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CHAPTER IV

THE OFFSHORING OF CORPORATE SERVICE FUNCTIONS: THE NEXT GLOBAL SHIFT?

In July 2003, Infineon Technologies announced the establishment of three new centres, in Dublin (Ireland), Kista (Sweden) and Munich (Germany), to rationalize its customer logistics management that had, till then, been handled in 19 European locations.¹ The same year, British Telecom set up two call centres in India, in New Delhi and Bangalore, to deal with directory inquiries,² and DHL, one of the world's leading logistics companies, announced that it would locate a centre in the Czech Republic to manage IT services for its entire European operations. Most of DHL's IT activities in Switzerland and the United Kingdom would shift to Prague, creating 400 jobs to start with, and growing to 1,000 over two years. Together with DHL's regional centres in Malaysia and the United States, the European centre would blend into a seamless IT infrastructure supporting the company's global operations. Meanwhile, ACS (United States) announced that it was building a new 40,000 sq. ft. office complex in Accra, Ghana, to accommodate the growing demand for its data processing services that support clients in the communications, healthcare and insurance industries.³ In 2004, the Bank of America announced that it would establish a wholly-owned affiliate in Hyderabad, India, to undertake back-office operations for its units in the United States. The affiliate would employ at least 1,000 people by mid-2005. The bank had previously outsourced software development to Indian companies such as Infosys Technologies in Bangalore and Tata Consultancy Services in Mumbai.⁴

What started some two decades ago with the “offshoring” of IT services from the United States to India has gained momentum in recent years. Similar cases of offshoring are now reported almost daily in the media as services of all kinds are restructured and relocated. Offshoring of export-oriented services such as call centres, business processes, drawing, testing and even research and development (R&D), is

gathering pace in response to the “tradability revolution” in services.

Some of the offshoring is done internally by moving services from a parent company to its foreign affiliates (sometimes referred to as “captive offshoring”, involving FDI), while some is outsourced internationally to third-party services providers (table IV.1). Many services are restructured among the developed countries; others are shifted to low-cost locations. Of course, not all services are moving, but the process is in its infancy, and likely to gather pace. It may well mark the next stage in the evolution of the international division of labour. Indeed, economic geographers see it as the cutting edge of the “global shift” in productive activity (Dicken 2003).

The global shift in services offers large potential benefits for countries at both ends of the process: the receiving countries gain jobs, skills, access to foreign markets and other benefits while the sending ones improve their competitiveness and can move into higher value activities. So far, most offshoring has taken place among developed countries, which underscores that it is not primarily a “North-South” issue. In fact, with a 25% share, Ireland leads the global market for offshored IT and IT-enabled services. The increased tradability of services allows companies to reconfigure their production of services across borders, sometimes involving an international intra-firm division of labour to enhance their overall competitiveness. Hence, there are more factors than only cost differentials that determine where a service will be produced. Indeed, in many instances, companies are offshoring services as much to improve the quality of the service produced, as to consolidate activities in search of economies of scale and to access certain skills or markets – in short, to reap the benefits of the new international division of labour that is unfolding.

Although recent media attention may suggest otherwise, to date, the magnitude of offshoring to developed and developing countries

Table IV.1. Offshoring and outsourcing – some definitions

Location of production	Internalized or externalized production	
	Internalized	Externalized ("outsourcing")
Home country	Production kept in-house at home	Production outsourced to third-party service provider at home
Foreign country ("offshoring")	Production by foreign affiliate, e.g. - Infineon's centre in Dublin - DHL's IT centre in Prague - British Telecom's call centres in Bangalore and Hyderabad "intra-firm (captive) offshoring"	Production outsourced to third-party provider abroad, To local company , e.g. - Bank of America's outsourcing of software development to Infosys in India To foreign affiliate of another TNC , e.g. - A United States company outsourcing data processing services to ACS in Ghana

Source: UNCTAD.

is relatively small, albeit growing fast. Over time, as companies learn how to manage the international production of services, developing countries are likely to play a growing role as service exporters. As in previous periods of economic restructuring, new challenges will arise as companies adjust and reconfigure their operations.

This chapter looks at the technological, economic, institutional and organizational factors that are catalysing the growth of offshoring, traces the role of FDI in the process and explores the implications for host and home countries. While the bulk of offshoring has so far been undertaken among developed countries, the chapter pays special attention to the role of developing countries and economies in transition in this process.

A. The tradability revolution

1. The tradability of services

Offshoring reflects nothing less than a revolution in the tradability of services. Traditionally, most services have been "non-tradable" in that they require buyers and sellers to be in the same place at the same time. Unlike physical products, they could not be traded between parties located in different countries; a haircut, for instance, is impossible to deliver across a distance. Many services, however, do not require physical proximity, but have usually taken place face-to-face because of technical constraints, habits or customs. These services centre on the

exchange, storage, processing and retrieval of information broadly defined.⁵ They have been non-tradable because:

- Some types of information (such as music before the discovery of recording devices) could not be stored, and had to be produced and consumed instantaneously.
- Some information could be stored (such as words or data in books or other written form), but not transmitted rapidly and economically (and in bulk) across countries for processing.
- Some information was processed in-house by enterprises because "it had always been so"; for example, it was customary to do accounting, archiving or designing internally. Some information exchange between service providers and consumers traditionally involved face-to-face contact, such as patients meeting their doctors or clients meeting their lawyers or bankers for consultation.

New information and communication technologies (ICTs) are dramatically changing the tradability of the information-centred set of services, in several ways (Sauvant 1990; Zimny and Mallampally 2002).⁶ For example, all kinds of information can be stored by digitization. And much cheaper and faster transportation allows the instantaneous exchange of digitized information and voice communication between people anywhere around the globe (provided the necessary infrastructure exists).⁷ In addition, customs and traditions are being broken as people are induced to use electronic media to acquire services they had previously only accessed by direct contact. In the business sphere, services traditionally obtained in-house by firms are now being

externalized, and consultations between service providers and customers are starting to take place at a distance because face-to-face interaction is not always deemed necessary.

The use of ICT allows knowledge to be codified, standardized and digitized, which in turn allows the production of more services to be split up, or “fragmented”, into smaller components that can be located elsewhere to take advantage of cost, quality, economies of scale or other factors. This makes it possible to produce certain services in one location and consume them (or use them in further production) in another – either simultaneously (e.g. information provided via call centres) or at a different time (e.g. data entry, software development). As a recent article puts it: “tasks that can be performed elsewhere are limited only by a manager’s imagination”.⁸ Such fragmentation exceeds that in manufacturing.⁹ New technologies do not just make services transportable; they also often simplify the tasks involved and so allow them to be relocated more easily.

The range of service products or functions affected by the fragmentation are huge. As a result, a wide range of services is already being exported, including by developing economies (box IV.1), whether relatively simple low-value data (e.g. numbers entered into a computer) or more sophisticated, high-value data (e.g. architectural designs, results of sophisticated financial analyses, R&D, X-rays, films, software programmes, advertising clips).¹⁰ While some are service products of one industry, most are generic and cut across industries. They are needed and widely used by individuals, firms in all industries, governments and non-governmental organizations (NGOs) and all types of institutions. As with manufactures, it is possible to categorize traded services according to skill requirements. This exercise is useful for assessing the potential of countries as exporters (box IV.2), but it needs to be refined and further developed.

Thus, progress in ICT has solved the *technical* problem of non-transportability and, for many services, that of non-storability.

Tradability is not just a matter of technology, however. Even when services are technically divisible and transportable, trade may not take place for *economic* reasons (UNCTAD 1994, p. 3; UNCTAD and the World Bank 1994).¹¹ For some types of services, proximity to markets, interaction with customers, trust and confidence outweigh the possible benefits from

the benefits of arm’s length trade. But on the premise of comparative advantage, increased transportability does open the potential for considerable economic gains from specialization. With sharply reduced telecom costs and increased broadband width, cost differentials play out directly. Increased competition – itself a consequence of falling transport and communication costs and liberalization – forces enterprises to reduce costs, hive off functions that can be performed more efficiently by specialized agents, and focus harder on their core competencies. This leads both to outsourcing within countries and to offshoring to locations abroad. Governments, hospitals and other institutions can also gain from offshoring when under pressure to economize.

The tradability revolution is already visible in the balance-of-payments data of countries (van Welsum 2004; Borga and Mann 2003).¹² In terms of imports of services, the United States has reported the largest increases, its share of global imports rising from 11% in 1992 to 13% in 2002 (WTO 2004a).¹³ In “other private services” imports, some of the fastest growth rates in the United States can be observed for “computer and data processing services” and “accounting, auditing and bookkeeping services”, two categories that are closely associated with the offshoring of services (table IV.2). Meanwhile, the largest increases in the *export* market share of “other business services” and “computer and information services” are reported by the United States, India, Ireland, the United Kingdom, Sweden, Spain, China and Israel, in that order (van Welsum 2004).¹⁴

2. Limitations to offshoring

Not *all* services will relocate. Typical features of services with a high probability for offshoring include (Bardhan and Kroll 2003, p. 4):

- no face-to-face servicing requirement;
- high information content;
- the work process is telecommutable and Internet-enabled;
- high wage differentials with similar occupations in destination country;
- low set-up barriers; and
- low social networking requirements.

Box IV.1. Developing countries are exporting a bewildering array of services

The offshoring of services affects a wide range of service activities. The following are a few examples of services that are now exported across borders by various developing countries:

Audiovisual and cultural services include motion picture and video tape production and distribution; motion picture projection; radio and television; radio and television transmission; sound recording; recreational, cultural and sporting services; and news agency services. Developing-economy exporters include Argentina, Brazil, Hong Kong (China), India, Mexico and Venezuela.

Business services encompass various back-office processes, customer interaction and technical support. Examples include abstracting and indexing, data entry and processing, electronic publishing, legal transcription, litigation support, mailing list management, remote secretarial services, technical writing, telemarketing, telesupport and web-site design. India is by far the largest developing country exporter of such services, but more and more countries are entering the arena.

Computer and related services include the installation of computer hardware, software implementation, data processing, database services, maintenance and repair of office machinery and equipment such as computers, and other computer services. Ireland, India and Israel account for much of the exports of these services, but there are also many other exporters.

Higher education and training services benefit from new technologies that are making possible the inexpensive delivery of content in audio and visual formats (or on the Internet), leading to a surge in cross-border education in electronic format. Some developing countries are establishing a presence in this market.

Financial services cover insurance and insurance-related services, as well as banking and other financial services. Many developing-country exports of these take the form of joint ventures or affiliates of large financial service TNCs from developed countries. Foreign affiliates provide services not only to the parent company and the local market, but are also involved in exports to third parties, including to other developing country markets. Here too, India is a major player. In Latin America, reinsurance firms are collaborating with

providers of financial services and insurance firms to offer a range of competitive new products.

Health services include medical, dental, nursing and paramedical services, hospital, social and other human health services; these are among the most rapidly growing industries in the world economy. Direct exports of related services include shipment of laboratory samples, diagnosis, second opinions and consultations via traditional postal channels as well as via electronic means. China offers on-line diagnostic services to patients in Taiwan Province of China and some South East-Asian countries. In India, radiologists interpret computer tomography scans for hospitals in the United States. Medical samples go for diagnosis to Mexico from Central America, and some medical facilities have their medical records or patient interviews digitally transcribed in Bangladesh, India, Pakistan, the Philippines and Zimbabwe.

Internet-related services include the supply of the Internet itself (telecommunication services), the supply of content, a mix of business services, audiovisual services and computer and related services. Latin American Internet companies have expanded to other countries in the region building on the common language base. Hong Kong (China), Lebanon and Singapore are exporters to their neighbours.

Various *professional services*, such as legal services, accounting, auditing, taxation, architectural and engineering services, represent some of the most sophisticated areas of services offshoring. This has been a difficult area for developing countries to break into because of high skill requirements and problems in establishing credibility in foreign markets. However, their exports are growing. Commonly offshored processes include bookkeeping for clients, tax co-sourcing solutions, document management, staffing and IT services. Architectural design and other services are also being exported. India, Singapore and several CEE countries are among the exporting countries in this category.

Animation production in India alone is expected to surge, from \$600 million in 2001 to more than \$1.5 billion in 2005. This is in response to the fast growing demand from animation studios to meet 2-D and 3-D requirements (Bajpai et al. 2004).

Source: UNCTAD, based on Nielson and Taglioni 2004.

Box IV.2. Skills categorization of traded services

As with manufactures, the categorization of traded services by skill levels highlights the kinds of attributes needed for countries to become competitive suppliers. Of course, these attributes determine service exports only when other necessary conditions such as the investment climate, infrastructure and regulatory framework are in place.

Low-skill services. These are services with the lowest entry barriers in terms of skills, scale and technology. They include data entry or call centres (although some call centres require higher skills, computer or technical support). They tend to need general – but not very high – levels of formal education, a working knowledge of the relevant language and/or basic computer skills. There are generally few economies of scale or agglomeration: a call centre may be viable with 30 operatives in a site where there are no similar centres or knowledge institutions. The level of development of other services or manufacturing is not necessarily important for competitiveness in such activities. For this reason, there are likely to be few positive spillovers in terms of supplier linkages or skills creation.

Medium-skill services. These are complex services that require more advanced skills, and may offer considerable scale economies and agglomeration effects. Examples include financial and accounting services, standardized programming work, routine data analysis and processing or back-office services such as ticketing and billing. Specialized training would generally

be required (and so also the necessary training institutions). The building of competitive capabilities may also call for a large local market where the skills accumulate over time. Some services may require a minimum critical mass of different skills in one location to provide the whole package.

High-skill services. This is the most creative and skill-intensive end of offshored services, with the most stringent entry requirements. Examples include R&D (from all sectors), design services, architectural drawings, new software development, animation, medical testing or analysis and technology systems design. These require advanced skills at high levels of specialization, often with strong educational institutions. They involve agglomeration economies, with different skills, enterprises and institutions interacting with each other to share work, stimulate knowledge flows and allow specialized skills to be fully utilized. Needless to say, the location would have to be attractive enough to retain a large number of qualified personnel.

The line between the three types of services is not firm. The proposed categories are highly aggregated, and there is likely to be considerable skill variation within each of them. Since technologies change rapidly, activities may move up or down the ladder from one year to the next. Nevertheless, the categorization is useful in matching the growth of offshoring of services with the potential for countries to export and become competitive.

Source: UNCTAD.

Table IV.2. Growth in imports by the United States of selected services within the category of business, professional and technical services, 1992-2002

(Per cent and millions of dollars)

Type of service	Average annual growth rate	Value 2002
Computer and data processing services	31	1 057
Accounting, auditing and bookkeeping services	21	716
Management, consulting and PR services	17	1 188
Research, development and testing services	16	1 040
Training services	14	361
<i>Memorandum items</i>		
<i>Total business, professional and technical services</i>	13	10 732
<i>Total other private services</i>	11	69 436
<i>Total private services</i>	7	205 234

Source: UNCTAD, based on Borga and Mann 2003.

