

COMMITTEE FOR INFORMATION, COMPUTER AND COMMUNICATIONS POLICY

INFORMATION TECHNOLOGY OUTLOOK 2004 (forthcoming)

CHAPTER 2: GLOBALISATION OF THE ICT SECTOR
Section on International Sourcing

This document is circulated for discussion. It is being declassified under the written procedure with final comments being requested by the 23 April 2004.

We draw the attention of delegates to the OECD-Eurostat Expert Meeting on Trade-in-services Statistics in particular to Table 2.11 which shows the large and increasing discrepancy between services exports as reported by India and imports reported by various countries and to the tentative explanations advanced to explain these differences.

Delegates are invited to discuss the practical measurement issues, inform the meeting of any relevant national experiences, help to improve statistical reporting, and understanding of developments in the area of international services sourcing.

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Summary

1. Offshoring – the international sourcing of IT- and ICT-enabled business support services – is a recent development in the globalisation of the ICT sector. It has arisen in response to the need to cut costs and fill skills shortages, and competition has created a self-reinforcing dynamic. Once one or two firms adopted lower-cost locations and moved the cost/quality frontier, others had to follow. How much longer the dynamic will be maintained will depend on the availability of skills and relative wage and other costs. At present, no reliable official data are available measuring the extent of the offshoring phenomenon, but some of it may be captured by exports of computer and information services and other business services. Most exports of these services originate in OECD countries, although their share of the value of total reported exports in the relevant IMF balance of payment categories has declined from 79.5% in 1995 to 77.1% in 2002. Some non-member developing countries are experiencing rapid growth in exports, though starting from very low levels.

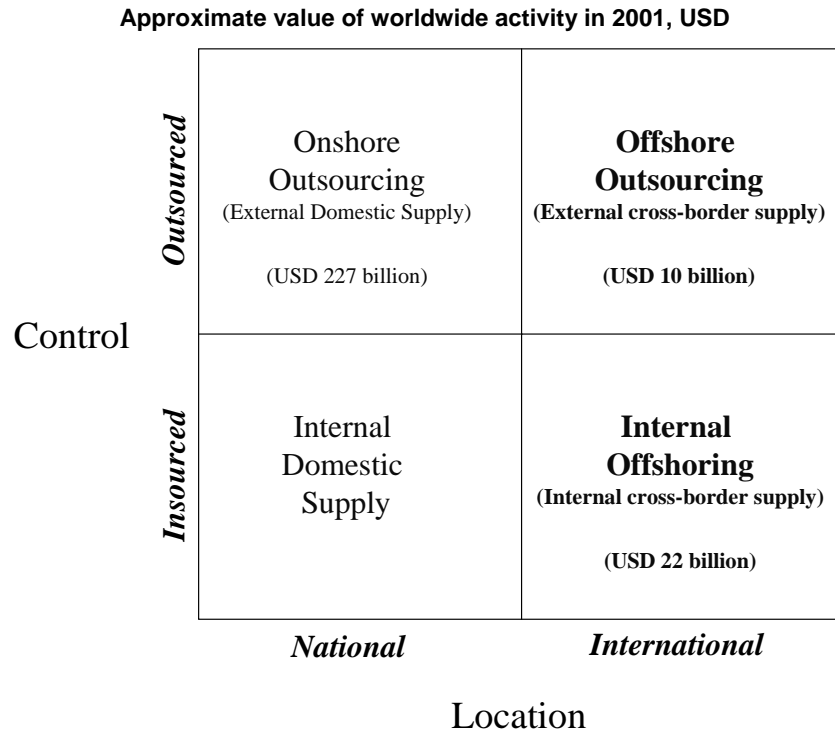
2. While offshoring may deliver cost savings, it may also initially involve job losses in the home country and job creation in the host country. However, cost savings and efficiency gains provide the foundation for productivity growth and the creation of new employment opportunities in the home country. Nonetheless, there is some concern that labour conditions will be eroded through competition with locations lacking equivalent labour and social welfare provisions. A protectionist response that forfeits the potential benefits of offshoring is unlikely to be very constructive. A more measured response would be to take advantage of the benefits while managing the adjustment process, compensating for adjustment costs where necessary and enabling workers to seize new job opportunities. One of the keys to maximising the benefits will be to ensure that they flow to the consumer in lower prices as quickly as possible through continued attention to competition policy.

Offshoring: international sourcing of IT and related business support services

3. Offshoring is a recent development in the globalisation of the ICT sector. It is defined as the international sourcing of IT- and ICT-enabled business support services. It involves both international outsourcing (*i.e.* unaffiliated trade in services) and the distribution of internal business support activities through international corporate networks (*i.e.* FDI and intra-firm sourcing). Figure 2.15 illustrates the nature and scope of offshoring in terms of a matrix of location and control. Within such a framework, services can be supplied internally (*i.e.* insourced) or by an external supplier (*i.e.* outsourced), and they can be supplied from within the country or from another country. Offshoring, therefore, can involve:

- Internal offshoring: internal cross-border supply, with internal business support services activities located in another country.
- Offshore outsourcing: external cross-border supply, with business support services supplied by an external supplier or suppliers located in other countries.

