector jobs. It stated that nearly 50 percent of the packaged software and IT services sector jobs could potentially be outsourced. The report estimated that 25 percent of the banking, 52 percent of engineering jobs, 31 percent of finance and accounting jobs, and 19 percent of insurance IT and services related jobs could be outsourced offshore and performed remotely. Nonetheless, McKinsey believes that in the near term that the number outsourced service jobs will remain small in comparison to total employment in the United States and the developed world.

In *Offshoring: Is it a Win-Win Game?*, McKinsey asserted that offshoring of business processes generates wealth for both the United States and for India. McKinsey calculated that for every dollar that U.S. companies outsourced offshore that the global economy gained \$1.47, generating a net gain of 47 cents to outsourcing companies. The study also concluded that India captures 33 cents of that dollar in

¹⁴⁷ *Offshoring: Is it a Win-Win Game?*, McKinsey Global Institute, 2002.

¹⁴⁸ Syed Amin Jafri, "Nasscom-McKinsey study predicts \$80 billion potential for Indian IT sector in 2008," *rediff.com*, June 10, 2002, found at <http://www.rediff.com/money/2002/jun/10nass.htm>, retrieved Sept. 14, 2005.

¹⁴⁹ Vivek Agrawal and Diana Farrell, "Who wins in offshoring," *The McKinsey Quarterly*, 2003 Special Edition, found at http://www.mckinseyquarterly.com/article_page.aspx?ar=1363&12=7&13=10&srId=6&g..., retrieved Aug. 30, 2005.

¹⁵⁰ Looking at 8 industry sectors (auto, health care, insurance, IT services, retail, retail banking, packaged software, and pharmaceuticals) McKinsey estimated that 18.3 million jobs in these sectors could be done offshore. Through "extrapolation" McKinsey calculated that for these 8 sectors in the global economy in 2008 (160 million jobs) representing nearly 11 percent of the envisioned world's 1.46 billion service jobs that could be offshored. *The Emerging Global Labor Market*, McKinsey Global Institute, June 2005.

¹⁵¹ Erika Kinetz, "Crunching the numbers for a true picture of outsourcing," *International Herald Tribune*, June 18, 2005, found at http://www.iht.com/bin/print_ipub.php?file=/articles/2005/06/17/yourmoney/mlabor.php, retrieved July 13, 2005.

¹⁵² McKinsey's figures were generated by extrapolating from analysis of 9 industrial sectors including: auto, health care, insurance, information technology services, retail, retail banking, packaged software, and pharmaceuticals. These sectors account for 50 percent of U.S. non-farm employment.

the form of wages paid to local workers, revenues and profits earned by Indian outsourcing vendors and their suppliers, profits earned by local business process outsourcing firms and their suppliers, and taxes collected by the government (table 13).¹⁵³

Table 13: Benefits of offshoring to India, according to McKinsey Global Institute			
Offshore sector	Items	Value (\$)	Total value (\$)
	Labor	0.10	0.20
	Profit retained in India	0.10	
Suppliers	Revenue to supplier industries net of taxes	0.09	0.09
Government taxes	central government	0.03	
	state government	0.01	0.04
Total benefit			0.33
Source: McKinsey Global Institute.			

Likewise, the McKinsey report estimated that for every dollar offshored by U.S. companies the U.S. economy captured a potential net benefit of between \$1.12 and 1.14 (table 14).¹⁵⁴ McKinsey calculated that U.S. companies save 58 cents for every dollar of work that is moved offshore and that those savings could be reinvested in new business opportunities, pay additional dividends to shareholders, or result in lower prices for consumers. The study said benefits were redistributed as follows: 45 to 47 cents redistributed through the creation of new jobs or the re-employment of workers; 4 cents for repatriated earnings; 5 cents for additional exports from low-cost countries for computers, telecommunications equipment, other machinery and equipment; and through the procurement of U.S. services (financial, legal, marketing). Consequently offshore outsourcing created a net additional value to the U.S. economy of 12 cents to 14 cents that would not have existed without outsourcing.

Table 14: Benefits of offshoring to the United States			
Direct benefits	Items	Value (\$)	Total value (\$)
	Savings to U.S. investors and customers through cost differentials	0.58	0.67
	Import of U.S. goods and services by India (computer hardware devices)	0.05	
	Profit repatriation by U.S. companies back from India	0.04	
Indirect benefits	Value from U.S. labor redeployed		0.45 to 0.47
Total benefit of outsourcing to the U.S.			1.12 - 1.14
Source: McKinsey Global Institute.			

¹⁵³ *Offshoring: Is it a Win-Win Game?*, McKinsey Global Institute, Aug. 2003.

¹⁵⁴ Ibid.

While the McKinsey study acknowledges that outsourcing offshore leads to worker dislocation in the short term, the economy, the business community, and consumers will be much better off in the long term. McKinsey predicts in *Offshoring: Is It a Win-Win Game?* that approximately 90,000 net new jobs are being created throughout the U.S. economy. Additionally, \$33.6 billion was added to the U.S. GDP in 2003 and \$124.2 billion will be added through 2008. “Outsourcing lifts wages,” the study concluded, “though minimally, real-wages were 0.13 percent higher in 2003 because of outsourcing and could be 0.44 percent higher by 2008.”¹⁵⁵

McKinsey also reported that the supply of qualified low-cost labor in India and other developing countries will not meet demand in the future, except for the field of engineering. McKinsey analyzed university graduation rates in 28 low-wage countries and found that only 6.4 million of the 33 million university graduates with up to 7 years of experience were qualified for employment in a multinational corporation. The remainder lacked sufficient language skills, were limited by cultural barriers, were inaccessible geographically, or they chose to work for domestic companies.

Gartner Research studies: The offshore outsourcing of IT and business services has become the most commonly used delivery model, according to Gartner Research. The potential cost savings it offers are so compelling that participating companies can gain a significant cost advantage over their competitors.¹⁵⁶ In 2004, Gartner estimated that the global market for offshoring of IT and business services would grow to \$130 billion by the end of 2005. It also predicted that global spending on research and development would grow from \$1.25 billion in 2004 to \$12 billion by 2010, spending on infrastructure outsourcing would grow from between \$100 million and \$250 million to between \$3 billion and \$4 billion, and spending on application-development services would grow from \$23 billion to approximately \$50 billion during the same time period.¹⁵⁷ Gartner also predicted that global spending on customer service outsourcing would grow from \$8.4 billion in 2004 to \$12.2 billion in 2007.¹⁵⁸

Gartner indicated that less than 5 percent of the IT positions in the United States and other developed nations have been sent offshore. It projected that the number of IT positions offshored will grow to 30 percent by 2015.¹⁵⁹ In a research report published in 2003, Gartner predicted that 10 percent of U.S. computer services and software positions would be sent offshore by the end of 2004.¹⁶⁰ Nonetheless, this will not result in a net loss of jobs in the United States, says Gartner, because the effects of automation and gains in labor productivity will have a far greater impact on IT job

¹⁵⁵ “Outsourcing creates jobs, study says,” CNN Money, March 30, 2004, found at <http://cnmoneyp.inthis.clickability.com/pt/cpt?action=cpt&title=outsourcing+creates+j...>, retrieved May 23, 2005.