There are a number of services or service processes that do not meet these criteria. And there are other limits to offshoring. There are technological limitations: many service functions cannot be digitized and/or separated from related activities. Face-to-face interaction is still required at many points in the value chain of developing, marketing, delivering and maintaining a variety of services. Proximity to customers is often important to gain knowledge of markets. Some processes are hard to manage cross-nationally; for example, creative and innovative processes mostly require close interaction and are therefore difficult to separate and offshore.¹⁵ In some cases, a local presence is critical to understand technical requirements such as health-care regulations or legal codes. In others, the information to be processed may be personal, idiosyncratic, sensitive or confidential, increasing the transaction costs involved and so limiting the desirability of offshoring. Some countries require particular services to be provided by companies established locally (in case of foreign companies, through FDI) (chapter V).¹⁶

Other legal factors that may limit the globalization of IT-enabled services relate to areas where the marketplace is global, but the legal jurisdiction is local. Professional qualifications are one such example. Whereas certain accounting activities can be offshored, the final stamp of approval may need to be given by a certified accountant in the home country. The lack of globally agreed privacy rules may similarly limit the globalization of IT-enabled services. In the United States and the European Union (EU), data-security issues have emerged as potential barriers to further offshoring. Legal restrictions in a few developed countries to the offshoring of services to protect jobs at home may also have a dampening effect on the trend (chapter V).

There are also limits to the supply of appropriately educated workers. For example, among companies interviewed concerning the location of shared service centres for the European market, the lack of language skills was perceived to be the main obstacle to offshoring (IBM and Oxford Intelligence 2004). Continued high levels of growth in offshoring to preferred locations are likely to affect both the availability and cost of appropriate skills. Even in large economies like India, shortages can lead to wage inflation and high levels of attrition, making the offshoring proposition less attractive. The greater

the interest among companies and institutions to relocate services, the more efforts are needed by both host governments and the private sector to increase the supply of adequately trained labour. Shortages of skills in one location may also lead companies to consider other locations, thus opening the door for new entrants to become a base for exports of services.

Finally, based on their perceptions of risk, companies, even in the same country and industry, differ significantly in their assessment of the benefits from shifting the production of a service abroad. For example, in the financial industry in the United Kingdom, the Royal Bank of Scotland – in contrast to competitors such as Barclays and HSBC – took a decision not to shift certain services abroad (at least not for the time being).¹⁷ Thus, any assessment of the potential for services offshoring requires a careful analysis of corporate strategies.

3. Is the globalization of IT-enabled services different from that of manufacturing?

As services become more open to efficiency-seeking FDI, information-intensive services can be fully subjected to the international division of labour and hence integrated international production (*WIR93*). *WIR02* analysed the emergence of integrated international production systems in manufacturing and their impact on the export competitiveness of developing countries. It noted that export growth was more rapid in technology-intensive activities where such systems had advanced the furthest. However, the spread of integrated production systems in manufacturing was uneven; there were cumulative agglomeration forces allowing first movers to pull ahead of later entrants. While the forces driving the fragmentation and globalization of goods and services production are similar, some notable differences exist (Bardhan and Kroll 2003; Mann 2003):

- The Internet and associated IT hardware and software have rapidly removed a basic barrier to trade in IT-enabled services. Moreover, it is structurally simpler to offshore services in terms of resources, space and equipment requirements. Thus, the fragmentation of services, where it is possible, proceeds faster than in manufacturing. The need for adjustment

policies in importing countries may therefore also be more important.

- The offshoring of tradable services potentially affects firms in all sectors, and may have wider implications than the fragmentation of manufacturing.
- The offshoring of services affects mainly white-collar workers whereas the relocation of manufacturing involved primarily blue-collar workers.¹⁸ In manufacturing, considerable offshoring has taken place with relatively low skill demands on the workforce, compensating, as necessary, by importing skills through on-the-job training. The skill intensity of some services being offshored is adding to concerns in developed countries about the possible loss of white-collar jobs.
- Offshoring of services may be more footloose than that of manufacturing because of lower capital intensity and sunk costs as well as weaker links to local suppliers. Obviously, this applies more to lower skill than to higher skill services.

In sum, many of the forces that have driven the internationalization of manufacturing are increasingly at play for a growing number of service functions. However, as the offshoring phenomenon may unfold faster, and because it is likely to affect corporate strategies in all sectors, it is all the more important to study carefully its implications.

B. Future prospects for the offshoring of services

The offshoring of service functions is still at an early stage. The trend began with IT/software services in the 1980s¹⁹ and accelerated in the 1990s as offshoring was used to cope with concerns related to the Y2K problem.²⁰ The early motivation was not just to lower costs but also to handle the surge in demand for such services, and to improve quality. In 2002, the market for offshore outsourcing of IT-enabled services (mostly business process outsourcing) was estimated at \$1.3 billion – less than 1% of the global market for such outsourcing (Scholl et al. 2003). However, a more complete picture of offshoring of services needs to take into account captive production as well as international

outsourcing of such services as software development and other IT services, which are not covered under IT-enabled services. The total market for *all* offshore service exports was estimated at \$32 billion in 2001, most of which was supplied by Ireland, India, Canada and Israel, in that order (McKinsey & Co. 2003).

While assessments differ, virtually all observers expect offshoring of services to accelerate in the foreseeable future. Offshore outsourcing of business processes is expected to grow from \$1.3 billion in 2002 to \$24 billion in 2007, raising the international share of the total market from 1% to 14% in five years. Between 2001 and 2003, the planned adoption of offshore outsourcing of business processes among corporate decision-makers in the United States rose by a factor of six (Scholl et al. 2003). Even among the world's 1,000 largest companies, some 70% have still not offshored any business processes to lower cost countries.²¹ In a 2004 survey of the top 500 European firms jointly undertaken by UNCTAD and Roland Berger Strategy Consultants (RBSC), only 39% had experience with offshoring of business services (UNCTAD and RBSC 2004). The responding companies had already offshored some 20,000 jobs, and 44% of all respondents said that they planned to offshore more in the next few years. Other studies confirm that more offshoring is in the making:

- The number of call centres in Scotland with offshore operations is expected to double in the next five years (Taylor and Bain 2003).
- In a study of mainly United States companies, 25% had offshored some services, and as many as 79% said they planned to offshore within two years (Bajpai et al. 2004).
- In Japan, 23% of the corporate members of the IT-related trade association were utilizing offshore services, especially in China. While some Japanese companies have set up call centres and back-office operations in Dalian, which has a large pool of Japanese speakers (Sasaki 2004), they still lag significantly behind their counterparts in the United States in terms of services offshoring.
- Foreign affiliates exporting services from India predicted in early 2003 that their employment would double over the subsequent 12 months (Dossani and Kenney

2004). (Some examples of expansion plans of leading TNCs in the ICT industry in India are presented in table IV.3.)

How big is the offshoring phenomenon likely to become? Its future scope and dimensions remain uncertain. It has a long way to go before it matures and settles down in pattern and location. An early assessment of the “outer limit” of the number of jobs for which long-distance provision is technically feasible *and* for which cost savings of up to 30-40% would be plausible, suggested that 1-5% of the total employment in the G-7 countries could be affected (World Bank 1995). A more recent analysis concluded that the *maximum* number of jobs potentially subject to offshoring from the United States was in the magnitude of 11% of jobs in all occupations, or 14 million jobs (Bardhan and Kroll 2003). Estimates on the likely actual impact are much lower. For example, one study has suggested that 3.4 million service jobs are likely to have shifted from the United States to low-income countries by 2015.²² Another study concluded that 2 million offshored jobs could be created in the financial services industry alone, and that the total number of jobs affected for all industries could be in the area of 4 million.²³

Even the financial and IT industries, which have spearheaded offshoring, are only at the beginning of the international restructuring process. In banking, for example, large

opportunities remain for reorganizing operations at a regional or global (rather than national) level. The best prospects are to be found in the higher value, more strategic functions (IBM and Oxford Intelligence 2004). Further consolidation of operations that can be standardized and digitized in combination with economies of scale, lower labour costs and a focus on core activities offer attractive prospects for offshoring by companies from all sectors. If pioneering firms succeed in improving their competitiveness, competitors are likely to follow quickly. The unfolding of the process is difficult to forecast. There can be considerable inertia in organizational systems. Also, the technical changes involved in international restructuring can be expensive. Indeed, among European TNCs, increased offshoring is more likely to come from companies that already have experience in this field than from newcomers (UNCTAD and RBSC 2004).

However, to the extent that offshoring is shown to pay off – as various surveys of United States and European TNCs seem to suggest (see below) – it is likely to spread across industries and countries. Notwithstanding differences in corporate strategies, the standard benefits of an international division of labour and internationalization of production apply to most service activities. Similarly, while offshoring has so far been considered mainly by large corporations, sooner or later small companies are

Table IV.3. Plans of TNCs in the ICT industry for offshoring of services to India, based on information available at the end of 2003

Company	No. of employees	Employees in India	Plans for India office
Accenture	65 000	3 500	8 000 by August 2004
Adobe Systems	3 250	185	250 in 6 months
Cadence	5 000	315	Doubling in four years
Cap Gemini	56 500	800	2 000 by December 2004
Cisco	34 466	2 300	...
Covansys	4 556	2 000	2 800 in one year
CSC	92 000	1 200	4 800 by 2004
EDS	138 000	300	2 400 by 2005
i2	2 800	1 000	Actively recruiting
IBM Global Services	150 000	3 100	10 000 in 3 years
Intel	79 200	950	3 000 by 2005
Keane	5 819	623	2 000 by end 2003
Logica-CMG	24 000	350	1 000 by end 2004
Lucent	35 000	570	...
Microsoft	55 000	200	500 in three years
Oracle	40 000	3 159	6 000 in one year
Sapient	1 500	600	Will grow
Sun Microsystems	36 000	700	Will grow
Texas Instrument	34 400	900	1 500 by March 2006
Xansa	5 583	1 200	6 000 in a few years

Source: Roach 2004, pp. 90-92.

likely to follow the larger trailblazers; in fact, some smaller TNCs are already exploiting the opportunities from offshoring (see e.g. box IV.3).

Benefits of offshoring are not confined to the corporate sector; they can also be reaped by governments. For instance, tax authorities in high-cost countries can at present afford to check only a small number of tax declarations every year; by shifting some work to lower cost locations, they could raise the audit ratio significantly and improve their intake. Other government services could also raise the quality of their services while lowering their costs by offshoring some segments of their work. And still other official and private institutions could follow, as they seek to economize and become more efficient.

For some services, offshoring strategies compete with automation trends. When automation is preferred, jobs are likely to disappear in both developed and developing countries. Prominent examples include basic banking services that previously required face-to-face interaction, but are now often handled over the Internet. On the other hand, for many

other types of services, human interaction offers flexibility that automation does not. For complex activities, a real time human interaction will remain crucial.

In sum, there are sound – some would say compelling – reasons for the offshoring of services to grow and spread. TNCs will play a vital role in this international restructuring of activities, directly by setting up captive offshore centres or affiliates serving third parties, and indirectly by subcontracting work to local service providers. The opportunities for all countries, not least developing and transition economies, to attract employment and income-creating work are significant, although at this stage, it is impossible to say exactly *how* significant. The forces driving offshoring are powerful and the resulting economic benefits are a classic illustration of gains from trade and specialization. Competitive pressures on companies are likely to spur further offshoring as managers are obliged to look for new ways to improve competitiveness. As companies learn how best to optimize service functions internationally, and as they monitor the moves of their competitors, the process is likely to gain momentum.

Box IV.3. Smaller TNCs are offshoring too

The bulk of offshoring of services has so far been undertaken by large firms – but smaller companies are also starting to exploit opportunities created by the increased tradability of services. Global Refund – a market-leading supplier of financial services to enable travellers to collect tax refunds – is a good example.

Global Refund employs 800 people worldwide, in some 35 countries. It has its origin in Sweden, but is legally registered in the Netherlands (mainly for tax purposes). Information technology has made it possible to locate various headquarter functions to different locations: the chief executive officer is based in Switzerland, marketing and finance functions are located in Sweden, IT and transaction processing functions are run from Austria, and certain business segments are managed from Singapore.

As of early 2004, Global Refund was in the process of consolidating back-office work into two “centres of excellence” in Europe. Once consolidated, tried and tested, the company may,

as a second step, offshore these functions and establish a foreign affiliate in a lower cost location in either CEE or Asia.

The company has also chosen to offshore some services through outsourcing. In one business segment, all transaction processing work has been outsourced to a local service provider in Singapore; software development for the European market has been outsourced to a local company in Bulgaria; and software development to support the Asia-Pacific region is undertaken by a local company in India. There are also plans to establish a captive call centre in a low-cost location.

The company views the offshoring of services as a necessary process to increase competitiveness. By consolidating certain functions in centres of excellence, it has been able to reap economies of scale, avoid duplication of work, enhance worker skills, and thereby reduce costs as well as improve the quality of the services performed.

Source: UNCTAD, based on company interview.

However, realizing the full development and competitive potential of offshoring will not be easy. To date, a relatively small number of countries at different levels of development have attracted most of the service activities that have been offshored. This tendency to agglomerate is stronger the more sophisticated the service activity is, reflecting the need to access the necessary levels of skills and infrastructure quality. Spreading the benefits more broadly, not least in the developing world, means other countries will have to increase their attractiveness and capabilities. Not only will they have to offer favourable conditions for local and foreign service providers, they will also have to overcome the first-mover advantages of the pioneers. On the side of developed countries, there is growing realization of the competitive benefits of offshoring, but bridging the perception gaps and institutional and organizational inertia will take time. There is, moreover, growing concern about job losses and, underlying this, about the costs of adjusting to the emerging pattern of comparative advantage in services.

C. Outsourcing vs. captive business models

1. What determines how offshoring is undertaken?

As noted above, offshoring – shifting an activity abroad – can be done internally (captive offshoring) or through international subcontracting or outsourcing (table IV.1). Any offshoring decision requires a firm to choose to remove a service function previously undertaken in-house at home and entrust it to a provider – either its own foreign affiliate or a third party – located outside the home country. The potential for offshoring of services may partly be gauged by the progress in outsourcing of services at the national level (box IV.4). After all, once a company has outsourced an activity to an independent supplier in its home market, a logical next step may be to explore similar set-ups in other locations, and, for instance, consolidate in one place the production of individual service functions for the corporate network as a whole. Moreover, as domestic suppliers of outsourced services expand internationally, the scope for offshoring also increases.

If it is economical to offshore a service, the principal has to decide whether to produce the service in-house (by setting up an affiliate in the chosen location) or to buy it from an independent enterprise. A considerable proportion of all offshored services is produced by foreign affiliates. According to balance-of-payments data, intra-firm trade accounts for more than 71% of all imports of “business, professional and technical services” into the United States.²⁴ Moreover, during the period 1997-2002, the value of intra-firm imports of such services increased faster than unaffiliated imports (van Welsum 2004; Borga and Mann 2003). In Europe, 45% of the largest firms with offshoring experience had offshored services to their foreign affiliates or a joint venture set up abroad, whereas 48% of the companies had outsourced activities to third party service providers (UNCTAD and RBSC 2004).