Figure 2.15. Offshoring, insourcing and outsourcing IT and business process services



Source: Based on McKinsey & Company, 2003.

4. Manufacturers have sourced components from other countries for many years, but the international sourcing of business support services (Table 2.9) is a relatively recent phenomenon. It has been enabled by developments in IT systems and broadband communications and by the liberalisation of trade in services, which are making services more easily tradable. As a result, service activities are now less constrained in their choice of location than they have been traditionally. As services account for a larger share of production costs, there is increasing pressure to seek lower-cost solutions for the provision of business process services. Offshoring is a response to these cost pressures and to the ICT and related skills shortages experienced in many developed countries during the late 1990s.

5. There are many problems involved in tracking offshoring activities, because of definitional and data collection difficulties and because there are a number of modes of offshoring. These may include cross-border trade in services, FDI and temporary migration. These difficulties are discussed in more detail below, in the context of an exploration of official sources.

The offshoring phenomenon

6. According to widely cited industry sources, India has been the leading location for the offshoring of IT and related business process services activities.¹ McKinsey & Company (2003) suggest that offshore outsourcing of IT and related business process services accounts for around 4% of outsourcing in those areas. They also suggest that internal or captive offshoring was more than double the value of offshore outsourcing. India is said to account for around 25% of global IT and business process offshoring (McKinsey & Company, 2003). NASSCOM/McKinsey (2002) estimated India’s IT-enabled services exports at USD 1.5 billion in 2001-02 (Roach, 2003).²

7. Widely cited figures from Forrester Research suggest that by 2015 around 3.3 million US business processing jobs will have moved offshore, accounting for USD 136 billion in wages (McCarthy, 2002). Of the 3.3 million jobs, 473 000 are expected to be in the IT industry. Gartner recently predicted a 40% growth in the European offshore outsourcing market, and Ovum Holway forecasted that by 2006 some 20 000-25 000 IT jobs would be lost offshore from the United Kingdom (Moran, 2003). Miller and Codling (2003) reported that the offshore sector of the United Kingdom's services market grew by 27% in 2002, to more than USD 800 million, of which 95% went to Indian IT firms. The leading Indian firms (Tata Consulting Services with UK sales of USD 137 million in 2002, Wipro with UK sales of USD 98 million and Infosys with UK sales of USD 64 million), are significant players in the United Kingdom's IT services market (Hunt, 2003).

Table 2.9. IT and business process services involved in offshoring

IT services	
IT services	Software development and implementation services, data processing and database services, IT support services, application development & maintenance, business intelligence & data warehousing, content management, e-procurement and B2B marketplaces, enterprise security, package implementation, system integration, SCM, enterprise application integration, total infrastructure outsourcing, Web services (internet content preparation, etc.), Web-hosting and application service providers (ASPs).
Business process services	
Customer interaction services	Sales support, membership management, claims, reservations for airlines and hotels, subscription renewal, customer services helpline, handling credit and billing problems, etc. telemarketing and marketing research services.
Back-office operations services	Data entry and handling, data processing and database services, medical transcription, payment services, financial processing (financial information and data processing & handling), human resource processing services, payroll services, warehousing, logistics, inventory, supply chain services, ticketing, insurance claims adjudication, mortgage processing.
Other professional & business services	Human resource services (hiring, benefit planning and payroll, etc.), finance & accounting services (including auditing, bookkeeping, taxation services, etc.), marketing services, product design and development.

Source: Mattoo and Wunsch, 2004, p. 4.

8. To date, offshoring has been dominated by American and British companies offshoring their internal operations and outsourcing to third parties, notably in Ireland, Canada and India. Relatively liberal employment laws have been one factor. Language and cultural affinity are also important. For MNEs that operate in Europe, central and eastern European countries offer cultural and linguistic similarities, greater ease of ensuring compliance with European regulations and high levels of technical ability. General Electric (GE) has become one of the largest investors in Hungary, moving a number of business processes to that country in support of GE units across western Europe. In late 2003, DHL announced its intention to shift its data centre from the United Kingdom and parts of its IT operations from Switzerland to a new services centre in Prague, from which it will oversee all the company's European IT operations.³ For global firms, multi-location offshore sourcing is becoming increasingly common. For example, Siemens recently announced its intention to move 15 000 software programming jobs from offices in the United States and western Europe to India, China and Eastern Europe (Associated Press, 2004).

9. Mattoo and Wunsch (2004) provide examples of factors that may influence a firm's choice of location for offshore operations. For example, for US companies with a Spanish-speaking customer base, Latin American countries offer low labour costs, proximity to the United States, the same time zone and Spanish language. Since March 2002, AOL Time Warner has served its Spanish-speaking customers from a call centre in Mexico. The Philippines is also an attractive location, owing to cultural affinities with the United States and language skills in English and Spanish. To take advantage of the large number of Filipino accountants trained to US accounting standards, Procter and Gamble moved the accounting

services for its global operations to the Philippines. Other companies that have located in the Philippines include: AIG, American Express and Citibank. Finally, Russia has a large pool of technical talent, and Boeing has involved Russian aeronautics specialists in designing parts of its 777 aircraft.