¹⁵⁶ Sharon Gaudin, “Gartner: 1/4 of U.S. IT Jobs Offshored by 2010,” IT Management, March 26, 2004, found at <http://itmanagement.earthweb.com/career/print.php/3331751>, retrieved Sept. 16, 2005.

¹⁵⁷ Paul McDougall, “30% of Tech Jobs At Risk From Offshoring, Gartner Says,” InformationWeek, Apr. 4, 2005, found at <http://www.informationweek.com/shared/printablearticlesrc.jhtml?articleid=160401701>, retrieved Sept. 16, 2005.

¹⁵⁸ Gartner noted the offshore portion would account for only 5 percent of the market in 2007. Andy McCue, “Gartner: Outsourcing costs more than in-house,” Cnet News, March 4, 2005, found at http://news.com.com/2102-1022_3-5600485.html?tag=st.util.print, retrieved Sept. 16, 2005.

¹⁵⁹ Paul McDougall, “Exclusive: Gartner Predicts Huge Increase in Offshore Outsourcing by 2015,” Outsourcing Pipeline, March 31, 2005, found at <http://www.outsourcingpipeline.com/shared/article/printablearticlesrc.jhtml?articleID=160...>, retrieved Sept. 13, 2005.

¹⁶⁰ *Offshore Outsourcing of Data Services by Insured Institutions and Associated Consumer Privacy Risks*, FDIC, found at <http://www.fdic.gov/regulations/examinations/offshore/background.html>, retrieved Sept. 13, 2005.

displacement than offshoring.¹⁶¹

Gartner analysts believe most of the offshored jobs lost by the developed world will be sent to low-cost countries like India, the Philippines, Malaysia, and China. Although India is the preferred location for U.S. companies, Gartner predicted that its market share would decline from 80 percent in 2004 to approximately 55 percent by 2007.¹⁶² Gartner does not expect any one nation to contest India's position rather a number of nations will arise to challenge India's preeminent position. Gartner's study also asserted that because India has no long-term plan for improving its infrastructure or increasing its talent pool, the country will also face a serious challenge from other English-speaking countries like Ghana, South Africa, Mauritius, Fiji, Malaysia, the Philippines, Australia, New Zealand. Gartner's study also predicted that China will also challenge India by 2007. However, China's limited English-speaking capabilities will limit the challenge and Gartner believes that China will not challenge India in voice-based services, but only in the lower-end transaction processing work (rules and form-based processing).

Academic literature

The academic literature related to offshoring of business services is growing. Recent contributions include: Amity and Wei (2004); Bhagwati, Panagariya, and Srinivasan (2004); Mann (2003); Bardhan and Kroll (2003); and Jensen and Kletzer (2005). These authors did not identify strong correlation between offshore outsourcing and job loss. Bhagwati found that the current public concern over job loss was misplaced because nearly 90 percent of all service sector jobs require geographic proximity and therefore cannot be outsourced. Many of these studies conclude that even if the most dire predictions on job loss come true, job losses would affect less than 2 percent of the U.S. labor market because job displacement would be overshadowed by gains in efficiency, higher levels of output, job creation in other sectors of the economy, and higher average real wages. The authors used different analytical techniques to examine the question including statistical analysis, conceptual framework, and data analysis. A summary of their findings in the academic literature is presented in Box 4.

¹⁶¹ "An offshoring tidal wave to come?" Cnet News, April 1, 2005, found at http://news.com.com/2061-10788_3-5650697.html, retrieved Sept. 16, 2005.

¹⁶² John Riberio, "Gartner: India's BPO market likely to lose market share," Network World, Aug. 30, 2004, found at <http://www.networkworld.com/cgi-bin/mailto/x.cgi>, retrieved Sept. 16, 2005.

Box 4: Summary of the findings in the academic literature	
Amiti and Wei (2004)	The authors asserted that the data did not support the prevailing level of anxiety in the United States over massive job losses caused by offshoring. They also found that the effect on net employment depended upon what level U.S. manufacturing industries are disaggregated and they estimated a small negative effect on U.S. employment when economy was segmented into 450 sectors, but found the negative effect disappeared when the U.S. industry sectors were more broadly defined.
Bhagwati, Panagariya, and Srinivasan (2004)	The authors stated that the impact of the offshoring of services on the U.S. labor market is relatively minor. They constructed a conceptual framework to argue that trade in services is similar to trade in goods. Bhagwati et al stated that not all jobs can be sent offshore and that nearly 70 percent of all U.S. jobs require physical proximity and cannot be outsourced offshore .
Catherine Mann (2003)	Mann expects that the offshoring of services will also bring lower prices for consumers, more affordable business services, facilitate job-creating investment, and lead to higher worker productivity. Mann asserted that employment in those areas considered at risk to IT outsourcing were, for the most part, either stable or recovering.
Bardhan and Kroll (2003)	The authors asserted that Forrester’s claim now seems conservative and concluded that 14 million manufacturing and non-manufacturing positions were vulnerable to outsourcing, representing approximately 11 percent of the total U.S. workforce.
Jensen and Kletzer (2005)	Jensen and Kletzer concluded that workers in tradable service industries possess different demographic characteristics than their counterparts in non-tradable industries; displacement rates for services industry workers are lower than for manufacturing and re-employment rates are higher; and earning losses are lower for displaced services workers than for displaced manufacturing workers.

Amiti and Wei: The authors contributed two studies on the effects of offshoring of business services on employment and productivity in developing economies. In *Fear of Service Outsourcing: Is It Justified?* (2004),¹⁶³ the authors point out that the outsourcing of business services has received a tremendous amount of negative attention in the press. Much of the anxiety associated with offshore outsourcing in developed economies has centered primarily on the outsourcing of services. The authors asserted that this anxiety gives the impression that the outsourcing of services is somehow “quantitatively different” from material outsourcing. Amiti and Wei noted that stories on business process outsourcing in the popular press have been based primarily on reports prepared by management consulting firms rather than on academic research. Amiti and Wei indicated that there is substantial literature related to material-input outsourcing but very little on services outsourcing.

The chief aim of the Amiti and Wei study was to differentiate the unfounded assumptions from the facts about job losses associated with services outsourcing. The study centered on business services and computing and information services as the most commonly cited professional job categories associated with outsourcing. The authors examined the United Kingdom as potentially illustrative of the effects of outsourcing on the United States. The authors analyzed 69 U.K. manufacturing industries and 9 service industries over the 1995 to 2002 period. They found that although offshore outsourcing of services in the United Kingdom has been steadily growing, but remains at very low levels. The authors asserted that the data did not support the prevailing level of anxiety in the United States over massive job losses caused by offshoring. They also found no evidence that outsourcing led to employment losses in the UK or any correlation between higher levels of outsourcing and a slower rate of job growth in the

¹⁶³ Mary Amiti and Shang-Jin Wei, *Fear of Service Outsourcing: Is It Justified?* International Monetary Fund (IMF) Working Paper, WP/04/186, Sept. 2004.

United Kingdom.