As illustrated by Bank of America – mentioned in the introduction to this chapter – a company may choose to offshore two types of services to the same location (India) in different ways, outsourcing one (software development) to local providers while producing the other (back-office operations) in-house in a foreign

Box IV.4. Outsourcing at the national level

The outsourcing of business processes *within* a country has existed in some form for centuries. However, it really took off in the United States in the late 1980s, when companies started to focus harder on their core activities and to tap the technological potential of ICT (UNCTAD 2003g). Large companies increasingly outsourced ICT functions to external service providers, which also delivered and maintained various data-related services. As the capacity to store and transfer data at low cost rose, the scope of outsourced operations and the number of providers expanded. Today, companies in all sectors undertake a broad range of business processes outsourcing related to both front-office (customer interaction) and back-office services (data processing, finance, accounting, human resources, knowledge services). The global market for such outsourcing was estimated at \$110 billion by end 2002, and is expected to grow to about \$173 billion in 2007 (Scholl et al. 2003).

Source: UNCTAD.

affiliate. Similarly, ExxonMobil and GE set up affiliates in Hungary to provide back-office services, while K&H Bank outsourced similar activities to the Hungarian affiliate of the specialized service provider, EDS. A range of factors affects these decisions.

First, a company usually opts for keeping an activity in-house when strict *control of that activity* is considered crucial, when high transaction costs are involved (Buckley and Casson 1976) or when proprietary knowledge and information is sensitive, tacit, expensive to produce, complex or idiosyncratic, but easy to replicate (Dunning 1989). As in any economic activity, the more strategic the service function, and the closer it is to the core competence of a firm, the less likely it is to be outsourced.²⁵ For example, the financial services industry appears to rely almost exclusively on internalized models of offshoring (Joyce 2002).²⁶ Most offshored R&D operations in India are performed by foreign affiliates. Examples include Oracle's and Texas Instruments' design and development centres and GE's R&D laboratory in Bangalore.²⁷ Other TNCs such as Cisco, Hewlett-Packard, IBM, Lucent and Microsoft have also made investments in R&D centres in India (Kapur and Ramamurti 2001).

Second, the *level of internal interaction* associated with an activity matters. A commonly cited risk with outsourcing is associated with communication difficulties with the vendor (Bajpai et al. 2004). For services that are technically separable, but involve close interaction with other (service, manufacturing, R&D) activities of the firm to be efficient, an internalized solution is likely to be preferred. In contrast, back-office operations and customer interaction services that can be easily standardized and separated from other activities are more likely to be outsourced. Thus, a number of TNCs has outsourced routine, standardized software development to Indian companies, but internalized more complicated development work (Kumra and Sinha 2003).²⁸

Third, the *availability of capable local firms* influences the choice.²⁹ The emergence of low-cost service providers in some developing countries is a recent phenomenon (Huang and Khanna 2003; Zaheer and Rajan 2003; Kumra and Sinha 2003).³⁰ For example, when TNCs started to transfer back-office functions to India, there were no local companies to which they could outsource. American Express in 1993,

British Airways in 1996 and General Electric in 1998 set up their own affiliates for this reason (Dossani and Kenney 2004; Riera et al. 2002), whereas latecomers to offshoring in the airline industry chose to externalize similar activities in that country. Delta Air Lines outsourced some of its call-centre reservations to Spectramind, a Wipro subsidiary. Swiss International Airlines, Austrian Airlines and Sabena outsourced revenue and traffic accounting, cargo revenue accounting, passenger interline billing, navigation support and frequent flyer programme administration to AFS, a wholly-owned affiliate of Tata Consultancy Services, the largest Indian software company.³¹ Consequently, for more "mature" services that have been offshored for some time (such as software development), it is easier for a company to find a third-party supplier than in an area that is emerging (e.g. financial analysis).

Different business models may be chosen, depending on a host-country's features. In the case of shared service centres for the European market, offshoring to India tends to involve mainly outsourcing, whereas offshoring to CEE countries is likely to have a higher element of internalized solutions (IBM and Oxford Intelligence 2004). Other host-country factors that could deter outsourcing include weak property rights protection, cultural mismatch between home and host countries and a poor track record of existing local vendors.

Fourth, *larger scale activities* are more likely to be kept in-house when offshored. Unless the volume of work is large, it can be difficult to generate the required economies of scale to reap savings. Being a small player may also make it more difficult to recruit the best talents. Outsourcing the activity to a better-known specialized service provider may be a solution. The higher the value added in the service function performed, the greater the incentive for the sourcing company to keep the activity in-house to reap the full return on investment.

2. A new breed of TNCs provides services globally

The expansion of international outsourcing has contributed to the emergence of a new breed of TNCs that supplies services of other companies, rather like contract manufacturers in manufacturing (Sturgeon 2002; *WIR02*, p. 139). Since outsourcing is the most advanced in the United States, most specialized

contract service providers also hail from there. Some have become global players by setting up foreign affiliates around the world, and are hence becoming key targets for investment promotion agencies seeking to attract FDI into export-oriented services. One of the main advantages of contract service provider TNCs is their established links to clients in the United States and Europe. By developing a portfolio of locational advantages through a global network of their own affiliates, they have great flexibility in offering tailored solutions to their clients.

In the call centre industry, the largest contract service providers include Convergys, ICT Group, Sitel and Sykes – all from the United States (table IV.4). These companies have been established for some time, but have only recently set up foreign affiliates in developing countries. Sykes, founded in 1977, set up its first contact centre in a developing country (the Philippines) only in 1997. Convergys, the world's leading call centre company, set up its first developing-economy affiliate in 2000, and then expanded rapidly – by 2003, it had export-oriented centres in Argentina, Brazil, India, Indonesia, Mexico, the Philippines, the Republic of Korea, Singapore, Sri Lanka, Taiwan Province of China and Thailand. Sitel's export-oriented contact centres are in Canada, Colombia, India, Jamaica, Mexico, Morocco, Panama and the Philippines. However, these centres account for less than 10% of the company's worldwide business, i.e. the great bulk of activities are in developed countries.³²

While the main operations of these companies remain in industrialized countries, those in developing countries are growing more rapidly in employment terms. Convergys' Indian operations, started in 2000 in New Delhi, had expanded to employ 3,000 people by April 2003, and another centre was being developed in Bangalore for an additional 3,000 employees. Similarly, Sykes announced plans to expand its

Indian activities by 1,200 people during 2003 (Dossani and Kenney 2004).

In business-process outsourcing and IT-related services, there are also a growing number of external service providers. Some of the top companies are IBM Global Services, EDS, Accenture and Hewlett-Packard. In India, IBM is the largest foreign IT service provider with some 15,000 employees, followed by Hewlett-Packard and Accenture, each employing 3,000 people. EDS expects to reach similar levels of employment at the end of 2004.³³

The emergence of contract service provider TNCs makes it increasingly important for local suppliers in developing countries to expand abroad and establish a global foothold. TNC clients expect a presence or support in many countries, and often prefer to deal with one global contact of a single outsourcing company than entering into multiple contracts with a range of local suppliers around the world. Companies that have a global presence are better equipped to manage an outsourced function effectively and cost efficiently across geographic areas. Accordingly, some Indian companies established affiliates in the United States and Western Europe some time ago and are now starting to move into CEE (see also chapter I). For example, in April 2004, Infosys announced plans to invest \$20 million in a business consulting subsidiary in the United States to match rivals and counter a possible political backlash against outsourcing;³⁴ Satyam plans to start a software-development centre in the Czech Republic, Hungary or Poland in 2004, initially employing at least 100 software engineers; Tata Consultancy Services in 2003 set up a software development centre in Budapest, with 160 engineers, to serve its European clients; and Progeon, the back-office services arm of Infosys, will open its first overseas call centre facility employing about 150 people in the Czech Republic later in 2004.^{35, 36}

Table IV.4. Contract service provider TNCs offering call/contact centre services, 2003

Company name	Turnover (\$ billion)	Number of employees	Year of establishment	Year of first offshore location in developing country
Convergys	2.3	55 000	1998	2000 (India)
ICT Group	0.3	11 000	1987	2002 (Philippines)
Sitel	0.8	26 000	1985	2001 (India)
Sykes	0.5	16 000	1977	1997 (Philippines)

Source: UNCTAD, based on information from company websites.

In sum, there is likely to be more consolidation, and the structure of the industry related to the offshoring of services will become clearer.³⁷ To the extent that customers require the ability to offer blended solutions (in which some work is done “onshore” and some offshore), it may become increasingly difficult for smaller service providers with limited international exposure to compete successfully for larger projects.

D. Search for competitiveness drives corporate offshoring

1. FDI related to the offshoring of services is still concentrated

Most offshored services to date are concentrated in a relatively small number of countries. Ireland, India, Canada and Israel (in that order) accounted for over 71% of the total market for offshored services in 2001, mostly in software development and other IT services (McKinsey & Co. 2003). But many other destinations are emerging as potential host countries. Due to rising labour costs in the most popular locations, competitive pressures and improving host-country environments, the geographic scope of locations for FDI in services is broadening. An assessment of the attractiveness of the 25 leading destinations for offshoring concluded that India topped the list by far, followed by China, Malaysia, the Czech Republic and Singapore (A.T. Kearney 2004). Brazil led

in Latin America, South Africa was the leader in Africa, while Canada and New Zealand were the highest ranking developed countries.

Among large European TNCs, the pattern is similar. Almost one-third of all offshored services projects have gone to India; Western European countries (e.g. Ireland, Portugal, Spain, the United Kingdom) have attracted 29% of all projects, while CEE countries (e.g. Hungary, Poland, Romania) account for another 22%. Only 8% of offshored services are located in Latin America, and less than 4% in Africa (UNCTAD and RBSC 2004). As projects offshored to India tend to be the largest ones, the country’s share of the total number of jobs created to date through offshoring by the top 500 European firms exceeds 50% of all jobs created.

FDI plays an important role in offshoring, although this is difficult to quantify owing to the lack of reliable data. In principle, FDI affects offshoring in two ways: through captive offshoring, and when specialized service providers set up foreign affiliates to serve foreign clients. While such investments can create many jobs, they typically do not generate large capital flows. Consequently, they do not account for large shares in the FDI statistics.³⁸ It may also be difficult to capture all the offshored service projects by the existing industrial classification. It is possible, however, to examine the *number* of TNC greenfield and expansion projects (rather than their value) in export-oriented services. The main categories of such projects, discussed below, are back-office services (shared service centres), front-office functions (call/contact centres), regional headquarters and IT services (including software development) (table IV.5).³⁹

Table IV.5. Definitions of export-oriented FDI projects related to offshored services

Call/contact centre services	Shared service centres (back-office services)	IT services	Regional headquarters
Help desk	Claims processing	Software development	Headquarters
Technical support/advice	Accounts processing	Application testing	Coordination centre
After-sales	Transaction processing	Content development	
Employee enquiries	Query management processing	Engineering and design	
Claims enquiries	Customer administration	Product optimization	
Customer support/advice	processing		
Market research	HR/payroll processing		
Answering services	Data processing		
Prospecting	IT outsourcing		
Information services	Logistics processing		
Customer relationship management	Quality assurance		
	Supplier invoices		

Source: UNCTAD and OCO Consulting.

While all these service functions can be fragmented and made into parts of integrated international production systems, the locational determinants as well as their potential differ.

Overall picture. The share of developing countries and CEE in FDI projects related to services offshoring is increasing, from 37% in 2002 to 51% in 2003. Their share in the number of jobs created reached 57% in 2003. The four categories of services discussed in this chapter make up a significant proportion of overall FDI activity. In 2002-2003, FDI projects in these services accounted for 12% of the total number of FDI projects, and as much as 20% of all jobs created by the same projects.

The data used here only capture greenfield and expansion projects, and do not include acquisitions. However, data suggest that greenfield projects still dominate. In India, FDI in IT and IT-enabled services in 1998-2002 comprised almost 90% greenfield investment, 10% joint ventures and less than 1% acquisitions (McKinsey & Co. 2003).⁴⁰ A study of European shared service centres found that about 46% of

all centres had been established through greenfield investment, more than half involved expanding an existing facility, and only 3% were the result of an acquisition (IBM and Oxford Intelligence 2004). This may be changing, however, as the outsourcing industry matures. For example, in April 2004, IBM announced plans to acquire Daksh eServices, one of India's largest independent IT-enabled service companies, employing 6,000 people in India and the Philippines.⁴¹ (Selected cross-border acquisitions of Indian firms are presented in table IV.6.) A European example of this possible trend is the € 2 million purchase in May 2004 of the Hungarian call centre operator Marketlink by Transcom WorldWide, of Swedish origin but headquartered in Barcelona.⁴² It is likely that further consolidation will follow as companies respond to the moves of competitors (*WIR00*).

Shared service centres. Developing countries and CEE economies attracted 65% of all export-oriented FDI service projects in 2002-2003 (tables IV.7, IV.8), almost half going to India. In CEE, the key locations were Hungary,

Table IV.6. Selected acquisitions of Indian firms by foreign firms, 2003-2004

Foreign firm	Indian firm	Comment
Hughes Software Systems (US)	Tenet Technologies	Deal to increase HSS' presence in Japan, where Tenet Technologies has an established presence.
GE India Technology Centre (US)	Engineering Analysis Centre of Excellence	EACE was bought from Tata Consultancy Services to provide high-end engineering analysis, design and software development.
SPI Technologies (Philippines)	Kolam Information Services	SPI expects Kolam to contribute close to \$3.5 million to its top line in the current financial year. The deal was for \$4 million. Kolam's work spans editorial functions, from manuscript development to production of books/journals and other activities.
WebEx Communications (US)	CyberBazaar	The acquisition of CyberBazaar (estimated at \$4 million in cash) will enable WebEx to provide multimedia web communication services for the Indian services sector.
Perot Systems Corporation (US)	Vision Healthsource	The deal was closed for \$10 million. Vision Healthsource is a provider of billing, receivables and claims and business-process outsourcing solutions for healthcare service providers. Perot Systems Corporation describes itself as "a global provider of technology-based business solutions in selected industry sectors".
Cognizant Technology Solutions (US)	Ygyan Consulting	The purchase price is approximately \$2 million. Ygyan Consulting is a Pune-based services provider.
IBM (US)	Daksh eServices	The deal will increase the scope of IBM's global network of 22 business transformation delivery centres by adding capabilities in India and the Philippines. Daksh eServices will also bring an experienced management team to IBM in India.