10. Growth in IT and business process services outsourcing and offshoring related direct investments in countries like India suggests the potential for significant growth in offshoring. Outsourcing is said to have been worth USD 3 783 billion worldwide in 2001 and to be growing by around 16% a year. IT and business process services are among the largest and fastest-growing market segments, with ICT services outsourcing worth an estimated USD 490 billion in 2003 and growing 20% a year. Even higher rates of growth are expected in finance and accounting, market research, human resources, administrative and corporate services (Corbett, 2002). Between 1991 and 1996, FDI inflows into India ran at an annual average of USD 1 085 million. Since 1997, inflows have increased rapidly to USD 3 449 million in 2002, at which time inward FDI stocks in India amounted to almost USD 26 billion. Indian cross-border M&A sales were worth USD 1 698 million in 2002, up from just USD 35 million a decade earlier, and India's cross-border M&A purchases were worth USD 2 195 million in 2001, up from just USD 1 million in 1991 (UNCTAD, 2003). McKinsey & Company (2003) estimated that USD 400 million of the FDI inflow into India in 2002 was invested in offshoring activities, up from USD 300 million in 2001 and from an annual average of around USD 100 million between 1996 and 2000.

Table 2.10. The worldwide offshored IT and business process "market", 2001
USD billions

<i>"Offshore" location</i>	<i>Domestic market</i>	<i>Offshoring</i>
Australia	2.1	0.4
Canada	24.4	3.7
China	8.4	1.1
Czech Republic, Hungary, Poland and Romania	1.7	0.4
India	2.4	7.7
Ireland	1.9	8.3
Israel	1.1	3.0
Mexico	-	0.5
Philippines	-	0.3
Russia	0.8	0.2
South Africa	0.02	0.01
Thailand	0.25	0.05

Source: Compiled from information in McKinsey & Company, 2003.

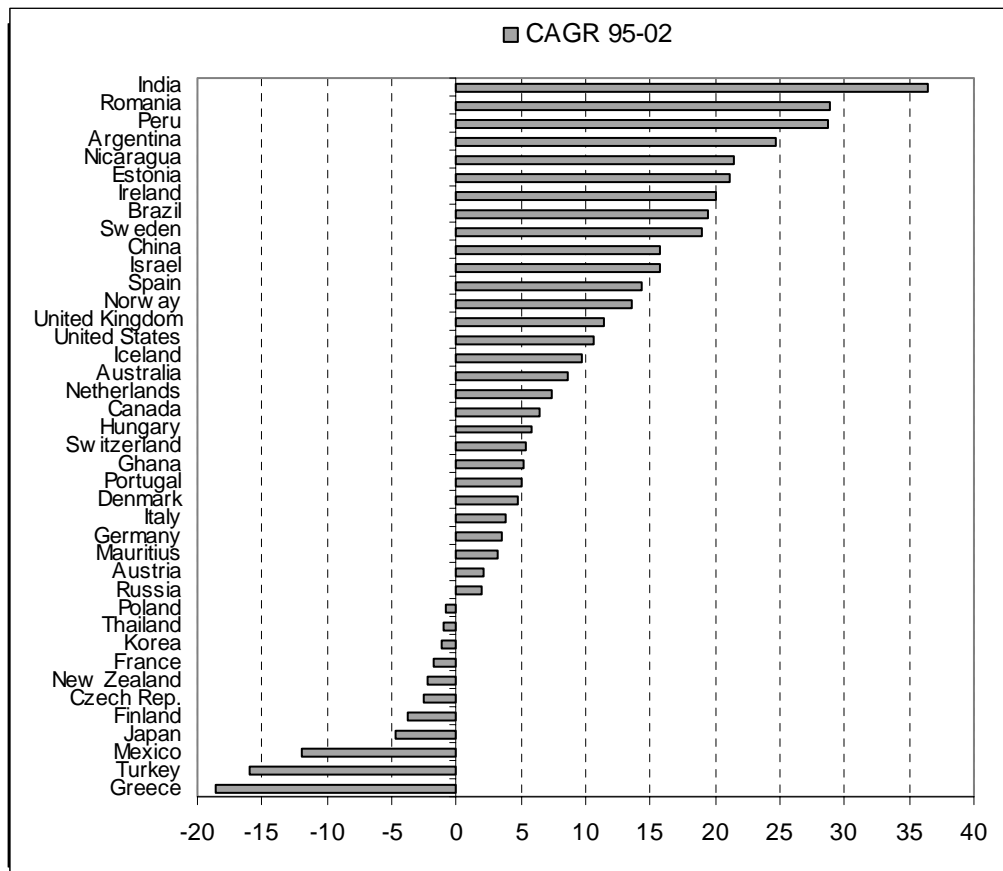
11. While numbers reported vary, there is little doubt that labour cost savings have been a major factor in offshoring decisions. Dossani and Kenney (2003) suggested that a trained certified public accountant (CPA) in the United States earns USD 75 000 a year, while a generally accepted accounting principles (GAAP) certified accountant resident in India typically earns around USD 15 000 a year. The differential for less skilled workers is even greater, with the Indian wage rate for entry-level call centre employees in metro areas around USD 2 400 a year. NASSCOM statistics suggest that in India direct costs per employee in call centres are USD 10 354 compared with an estimated USD 55 598 per employee in the United States. PricewaterhouseCoopers put the cost of operations in India 37% lower than in China and 17% lower than in Malaysia.⁴ These numbers suggest that firms can achieve substantial cost savings through offshoring. However, it is important to note that Indian IT wage rates are now increasing, while comparable rates in the United States and Europe are relatively stable. Moreover, the experience of Fortune 50 firms in India over two years suggests that total cost savings are typically less than was expected, and in fact no more than 10-15% (Biswas, 2003).