In a second study, Amiti and Wei found that the effect of outsourcing on employment depended upon the level of U.S. manufacturing industries disaggregation.¹⁶⁴ The authors discovered a small negative effect of approximately 0.5 percent on employment when the U.S. economy is segmented into 450 sectors, but found the negative effect disappeared when the U.S. industry sectors were more broadly defined. As they expected, when the U.S. economy was segmented into a more aggregated level (96 sectors) the authors found that the effect disappeared and that there was no correlation between job growth and growth of outsourcing at the sector level. The authors conclude that “importing service inputs may lead to a substitution effect away from labor but increasing demand in other industries offsets this effect.” This is in contrast to the popular media generated belief that the outsourcing of services was “exploding,” when in fact the overall employment effect has been small.

The data revealed that offshore outsourcing of business services is still at a relatively modest level. Using International Monetary Fund data, the authors found that of business services, as a percentage of U.S. GDP, increased from 0.1 percent in 1983 to 0.2 percent in 1993 and to 0.4 percent in 2003. The United States is the world’s leading importer of business services, but as a percentage of GDP, outsourcing remains low in comparison to the rest of the world.¹⁶⁵ Employing data for all U.S. manufacturing, the authors discovered that services outsourcing is positively correlated with U.S. labor productivity.

Bhagwati, Panagariya, and Srinivasan: In *The Muddles over Outsourcing* (2004), the authors assert that the public debate over offshore outsourcing of services suffers from two sets of serious “muddles.” The first muddle concerns how outsourcing is defined.¹⁶⁶ The authors concluded that the popular press, politicians, and some economists have misdefined outsourcing to include functions such as the offshore purchases of manufactured components, on-line purchasing, direct foreign investment, and in some cases all imports. Bhagwati defined outsourcing as the “arm’s length or long-distance purchases of services abroad that does not require geographical proximity of the buyer and the seller,¹⁶⁷ but not necessarily, via electronic mediums such as the telephone, fax and Internet.”¹⁶⁸

The second muddle concerns economists that accept Bhagwati’s definition of outsourcing, but hesitate to treat trade in services with the same analytical tools as trade in goods. The authors present three alternative models to illustrate the effects of outsourcing on national output, wages, and distribution

¹⁶⁴ Amiti and Wei employ annual input/output tables and trade data to measure service and material outsourcing. Mary Amiti and Shang-Jin Wei, *Service Outsourcing, Productivity and Employment: Evidence from the US*, International Monetary Fund (IMF), May, 2005.

¹⁶⁵ Mary Amiti and Shang-Jin Wei, “Demystifying Outsourcing,” *Finance & Development*, IMF, Dec. 2004.

¹⁶⁶ Jagdish Bhagwati, Arvind Panagariya, and T.N. Srinivasan, “The Muddles over Outsourcing,” *Journal of Economic Perspectives*, Vol. 18, No. 4, Fall 2004, pp. 93-114.

¹⁶⁷ Mode 1 services, according to the World Trade Organization, are services that involve “arm’s length supply of services, with the supplier and buyer remaining in their respective locations.” These services “have come into predominance because of the advances in electronic information and communications technology that allow rapid flow of voluminous data across international boundaries.”

¹⁶⁸ According to the authors, the debate surrounding outsourcing flared with controversial comments made by the chair of President Bush’s Council of Economic Advisors, Gregory Mankiw in February 2004. Critics accused Mankiw of advocating a reduction in U.S. jobs. Following Mankiw’s statements the term outsourcing was linked almost solely with the offshoring of business services.

of income.¹⁶⁹ The study argued that outsourcing is strictly a trade phenomenon and is subject to the same theoretical approach as trade in goods. The authors also assert that outsourcing should have the same positive effect on jobs and wages as trade in goods.

The authors stated that the impact of the outsourcing of Mode 1 services on the U.S. labor market is relatively minor. Bhagwati et al acknowledged that some low-skilled workers will be temporarily dislocated due to outsourcing, but maintain that the U.S. economy will gain from cheaper imports and stronger export markets. The authors asserted that analysts must recognize that not all jobs can be sent offshore. Approximately 70 percent of all jobs in the United States require physical proximity and therefore cannot be outsourced offshore (Agrawal and Farrell, 2003).¹⁷⁰ Arvind Panagariya (2004) argued that some critics who contend that nearly all U.S. service jobs will be exported to low-cost countries commit both empirical and theoretical mistakes. The empirical error made is the assumption that all services jobs can be computerized or digitized and the theoretical mistake concerns the fact that “large volumes of imports are not possible without large volumes of exports unless foreigners are willing to provide us with services for free.”¹⁷¹

In spite of the rhetoric surrounding the outsourcing of Mode 1 services, Bhagwati et al assert that the actual effect on U.S. jobs is relatively small and will remain so through the end of 2010. They predicted that the effect will remain modest when considering either the buyer’s or seller’s side of the transaction. On the buyers-side, Forrester Research’s 2002 study is the most commonly cited estimate of job losses due to offshore outsourcing of services. Forrester predicted that approximately 3.3 million U.S. services jobs would be lost to low-cost countries by 2015.¹⁷² Bhagwati et al maintain that Forrester neglected to focus solely on Mode 1 services or explain if the U.S. economy would have 3.3 million fewer jobs than it would otherwise have had because of outsourcing. They maintained that this assumption contradicted the belief that “over the long term the number of jobs is determined by the natural rate of unemployment.”¹⁷³ On the seller side, India’s National Association of Software and Services Companies (Nasscom) contended that employment in India’s call centers grew from 353,000 in March 2000 to 505,000 in March 2003.¹⁷⁴

¹⁶⁹ The first model, a standard theoretical model, uses one (aggregate) final good and two factors of production (labor and capital). The introduction of outsourcing leads to clear welfare gains that could benefit society as a whole. The second model, a specific factors model, contains 2 goods and 2 factors and demonstrates that the country still gains overall due to outsourcing. In the short run, IC is fixed and labor is mobile domestically. The third model, another standard theoretical model, has three goods and two factors. Because non-tradable goods can be imported at lower prices in this model it produces welfare gain and both factors are better off. The authors assert that the third model refutes the belief that outsourcing will harm real wages of particular factors of production.

¹⁷⁰ Vivek Agrawal and Diana Farrell, “Who wins in offshoring,” *The McKinsey Quarterly*, Special Edition: Global Directions.

¹⁷¹ Panagariya indicates that this results from confusion between absolute and comparative advantage. Arvind Panagariya, *Outsourcing: Why is it Good for the United States*, Columbia University, 2004.

¹⁷² Forrester revised its prediction to 3.4 million jobs by 2015. Forrester claimed that there would be an average annual outflow of 300,000 jobs from the United States due to offshore outsourcing.

¹⁷³ Forrester based its findings on examining 9 occupational categories in 2002. Its estimates suggested that the number of jobs affected outsourcing would only be 0.53 percent of the 56.7 million positions contained in the 9 categories. Forrester stated that the U.S. economy destroyed approximately 30 million jobs in 2003 and that its estimate represents almost 1 percent of the number of jobs destroyed by the economy in 2002. Citing Mann (2003), the authors point out that the number of jobs in the 9 occupational categories was either stable or rising, suggesting that outsourcing had a very modest impact on employment.

¹⁷⁴ Nasscom maintained that more than 70 percent of these workers were employed by companies supplying services to the United States.