Source: The Hindu Business Line (<http://www.thehindubusinessline.com/cgi-bin/bl.pl?mainclass=15&subclass=345>).

the Czech Republic and Poland, especially for European companies; Chile and Costa Rica attracted some shared service centres for the Americas; and China and the ASEAN countries were relatively well represented in Asia. In developed countries, Ireland remained the leading location. Financial and IT companies generated most of the projects, with the contract service provider Accenture and Citibank as leading investors (annex table IV.2).⁴³ In terms of prospects for shared service centres, 20% of the *Fortune 500* companies have not yet set up any such centres but could do so in the future, as could smaller companies in order to save costs and improve competitiveness (IBM and Oxford Intelligence 2004). While India, China and the Philippines are likely to be the most attractive locations for global solutions, various studies mention countries in CEE and Latin America as candidates for regional shared service centres. In the case of pan-European shared service centres, Ireland is the preferred location, followed by Hungary, Poland and the Czech Republic (IBM and Oxford Intelligence 2004).

Call centres. More than half the 500 FDI projects in call centres recorded in 2002 and 2003 went to developed countries, notably Canada, Ireland and the United Kingdom.⁴⁴ This suggests that geographical and psychic distance to markets matters, as do linguistic, cultural and other affinities – and that costs are not the only determining factor. In Ireland, inward FDI has boosted employment in related industries. In 2003, two-thirds of all the people employed in the Irish call centre industry worked in foreign affiliates, mostly controlled from the United States (CM Insight et al. 2004). Irish call centres appear to focus on the high end of the market, providing telesales and marketing, customer service and technical and software support for various industries (ibid., p. 160). In the developing world, more than 80% of FDI in call centres went to Asia, with India (60 projects), China (30), Malaysia (16) and Singapore (16) as top recipients. A number of countries in Latin America and the Caribbean were also recipients, including Brazil, Chile, Costa Rica, Africa attracted only a few call centres, which went to Egypt, Morocco and South Africa. In CEE, 31 projects were registered, with Hungary being the market leader. Although developed countries hosted more projects, the growth of call centres was much higher in developing countries.

Half the call centre projects came from IT companies and business service providers, followed by telecom and electronics companies. The preferred locations for call centres in the near future include India, the Philippines, China, South Africa, Mauritius and the United Arab Emirates (UNCTAD interviews; CM Insight et al. 2004). However, due to language requirements, many other countries have good chances of attracting FDI in call centres.

Regional headquarters (RHQs) have a much longer history than the other categories of offshored services addressed in this section, and are not driven by labour cost differentials (see below). They are included in the analysis mainly because the services provided in them are export-oriented in nature, and because many countries increasingly seek to attract headquarters functions. Almost 40% of new FDI projects related to RHQs in 2002-2003 went to developing economies, with China, Hong Kong (China), Singapore and the United Arab Emirates (Dubai) as the leading destinations in the developing world. Brazil was the main location for Latin America, and Hungary and Romania for CEE. Among developed countries, the United States, the United Kingdom and Canada were the top locations. The IT industry was the source for almost one-quarter of all projects, followed by electronics and automotive industries. In terms of future prospects outside developed countries, the strongest candidates for new RHQs in Asia appear to be the United Arab Emirates, Singapore and China; in CEE, Hungary, the Czech Republic and the Russian Federation; in Latin America, Brazil; and in Africa, South Africa (UNCTAD interviews).

IT-related services. FDI projects in IT-related services were equally distributed between developing and developed locations. However, the number of IT service projects in developing countries more than doubled in 2003, while in developed countries it grew by only 6%. Top locations for offshored IT services in developed countries were the United Kingdom, Germany, the United States and Australia. Asia dominated among developing regions. Of the more than 300 export-oriented IT projects in developing countries, 37% went to India, 19% to China and 11% to Singapore. The Czech Republic attracted the most projects in CEE, Brazil in Latin America, and South Africa in Africa. Asked about the potential future locations for FDI projects

Table IV.7. Export-oriented FDI projects in call centres, shared service centres, IT services and regional headquarters, by destination, 2002-2003

(Number and per cent)

Region/economy	Call centres		SSCs		IT services		Regional HQs	
	No. of projects	Share of total	No. of projects	Share of total	No. of projects	Share of total	No. of projects	Share of Total
World	513	100	139	100	632	100	565	100
Developed countries	279	54	48	35	293	46	339	60
Western Europe	174	34	38	27	208	33	200	35
EU	169	33	38	27	198	31	185	33
Austria	2	-	-	-	-	-	2	-
Belgium	7	1	1	1	5	1	9	2
Denmark	5	1	1	1	6	1	15	3
Finland	2	-	-	-	2	-	1	-
France	13	3	2	1	16	3	11	2
Germany	20	4	1	1	34	5	22	4
Greece	1	-	-	-	-	-	1	-
Ireland	29	6	19	14	14	2	15	3
Italy	6	1	-	-	7	1	2	-
Luxembourg	1	-	1	1	-	-	1	-
Netherlands	13	3	3	2	16	3	20	4
Portugal	5	1	-	-	3	-	-	-
Spain	8	2	2	1	8	1	9	2
Sweden	14	3	1	1	14	2	13	2
United Kingdom	43	8	7	5	73	12	64	11
Other Western Europe	5	1	-	-	10	2	15	3
Norway	-	-	-	-	3	-	1	-
Switzerland	5	1	-	-	7	1	14	2
North America	71	14	5	4	40	6	105	19
Canada	56	11	3	2	14	2	25	4
United States	15	3	2	1	26	4	80	14
Other developed economies	34	7	5	4	45	7	34	6
Australia	19	4	3	2	26	4	24	4
Israel	-	-	-	-	2	-	-	-
Japan	11	2	-	-	16	3	8	1
New Zealand	4	1	2	1	1	-	2	-
Developing economies	203	40	72	52	315	50	209	37
Africa	7	1	1	1	10	2	4	-
North Africa	4	1	-	-	-	-	-	-
Egypt	2	-	-	-	-	-	-	-
Morocco	2	-	-	-	-	-	-	-
Other Africa	3	1	1	1	10	2	4	-
Mauritius	-	-	-	-	1	-	-	-
Nigeria	-	-	-	-	1	-	-	-
South Africa	2	-	1	1	6	1	3	1
Senegal	1	-	-	-	1	-	-	-
Tanzania, United Rep. of	-	-	-	-	1	-	1	-
Uganda	-	-	-	-	-	-	-	-
Latin America & the Caribbean	29	6	5	4	22	3	10	2
South America	13	3	4	3	16	3	7	1
Argentina	2	-	-	-	1	-	-	-
Brazil	6	1	-	-	9	1	6	1
Chile	4	1	4	3	5	1	1	-
Uruguay	-	-	-	-	1	-	-	-
Venezuela	1	-	-	-	-	-	-	-
Other Latin America & Caribbean	16	3	1	1	6	1	3	1
Antigua & Barbados	2	-	-	-	-	-	-	-
Costa Rica	4	1	1	1	-	-	-	-
Dominican Republic	-	-	-	-	1	-	-	-
El Salvador	-	-	-	-	-	-	1	-

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Table IV.7. Export-oriented FDI projects in call centres, shared service centres, IT services and regional headquarters, by destination, 2002-2003 (concluded)
(Number and per cent)

Region/economy	Call centres		SSCs		IT services		Regional HQs	
	No. of projects	Share of total	No. of projects	Share of total	No. of projects	Share of total	No. of projects	Share of Total
Jamaica	1	-	-	-	-	-	-	-
Honduras	-	-	-	-	1	-	1	-
Mexico	5	1	-	-	2	-	-	-
Panama	2	-	-	-	1	-	1	-
Puerto Rico	2	-	-	-	1	-	-	-
Asia	167	33	66	47	283	45	195	35
West Asia	17	3	1	1	17	3	36	6
Bahrain	-	-	-	-	-	-	3	1
Jordan	1	-	-	-	1	-	-	-
Lebanon	-	-	-	-	2	-	-	-
Qatar	-	-	1	1	-	-	-	-
Oman	-	-	-	-	-	-	1	-
Saudi Arabia	1	-	-	-	-	-	-	-
Turkey	2	-	-	-	2	-	1	-
United Arab Emirates	13	3	-	-	12	2	31	5
Central Asia	1	-	1	1	1	-	1	-
Uzbekistan	1	-	1	1	-	-	-	-
Southern, East and South-East Asia	149	29	64	46	265	42	158	28
Bangladesh	1	-	-	-	-	-	1	-
China	30	6	4	3	60	9	38	7
Hong Kong, China	2	-	-	-	14	2	37	7
India	60	12	43	31	118	19	7	1
Korea, Rep. of	5	1	-	-	5	1	6	1
Malaysia	16	3	6	4	8	1	17	3
Pakistan	1	-	-	-	-	-	-	-
Philippines	12	2	1	1	9	1	4	1
Singapore	16	3	8	6	35	6	36	6
Taiwan Province of China	4	1	-	-	9	1	4	1
Thailand	2	-	2	1	7	1	8	1
Central and Eastern Europe	31	6	19	14	24	4	17	3
Belarus	-	-	-	-	1	-	-	-
Bulgaria	1	-	-	-	-	-	1	-
Czech Republic	9	2	6	4	5	1	-	-
Estonia	-	-	-	-	1	-	-	-
Hungary	11	2	7	5	4	1	4	1
Latvia	-	-	-	-	1	-	1	-
Lithuania	1	-	-	-	-	-	1	-
Poland	3	1	5	4	4	1	3	1
Romania	1	-	-	-	2	-	4	1
Russian Federation	1	-	1	1	4	1	2	-
Serbia and Montenegro	-	-	-	-	-	-	1	-
Slovakia	4	1	-	-	-	-	-	-
Unspecified	-	-	-	-	2	-	-	-

Source: UNCTAD, based on data from OCO Consulting.

Table IV.8. Export-oriented FDI projects in services, by industry, 2002-2003

(Number and per cent)

Industry	Call centres		SSCs		IT services		Regional HQs	
	No. of projects	Share of total	No. of projects	Share of total	No. of projects	Share of total	No. of projects	Share of Total
Business services	116	22	24	17	-	-	17	35
Chemicals	3	0.6	1	0.8	1	0.2	15	2.8
Electronics	42	8	6	4.4	4	0.6	57	10
Energy	14	3	5	3.6	-	-	15	2.8
Financial services	30	6	40	29	2	0.3	32	5.7
Food and drink	3	0.6	4	3	-	-	20	3.5
Hotels, tourism and leisure	3	0.6	2	1.5	-	-	19	3
Internet	12	2	1	0.8	-	-	8	1.5
IT and software	154	30	33	24	618	97.8	132	23
Life sciences	7	1.3	3	2	-	-	51	9
Light industry	2	0.4	2	1.5	-	-	20	3.5
Machinery and industrial goods	18	3.5	1	0.8	-	-	28	5
Metals/mining	5	1	1	0.8	-	-	10	1.7
Telecom equipment	20	4	3	2	4	0.6	15	2.8
Telecom services	30	6	-	-	3	0.5	25	4.4
Transport equipment	30	6	6	4.4	-	-	55	9.7
Other	24	5	6	4.4	-	-	47	8
Total	513	100	138	100	632	100	566	100

Source: UNCTAD, based on data from OCO Consulting.

related to IT services, companies interviewed by UNCTAD mentioned India, the Russian Federation, Bulgaria, Albania, the Philippines, China, Mexico, the Czech Republic and the United Arab Emirates, in that order.

To sum up for 2002-2003:

- While the stock of FDI projects related to the offshoring of services is larger in developed countries, the greatest dynamism is in developing economies. South and South-East Asia dominate FDI projects related to the offshoring of services in the developing and transition economies, accounting for 63% of all projects by number. The region's dominance is greatest in IT services, where it accounts for almost 80% of all FDI projects in the non-industrialized countries.
- A significant number of the recorded FDI projects went to developed countries, implying that low wages, *per se*, do not account wholly for the pattern of offshoring.
- The locational determinants of offshoring of different services vary (see below).
- By industry of origin, firms in IT and software dominate FDI projects in IT-related services. IT companies are among the most active also in the other three groups of FDI

projects, but not dominant. Firms in business services and electronics account for most call centre projects. Financial service TNCs are significant in IT, and software firms in shared services. In regional headquarters projects, manufacturers of electronics, transport equipment and pharmaceuticals lead.

2. Cost reduction and improved quality are key drivers

Corporate strategies related to offshoring resemble those that have led companies to restructure their manufacturing operations. Technical changes that make for increased tradability, together with liberalization of investment and trade, induce companies to restructure (and fragment) their activities internationally in order to protect or advance their competitiveness. TNCs can gain scale advantages from consolidating service activities in one location and standardizing the services across the globe. Offshoring, besides allowing a company to lower its costs, can also help improve the quality of the services produced.

Cost reduction is one of the prime motivations for offshoring. Various studies confirm that a large majority of companies cite

lower costs as the prime reason for setting up an offshore shared service centre (UNCTAD and RBSC 2004; IBM and Oxford Intelligence 2004; Bajpai et al. 2004; CM Insight et al. 2004). Cost savings can be achieved partly by seeking out lower cost locations, and partly by consolidating operations and reducing the cost of infrastructure, training and management. Any major international bank that currently has, say, 50-60 data centres with infrastructure, maintenance and specialized skills, could consolidate operations into perhaps 5-10 such centres. This implies less expenditure on infrastructure and maintenance, as well as labour costs; it would also allow the development of centres of excellence. Such consolidation can entail considerable savings, especially (but not necessarily) if combined with lower labour costs. GECIS (United States) reportedly saves more than \$300 million annually as a result of its offshored operations (box IV.6).⁴⁵ Similarly, it has been suggested that the banking industry in the United States saved up to \$8 billion during 1999-2002 by offshoring services to India.⁴⁶ About 80% of major European TNCs with experience in offshoring report cost savings in the magnitude of 20-39%, and for another 10% of the companies the savings were even higher (UNCTAD and RBSC 2004). Cost savings allow companies to lower their prices or increase their profit margins – in short, to raise their competitiveness.