Measuring the extent of offshoring

12. Indian exports of ICT-enabled services have grown rapidly since the mid-1990s. It is, however, difficult to measure the extent of international trade in IT and business process services in international statistics. To provide an aggregate overview, the IMF Balance of Payments categories “computer and information services” and “other business services” (see Annex Table 2.A1.13 for a detailed description) are summed. However, data on computer and information services is not available for all countries. For some, such as India, they are included under “other business services”, along with other services.⁵

13. Most exports of other business services and computer and information services still originate in OECD countries (77.1% of total reported exports of other business services and computer and information services in 2002, down from 79.5% in 1995). Some non-member developing countries are experiencing rapid growth in exports, although they are starting from much lower levels (Figures 2.16 and 2.17). Moreover, the data are reported in current USD and will be affected by currency movements. Exports of other business services and computer and information services are also sensitive to the overall business cycle. Indeed, the global downturn affected total reported values (in current USD) of exports, with annual growth rates averaging 6.9% over the period 1995-2000, and 3.9% for 2000-02. For some countries, the difference was marked. India, for example, experienced very strong average growth of its exports over the period 1995-2000 with a compound annual growth rate (CAGR) of 43.8%, but only a CAGR of 19.6% for 2000-02.

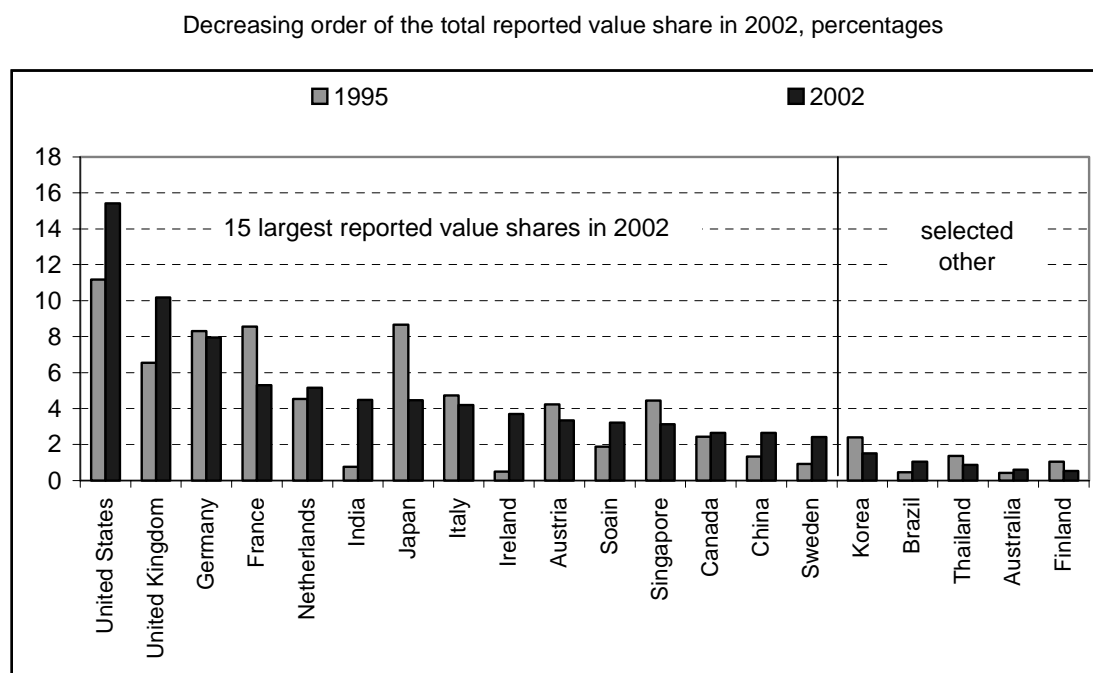
Figure 2.16. Growth of the value of exports of other business services and computer and information services for selected countries, 1995-2002
Compound annual growth rate, percentages



Source: OECD, based on IMF Balance of Payments Database (November 2003).