Mann: In *Globalization of IT Services and White Collar Jobs: The Next Wave of Productivity Growth (2003)*,¹⁷⁵ Mann argued that the globalization of IT hardware production should serve as a model for the development of the U.S. IT services and software sectors. Mann expects that the outsourcing of services will also bring lower prices for U.S. consumers, more affordable business-specific packages, facilitate high-value and higher paid technical job-creation, and lead to higher U.S. worker productivity. Mann acknowledged that although technological change is the primary driver behind declines in IT prices, she suggested that outsourcing in the 1990s also helped facilitate a price reduction in IT hardware. Mann's study concluded that the outsourcing of U.S. computer chip manufacturing in the 1990s led to a price decline of between 10 to 30 percent on chips and a decline in prices of personal computers. This reduction stimulated demand for U.S. IT hardware and software that increased from 58 to 69 percent of IT spending during 1999-2001. Mann estimated that with outsourcing, U.S. GDP gained \$230 billion in additional growth between 1999 and 2002. Mann also predicted that offshoring of services would yield a similar increase in GDP and suggested that annual average real U.S. GDP growth would have been 0.3 percentage points lower without offshore outsourcing of IT hardware.

Mann cited reports by Forrester Research and other management consulting firms as examples of projections that millions of U.S. services jobs will be sent offshore in the near future. Mann believed that Forrester and the other consulting firms fail to consider that the U.S. economy will generate stronger demand for IT proficient workers due to outsourcing and the infusion of IT in new sectors of the economy. She also stated that many opponents of outsourcing use 2000, the peak of the dot.com-technology revolution, as the starting point to beginning their analysis. This position fails to factor in such issues as the business cycle, a trend decline in manufacturing employment, the overvaluation of the U.S. dollar, and the dot.com bust. This position also fails to acknowledge that official trade data under represents services trade since services are often bundled into goods. Mann also pointed out that the United States is internationally competitive in the global market for services and that its trade surplus in services increased from \$42 billion in 2002 to nearly \$50 billion in the first quarter of 2003.

Although Mann acknowledged that "there are no publically available data on jobs lost to workers in foreign economies" she cites the Bureau of Labor Statistics' *Occupation Outlook Handbook* that projected that the number of IT related occupations will grow 43 percent by 2010. The Handbook also predicted that occupations likely to exhibit the greatest growth between 2002-2012 included several IT related categories (computer support specialists, computer software application engineers, network administrators, desktop publishers, computer and information systems managers). The OOH also forecast that 50 percent of the top 20 occupations will demand IT skills and that 13 percent of the total number of jobs created by 2010 in the economy will be IT-related.¹⁷⁶

Bardhan and Kroll: The authors believe that observing the effects of outsourcing on the U.S. manufacturing industry during 1987-1997 should be a useful tool for appraising how outsourcing will

¹⁷⁵ Catherine L. Mann, "Globalization of IT Services and White Collar Jobs: The Next Wave of Productivity Growth," *International Economic Policy Briefs*, No. PB03-11, Dec. 2003.

¹⁷⁶ Mann also examined changes in the number of workers across 22 BLS occupational codes from BLS' annual *Occupational Employment Survey* for 1999 through October 2003. She demonstrated that employment in these categories peaked at 129.7 million in 2000 from 127.3 million in 1999. Mann asserted that employment in those areas considered at risk to IT outsourcing were, for the most part, either stable or recovering. Mann showed that employment in 16 of the occupational areas actually exceeded 1999's totals and in those areas where employment lagged, only the architecture and engineering category contained professions affiliated with offshore outsourcing of services. Those occupational categories exceeding 1999 employment total included computer and mathematical, legal, health care support, business and financial operations, and sales and related.

affect the services sector.¹⁷⁷ Bardhan and Kroll identified considerable economic research related to the outsourcing of manufacturing and concluded that this research is applicable to the outsourcing of business services. The outsourcing of business services primarily affects white-collar workers unlike manufacturing outsourcing that impacted principally blue-collar workers.

The second half of the 1990s was a period characterized by high employment, tight U.S. labor markets, and tremendous growth in the IT software and services markets. The authors contend that most of the jobs gained in the developing world were spinoffs from a tight U.S. labor market rather than the pursuit of lower labor costs. The authors suggested that the subsequent economic downturn and the jobless recovery gave rise to legitimate concern that the outsourcing of business services involved the transfer of U.S. jobs offshore.

Analyzing data from the Bureau of Labor Statistics, the authors presented employment statistics for those sectors of the economy most commonly associated with outsourcing.¹⁷⁸ The authors found that between the first quarter of 2001 and the second quarter of 2003 employment in the identified sectors declined by 15.5 percent nationally and by 21 percent for California, the home of Silicon Valley. This represented a net job loss of more than 1 million positions in the United States and approximately 200,000 in California, in the identified sectors. Although most of the jobs lost can be attributed to the dot.com bust, the technology downturn, and the cyclical downturn in the U.S. economy, outsourcing also played a significant role in job loss.

The authors asserted that Forrester's claim that 3.4 million jobs will be lost to offshore outsourcing by 2012 now seems conservative. The authors estimated the outer limits of potential job loss in these occupations due to offshore outsourcing. They concluded that 14 million positions in 2001 were vulnerable to outsourcing, representing approximately 11 percent of the total U.S. workforce (table 15).¹⁷⁹

The data revealed that 218,000 at-risk jobs were lost between 2000 and 2002 and the authors believe that, as of June 2003, between 25,000 and 30,000 IT positions had been outsourced to India. These estimates were based on Occupational Employment Statistics developed by the Bureau of Labor Statistics. The majority of these at risk occupations are back office jobs that represented approximately 11 percent of the total U.S. non-farm workforce in 2001.¹⁸⁰ The primary driver of outsourcing of business services is the gap between salaries in the United States and those in the developing world.¹⁸¹ Kroll also contended that offshore outsourcing could endanger U.S. ascendancy in emerging fields like genetics and nanotechnology. She estimates that about 1 in 9 jobs nationwide and 1 in 6 in California's Silicon Valley could be vulnerable. Bardhan and Kroll hypothesize that workers in surviving outsourced job categories

¹⁷⁷ Ashok Deo Bardhan and Cynthia A. Kroll, *The New Wave of Outsourcing*, Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, Research Report, paper 1103, Fall 2003.

¹⁷⁸ Sectors included: *Non-manufacturing sectors*: software publishers (except Internet); Internet publishing and broadcasting; telecommunications; ISPS, search portals, and data processing (data processing and related services); accounting, bookkeeping, and payroll (payroll services); computer systems design and related; business support services (telephone call centers - telephone answering services, telemarketing bureaus). *Manufacturing sectors*: computer and electronic products (semiconductor and electronic, components).

¹⁷⁹ Ashok Deo Bardhan and Cynthia A. Kroll, *The New Wave of Outsourcing*, Fisher Center for Real Estate and Urban Economics, University of California, Berkeley, Research Report, paper 1103, Fall 2003.

¹⁸⁰ Ibid.

¹⁸¹ Garner (2004) pointed out that "the true difference in labor costs per unit of output may not be as large as these wage figures suggest, however, because U.S. workers have high average levels of productivity. High average productivity reflects our advanced technology and large amounts of human and physical capital per worker." C. Alan Garner, "Offshoring in the Service Sector: Economic Impact and Policy Issues," *Economic Review*, Third Quarter 2004, Federal Reserve Bank of Kansas City.

could confront a ‘downward adjustment of salary and wages’ making them globally competitive once again. They projected that high-tech cities like New York, Boston, San Jose, and San Francisco will be the biggest losers.