In call centres, labour costs account for 50-70% of total costs in developed countries. Moving to India, where wages are 80-90% lower than in the United Kingdom, for example, is an attractive proposition (Outsourcing Insight 2001, p.11). However, the actual savings are smaller, since labour costs constitute a smaller share of costs in a developing country, while costs of infrastructure, training and travelling tend to be higher. Taking all these factors into account, cost savings in India are in the range of 30-40%, or perhaps higher when compared with the United States.⁴⁷

But cost reduction is only part of the story. As companies gain experience, they see other benefits in the form of *improved quality* of services. As some observers put it, some offshoring companies “Went for cost, stayed for quality” (Dossani and Kenney 2004). Quality improvements were cited by large European TNCs as the third most important benefit achieved from offshoring (after reduced labour and other costs), often exceeding expectations

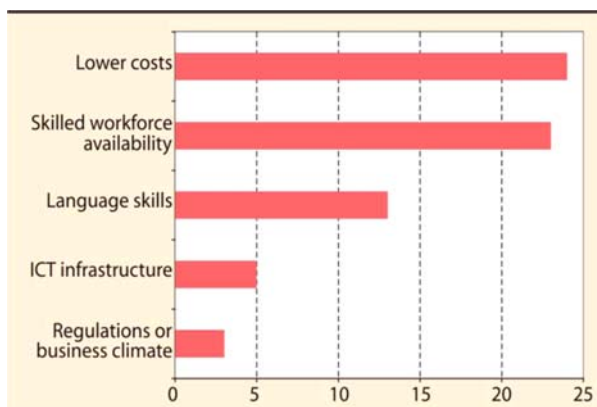
(UNCTAD and RBSC 2004). When the “back-office services” of the outsourcing firm become the “front-office services” of the service provider, the latter pays more attention to quality. Moreover, lower cost locations may offer better educated staff for the services than a developed country. For example, in India, the majority of call centre agents are university graduates while they tend to be school-leavers in industrialized countries (Taylor and Bain 2003). Lower costs also allow a company to carry more slack to meet peak loads than is possible in a high-cost country, enhancing the quality of the service. Moreover, by outsourcing standardized, routine work, companies can focus scarce resources on their core activities. Relocating some functions offshore may also be a way to cope with excess demand, as was done by IT services in coping with the Y2K problem in the run-up to the new millennium, mentioned earlier.

In terms of *locational determinants*, while cost reduction is also the leading factor, followed by availability of labour with the appropriate skills, an additional key consideration is the quality of the infrastructure, notably cost-effective and reliable telecommunications and power supply (Bajpai et al. 2004; UNCTAD and RBSC 2004; IBM and Oxford Intelligence 2004; Taylor and Bain 2003; Outsourcing Insight 2001). In addition, economic and political stability and the legal and regulatory framework are important. The weight of each factor varies according to the nature of the service. For FDI projects related to call centres, shared services and IT services, particular importance is attached to the *availability of skills* when selecting a location (figures IV.1 to IV.4). In general, a ready supply of people with good secondary or tertiary education and IT proficiency is important but not sufficient. Software development requires, in addition, specialized engineering skills, back-office work may need skills in human resources or accounting, and call centres need skills in customer interaction and marketing.⁴⁸

Language skills are, of course, critical for call centres, and linguistic traditions play a significant role in their location. Chile, Mexico and Morocco have attracted call centres serving Spanish-speaking clients in the United States and Europe. Mauritius, Morocco, Senegal and Tunisia host call centres for the French-speaking market.⁴⁹ German-speaking centres have been set up in the Czech Republic and Hungary. Japanese call centres have gone to China. Canada,

Figure IV.1. Low costs lead the location determinants of call centre-FDI projects in developing countries and economies in transition, 2002-2003

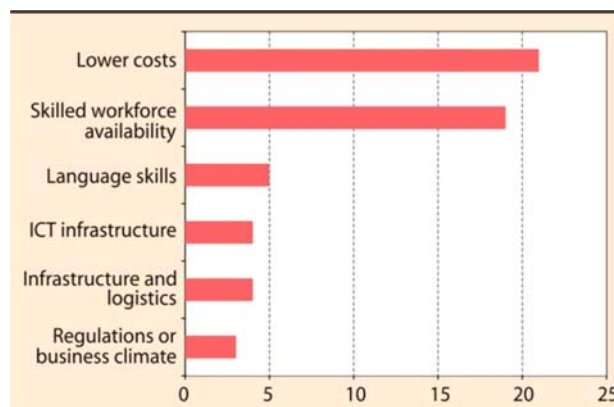
(Number of companies citing factor)



Source: UNCTAD, based on information from LOCOMonitor.

Figure IV.2. Low costs lead the location determinants of FDI projects in shared service centres in developing countries and economies in transition, 2002-2003

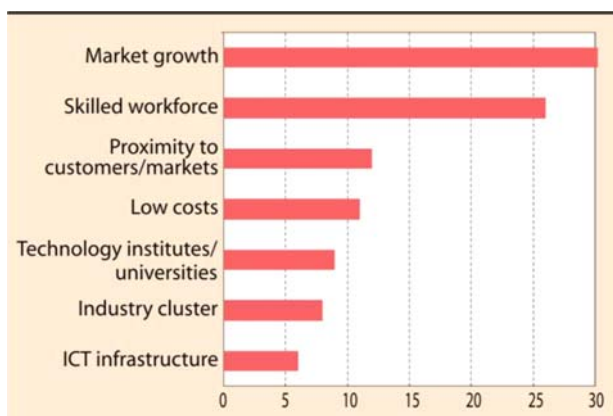
(Number of companies citing factor)



Source: UNCTAD, based on information from LOCOMonitor.

Figure IV.3. Market growth leads the location determinants of IT services FDI projects in developing countries and economies in transition, 2002-2003

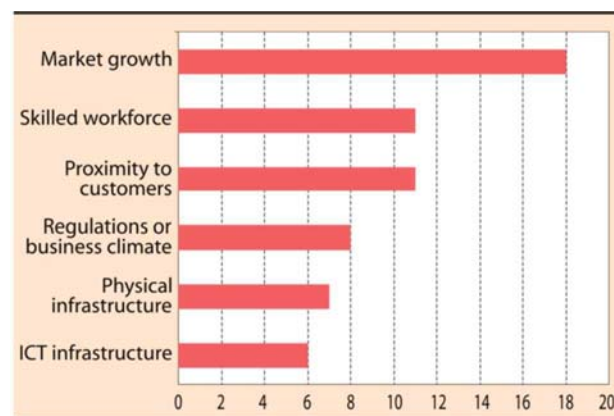
(Number of companies citing factor)



Source: UNCTAD, based on information from LOCOMonitor.

Figure IV.4. Market growth leads the location determinants of regional headquarters FDI projects in developing countries and economies in transition, 2002-2003

(Number of companies citing factor)



Source: UNCTAD, based on information from LOCOMonitor.

Ghana, India, Ireland, the Philippines and South Africa host call centres serving English-speaking markets.⁵⁰

For IT services, the presence of *universities and dynamic IT clusters* matters. Capabilities in these areas are difficult for developing countries to acquire: they take time to build and enjoy cumulative agglomeration economies. This explains why IT centres tend to cluster in only a few sites; moreover, once the first offshoring work has been attracted, there are potential learning benefits for first-movers

that reinforce their initial advantages. The pattern persists at the subnational level; for instance, in India, most of the software work is performed in a few cities (Kumar 2001a; D'Costa 2003).

Attrition and staff turnover are also important issues. Where these are high, costs rise for recruiting and training staff, and high turnover can affect the quality of the service. Whereas call centres in India have shown considerably lower attrition rates than in the United States (Outsourcing Insight 2001), they are now slightly higher (30%) than in Ireland and the Netherlands

(20-25%) and well above those of the United Kingdom (15%), the Philippines (10%) and South Africa (7%) (CM Insight et al. 2004). Rising levels of attrition in current hotspots may open up opportunities for new locations.

Telecom infrastructure and *access* remain critical to attracting all types of IT and IT-enabled offshored services. Telecommunications need to be not only reliable and stable, but also competitive. This is especially true for smaller locations.⁵¹ In the case of call centres, telecom costs can represent up to 40% of the total cost in “low-income” locations. Moreover, due to the specific quality requirements that apply to voice transmissions, access to *fibre-optic links* is important for countries that seek to attract call centre activities.

Another factor affecting location is the *time zone* of a host country relative to that of the home country. For some services, especially those that need to be provided during normal working hours, it is desirable to locate the service in the same time zone as the customers. In other cases, there are advantages to being in a completely different time zone, to offer 24-hour service. *Cultural affinity* may play a role in some offshored services, particularly in call centres. However, where this is lacking, it can be (at least partly) developed. Some call centres in India, for example, are training their staff in the accents, interests and traditions of United States customers.⁵² The Indian company Akiko Callnet has more than 100 call centres in the country and has launched a chain of 53 training institutes to create a pool of staff with the requisite skills.⁵³

As already noted, the motives for the setting up of regional headquarters differ from those of the other three categories of FDI projects, and cost considerations take lower priority in the list of determinants. Regional headquarters provide high-level services employing senior management and professionals, including a significant number of expatriates. To attract such projects, locations need to offer a good quality of life, convenient air connections and access to competent suppliers of business support services.⁵⁴ Key location determinants include proximity to customers (both external and networks of foreign affiliates located in the region), market growth opportunities, access to a skilled workforce, a supportive business and regulatory climate as well as a high-quality physical and ICT infrastructure (figure IV.4).

Only a few developing economies currently meet all of these requirements. Those that do, such as the United Arab Emirates (Dubai), Hong Kong (China) and Singapore, have been successful. Given the considerable agglomeration benefits in the location of headquarters functions, it can be difficult for newcomers to emerge as attractive competitors.

Many policy-related factors also affect the location decisions of different offshored services. Some companies have been attracted to a location as a result of promotion by the host-country government (UNCTAD and RBSC 2004). In setting up shared service centres for the European market, about 25% of all projects involved interaction with development agencies at some stage in the process (IBM and Oxford Intelligence 2004). In the same study, the provision of grants and incentives also ranked among the most important factors affecting the location decision. Interestingly, many companies choose to offshore services to countries where they already have a presence. For large European firms, this has been the third most important factor for selecting a specific country in the CEE region and the fifth most important factor when offshoring to Asia (UNCTAD and RBSC 2004).⁵⁵ The same survey also showed that internal lobbying of headquarters by a foreign affiliate can affect the choice of location, indicating an important role of after-care by investment promotion agencies to attract further offshored service activities (chapter V).

Success in attracting offshore services has a cumulative dynamic of its own – success in one set of activities can lead to success in another. India may be attracting services of all kinds (with the exception of regional headquarters, which are more attracted to other locations) because it has developed a reputation for offering efficient and reliable services. “Bangalore” has become a brand name. Other factors may reinforce the reputation effect, such as policy learning (successful sites make new entry easier as they learn to meet offshoring needs), skill spillovers across activities, scale economies in infrastructure and institutional support. Offsetting these factors may be the costs of clustering: congestion, rising wages, staff turnover and other costs, and the risk of losing proprietary knowledge to competitors. This, in turn, may lead to dispersion, offering other locations an opportunity to attract FDI.

3. European TNCs offshore less than their United States rivals

As noted above, the practice of offshoring of services started in the United States. Even in 2004, companies from that country dominate the offshoring scene. For example, more than two-thirds of India's exports of software services are to the United States. The patterns are similar in the case of FDI projects (annex table IV.1). Firms from the United States dominate, with two-thirds of all IT service projects, 60% of all call centre projects and 55% of shared service projects.

In general, European companies have shown less inclination to offshore services. In the case of pan-European shared service centres, 65% have been set up by TNCs from the United States (IBM and Oxford Intelligence 2004). In fact, as noted above, even among the largest European TNCs, less than 40% have experience with services offshoring (UNCTAD and RBSC 2004). Moreover, more than half of them do not have any plans to pursue offshoring in the near future. However, interest in offshoring varies considerably by European country, with the

United Kingdom following the most closely behind the United States.⁵⁶ In all four categories of export-oriented FDI projects analyzed above, the United Kingdom accounted for the largest share of projects originating in the EU (annex table IV.1).⁵⁷ These findings were confirmed in the survey conducted by UNCTAD and RBSC. It showed that, while more than half of responding TNCs based in the United Kingdom (and in the Benelux countries) had already offshored some services, the corresponding figure in German-, French-, Spanish- and Italian-speaking countries was much lower.⁵⁸

Although United Kingdom companies have offshored some of their operations for several years, particularly to India, the trend accelerated in 2003 (table IV.9). Offshoring has mainly involved call centres, but also legal services and various back-office functions (billing for Thames Water; customer relations and passenger revenue accounting for British Airways). At the same time, some companies have deliberately decided not to offshore,⁵⁹ and a few have moved operations back in response to customer complaints. In the Netherlands, more

Table IV.9. Selected offshoring cases, United Kingdom, 2003-2004

Service	Company	Function	Country and number of jobs or value involved
Financial services (banking, insurance)	HSBC	Back-office processing jobs	4,000 by the end of 2003 in India, China and Malaysia. Another 3,500 were announced in June 2004.
	Norwich Union/ Aviva	Administrative insurance jobs; 350 in call centres, 2000 in back-office and administration	2,350 in India by end of 2004
	Lloyds TSB Barclays Axa	Call centre jobs Back-office staff	1,500 jobs in India by end 2004 500 to India 700, some to India
	Abbey National	Back-and-front office work	400 jobs to Bangalore
Distribution services	Tesco	Business support centre	350 to India
Telecommunication services	BT	Call centre	2,200 by 2004 to India
Transport services	British Rail	National Rail inquiries	600 to India
Health services	NHS	Fast-track centres offering surgery to NHS patients. Foreign providers run mobile operating units. Netcare plans to bring over surgical teams from South Africa on rotation once every 11 weeks	Non-UK health care providers, including Netcare of South Africa, amounting to a total of £2 billion
	NHS	£896-mn IT contract to modernize NHS	Tata Consultancy Services (India) part of a consortium
Other government	Greater London Authority	Software for toll charging	A \$10 million contract to Mastek

Source: UNCTAD, based on various newspaper articles in the United Kingdom.

than 200 firms have offshored IT work to India,⁶⁰ and it is estimated that 50,000 IT jobs will be created in India over the next ten years.⁶¹

Among large European companies that have experience with offshoring, most are satisfied with the associated outcome: 83% stated that projects were partly or entirely successful, while only 3% were of the opposite opinion (UNCTAD and RBSC 2004). In light of the considerable advantages reaped through offshoring, this raises questions related to the future competitiveness of companies that do not consider such opportunities. If companies that do offshore become more competitive, others – in developed as well as developing countries – may be compelled to jump onto the bandwagon.

E. Impact on host countries

FDI in export-oriented services offers a number of economic development benefits for host countries. Key benefits relate to increased export earnings and the impact on the labour force: job creation, higher wages and upgrading of skills. Jobs in IT-enabled or IT services are typically better paid than in, for example, assembly work or other manufacturing activities. Given the short time needed to implement an FDI project in such services, attracting offshored services can offer fast-track job creation, especially in locations where the skills needed already exist. Obviously, this also means that investment projects won may easily be lost; sunk costs are typically low for simple operations, and the risk of footloose behaviour is high – although this risk diminishes the more skill-intensive operations are.

FDI related to the offshoring of services may be desirable from a spillover perspective, especially if the exported services are also supplied to the domestic market. Positive spillovers in terms of raising the competitiveness of human resources and improvements in ICT infrastructure and business services that accompany significant services FDI benefit all sectors of the economy. Most of the associated skills are readily transferable to other parts of the economy: skills involving computers, sales, languages, finance, accounting and software development are in high demand locally and internationally. Moreover, negative spillovers in terms of environmental pollution and exploitation of natural resources are likely to be limited.