14. It is important to bear in mind that some of the countries experiencing very high growth rates account for only a small proportion of total reported exports. Figure 2.17 shows the 15 countries that accounted for the largest value shares in 2002, as well as some selected other countries.

Figure 2.17. Share of the value of reported total¹ exports of other business services and computer and information services, selected countries, 1995 and 2002



1. The reported total for all countries does not necessarily correspond to a world total. For some countries, such as India, it is not possible to break down the data to isolate other business services and computer and information services. As a consequence, for India, the category includes total services, minus travel, transport and government services (*i.e.* including construction, insurance and financial services, for example, as well as other business services and computer and information services).

Source: OECD, based on IMF Balance of Payments Database (November 2003).

Discrepancies in reported data: a challenge for statisticians

15. Offshoring can include cross-border trade in services (*i.e.* international outsourcing), trade related to FDI (*i.e.* internal offshoring) and temporary migration. Leaving aside the latter, both international outsourcing and internal offshoring might be expected to appear in international trade in services statistics, the former as unaffiliated trade and the latter as affiliated trade. Table 2.11 shows data from various sources and highlights some of the discrepancies in the exports reported by India (Reserve Bank of India) and the imports reported by other countries. While information is not available for all importers, the magnitude of the discrepancies points to the existence of a major statistical challenge.

Table 2.11. Difference in exports reported by India and imports reported by various importers

USD millions

	1997	1998	1999	2000	2001	2002
Total services						
Exports to all countries reported by India	9111	11691	14509	19175	20886	24859
Imports from India reported by						
US (1)	1224	1541	1520	1896	1810	1667
EU	2241	2425	2518	2268	2418	2275
<i>of which: UK</i>	702	803	958	865	1030	1007
Japan			455	423	357	326
Canada	117	118	102	107	155	
Sum of reported imports	3582	4084	4595	4694	4740	4268
Discrepancy	5529	7607	9914	14481	16146	20591
i.e. Percentage of Indian exports unaccounted for by the above countries	61	65	68	76	77	83
All commercial services, excl. travel and transport						
Exports to all countries reported by India	3852	6096	8892	13018	15126	18630
Imports from India reported by						
US	422	614	568	832	803	670
EU	722	800	905	689	957	800
<i>of which: UK</i>						
Japan			232	237	201	180
Canada	26	27	16	24	33	
Sum of reported imports	1170	1441	1721	1782	1994	1650
Discrepancy	2682	4655	7170	11235	13131	16980
i.e. Percentage of Indian exports unaccounted for by the above countries	70	76	81	86	87	91
Computer and information services						
Exports to all countries reported by India				6341	7556	9600
Imports from India reported by						
US				135	104	80
EU				114	336	177
<i>of which: UK</i>						
Japan				13	45	37
Canada						
Sum of reported imports				262	485	294
Discrepancy in total				6079	7071	9306
i.e. Percentage of Indian exports unaccounted for by the above countries				96	94	97

1. Imports of US private services only.

Source: OECD, based on Reserve Bank of India, US Bureau of Economic Analysis, Eurostat, UK Office of National Statistics, Bank of Japan, and Statistics Canada.

16. The discrepancies in the reported data raise a number of questions and present a challenge for statisticians, especially since their magnitude has increased over time. There are many possible reasons for the discrepancies:

- Firms are encountering reporting difficulties relating to the definition of services and modes of delivery. The definitions of the various sources are also likely to differ, with more restricted definitions focusing on computer and information services in some cases and a much broader definition of ICT-enabled services often used in India and elsewhere.
- Most countries implemented the revised Balance of Payments (BPM5) methodology in the late 1990s, sometimes incrementally. As a result, International Monetary Fund (IMF) figures may conceal significant methodological breaks in time series.

- To the extent that data on trade in services are collected from surveys, data on exports are likely to be collected from fewer specialised firms and provide better coverage than data on imports which are drawn from a much larger number of firms. Moreover, the existing surveys used to collect data on trade in services may not cover new importers of computer and information services, for example. It is also possible that the Indian data are not collected solely on the Balance of Payments criterion of a transaction having taken place between residents and non-residents.
- There may also be differences in the treatment of certain categories, such as the movement of temporary workers. OECD standards do not count the remuneration of temporary workers as trade but as compensation of employees in the country where they are working. However, this type of remuneration may be counted as exports in the Indian data. Similarly, there are likely to be differences in coverage. For example, US services trade data do not include packaged software recorded on media (*i.e.* software products), while Indian sources may do so.
- Another part of the challenge may be understanding the structures and operations of global firms, which often no longer organise along national lines and may find it difficult to report along national lines to statistical agencies.⁶ The existence of triangular arrangements, for example, between a firm's global headquarters, regional headquarters and local offices, may make it difficult to establish where and between whom transactions have actually taken place.