Table 15: Estimated U.S. jobs vulnerable to offshoring (2001)		
Occupation	U.S. employment (thousands)	Average annual salary
Office support	8,637,900	\$29,791
Computer operators	177,990	\$30,780
Data entry keyers	405,000	\$22,740
Business and financial support	2,153,480	\$52,559
Computer and mathematical professions	2,825,870	\$60,350
Paralegals and legal assistants	183,550	\$39,220
Diagnostic support services	183,550	\$39,220
Medical transcriptionists	94,090	\$27,020
Total	14,063,130	\$39,631
Source: Ashok Deo Bardhan and Cynthia Kroll, <i>The New Wave of Outsourcing</i> .		

Jensen and Kletzer: The authors found no clear understanding of the relationship between job generation and the globalization of business services.¹⁸² Jensen and Kletzer asserted that outsourcing has changed significantly in recent years. Prior to 2001, manufacturing workers accounted for more than 50 percent of all displaced workers, but following the dot.com bust non-manufacturing occupations accounted for nearly 70 percent of all U.S. displaced workers. According to Kletzer, offshore outsourcing of business services emerged as a public policy and trade issue in 2001 (Kletzer 2005).¹⁸³ Jensen and Kletzer argue that there is “little clear understanding of the size and extent of services global outsourcing,” or how it will affect the U.S. labor market or the U.S. economy as a whole.

The authors cited a number of estimates of job loss prepared by management consultant firms, particularly Forrester Research’s prediction that 3.3 million workers would be displaced by offshore outsourcing. They concluded that the size and scope of offshore outsourcing are still unclear and that it is reasonable to believe that offshoring will have a significant impact on certain sectors of the economy.

Tradable Services: Understanding the Scope and Impact of Services Offshoring (2005), represents the initial attempt by Jensen and Kletzer to estimate the size and scope of services outsourcing and to identify the impact it may have on labor markets. They acknowledged that finding detailed data on the scope of offshore outsourcing is difficult, but they sought to examine changes in services trade at the industry and occupational levels. Based on Bureau of Labor Statistics data, Jensen and Kletzer subdivide industries by their degree of geographic concentration to provide estimates of which occupational

¹⁸² J. Bradford Jensen and Lori G. Kletzer, *Tradable Services: Understanding the Scope and Impact of Services Offshoring*, prepared for the Brookings Trade Forum 2005, Offshoring White-Collar Work - the Issues and the Implications, May 12-13, 2005.

¹⁸³ Lori G. Kletzer, “Globalization and job loss, from manufacturing to services,” *Economic Perspectives*, Federal Reserve Bank of Chicago, 2Q/2005.

categories were internationally tradeable.¹⁸⁴ The study's preliminary results demonstrate workers employed in tradable industries are likely to be higher skilled and have higher incomes than workers employed in manufacturing or in non-tradable industries. Jensen and Kletzer propose that trade in services is consistent with U.S. comparative advantage and that "as technological and organizational change increase the potential for trade in services, economic activity within the U.S. will shift to activities consistent with U.S. comparative advantage."

The author also asserts that U.S. workers and firms are likely to benefit from any future liberalization in international services trade. Jensen and Kletzer also demonstrated that workers in tradable service industries possess different demographic characteristics than their counterparts in non-tradable industries. The rate at which workers were laid off in the services industry was lower than for manufacturing and "re-employment rates [were] higher and earning losses [were] lower for displaced services workers than for displaced manufacturing workers."

Conclusion

Outsourcing of business process services is here to stay, but the degree to which it will either positively or negatively affect the U.S. economy is yet to be determined. U.S. corporations continue to outsource many of their routine labor-intensive business process services tasks to developing countries that offer significant cost savings and quality advantages. Labor arbitrage continues to be the driving force behind offshoring as it has allowed companies to dramatically lower their labor costs. In theory, these savings can be passed on in the form of lower prices to consumers and higher dividends to shareholders. Offshore outsourcing also allows American companies to focus on their core competencies while improving quality and productivity.

India is only one of a number of low-cost countries that U.S. companies are using to lower their costs and gain greater efficiencies. At present, India dominates global business process outsourcing because of its competitive advantage in the areas of linguistic skills, institutional comparability, competitively priced telecommunications services, and its ability to offer quality services at 40 percent to 60 percent of the manpower cost in the United States. However, India continues to be weak in infrastructure and its business process outsourcing sector continues to suffer from attrition and absenteeism problems, rising costs, and security concerns (IP piracy). Consequently, there are a number of countries such as China, the Philippines, and Malaysia that are waiting to challenge India's supremacy.

Anxiety in the U.S. jobs market stemming from outsourcing and potential job loss continues to be an important issue among white-collar IT and services sector workers and in Congress. There is clear evidence that IT and services sector jobs have been sent offshore, but most of these jobs have been concentrated in lower skilled occupations. Nevertheless, there is no hard evidence to support the notion that globalization or offshoring will transform the United States into a third world nation or that it will

¹⁸⁴ Industries were divided into three classes and ranked according to Gini Coefficient in descending order, based on least to greatest geographically concentrated. Jensen and Kletzer found those occupational categories with the highest Gini coefficient included computer-mathematical; architecture-engineering; and legal, life, physical, and social science occupations. For those industries identified by Dossani and Kenny (2004) as at-risk occupations, the authors found the following Gini coefficients: paralegals and legal assistants at 0.18, computer science engineers at 0.38, operations research analysts at 0.33, database administrators at 0.28, network systems administrators at 0.27, computer control programmers at 0.25, network and computer systems analysts at 0.20, and computer support specialists at 0.18. The paper also illustrated that there was a tremendous wage-earning differential between the services and manufacturing sectors. The authors proposed that those employed in the services sector earned much higher annual incomes due to their higher education attainment and because they are more likely to be male.

exert downward pressure on U.S. wages or broaden the income distribution gap. Much of this debate has been made with “incomplete data, anecdotal, politically motivated, or data that has been otherwise tweaked.”¹⁸⁵ Even the most generous estimates of jobs lost to outsourcing account for less than two percent of total U.S. non-farm employment. Nevertheless, Forrester Research and other consulting firms contend that trade in services could generate net benefits to the U.S. economy including lower prices to consumers, higher dividends to shareholders, growing exports, greater job security and higher wages for the remaining workers, and greater overall economic efficiencies.

Bhagwati asserted that, “there is an emotion on outsourcing that runs through talk radio and popular media in the U.S. that is quite out of proportion to the number of jobs that have migrated. One reason is that it is easier to see the losses, whereas the gains to the U.S. economy, which clearly outweighs the losses, are less easily visible. The number of back-office jobs that have moved to India is a tiny portion of the overall U.S. labor market. Fewer than 350,000 Indians work in call centers, up from about 250,000. Last year the U.S. economy shed and then created 30 million jobs.”¹⁸⁶ Likewise Charles Schultz (2004) stated in *Offshoring, Import Competition, and the Jobless Recovery* that “it is clear that offshoring has had a relatively modest impact on unemployment when compared to the other economic factors that create and destroy jobs week by week in the U.S. economy. In the short run, an increase in offshoring reduced U.S. job growth. But in the long run it improves the standard of living, increases real wages, and increases the country’s economic growth.”¹⁸⁷

Most economists also believe that the U.S. economy will continue to generate high-value added jobs in the future and outsourcing of business process services jobs will continue to be confined primarily to low-wage, low-value added jobs many of which could be eliminated in the near-term through technological innovation. They also believe that international trade, and outsourcing in particular, will result in significant economic gains for the U.S. economy.