The scope for upgrading has improved as the nature of offshored services has evolved. Initially, most work tended to be in low-end IT-enabled services such as data entry and basic programming. These activities require only basic levels of computer literacy and limited interaction between customers and suppliers. Foreign companies that set up the first back-office functions in India in the mid-1990s are now offshoring more sophisticated tasks as well, such as software development and design, financial analysis, architectural services, tax preparation and medical analysis.⁶² The upgrading of the skill and technology content of offshoring continues as capabilities in developing-country suppliers improve and firms in industrialized countries see the potential for and economic benefits of offshoring.

Meanwhile, since export-oriented services tend to be relatively skill-intensive and require advanced infrastructure, the scope for broader development benefits outside the most advanced regions of an economy may be limited. There are also indications that the scope for linkages between foreign affiliates and local firms is small, especially in the area of software development (Kumar 2001a). Moreover, an influx of export-oriented services FDI may attract the best skills to certain types of service activities that, unless continuously upgraded, may move on to another location as the competitive situation changes. Increased competition for skills may have adverse effects on other industries of the economy. The experience of India and some other destinations of offshored services is reviewed next.

1. India

The offshoring of software development and, later, back-office and call centre services, has driven India's rapidly expanding service exports. During the past decade, the value of exports of software and other services jumped from less than a \$0.5 billion to \$12 billion in 2003-2004, according to the National Association of Software and Service Companies (NASSCOM). In parallel, the export intensity of the Indian software and service industry rose from 58% to 78%, and the share of these services in total exports from India increased from 3% to 21% between 1996 and 2003 (RIS 2004). Whereas software exports still account for the lion's share of these exports, IT-enabled services have emerged as an increasingly important component, rising from \$0.6 billion in 1999-2000

to the current level of \$3.6 billion. Of India's software and service exports, 68% go to the United States and another 14% to the United Kingdom (Joseph and Parayil 2004).⁶³ In 2001, India's share of the global market for offshore IT and IT-enabled services was estimated at 25% – second only to Ireland – while for offshore IT-enabled services only the figure was as high as 67% (McKinsey & Co. 2003; Scholl et al. 2003). According to estimates by NASSCOM, the market for IT-enabled services will continue to grow fast and could be worth \$17 billion by 2008.⁶⁴

What has been the role of FDI in India's success as an offshore location?⁶⁵ In software development, TNCs have played a key initial role in the development of the Indian industry (see box IV.5 for the case of Nortel Networks of Canada). Some early entrants (such as Texas Instruments) led more TNCs to consider India as an attractive location for offshored services. However, FDI has not been a dominant feature. In 2002, foreign affiliates accounted for 20% of total export revenues in the software industry.⁶⁶ While foreign investors have created new software jobs in India, most of them entered the country when the domestic industry was already well developed (Kumar 2000). Today, leading Indian companies (Tata Consultancy Services, Infosys Technologies, Wipro Technologies, Satyam Computer) are on par with, or even ahead of, many of their foreign rivals in terms of profitability.⁶⁷ India has earned a strong reputation on account of high quality services. IT firms in India typically hold the necessary quality certifications.⁶⁸

In contrast, TNCs have played a critical role in India's exports of back-office services (Patibandla and Petersen 2002; McKinsey & Co. 2003). The IT-enabled service industry in India began to evolve in the early years of the 1990s, when companies such as American Express, British Airways, GE and Swissair set up their own offshore operations in India. Today, a large number of foreign affiliates operate IT-enabled services in India (table IV.10). According to NASSCOM estimates, foreign affiliates in 2002-2003 accounted for 58% of exports of offshored business processes; their share is expected to increase in the next few years.⁶⁹ TNCs have provided capital, knowledge and expertise, new infrastructure, access to markets and fostered the formation of new companies (McKinsey & Co. 2003).

Among IT-enabled services, companies are offshoring to India customer care, finance, human resources, billing and payment services, administration and content development (table IV.11). There is increasing offshoring of upcoming service lines involving higher value-added activities such as engineering and design, knowledge processing and logistics. It has been estimated that the industry generates about 240,000 jobs. The customer-care segment accounts for about 39% of employment, and has recorded the highest growth rate in recent years.

The total number of foreign affiliates in IT-enabled services in India increased from 57 to 102 between 1997/98 and 2002/03. As a result, the share of foreign firms in the total number of firms in this industry rose from about 13% to 20%. These companies are concentrated in a few Indian states, notably Karnataka, Maharashtra, Delhi, Tamil Nadu and Andhra Pradesh (table IV.12). The export intensity is as high as 93% for foreign affiliates, whereas the corresponding share for local firms was about 70%.

There is a high regional concentration of export production. Even within states, one or two metropolitan centres account for the bulk of exports. Thus, Bangalore in Karnataka, Mumbai and Pune in Maharashtra, Noida and Gurgaon in the Delhi area, Hyderabad in Andhra Pradesh and Chennai in Tamil Nadu are the centres of software and service activities. In terms of growth, during the past five years foreign firms have been more dynamic than their local counterparts, but there is significant regional variation in the generation of export earnings and employment. Foreign affiliates in IT-enabled services in Delhi, for example, accounted for 24% of employment but only 14% of exports in 2002/03. Conversely, in Karnataka, their share of employment was 23% whereas their export share was 45%.

Employment in foreign affiliates has expanded faster than in local firms during the past five years. In software development, foreign firms now account for about 20% of total employment; in IT-enabled services the share is about 28% (RIS 2004). There is hardly any difference in the employment intensity of foreign and local firms, but highly skill- and design-intensive activities generate fewer jobs than less skill-intensive activities such as data entry. In software development, the average employment per \$1 million of exports is in the order of 30 persons. For the IT-enabled service industry as

Box IV.5. Nortel Networks' offshoring to India

In 1989, Nortel (Canada) had itself set an ambitious target of increasing its turnover from \$6 billion to \$20 billion by 2000. To achieve this, it started expanding its R&D capabilities for which it required highly educated personnel. However, the company saw a serious constraint in terms of a shortage of locally available scientific and technical skills. Enrollment in science and technology had already peaked in North America and the college-age population was declining. This posed a challenge for a company that used to recruit the top 10% of science students from selected universities in North America. It therefore decided to look globally for technical talent. Thus, the starting point was not cost savings, but the need to access the best and brightest skills.

This was when Nortel set its sights on India – it saw the potential of India's nascent software industry. India also offered the rule of law, democratic institutions, judicial and banking systems as well as process protection. Consequently, in the early 1990s, Nortel decided to set up an offshore software development centre in the country. Another advantage was that the time difference with North America allowed the possibility of doing R&D 24 hours a day. Moreover, India was churning out thousands of English-speaking graduates with solid engineering and programming credentials. While many of them headed straight to North America and Europe for further study or to join TNCs, thousands more stayed back. Thus, Nortel found a pool of programming talent available for less than 30% of the cost of a North American engineer.

Some hurdles remained. Colleagues in North America were not convinced that the farming out of jobs to India was a good idea. Many managers worked hard to keep jobs at home to retain control. Some were dubious about the quality of Indian programmers. Still others were suspicious that their new Indian partners would share what they learned with Nortel's competitors.

In Mumbai (then Bombay) and Bangalore, Nortel identified a number of companies, each of which was awarded small R&D contracts. Among the jobs assigned was a project to convert software code from one computer language to another. Other assignments involved the development of tools for testing telecom software. From the outset, the goal was to engage the minds of Indian engineers and steadily ratchet up the sophistication of the

work done on Nortel's behalf. Whereas the Indian programmers completed most of the projects successfully and Nortel began assigning more complicated jobs, some problems began to emerge. People in India were not familiar with working in an environment with proprietary software and advanced equipment, and required guidance. India's top software companies at the time were very good at handling chores involving the translation of software from one type of technology platform to another, but less adept in finding imaginative approaches to creating applications or products. Moreover, India's companies were operating under severe restrictions: they could not raise money, list on stock exchanges or import computers for personal use without government permission. In addition, at the time, telecom and power networks were inefficient.

After 1991, the Government encouraged TNCs from the United States to set up operations in India, which put pressure on India-based firms to upgrade. In this phase, Nortel's influence was crucial; it encouraged Infosys and Wipro to develop groups of employees who worked exclusively on Nortel projects. The programmers were assigned their own offices and telephone exchanges, and Nortel spent millions on satellite links, switches and other telecom gear.

To outsiders, the offshored group assigned to handle Nortel projects looked very much as if they were part of Nortel's global workforce, and the R&D units became known as dedicated offshore software development centres. Infosys and Wipro would eventually set up many such centres on behalf of dozens of the world's largest TNCs.

The Indian firms learned quickly and gradually won the confidence of their Nortel colleagues in North America. Indian programmers began getting international experience, particularly during the initial stages of most projects, when they, along with managers, spent time in North America on customer sites to gain a detailed understanding of what was required. Most would then return to India to write the necessary programmes. Only a small part of this work involved leading-edge technology; when the North American firms moved from one generation of technology to the next, they would hand over responsibility for the older part to India and concentrate on the newest products.

Table IV.10. Leading foreign affiliates in India's IT-enabled service industry, 2003-2004

Company	Service lines	Number of employees
Accenture	Pharmaceutical and insurance back-office functions, HR and procurement management, IT support and customer relationship management	4 300
American Express	Financial accounting, data management, information analysis and control, administration, staffing, payroll services	4 000
AOL	Customer support, back-office operations	1 500-1 900
AXA Business Services	Claims processing, accounting, telemarketing, tax consulting, compliance, financial analysis	800
Convergys India	Call centre services	3 000+
Dell	Customer support services	3 000
EDS	Data entry, phone-based marketing, payroll, credit cards, loans and mortgages, medical and insurance claims	700
Ford Business Services Center	CAD, CAM, e-mail support services	500
GE Capital	Client services; remote IT help desk, software distribution; server services; remote service support, data centre; network services; remote network support; application services; software quality assurance; payment services	11 500
Healthscribe India	Medical transcription, data processing, hospital information services, customer support, billing, claims processing, account receivable	1 200-1 250
HP Global eBusiness Operations	Internal financial back-office for HP	1 500
HSBC Electronic Data Processing India	Account transactions, general accounting, credit/debit card services, cheque processing, benefits administration, recruiting and staffing, payroll services	4 500
JP Morgan Chase	Transaction processing	1 200
Sitel India Private Limited	Customer support services	1 000
Standard Chartered	Banking operations, global HR support, software development and maintenance, global treasury operations support, IT helpdesks	3 000

Source: UNCTAD, based on company interviews and press releases.

Table IV.11. Service lines in IT-enabled services in India, 2001-2004
(Number of employees and millions of dollar)

Service line	2001-2002		2002-2003		2003-2004	
	Employment	Revenue	Employment	Revenue	Employment	Revenue
Customer care	30 000	400	65 000	810	95 000	1 200
Finance	15 000	300	24 000	510	40 000	820
Human resources	1 500	30	2 100	45	3 500	70
Payment services	7 000	110	11 000	210	21 000	430
Administration	14 000	185	25 000	310	40 000	540
Content development	39 000	450	44 000	465	46 000	520
Total	106 000	1 475	171 100	2 350	245 500	3 580

Source: NASSCOM 2004.

whole, this figure is about 68 persons, and it is 88 for content development and 79 for customer care. Thus, employment generation in software is only about half of that in IT-enabled services.

The services offshored to India appear to be moving towards higher value-added levels. Although it has been argued that Indian firms, by and large, still operate at a relatively low end of the value chain (Arora et al. 2000; D'Costa 2003), some evidence suggests that they are moving up fast (Joseph and Abraham 2002;

Kumar 2001b). Still, India is yet to make its presence felt in the growing area of embedded software. Significant opportunities for upgrading also exist in IT-enabled services. The earliest services offshored by a company tend to be relatively standardized and of limited strategic importance, but if the first attempts succeed, more sophisticated tasks tend to follow. For instance, in the processing of insurance claims, the first step is to enter simple information into a standard form. The next step is to take over some investigation and valuation of claims. Later,

Table IV.12. Export intensity of foreign and local firms in India's software industry, by state, 2002/03
(Per cent)

Location	Foreign	Local
Delhi	95	72
W.Bengal	98	85
Gujarat	0	74
Maharashtra	85	76
Andhra Pradesh	98	87
Karnataka	94	76
Tamil Nadu	89	77
Kerala	0	84
Others	80	70
Total	93	70

Source: RIS 2004, based on data compiled from the NASSCOM Directories.

accountants or engineers are allowed to identify “unusual” (fraudulent or exaggerated) claims (Dossani and Kenney 2004, p. 12). The experience of GE points in the same direction (box IV.6). Some Indian companies – such as

Kale Consultants, a Mumbai-based company – have diversified from software development into IT-enabled services and deepened their relationships with foreign clients (Dossani and Kenney 2004, p. 33).

In seeking to leverage its position as a leading destination for offshored services, India is seeking to diversify its exports. Currently, two countries (the United States and the United Kingdom) account for 82% of the country's exports of software and IT-enabled services. But, India may be in the process of harnessing its growing trade relations with other economies in Asia, such as the ASEAN countries. To enhance the productivity, efficiency and competitiveness of domestic users, to realize the potential for linkages and spillovers and to promote economic growth, including at the regional level,⁷⁰ a stronger domestic market-orientation would help. Another related challenge is that the boom in the software and IT-enabled service industry may lead potentially to adverse effects on other parts of the economy that compete with the IT industry for skilled manpower (Desai 2000).

Box IV.6. Upgrading offshored service operations in India: the case of GECIS

GE Capital International Services (GECIS) started operations in India in 1997 by providing call centre customer support and back-office services, such as data entry and transaction processing to other GE companies. Since inception, the Indian operations have contributed to cost savings of 40-50% (or about \$300 million annually) for GE. Employment in India has grown to more than 11,500 jobs, and annual revenues stand at about \$1 billion. India is now hosting the global company headquarters of GECIS, which also has operations in China, Hungary and Mexico.

Gradually, GECIS India has generated internal pull from other GE companies by demonstrating cost and quality benefits, investing in infrastructure and implementing so-called “six-sigma processes” to deliver improved quality. GECIS India now provides services to nearly 300 processes from 30 internal GE businesses worldwide. For instance, 30% of all account closings for GE are done in India; the target is 100%.

Source: NASSCOM 2004.

In 2000, GECIS India started adding high-value products to its portfolio. At present, it offers, for example, IT helpdesk, risk management, actuarial services and loans and claim processing, making it one of India's largest providers of back-office services. Continued success has led to ambitious plans for the future: GECIS plans to set up three new contact centres in addition to the present facilities at Hyderabad and Delhi, at an estimated investment of \$83 million. The company aims to become the largest provider of remote services by capturing a 10% market share of global remote services.

GE has also offshored R&D work to India; it has leveraged the scientific talent pool of the country in its John F. Welch Technology Center in Bangalore. Indian scientists and engineers are working on R&D in such areas as electronic and electrical systems technology, ceramics and metallurgy, catalysis and advanced chemistry, polymer science and new synthetic materials and power electronics. The centre, where two-thirds of the employees have advanced education degrees, has already filed for more than 17 patents.