Globalisation and offshoring

17. Offshoring involves both insourcing and outsourcing services offshore. It takes a number of forms, and mutually reinforcing trends have created a dynamic that leads to further offshoring (Table 2.12). Internal offshoring provided the confidence to begin offshore outsourcing. To compete with the internal cost savings achieved through internal offshoring and offshore joint ventures, multinational outsourcers (*i.e.* providers of outsourced services to others) moved part of their activities offshore through FDI and subcontracting. With multinationals accessing the same cost base, indigenous offshore-based firms responded by opening front-office operations in developed country markets in order to compete in the country of origin of outsourcing with the MNE providers of outsourced services. This, in turn, has compelled MNE providers of outsourced services to extend their offshoring activity.

Table 2.12. The dynamics of offshoring in the offshore location

	MNE subsidiaries	Local joint ventures & spin-offs	MNE subsidiaries providing outsourcing services to others	Local independents
Offshore activity	Supply insourcing services	Supply related party sourcing services	Supply outsourcing services	Supply independent outsourcing services
Initial stage	Driven by internal cost cutting at home	Build on local knowledge to win share of international sourcing	Compete to win outsourcing business	Compete for local subcontracting
Subsequent stage	Cut internal costs further to compete with rivals that are outsourcing		Compete with developing local independents to win outsourcing business	Establish subsidiary in country of origin of outsourcing to compete for outsourced business

Source: OECD.

18. Early experience in India was built via the establishment of MNE operations in India, often triggered by senior executives of Indian origin (Tschang, 2001). This led to in-house offshoring, involving the operation of internal business support activities offshore following FDI (*i.e.* internal offshoring through FDI). American Express established business process services operations in India in 1993, British Airways established a business process support services operation in India in 1996, and General Electric did so in 1998. GE is now one of the largest business process services employers in India and intends to increase staff to 20 000 by the middle of 2004. Since 2000, an increasing number of Fortune 500 firms have established operations in India, including AOL, Citigroup, Dell, Hewlett-Packard, HSBC and JP Morgan Chase (Dossani and Kenney, 2003). Many of their facilities are growing rapidly. For example, one computer manufacturer's Indian facility grew from 200 employees to 3 200 within two years. As experience is gained, higher value activities are being offshored. For example, GE's Indian operations have added employees to undertake actuarial support, data modelling and portfolio risk management, and GE is reported to employ 40 doctors in its healthcare insurance operations (Dossani and Kenney, 2003).

19. Multinational providers of outsourcing services have followed, moving an increasing share of their work to low-cost offshore facilities (*i.e.* offshore outsourcing through FDI and affiliated trade in services). Convergys, Hewlett-Packard, IBM, EDS, Computer Sciences Corporation (CSC) and Accenture are among the firms making extensive use of their global networks to source both external and internal support services. Convergys opened its first Indian operation in New Delhi in late 2001. By April 2003, it had more than 3 000 employees, and was building a second facility in Bangalore that was expected to grow to 3 000 employees (Dossani and Kenney, 2003). In India, Hewlett-Packard employs around 8 000 people in software development, call centre, helpdesk and R&D activities. CSC is opening two new software development centres in India, adding to the three centres it already has there. Cap Gemini Ernst & Young has also been increasing staff in India, aiming for around 3 000 by 2005 (Moran, 2003). IBM recently announced its intention to move nearly 5 000 programming jobs from the United States to India (Lyman, 2003), and in early 2004 IBM (Australia) announced that it was moving software development jobs from its contract with Telstra in Australia to facilities in India (Crowe and Connors, 2004). The Australian case provides an illustration of the dynamic at work. It began with Telstra's cost cutting, follows IBM's loss of another Telstra contract to the Indian firm Infosys and clearly reflects IBM's need to match Infosys's cost structure, which is based on an offshoring component.⁷

Table 2.13. India's offshore IT and business process outsourcing services players

	<i>MNE subsidiaries</i>	<i>Local joint ventures & spin-offs</i>	<i>MNE subsidiaries providing outsourcing services to others</i>	<i>Local independents</i>
Information technology	Microsoft Oracle Adobe SAP Cadence	MBT Syntel Cognizant Convansys	Deloitte PricewaterhouseCoopers Accenture IBM EDC CSC	Infosys Wipro NIIT Satyam TCS
Business process	General Electric HSBC American Express Standard Chartered Ford McKinsey JP Morgan Flour Daniel	WNS Stream Trac Mail EXL Health Scribe eServe	Convergys Sitel EFund Sykes First Data	Daksh Spectramind MsourceE Intellinet TransWorks Progeon ICICI OneSource

Source: Derived from McKinsey & Company, 2003.

20. Some smaller IT and related services providers are now making offshoring a key element of their business models. For example, Covansys claims to have been one of the first US-based IT services companies to establish offshore facilities in India and to be a pioneer in seamlessly integrating offshore capabilities. Cognizant has 70% of its workers in India and was reported to have been expanding activities and aiming for an Indian workforce of 6 000 by the end of 2003. Convergys earned around USD 380 million in 2002. It operates in 28 locations around the world, including six development centres in India and the United States. Harvey Nash Software Development, based in the United Kingdom, chose to locate its activities in Vietnam, which it claims undercuts UK costs by 50-60%, and those of India by as much as 15%. Harvey Nash recently won a large contract from Honda (Moran, 2003).