¹⁸⁵ Erika Kinetz, “Crunching the numbers for a true picture of outsourcing,” *International Herald Tribune*, June 18, 2005, found at http://www.int.com/bin/print_ipub.php?file=/article/2005/06/17/yourmoney/mlabor.php, retrieved July 13, 2005.

¹⁸⁶ Edward Luce, “Booming Bangalore will be backing Bush to win again,” *Financial Times*, Sept. 22, 2004, p. 14.

¹⁸⁷ Charles L. Schultze, *Offshoring, Import Competition, and the Jobless Recovery*, The Brookings Institution, Policy Brief #136, Aug. 2004.

APPENDIX

Selected commentary on the United States, India, and outsourcing

Arguments for BPO: Outsourcing advocates have accused various media personalities, academics, and politicians of using outsourcing as a convenient scapegoat for the alleged U.S. “jobless” recovery. According to the McKinsey Global Institute, “trade in services like all international trade, benefits the United States as a whole by making the economic pie bigger and raising the standard of living.”¹⁸⁸ Proponents also accuse critics of unnecessarily arousing the fears of highly paid white-collar workers that their jobs are in imminent jeopardy of going offshore. They liken this fear to what occurred in the early 1960s when President Kennedy “predicted that factory automation and the introduction of computers would increase unemployment and exacerbate poverty” and during the 1991 recession when Presidential candidate Ross Perot reported hearing a “giant sucking sound” from Mexico “of jobs being lured to Mexico as a result of NAFTA.”

Gregory Mankiw, Chairman of the President’s Council of Economic Advisors, stated in the *2004 Economic Report of the President* that “when a good or service is produced at lower costs in another country, it makes sense to import it rather than to produce it domestically. This allows the United States to devote its resources to more productive purposes,”¹⁸⁹ and that “outsourcing is just a new way of doing international trade. More things are tradeable that were tradable in the past and that’s a good thing.”¹⁹⁰ Shallen Gupta, President of Minneapolis-based Renoids, “offshore BPO is part of a bigger economic force called globalization. Similar resistance in the U.S. was seen, when the emigration of manufacturing jobs to Asia first began, but today it’s an accepted way of doing business. The same will prove true with offshore outsourcing.”¹⁹¹ Also, the “offshoring of U.S. service jobs is only the latest manifestation of the gains from trade that economists talk about.”¹⁹² Carly Fiorina, former Chief Executive Officer for Hewlett Packard, said that “there is no job that is America’s God-given right anymore,”¹⁹³ and Bruce Mehlmán, Executive Director of the Computer Systems Policy Project asserted that, “there is no type of job that is immune from global competition.”

Advocates of outsourcing believe that it will benefit the U.S. economy in terms of lower prices, higher profit margins, growing exports, and greater job security and higher wages for remaining workers.¹⁹⁴ “Much of the substantial revenue earned abroad cycles back to Americans in the form of jobs and wages for workers, investment in research and development, profits for shareholders and taxes for the U.S. economy.”¹⁹⁵ Lawrence Klein, Nobel laureate and Professor Emeritus at the University of Pennsylvania’s Wharton School of Business acknowledges that some U.S. white-collar services workers

¹⁸⁸ Martin N. Baily and Diana Farrell, “Exploding the myths of offshoring,” McKinsey Global Institute Quarterly, June 2004.

¹⁸⁹ Economist caught in US jobs storm,” BBC News, Feb. 13, 2004, found at <http://newsvote.bbc.co.uk/mpapas/pagetools/print/news.bbc.co.uk/2/hi/business/3485025.stm>, retrieved May 4, 2005.

¹⁹⁰ John Cassidy, “Winners and Losers,” The New Yorker, Aug. 2, 2004, p. 26-30.

¹⁹¹ Archana Ravinder and Antara Nanda Mondal, “Outsourcing is here to stay,” Indian Post New Services.

¹⁹² Mankiw acknowledged that outsourcing could cause some dislocation, but said that they are a natural byproduct of trade. Peter Brownfeld, “White House Under Fire for Outsourcing Proposal,” Fox News, Feb. 13, 2004, found at http://www.foxnews.com/printer_friendly_story/0,3566,111287,00.html, retrieved Jan. 18, 2005.

¹⁹³ “Offshoring of high-tech jobs defended,” Outsourcing-Russia.com, found at <http://www.outsourcing-russia.com/kb/docs/outsourcing/o12014-01.html?print>, retrieved Nov. 2, 2004.

¹⁹⁴ Robert Kennedy, “Loss of jobs overseas opens debate on whether it’s a problem,” Detroit News, Feb. 1, 2004, p. 17A.

¹⁹⁵ Computer Systems Policy Project.

will lose their jobs but insists that the “overall impact on the economy will be favorable.” He believes this is “because companies are paying lower costs, they have more money for investment which leads to an increased demand for labor. This does not indicate a 1-to-1 ration of job gains to those lost; however, the overall economy will benefit from offshoring.”¹⁹⁶ Likewise, former Federal Reserve Governor Ben Bernanke states that, “to say that the U.S. economy benefits from trade is not to say that every individual American worker or family benefits, or that the structural changes induced by trade are not disruptive.”¹⁹⁷

Former Secretary of State Colin Powell stated that “outsourcing is a natural effect of the global economic system and the rise of the Internet and broadband communications. You’re not going to eliminate outsourcing; but at the same time, when you outsource jobs it becomes a political issue in anybody’s country. Outsourcing means a loss of U.S. jobs, so that means that these jobs have to be replaced.”¹⁹⁸ Even former Indian Prime Minister Atal Behari Vajpayee declared that “as economists around the world have been pointing out, outsourcing makes businesses more competitive; increases their exports and their profits; and places more investment surpluses in their hands, which can be deployed to make more jobs.”¹⁹⁹ Lastly, Davashish Ghosh, Chief Operating officer of Indian BPO Wipro Spectra mind, “even if the U.S. economy improves, offshore outsourcing to India will only increase. Thirty years ago when manufacturing jobs started moving out of the United States, there was anger, but that did not stop the outsourcing of those jobs. The BPO sector is going through the same thing now and this is a trend that is here to stay.”²⁰⁰

Arguments against BPO: Critics contend that offshore outsourcing will destroy the American middle class and seriously undermine America’s economic future. BPO opponents fear that millions of U.S. workers will become jobless from competition in the services sector and accuse U.S. corporations of exporting high paying white-collar service jobs overseas at the expense of the American worker. Others fear that outsourcing will exert downward pressure on U.S. wages and that the income distribution gap will broaden as more middle-class jobs go offshore.

Former Democratic Presidential candidate John Kerry accused the current administration of “wanting to export more of our jobs overseas,” and he labeled CEOs of companies that outsourced U.S. jobs overseas as ‘traitors’ and ‘Benedict Arnolds.’²⁰¹ Senator Kerry accused the administration of

¹⁹⁶ “But economists say “outsourcing” jobs overseas is a minor problem that Kerry’s plan wouldn’t do much to fix,” found at <http://www.factcheck.org/article225.html>, retrieved May 23, 2005.