2. Other Asian locations

Apart from India, offshored services are playing a growing role in several Asian economies. *The Philippines* is an attractive country for offshoring of business processes thanks partly to its cultural affinity to the United States and American-style English speakers. It also enjoys a reputation as a stable, fast-growing economy with rapid telecommunication and technological advances.⁷¹ Although the labour pool is smaller than in India and costs are somewhat higher, it is, nevertheless, frequently regarded as the closest competitor to India. Its call centre industry in 2003 employed more than 27,000 people, a figure that is expected to double in 2004. Intel, Microsoft, Safeway and Kodak are among companies that have opened Filipino call centres, most of which are located in Manila. There has also been rapid growth in shared service centres, due to a highly skilled workforce in accounting, software writing, architectural services, telemarketing and graphic design. AIG, Caltex, Procter & Gamble and HSBC operate among the largest shared service or call centres in the country. Foreign companies have in this way created many new jobs for college graduates and boosted the country's exports of services.⁷²

In *Malaysia*, third-party call and contact centres are growing at the rate of 100-200% since 2000. One of the country's strengths is the availability of workers speaking English, Malay, Mandarin, Cantonese, Hindi and Tamil (MIGA 2003). BMW, Citigroup, Dell, DHL, Ericsson, Hewlett Packard, HSBC, IBM and Royal Dutch Shell have all set up regional service hubs in Malaysia, while AIG and Motorola are among companies with software development centres in the country.⁷³ *Singapore* offers strong financial service skills and excellent infrastructure, but high salary and real estate costs. It also targets leading-edge offshore functions such as remote robotics management, healthcare and genetic diagnostics (A.T. Kearney 2004) and has become one of the key hubs for regional headquarters. Of the 7,000 foreign affiliates in Singapore, more than 4,000 have been assigned regional responsibilities.

China may well be the next major destination for the offshoring of services. The country is becoming a key product-development centre for GE, Intel, Microsoft, Philips and other electronics TNCs. Call centres for clients in Japan

and the Republic of Korea are springing up in coastal cities. Many industries are clustered in certain areas, with high-tech centres in Beijing and Shenzhen, financial services in Shanghai and Hong Kong (China) as a global financial centre. A large pool of skilled people and low costs are China's key advantages, but language skills and cultural factors tend to tilt the scales in the opposite direction.

3. Latin America and the Caribbean

Brazil, Chile, Costa Rica and Mexico have attracted some service production with relatively low labour costs and proximity (important due to similar time zones) to the United States. Some 8% of all large European TNCs with offshoring experience have activities in this region (UNCTAD and RBSC 2004). AOL Time Warner, Unisys and Xerox are examples of companies that are taking advantage of high investments in telecoms and IT infrastructure and a large and relatively low-cost labour pool. Procter & Gamble's shared service centre in Costa Rica provides support to 28 countries (box IV.7). Chile has attracted FDI in shared services by, for example, BHP Billiton, Nestlé, Shell,⁷⁴ Sodexo and Unilever. Advanced telecommunications at competitive costs are important strengths for Chile. The data on FDI projects in export-oriented services showed that, for IT services, Mexico has attracted projects in software development and Brazil in advanced R&D production. A number of countries in the Caribbean have successfully attracted offshored services.⁷⁵

4. Africa

In Africa, export-oriented FDI in services has mainly been in call centres. South Africa is the most prominent player, although countries such as Ghana, Mauritius, Morocco, Senegal and Tunisia have also received investments linked to offshore services. In 2003, there were more than 400 call centres in South Africa, employing close to 80,000 people. It is estimated that the number of work stations related to call centres and back-office services will increase by more than 200% until 2007. To date, FDI in the South African call centre industry has been quite limited (CM Insight et al. 2004), but EDS, Sykes and Merchants are among the largest call centre employers in the country.⁷⁶

5. Central and Eastern Europe

Several CEE countries offer a well-educated, multilingual workforce, competitive labour and property costs, central location and good infrastructure. For a number of European companies, offshoring in the same time zone is a more attractive option than shifting activities further away. With EU enlargement, some of the new EU member countries also offer attractive locations for regional headquarters. According to one ranking, the *Czech Republic* offers the most attractive conditions for offshoring to CEE

(A.T. Kearney 2004). Among the larger investments in the Czech Republic in 2003 were DHL's decision to set up a European IT centre, creating 500 jobs; Accenture's expansion of its service centre that could increase from 300 employees in 2003 to 1,500 in 2008; and the transfer of Philips' European accounting services from Dublin to Łódź, creating 400 jobs.⁷⁷ *Poland* was the second most attractive CEE location, followed by *Hungary* (A.T. Kearney 2004).⁷⁸ In IT services, countries such as the Russian Federation and Romania are emerging on the investors' list.

Box IV.7. Procter & Gamble's shared service operations for the Americas

Global Business Services is Procter & Gamble's (P&G's) worldwide shared services organization. It provides back-office support to nearly 98,000 employees in over 80 countries and comprises three centres: Manila (Philippines), Newcastle (United Kingdom) and San José (Costa Rica). In the process of selecting these three cities as locations for its Global Business Services centres, the company reviewed more than 120 cities worldwide. The key reasons for choosing Costa Rica were the pool of highly educated and skilled labour, the country's long-standing democratic tradition, an attractive cost structure and an investment-friendly approach to foreign investors.

The San José service center started operations in late 1999. By 2004, it was providing 28 different services to 63,000 P&G employees in 22 countries in North and South America. This includes serving 58 plants and 15,000 retirees. Services delivered from Costa Rica include employee services such as payroll, benefits, relocation, travel expense accounting and compensation; and accounting and financial services such as cost accounting, banking, treasury and affiliate accounting, purchasing, and IT support.

Some of the main activities undertaken by the Costa Rican centre include:

- Closing the books for 132 legal entities and managing 310 bank accounts in 35 different banks across 22 countries.
- Payroll and salary planning and compensation for 57,000 P&G employees.

- Annual processing of some 2.5 million invoices and managing accounts payables in the order of \$24 billion.
- IT support to 5,000 sales representatives in the United States.

Global Business Services has created 1,300 high value-added service jobs in Costa Rica, thereby helping to mitigate the risk for brain-drain from the country. The local operation has also promoted the transfer of skills through intensive training programmes. The company has "raised the bar" on recruiting and educational standards, reviewing over 12,000 résumés and requiring applicants to demonstrate proficiency in English and international accounting standards.

The company has recently become involved in global negotiations with strategic partners concerning the outsourcing of some functions previously handled by P&G Global Business Services. The first strategic partnership implemented was with Hewlett Packard with regard to IT support services starting 1 August 2003. From 1 August 2004, Hewlett Packard will also handle the accounts payable services. In November 2003, a real estate company, Jones Lang LaSalle, took charge of the facilities services and, since 1 January 2004, IBM has provided employee services to P&G. These partnerships will allow the centre in Costa Rica to attract higher value added work more concentrated in its core business activities. P&G expects more and more sophisticated services to be handled by its Global Business Services centres in the future.

Source: Procter & Gamble.

F. Implications for home countries

What is the likely impact of services offshoring on home countries? In response to the expansion of offshoring of services, there have been vocal reactions in both the United States and Europe. Concerns have been expressed that the growth of white-collar jobs in export-oriented services in countries such as India, the Philippines and the Caribbean signals employment losses in developed countries and potential harm to their economies. Proponents, on the other hand, argue that the offshoring of services will be beneficial to developed countries. As one observer put it (Drezner 2004, p. 23): “believing that offshore outsourcing causes unemployment is the economic equivalent of believing that the sun revolves around the earth: intuitively compelling but clearly wrong”.

It should be reiterated that this is not simply a North-South issue. As noted above, a significant share of offshoring takes place among developed countries. For example, Canada, Ireland and various Western European countries remain among the most attractive locations for shared service centres in Europe (IBM and Oxford Intelligence 2004), and more than half of all FDI projects related to call centres in 2002-2003 went to developed countries. Lower wages are thus not the only driver of services offshoring, and rich countries gain as well as lose jobs in a narrow sense.

Offshoring is essentially a manifestation of a shift in production in response to comparative advantage. It offers all the advantages – and costs – of such a shift. It is not a “zero sum game”, in which one party (the countries receiving service work) gains at the expense of the other party. On the contrary, it offers three main benefits to developed countries.

- Offshoring, undertaken by companies to reduce costs and/or improve quality and delivery, enhances their competitiveness and, by extension, benefits the home country. Conversely, companies that refuse to offshore, risk losing competitiveness to those that undertake it.
- It enables the home (or importing) country to shift to more productive and higher value activities. Economic dynamism depends on adaptation to changing comparative advantages, and offshoring is no exception.

As long as resources are mobile and workers move to new jobs, such changes are not just beneficial but also necessary for long-term prosperity. The impact is no different from that of technical change that makes some jobs redundant and creates others, generally at higher wage levels. And it is no different from the constant shifts in patterns of comparative advantage in manufactures that have driven trade growth in the past.⁷⁹

- Exporting host countries use some of their export revenues on imports of advanced products exported by the industrialized countries.

At the same time, the current size of the offshoring phenomenon needs to be kept in perspective. First, whereas offshoring is likely to grow over time, most *outsourcing* remains predominantly a domestic affair; only a small proportion of all business-process outsourcing is international and, within that segment, much is outsourced among developed countries (Scholl et al. 2003). Second, there is no sign of offshoring leading to a decline of similar services in home countries. Recent estimates undertaken on behalf of the United Kingdom Department of Trade and Industry show that the number of call centres in that country is likely to increase over the next three years, and that associated employment will increase from below 500,000 in 2003 to 650,000 by 2007.⁸⁰ In the United States, employment in call centres is expected to grow from 3% in 2001 to 5% of the workforce by 2010 (Mosher and Gist 2002). Moreover, in both these economies, employment in those industries that are expected to be the most affected by offshoring is in fact showing the fastest growth. Indeed, the number of IT-related jobs in the United States is expected to grow by 43% by 2010 (Mann 2003) – an example of restructuring.⁸¹ Moreover, the 3.4 million service jobs that are forecasted to be offshored from the United States until 2015 (or about 300,000 annually over the next 11 years) seem insignificant compared with the average normal turnover of some 4 million jobs every *month*.⁸²

Jobs created in exporting locations through offshoring do not equal jobs lost in importing countries. As mentioned above, the offshoring of services is sometimes done to cope with excess demand and in response to a shortage of adequately trained people at home. Among large European TNCs, 79% of those with experience in offshoring identified several ways

in which home countries benefit, including through lower prices, improved competitiveness, increased skills and higher employment (UNCTAD and RBSC 2004).

Interesting parallels can be drawn with the relocation of jobs in ICT-related manufacturing, when assembly operations shifted to East Asia. Together with technical progress, the globalization of hardware production cut the prices of ICT products, increased investment in ICT hardware and contributed to higher productivity and growth. Many new jobs emerged in the United States to integrate ICT equipment into the workplace and such jobs grew twice as fast as overall employment (Mann 2003). The globalization of IT-based services is likely to be similar. In fact, it may diffuse higher productivity to activities and firms that did not share in the productivity revolution of the 1990s (e.g. healthcare and SMEs). Services are more pervasive in their effects, and their benefits are likely to be widespread. IT jobs are predicted to grow three times faster than total employment in the United States, and the “second wave” of productivity growth based on IT-services could even exceed that in the 1990s. Lower cost of inputs boosts economic activity, investment and, eventually, job creation. According to a recent study, the offshoring of IT services in this way helped create 90,000 net new jobs in the United States in 2003, and more than 300,000 net new jobs could be created by 2008 (ITAA and Global Insight 2004).

What about the “jobless recovery” in the United States? Employment in white-collar service activities has not increased since 2001, as compared with an average annual gain of 5.5% over the past six cycles (Roach 2004). Is offshoring to blame? Only to a very small extent. It may have affected some white-collar jobs but other factors are far more significant. Only 2.8% of all IT software and service jobs that disappeared in the United States between 2000 and 2003 were lost due to offshoring (ITAA and Global Insight 2004). Data from the Labor Department in the United States show that only 2.5% of all job losses during the first quarter of 2004 (or 4,600 out of a total of 182,000 redundancies) were the result of offshoring.⁸³ Technical change is a far more important cause of job losses. Bank tellers, answering services and secretaries are replaced by automated teller machines, voice-answering technologies and word-processing software. Further jobs will be

lost as software is developed to undertake computer programming and financial analysis.

Thus, somewhat paradoxically, a considerable part of the gains from offshoring will be reaped by the importing countries, notably developed economies. This conclusion was confirmed in another recent study that found that most of the benefits from offshoring flow back to the United States (Agrawal et al. 2003; McKinsey Global Institute 2003). Benefits include lower prices to consumers, expanding markets for exports and higher corporate profits. This study concluded that the United States gains twice as much as India from offshoring. For every dollar spent on offshoring to India, it found that firms in the United States reaped \$1.12-\$1.14 in benefits.⁸⁴

However, even if long-term benefits are substantial, there are short-term challenges to consider. All shifts in comparative advantage entail adjustments at the micro level. Some people do lose jobs, and there is likely to be a transition period in which they search for new employment opportunities. Countries with more flexible labour markets stand a better chance to adapt. People may have to acquire new skills or move to new locations to become employable. There are, in other words, real adjustment costs – the role of the Government is precisely to minimize or ameliorate such costs and make the transition smoother and more efficient. The institutional challenge for home countries is to ease the transition process for those directly affected by offshoring, upgrade skills and increase innovation. This does not require measures to force service jobs to stay at home, but rather more constructive policies that encourage education, training and R&D. Protectionist measures aimed at arresting the offshoring trend would likely destroy rather than save jobs in developed countries.

Countries need to prepare for such adjustment policies. The tradability revolution has fundamentally changed the environment for doing business and opened completely new opportunities for restructuring the production of corporate service functions across borders. This new international division of labour has the potential for producing considerable welfare gains for the world economy as a whole – possibly, in the longer-term, even more considerable than in the case of manufacturing activities.