21. Independent Indian firms are also providing outsourced services, *i.e.* international outsourcing through trade in services (Table 2.13). In the year ending March 2003, Tata Consulting Services earned revenues of USD 1 billion, of which USD 944 million from exports. Over the period 1997-2003, TCS's revenue increased 31% a year, with export revenues increasing 33% a year. TCS employed 9 500 people in 1997 and 24 000 by early 2003.⁸ Wipro earned USD 886 million in 2003, up from USD 525 million in 2000 or by 19% a year. Wipro's IT services and business process outsourcing exports amounted to USD 618 million in 2003, up from USD 234 million in 2000, an increase of 38% a year.⁹ Infosys Technologies also offers IT services to clients worldwide. In 2002-03, it earned USD 754 million, up from USD 203 million in 2000, an increase of 55% a year. At USD 740 million, exports accounted for around 98% of 2002-03 revenues. Infosys has around 17 000 employees. Other Indian firms developing along similar lines include: Satyam Computer Services, which earned around USD 460 million in 2002-03 and employed 9 750; HCL Technologies, which earned USD 332 million and employed 9 500; and Patni Computer Systems, which earned USD 188 million and employed 5 600 (Hunt, 2003).

22. Indigenous Indian firms are now globalising (through reverse FDI) as a result of the development of their service provision capabilities. TCS operates branches in 32 countries worldwide and has development centres in India, the United States, Canada, United Kingdom, Australia, Japan, China, Hungary and Uruguay.¹⁰ Wipro has 30 offices worldwide, 21 000 employees and more than 300 customers across the United States, Europe and Japan.¹¹ Infosys now operates in 16 countries, including Mauritius, where it established a USD 25 million disaster recovery centre in 2002 (Hunt, 2003).

23. Offshoring arose as a response to skills shortages and the need to cut costs, and competition has created a self-reinforcing dynamic that is propelling its further development. Once one or two firms accessed lower-cost locations and moved the cost/quality frontier, others had to follow. How much longer this dynamic continues to operate will depend on the availability of skills and relative wage and other costs.

Impacts, issues and responses

24. While offshoring may deliver cost savings, it may also involve initial job losses in the home country and job creation in the host country. However, over time, cost savings and efficiency gains provide the foundation for productivity growth and the creation of new employment opportunities in the home country. They enable firms to compete, win new business, gain market share and grow. Nevertheless, some of the jobs lost may be difficult to replace, and there is some concern that labour conditions will erode as a result of competition with locations lacking equivalent labour and social welfare provisions and leading to a "race to the bottom".

25. Given the controversy surrounding the issue, it is difficult to maintain perspective. However, even if one takes the most widely cited consultancy predictions at face value, offshoring may be less significant than some suggest. For example, the widely cited figure of 3.3 million jobs moving offshore from the United States between 2000 and 2015 is not a large one for an economy with around 130 million

employed workers and in which an average of 7-8 million jobs were lost every quarter during the boom years of the 1990s, while even more were created (Agrawal and Farrell, 2003; Lohr, 2003; Kirkegaard, 2004). It is, perhaps, too early in the United States' recovery from the downturn to tell whether recent lower levels of job creation are merely cyclical or reflect an underlying shift towards "jobless growth", and if they do, what role offshoring and global labour arbitrage might be playing.¹² However, to date, the scale of offshoring is relatively modest and, if history is a guide, growing open economies should be able to adjust and prosper.

26. Reduced costs for businesses with offshore operations or that make use of outsourced offshore operations should make them more competitive. In the first instance, they should gain market share and profitability should improve. Over time, competition should ensure that the benefits flow through to consumers in the form of lower prices. Thus, offshoring should enable firms based in developed economies to gain market share in the global economy, grow and expand employment opportunities both at home and abroad. In addition, jobs created offshore generate demand for developed country goods and services exports – for ICT equipment and communications services immediately and, over time, for a wide range of consumer goods. At the same time, wages and prices in offshore locations are likely to rise, creating wealthier developing-country consumers and reducing the wage cost differential and arbitrage opportunity. Such a scenario would make offshoring a win-win.

27. However, there are adjustment costs and there may be some longer-term challenges. Personal adjustment costs for those who lose jobs are high, but can be lessened through job search support, retraining opportunities and, perhaps, insurance schemes.¹³ Many of the activities going offshore may have previously located in lower-cost rural locations in the home economy (*e.g.* call centres). This may limit the opportunities available to displaced workers and require special mechanisms to assist regional adjustment. Similarly, there may be particular adjustment difficulties for smaller countries which are neither low-cost locations nor the home base of MNEs, with jobs lost to India and benefits accruing in the first instance to US and European MNEs and their shareholders, and the time lag between job losses and realising the benefits of lower-cost structures through lower world prices may be greater. In the longer term, there may also be a need to adjust education and training, not only to account for the types of jobs being lost and created, but also for the possible loss of traditional career paths. For example, as programming activities move offshore there may be fewer career path opportunities for learning about systems design. All of these adjustments are made more difficult by the potential speed of relocation of IT and business process services activities, which are typically less capital-intensive and thus more footloose than manufacturing activities.