¹⁹⁷ Remarks by Governor Ben S. Bernanke, Trade in Goods, Fuqua School of Business, Duke University, March 30, 2004, found at <http://www.federalreserve.gov/boarddocs/speeches/2004/20040330/default.htm>, retrieved May 23, 2005.

¹⁹⁸ Steven R. Weisman, “Powell Reassures India on Technology Jobs but Presses for Open Markets,” The New York Times, March 17, 2004.

¹⁹⁹ “India insists outsourcing good for the U.S.,” The Washington Times, March 13, 2004.

²⁰⁰ “India tech boom,” Nasscom, Jan. 21, 2004, found at http://www.nasscom.org/articlesprint.asp?art_id=2348, retrieved Dec. 23, 2004.

²⁰¹ Others critics of outsourcing include former Senate Majority Leader Tom Daschle who said, “if this is the administration’s position, I think they owe an apology to every worker in America.” Senator Daschle referred to Gregory Mankiw’s statements as “Alice in Wonderland economics” and that “exporting jobs isn’t an accident - it’s administration policy. The administration is putting corporate profits ahead of American jobs. And the exporting of jobs is hurting millions of Americans and countless communities across the country.” Also, Senator Hillary Rodham Clinton introduced a non-binding resolution saying the administration’s policies “have failed to address or exacerbated the loss of manufacturing jobs in the United States. She indicated problems with the annual Economic Report to the President that because it failed “to capture the human toll behind the recent rise in offshore outsourcing. As we have seen from recent announcements, virtually every job category up and down the pay scale is now at risk: software engineers, machinists, newspaper reporters, accountants, and radiologists. We can’t be a

“rewarding Benedict Arnold CEOs who move profits and jobs overseas.”²⁰² He subsequently introduced a bill in Congress that “would require call center operators to disclose their physical locations to consumers with the aim of discouraging the practice.”²⁰³ Likewise, another critic who believes that offshoring is a grave danger to the U.S. economy, said, “now the services sector is also starting to be hit by offshore outsourcing while American companies may be improving their individual competitiveness for the short term, but may be collectively undermining America’s and their own competitiveness for the long haul. Bit by bit, we’re not just moving jobs offshore, but we may be transporting big blocks of our innovation infrastructure, the talent and technology that fueled our record setting growth and prosperity in the 1990s.”²⁰⁴

Offshoring opponents also point out that Indian BPO companies have begun the move up the value-added chain and are now competing for “solidly middle-class” occupations and consequently could undermine the American middle class. Opponents believe that “high paying, high value creative jobs that were thought to be impregnable to globalization’s pressure points are finding ways to breach the border, as developing countries have geared up with the necessary skill upgrades and vastly improved technology and communications infrastructure.”²⁰⁵

According to the Computer Systems Policy Project, “Americans who think that foreign workers are no match for U.S. workers in knowledge, skills and creativity are mistaken. Asian nations have invested heavily and it shows.”²⁰⁶ “Thousands of white-collar jobs are going overseas, chasing the cheap dollar in India, China, Malaysia, and the Philippines. That’s the reason for [congressional hearings], because of the incontrovertible evidence that the U.S. is on the verge of adopting the economics of third-world nations,” said Congressman Dan Manzullo (R-IL), Chair of the House Committee on Small Business.²⁰⁷

healthy economy unless we have more jobs here in America.” Congressman Manzullo declared that “thousands of white-collar jobs are going overseas, chasing the cheap dollar in India, China, Malaysia, and the Philippines. That’s the reason for [congressional hearings] because of the incontrovertible evidence that the U.S. is on the verge of adopting the economics of third-world nations.” Peter Brownfeld, “White House Under Fire for Outsourcing Proposal,” Fox News, Feb. 13, 2004, found at http://www.foxnews.com/printer_friendly_story/0,3566,111287,00.html, retrieved Jan. 18, 2005. “Bush Adviser Supports Outsourcing,” Fox News, Feb. 12, 2004, found at http://www.foxnews.com/printer_friendly_story/0,3566,111225,00.html, retrieved Jan. 18, 2005. Alan Fram, “Hastert lashes aide on exporting jobs,” Associated Press, Feb. 11, 2004, found at http://www.boston.com/news/nation./Washington/articles/2004/02/11/hastert_lashes_aide_on_exporting_jobs?mode, retrieved Jan. 18, 2005. Hiring offshore workers good for US market, says tech executives,” ComputerWeekly.com, Jan. 8, 2004, found at <http://www.computerweekly.com/print/articleprinterpage.asp?liartid=127425&liflavor>, retrieved Nov. 2, 2004.

²⁰² “US politician Kerry calls outsourcing firms traitors,” The Economic Times, Feb. 6, 2004, found at <http://economictimes.indiatimes.com/articleshow/msid-478554,prtpage-1.cms>, retrieved Jan. 18, 2005.

²⁰³ “Democrats hopefuls, lawmakers denounce outsourcing,” The Indian Express, Feb. 7, 2004, found at http://www.indianexpress.com/print.php?content_id=40640, retrieved Feb. 15, 2005.

²⁰⁴ Kathy Kiely, “As jobs go overseas, a city struggles to reinvent itself,” USA Today, Apr. 1, 2004, found at http://www.usatoday.com/news/nation/2004-03-21-outsourcing-usa_x.htm, retrieved Nov. 2, 2004.

²⁰⁵ Sridhar Sourirajan, *Globalization and Offshore Outsourcing A Tale of Two Realities*, Duke University, Apr. 12, 2004.

²⁰⁶ Ashu Kumar, “US IT Cos join fight against BPO backlash,” ExpressIndia, May 19, 2005, found at <http://expressindia.com/print.php?newsid=27731>, retrieved May 18, 2005.

²⁰⁷ “Hiring offshore workers good for U.S. market, says tech executives,” ComputerWeekly.com, Jan. 8, 2004, found at <http://www.computerweekly.com/itdirector/rpint.htm?type=story&at=39117659-3902467>, retrieved Nov. 2, 2004.

U.S. labor unions also expressed their strongly held opposition to offshore outsourcing urging U.S. corporations to keep white-collar IT and service sector jobs in the United States.²⁰⁸ Officials of the Institute of Electrical and Electronics Engineers maintain that offshoring, “poses a venous serious long-term challenge to the nation’s leadership in technology and innovation, its economic prosperity, and its military and homeland security.”²⁰⁹ The International Labor Organization’s (ILO) *World Employment Report 2004-05* reported that by “moving production to countries where wages, benefits, and the cost of living are much lower some of the jobs that were supposed to be the nation’s bridge to clean, brighter, better-paid future are starting to migrate too.”²¹⁰

Union critics like Marcus Courtney, President of the Washington Alliance of Technology Workers, said that BPO “is not a recipe for job creation in this country. This is a recipe for corporate greed. They’re lining up at the public trough to slash their labor costs.”²¹¹ Similarly, Linda Guyer, who locally represents IBM workers in New York, said “people are beginning to stand up against corporations because they saw that outsourcing was going to go well beyond the technology sector. It’s going to affect financial jobs. Accounting, it’s going to affect the entire U.S. middle class.”²¹² Marcus Courtney also asserted that “we’ve gone from a new economy to a fear economy. In the new economy, people were talking about unprecedented jobs and opportunities. In the fear economy, job security is the No. 1 issue.”²¹³

Not only Democrats, but several influential Republicans such as Senator Craig Thomas (R-WY), Senator George Voinovich (R-OH), and House Speaker Dennis Hastert (R-IL) have expressed reservations about BPO. Speaker Hastert warned that “outsourcing can be a problem for American workers and the American economy.” He also said, “I understand that Mr. Mankiw is a brilliant economic theorist, but his theory fails a basic test of real economics. An economy suffers when jobs disappear.”²¹⁴

The continued uncertainty in the U.S. job market is prompting some to ask if the United States can lose these jobs and still prosper. Ron Hira of the Rochester Institute of Technology stated that “unlike in previous years when international competition adversely affected American corporations, this

²⁰⁸ “USA, Inc. fighting hard to prevent BPO ban,” *The Economic Times*, March 1, 2004, found at <http://economictimes.indiatimes.com/articleshow/msid-530223.prtpage-1.cms>, retrieved March 1, 2004.