Notes

- 1 See IDA Ireland, <http://www.idaireland.com/news/showRelease.asp?storyid=205>.
- 2 The centres, employing about 2,200 people, strengthened BT's competitiveness and improved customer services. "BT Retail announces extra investment in UK contact centres and confirms plans for two centres in India". Press release from BT, 7 March 2003, <http://www.bt.com/index.jsp>.
- 3 "ACS announces creation of new technology center in Ghana to support expanding local workforce", *www.prnewswire.com*, 29 May 2003.
- 4 "Bank of America sets up Indian outsourcing subsidiary", *IDG News Service*, 18 February 2004.
- 5 Information here includes voice, words, data, pictures and any combination of these.
- 6 For early treatment of increased trans-border data flows, see UNCTC 1983a, b; UNCTC 1984a, b; Robinson et al. 1989; Sauvart 1986a, b.
- 7 The cost of one megahertz of processing power fell from \$7,600 in 1970 to 17 cents by 1999. The cost of sending 1 trillion bits of data plummeted from \$150,000 in 1970 to 12 cents by 1999. The entire contents of the United States Library of Congress can now be transmitted across the United States for \$40, and soon it may be storable on one computer chip. In 1930, the cost of a minute's telephone call from New York to London was \$300 at today's prices; today it is a few cents (UNIDO 2002). It has also been estimated that the cost of an international 2Mbps fibre leased line in India dropped by up to 80% between 1997 and 2001 (McKinsey Global Institute 2003, exhibit 5).
- 8 "Outsourcing: the myths and facts", *Wall Street Journal Europe*, 1 March 2004.
- 9 On fragmentation of manufacturing, see Arndt and Kierzkowski, eds. 2001. The trends in manufacturing are carried much further in services because they offer greater scope for separating processes.
- 10 For example, once the "expert system" for answering questions is written, anyone anywhere with sufficient skills can navigate through the decision tree on the computer screen and act like an expert. Spreadsheet software with embedded equations and the ability to download data implies that anyone with the requisite skills can provide analysis for a financial enterprise. Computer programming, at one time akin to an art, has been modularized and decomposed into three stages: design, implementation in computer code and maintenance and repair (e.g. debugging). This is similar to accelerating the standardization of manufacturing processes in the traditional product cycle, allowing its diffusion to new locations.
- 11 Cultural factors may also inhibit trade. A case in point is the disparate growth of home-working via e-mail in different countries and institutions, illustrating how social and work traditions can hinder the externalization of services beyond a single company.
- 12 Data on trade in services, and especially intra-firm trade, suffer from serious shortcomings (Kirkegaard 2004).
- 13 During the same period, the shares of Germany and Japan, two countries in which the private sector has undertaken less offshoring, fell by 0.6 and 2.7 percentage points, respectively (WTO 2004a).
- 14 However, in the import statistics of the United States, India and Ireland do not feature among the top 10 source countries. The leading suppliers of "other private services" in 2002 were the United Kingdom, Bermuda, Canada, Germany and Japan (Borga and Mann 2003). According to data from the United States Department of Commerce, Bureau of Economic Analysis, total imports of (mode 1) services from India was only \$80 million in 2002, as compared to the \$6.4 billion reported by IndiaStat as total services exports (mode 1 and 3) to the United States and Canada (Kirkegaard 2004).
- 15 See, for example, "Companies finding some computer jobs best done in U.S.", *New York Times*, 28 April 2004.
- 16 This has long been true in insurance and banking. In the former case, it has been justified by consumer protection. The quality of an insurance policy can be determined only when damage occurs (e.g. to a car or to health), while the premium payment takes place at the time of purchasing a policy. In banking, it may be justified by the need for prudential supervision to guarantee the safety and stability of financial systems.
- 17 According to the company: "The best outcome for our staff, shareholders and customers is to continue to employ people in countries in which we operate, provided the fiscal and regulatory climate is supportive of business", *The Guardian*, 18 October 2003 (<http://www.guardian.co.uk/business/story/0,3604,1065770,00.html>).
- 18 For more on the educational profile of workers in IT-enabled services, see United States, Department of Commerce 2003b, 2004b; Kirkegaard 2003.
- 19 Early examples include offshoring of data entry to India and the Caribbean (UNCTC 1989c).
- 20 Y2K is short for "Year 2000". Many computers needed upgrading of their software programmes to cope with the change from year "99" to "00".
- 21 See Forrester Research, 8 December 2003 (www.forrester.com/ER/Press/Release/0,1769,867,00.html).
- 22 Forrester Research, cited in "Growth of offshoring may accelerate", *CNNMoney*, 17 May 2004.
- 23 Deloitte Research, "The cusp of a revolution: how offshoring will transform the financial services industry", www.deloitte.com/dtt/cda/doc/content/The-Cup-of-a-revolution-2003.pdf.
- 24 For "other private services" as a whole, the corresponding figure was 47%.
- 25 Managers unfamiliar with (outsourcing and) offshoring may also feel more comfortable with an in-house solution (Kobayashi-Hillary 2004).
- 26 Some large financial service TNCs have established subsidiaries in India, which export services. These include American Express, Citigroup, Fidelity, GE Capital, HSBC and JP Morgan (Dossani and Kenney 2004; "More 'Can I help you?' jobs migrate from U.S to India", *New York Times*, 11 May 2003).
- 27 "Is your job next?", *Business Week*, 3 February 2003.
- 28 "Protectionism hits the outsourcing industry", *IDG News Service*, 15 April 2003; "Opportunity on the line: the promise of business-process outsourcing is tempered by questions of security, technology, and culture", *Information Week*, 20 October 2003.

- 29 It can be demonstrated theoretically that a disproportionate improvement of skills and investment technology in developing countries (compared with in developed countries) will bring about a shift in sourcing of services from developed to developing countries (Grossman and Helpman 2002).
- 30 See also “Global designs for India’s tech king”, *Business Week*, 13 October 2003.
- 31 “On runway, will take off: airlines BPO has contributed \$30 million to the total earnings of WNS”, *Indian Business Insight*, 31 August 2003.
- 32 Sitel is also considering new offshore centres in China, South Africa and certain CEE and Central American countries (company interview, March 2004).
- 33 “EDS opens offshore facility in India”, *IT Management: Outsourcing*, 18 June 2003.
- 34 See www.top-consultant.com.
- 35 “India’s outsourcing firms have a new target: Europe’s expanding eastern rim”, *Dow Jones Newswire*, 30 April 2004.
- 36 Additional examples include Wipro, Birlasoft and HCL Technologies all with operations in the United Kingdom and the United States; Datamatics Technologies acquired CorPay Solutions (United States) for \$9 million in 2003 and is planning to acquire more companies in the United States, Europe and Canada.
- 37 In India, four trends towards industry-wide consolidation have been noted (“Outsourcing in India: growing up”, *The Economist*, 22 May 2004). First, some foreign affiliates are thinking of selling some of their operations. Second, fast-growing Indian firms see acquisitions – inside and outside India – as a way to sustain growth. Third, some contract service provider TNCs, such as IBM and Accenture, are acquiring local service providers in the Indian market. Finally, there is consolidation among Indian companies.
- 38 For example, in the case of India, average FDI into services offshoring totalled \$300 million in 2001, or just over 10% of the country’s total inflows of FDI that year (McKinsey & Co. 2003).
- 39 The data used here are from LOCOMonitor, a database developed by OCO Consulting covering over 21,000 greenfield and expansion projects (but not cross-border M&As). While the database does not claim to be comprehensive, information on these FDI projects comes from over 6,000 sources including companies’ press releases, government websites and the media.
- 40 Examples of takeovers include Hinditron, acquired by TAIB Bank (Bahrain), and IIS Infotech, bought by FI Group (United Kingdom). Joint ventures have been established between British Aerospace and Hindustan Aeronautics; Bell South and Telecommunication Corporation of India; and British Telecom and Mahindra Group (Kumar 2000).
- 41 “IBM buys Indian back-office service firm”, *Reuters* (www.reuters.com), 7 April 2004.
- 42 “Call centre firm eyes expansion with new owner”, *Budapest Business Journal*, 3 May 2004.
- 43 Some 95% of all shared service centres serving the European market have some type of financial service functions and 23% provide an IT service (IBM and Oxford Intelligence 2004).
- 44 More than 60 companies (mainly from the United States) use Ireland as a base for their European call centres, employing 12,000 people.
- 45 “US firms saved \$8 bn via local outsourcing”, *Business Standard*, 16 April 2003.
- 46 Ibid.
- 47 Data from NASSCOM suggest that the direct cost per employee in an Indian call centre are about \$5.20 per billable hour as compared with \$27.80 in the United States (Dossani and Kenney 2004).
- 48 The Philippines Board of Investment, for example, actively uses the country’s large pool of trained accountants in its marketing efforts. According to the Government, the country boasts a larger number of accountants than India (information provided by the Philippines Board of Investment). Companies such as Procter & Gamble and Caltex have selected the Philippines as a base for shared services related to finance and accounting.
- 49 France Telecom, SNCF (the French Railway company) and Altitude Marketing are examples of companies that have set up call centres in Morocco (see Belghazi 2000). Atento, of Spanish Telefonica, has set up call centres with several hundred employees in Tangiers.
- 50 Ireland and the Netherlands, at an early stage, successfully established themselves as leading locations for pan-European call centres, leveraging the availability of the many languages represented in their population, including foreign students. However, within certain language regions, such as Scandinavia, many companies have set up local operations.
- 51 Low labour costs in India have made it viable for companies to import all their own telecom technology for the large call centres that have been established, while still operating at a far lower cost than in developed countries. For smaller countries, where the capital outlay for telecommunications would be proportionately higher (because the centres would be smaller) an insufficient telecoms infrastructure could have a prohibitive effect on potential investors (Cohen 2003).
- 52 See, e.g. “Online extra: the good life in a Bombay call center”, *Business Week*, 3 February 2003.
- 53 “Call centres to be India’s biggest job-maker”, *Times News Network*, 18 December 2003.
- 54 For example, Changi International Airport in Singapore, one of the largest air hubs in the Asia-Pacific region, handled more than 25 million passengers in 2003. In April 2004, it was linked to 152 cities in 51 countries, with more than 3,400 weekly flights (www.chiangi.airport.com.sg).
- 55 See also IBM and Oxford Intelligence 2004.
- 56 Some 7% of all pan-European shared service centres are part of TNCs from the United Kingdom (IBM and Oxford Intelligence 2004).
- 57 In terms of outsourcing, the United Kingdom alone accounts for 35% of the European market (“Outsourcing embraced in Europe as well”, CIO Information Network, www.cioupdate.com, 18 March 2004).
- 58 A few cases of offshore services have received attention in Germany. For example, Siemens has located around 2,700 software and accountancy jobs in CEE, and has announced that it will offshore 10,000 of a total of 30,000 software development operations to low-wage countries; SAP has opened R&D centres (product development and customer support) in China and India. It has established a presence in India where it is

- planning to employ nearly 2,000 people by the end of 2004 (“Siemens to move 10,000 jobs to India, China, Russia”, Rediff.com India (www.rediff.com), 16 December 2003). The accountancy arm of Infineon plans to expand its services activities in China in the next five year from 800 to 3,300 employees (“Infineon baut Werk und Entwicklungszentren in China”, Heise Zeitschriften Verlag (www.heise.de), 26 July 2003).
- ⁵⁹ See footnote 17. Other examples are Northern Rock and Alliance & Leicester.
- ⁶⁰ AND Publishers (electronic mapping), Philips, Atos Origin, Logica CMG, ABN AMRO, Reed Elsevier and the Dutch affiliate of EDS have all offshored services (article in *Intermediar* (www.intermediar.nl), November 2003).
- ⁶¹ Interview with Paul Tjia, GPI Consultancy, February 2004.
- ⁶² See “Down and out in white-collar America”, *Fortune*, 23 June 2003, pp. 43-47; “Commentary: outsourcing jobs: is it bad?” *Business Week*, 25 August 2003.
- ⁶³ The share of Asian countries is estimated at about 8%, of which the Japanese market accounts for almost three percentage points.
- ⁶⁴ “A shadow called ‘outsourcing’”, *Indiabiz News and Research Services*, Volume 1, Issue 13, June 2003, p.3.
- ⁶⁵ Detailed data on FDI in the software and IT-enabled services are not available. NASSCOM publishes a directory of firms with details of software and service firms related to ownership, sales, employment, export, location, etc. It also publishes a directory of firms in IT-enabled services. The directory of software firms includes all the major firms, accounting for about 90% of the total software exports. The coverage of the IT-enabled services directory is about 60% of total exports. The analysis of the role of the FDI in the software and IT-enabled services is mainly based on the firm level data compiled from the two directories mentioned above.
- ⁶⁶ Based on information from NASSCOM directories.
- ⁶⁷ The operations in the United States of the best Indian IT companies have shown productivity levels of 150% the United States average – comparable to the levels of large United States service companies such as Accenture and EDS (McKinsey & Co. 2003, p. 11).
- ⁶⁸ Some 60 IT companies in India currently hold so-called CMM level 5 certification; this represents 72% of all IT companies with such certification in the world.
- ⁶⁹ See NASSCOM-BPO Forum (http://bpo.nasscom.org/download/BPO_Captives_GoodOmen_4_3rdParties.pdf).
- ⁷⁰ As mentioned earlier, the software and IT-enabled service industry remains confined to a few cities, despite various state governments’ initiatives to attract software investment to less developed regions.
- ⁷¹ See, for example, CM Insight 2004; Bajpai et al. 2004; A.T. Kearney 2004.
- ⁷² Information provided by the Board of Investment, March 2004.
- ⁷³ A.T. Kearney 2004; MIGA 2003; “Why Malaysia”, *Sigmax-E*, 2003 (<http://www.sigmax-e.com/>).
- ⁷⁴ For example, Shell has decided to locate its regional customer service centre for Latin America in Santiago. The aim is further improvements in customer services and to reduce costs by centralizing and optimizing operations. The centre in Chile will provide back-office administration and front-office (call centre) functions to Argentina, Chile, Paraguay and Uruguay. The company estimates that the centre will receive around 75,000 calls per month relating to its fuel, lubricants, retail and asphalt businesses Invest@Chile (http://www.hightechchile.com/inversionistas/last_investors.htm).
- ⁷⁵ For example, Sykes has set up a call centre in El Salvador employing some 500 people, and West Corp. employs 400 people in a call centre in Jamaica.
- ⁷⁶ Information provided by Gauteng Economic Development Agency, South Africa, January 2004.
- ⁷⁷ “Subcontracting and location decision in 2003”, *Revue Régionale*, 9 February 2004.
- ⁷⁸ Hungary has attracted shared services FDI by such companies as Alcoa, Avis, Diageo, ExxonMobil, GE and General Motors.
- ⁷⁹ When Delta Airlines offshored services by setting up a 1,000-person call centre in India in 2003, the company saved \$25 million and facilitated an addition of 1,200 reservation and sales positions in the United States (Drezner 2004, p. 27).
- ⁸⁰ CM Insight 2004.
- ⁸¹ In the United Kingdom, according to data from the Office for National Statistics, employment in banking, insurance and other financial services – the industries most affected by offshoring – has increased steadily over the past decade. Real value added in the business services and finance industries of the United Kingdom has also increased and the balance of trade in computer and information services is positive and growing.
- ⁸² Data for the 12-month period ending June 2004 (<http://bls.gov/news.release/pdf/jolts.pdf>).
- ⁸³ See <http://www.bls.gov/news.release/pdf/reloc.pdf>. Similar findings have been noted for Europe (Kirkegaard 2004).
- ⁸⁴ An Indian study reached similar conclusions (NASSCOM and Evalueserve 2003).