28. Nevertheless, a protectionist response that forfeits the potential benefits of offshoring is unlikely to be the most constructive. A more measured response would be to take advantage of the benefits while managing the adjustment process, compensating for adjustment costs where necessary and enabling workers to seize new job opportunities. One of the keys to maximising the benefits will be to ensure that they flow to the consumer as quickly as possible through continued attention to competition policy. Inequality is the basis for wage arbitrage. In the long run, contributing to further trade liberalisation and development in developing countries, and pressing for the harmonisation of minimum labour and welfare conditions are the most effective ways to reduce the opportunities for wage arbitrage and, therefore, the motivation for offshoring (Dossani and Kenney, 2003).

Conclusion

29. The ICT sector is highly and increasingly globalised. In many respects, it offers a leading example of industrial globalisation. While different segments of the ICT sector vary, owing to different regulatory and market imperatives, the ICT sector as a whole reveals some of the key drivers and core characteristics of industrial globalisation. The underlying structure and dynamics of the ICT sector are likely to ensure that it remains at the forefront of globalisation.

30. Offshoring, defined as the international sourcing of IT- and ICT-enabled business support services, is a recent development in the globalisation of the ICT sector. It arose in response to skills shortages and the need to cut costs, and competition has created a self-reinforcing dynamic that is propelling its further development. However, while offshoring may deliver cost savings, it may also involve initial job losses in the home country, while creating jobs in the host country. Nevertheless, over time, cost savings and efficiency gains should enhance productivity growth and create new employment opportunities in the home country. Rather than a protectionist response, it would be better to take advantage of the benefits while managing the adjustment process, compensating for adjustment costs where necessary and enabling workers to seize new job opportunities, for example by adjusting education and training programmes. It is also important to safeguard against the erosion of labour conditions and social welfare provisions and a “race to the bottom”. At present, the formal analysis of the offshoring phenomenon and its implications is complicated by the absence of reliable statistics measuring its extent, and in particular its net employment impacts.

NOTES

- ¹. OECD (2000) provides an extensive review of the Indian software industry.
- ². NASSCOM consolidate IT and IT Enabled Services (ITES), which are typically business process services, into a single category. See NASSCOM/McKinsey (2002), cited by Roach, 2003.
- ³. “Relocating the back office – Offshoring – The benefits of offshoring”, *The Economist*, Saturday 13 December 2003. Available at www.nasscom.org/artdisplay.asp?Art_id=2240 accessed January 2004.
- ⁴. *The Economist* (2003), *op. cit.*
- ⁵. For India, the category “other business services” includes all services except travel, transport and government services. However, it should also be noted that Indian firms are now exporting ICT-enabled services as well as business process services, and that the remaining categories of services included in the category are likely to be small in comparison. Furthermore, data on overseas revenues from annual reports of top Indian export firms show patterns similar to the IMF data.
- ⁶. For example, a regionally organised firm may trade between its regional entities globally and its national entities regionally, such that US offshoring to India might appear to be conducted between the United States and an Asia-Pacific regional entity based in Japan, Singapore or Australia in US trade data. Moreover, when organising its internal office functions globally, a firm may not even record activities as transactions between profit/cost centres. It may see itself as simply operating an accounts department on the other side of the world, rather than the other side of the corridor.
- ⁷. This is a good example of the dynamic at work. It was reported that: “Telstra has struck a deal to send 450 software jobs to India in the biggest example yet of sending skilled Australian jobs to low-wage countries... IBM will send much of the work currently done in Australia to its services operations in India, helping the computer giant meet Telstra's demands for lower costs. In an embarrassing blow last year, IBM lost a key part of its business with Telstra to Indian outsourcing company Infosys, which won a five-year \$75 million project that put at risk 180 local software jobs. The contract announced yesterday is understood to be the first time IBM Australia has been forced to send work to India to meet cost targets in Australia, demonstrating the pressure it is under to match the cost structure of rivals like Infosys.” Crowe and Connors, 2004.
- ⁸. Company Annual Report.
- ⁹. Company Annual Report.
- ¹⁰. Company Web site.
- ¹¹. Company Web site.
- ¹². One fear is that low-cost countries enter on the supply side of global commerce, but their demand response lags and domestic demand remains weak, creating asymmetrical globalisation that leads to jobless growth in higher wage economies as they provide the demand side (without the supply side, which has moved offshore). See Roach, 2003.
- ¹³. McKinsey Global Institute (2003), p. 15, citing L. Kletzer and R. Litan (2001), “A Prescription to Relieve Worker Anxiety”, Institute for International Economics, Policy Brief 01-2, February.