²⁰⁹ Ed Frauenheim, “Statistician defends his outsourcing figures,” *CNET News*, Aug. 10, 2004, found at <http://www.zdnet.co.uk/print/?type=story&AT+=39163028-39020484t-20000021c>, retrieved Apr. 12, 2005.

²¹⁰ “Outsourcing of high-skilled jobs to India on rise, says ILO report,” *The Indian Express*, Dec. 12, 2004, found at http://www.indianexpress.com/print.php?content_id=60750, retrieved Dec. 13, 2004.

²¹¹ “Outsourcing of high-tech jobs defended,” *Outsourcing-Russia.com*, found at <http://www.outsourcing-russia.com/kb/docs/outsourcing/o12014-01.html?print>, retrieved Nov. 2, 2004.

²¹² Suzanne King, “Technology jobs heading overseas as companies look to cut costs,” *The Kansas City Star*, Oct. 21, 2003, found at http://www.kansascity.com/mld/kansascity/business/7056515.htm?template=content_modules, retrieved Feb. 15, 2005.

²¹³ *Ibid.*

²¹⁴ In a letter to Speaker Hastert, Gregory Mankiw wrote that “my lack of clarity left the wrong impression that I praised the loss of U.S. jobs. Creating an environment for robust job creation is the paramount goal of the President. It is regrettable whenever anyone leaves a job. Some would respond to the recent challenges facing the economy by erecting trade barriers.” “When a good or service is produced more cheaply abroad, it makes more sense to import it than to make or provide it domestically. History teaches that a retreat to economic isolationism would mean lower living standards for American workers and their families.” “Bush Economist: Outsourcing Remark Misunderstood,” *Associated Press*, Feb. 19, 2004. TV Parasuram, “Bush aid under fire for supporting BPO,” *rediff*, Feb. 12, 2004, found at <http://www.rediff.com/cms/print.jsp?docpath=/money/2004/feb/12bpo1.htm>, retrieved May 4, 2005.

time it is the workers who are left exposed while corporations benefit from offshoring.”²¹⁵ In *Outsourcing America What’s Behind Our National Crisis and How We Can Reclaim American Jobs (2005)*, Hira and Hira believe that the “jobless” recovery and the extended economic recession can be linked to the offshore outsourcing of IT and business services occupations to low-cost countries.²¹⁶ Ronil Hira contends that unlike previous eras when international competition challenged U.S. corporations, that offshoring of business services has benefitted U.S. corporations at the expense of U.S. workers.²¹⁷ Hira contends that as U.S. corporations become global entities, U.S. workers are no longer stake holders and will be treated no differently than other company workers located offshore in countries like India and China. The implication of this, says Hira, is that U.S. multinationals have fewer ties with their U.S. workers and what is best for the country.

According to the Hiras, U.S. companies are re-balancing their work forces in favor of the offshoring share because they can obtain better margins. The Hiras point out that some argue that offshoring is being driven by the need to cut costs, but they assert that the companies outsourcing are among America’s most profitable. The Hiras contend that U.S. corporations have no incentive of keeping U.S. workers employed since the CEO’s primary incentive is to improve profitability and the bottom line. Hira believes that the United States is at the beginning of white-collar outsourcing in 2005 and maintained that the use of outsourcing is just beginning to accelerate. Venture capital firms are forcing their start-up companies to have offshoring plans before they get their next round of funding. Companies are benefitting from offshoring by acting rationally, but workers are the ones that are bearing the brunt of the negative side.

Hira emphasized that the outsourcing and its effects have not been quantitatively studied and that official U.S. data regarding offshore outsourcing of business services is inadequate. They cited a U.S. Government Accountability Office (GAO) study that found that official U.S. government statistics does not specifically identify offshoring activities. Also cited was a Bureau of Labor Statistics’ Mass Layoffs Survey for the first quarter of 2004 that revealed that only two percent of layoffs were due to offshoring. The Hiras are skeptical of BLS results noting that the survey only captures layoffs involving at least 50 employees and that employers can name a variety of other causes for the layoffs. Ronil Hira believes that because of the controversy surrounding offshore outsourcing many U.S. companies are reluctant to divulge their hiring and layoff practices. He also believes that offshoring will lead to downward pressure on wages, will dissuade U.S. students from considering computer science degrees, and will heighten the feeling of uncertainty among many professionals.²¹⁸

There are no villains, according to Ronil Hira, since CEO’s are doing what they are paid to do and workers are also acting rationally by saying this is a bad deal for us because re-employment isn’t good right now. The most frequently cited policy proposals to assist dislocated IT and service sector workers are extending Trade Adjustment Assistance benefits to services workers, establishing a Presidential Commission, wage insurance and pension portability, increasing funding for physical science and engineering R&D, assisting U.S. engineers and computer specialists in acquiring skill sets that their counterparts offshore lack. Hira also questioned the current assumptions underlying trade

²¹⁵ Ronil Hira, *Outsourcing America: What’s Behind Our National Crisis and How We Can Reclaim American Jobs*, presentation given at the Woodrow Wilson International Center for Scholars, June 7, 2005.

²¹⁶ Kimberly Blanton, “An honest, disturbing look at outsourcing,” *Boston Globe*, July 10, 2005, found at http://www.boston.com/business/articles/2005/07/01/an_honest_disturbing_look_at_outsourcing..., retrieved Sept. 23, 2005.

²¹⁷ Book Launch — *Outsourcing America: What’s Behind Our National Crisis and How We Can Reclaim American Jobs*, a discussion by Ronil Hira at the Woodrow Wilson International Center for Scholars, June 7, 2005.

²¹⁸ “RIT Professor Ron Hira Publishes Book on Offshore Outsourcing,” RIT News Release, Apr. 26, 2005, found at <http://www.rit.edu/~930www/proj/news/viewstory.php?id=1542>, retrieved Sept. 23, 2005.

policy and referred to a recent article by Paul Samuelson that illustrated how the technological rise of one trading partner could erode the gains for the other.²¹⁹

²¹⁹ Paul A. Samuelson, *Where Ricardo and Mill Rebut and Confirm Arguments of Mainstream Economists Supporting Globalization*, *Journal of Economic Perspectives*, Vol. 18, No. 3, Summer 2004, pp. 135-146.

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