

## The Impact on Advanced Economies of North-South Trade in Manufacturing and Services<sup>1</sup>

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Abstract: Many types of production are being transferred from the rich economies of the North to the poorer economies of the South. Such changes began in manufacturing but are now spreading to services. This paper provides estimates of their past and future impact on employment in the North. About 5 million manufacturing jobs have been lost over the past decade because of trade with low-wage economies. A similar number of service jobs may be lost to low-wage economies over the next decade. Although small compared to total employment, such losses may seriously harm certain localities or types of worker.

Key words: North-South Trade, Employment, Offshoring, Manufacturing, Services.

JEL Classification: F16, M55, L60, L80.

In the past, North-South trade was based on supposedly natural differences. The rich countries exported manufactures and services in return for primary products from poorer countries in the form of food, minerals and raw materials. In fact the term 'natural' is something of a misnomer, since some of the poorer countries concerned were prevented by administrative means from exporting manufactured goods or services to the rich countries, and their almost exclusive reliance on primary products was the outcome of history rather than nature.

In recent decades, a new kind of North-South trade has begun to emerge driven by the abundance of cheap labour in the South. The production of many

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<sup>1</sup> The terms North and South are conventional short-hand for highly developed and less developed countries. It should be kept in mind that the number of countries that belong to the South according to this definition, is gradually shrinking as economic growth takes some of them into the highly developed category.

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basic goods and services is being transferred from the high-wage economies of the North to the low-wage economies of the South, whilst the North is specializing in ‘knowledge-intensive’ activities. Simultaneously, production processes are being fragmented so as to take advantage of international cost and quality differences. These developments first took off in the manufacturing sector, but they are now spreading to services. More and more activities and countries are being drawn into what is already an extremely complex and dynamic division of labour. Moreover, patterns of trade are constantly changing as countries and firms move up the value hierarchy to more sophisticated activities.

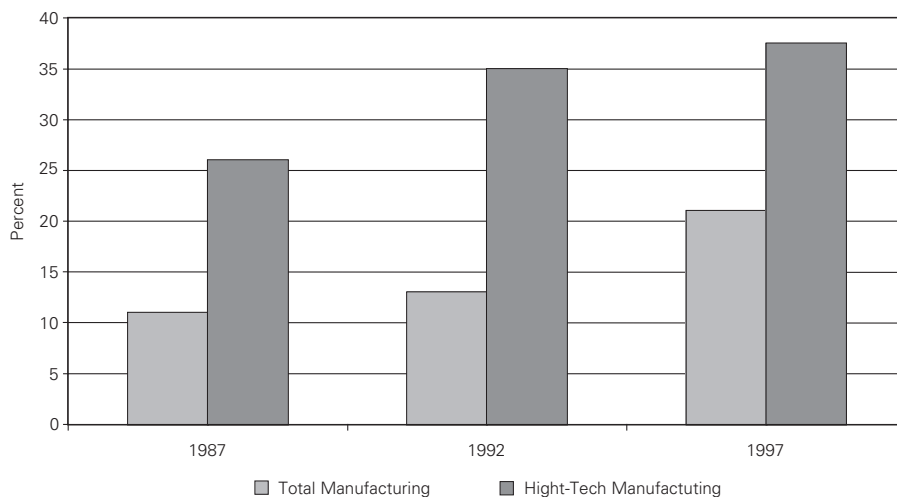
These developments have caused unease in the established economies of the North where demands for protection from low-wage competition are commonplace. The US presidential candidate Ross Perot campaigned against the North American Free Trade Area on the grounds that it would destroy American jobs. “If you hear a loud sucking sound, that is the sound of American jobs going to Mexico”. The US Senate has recently passed a bill preventing the Federal Government from off-shoring its activities to low wage economies and there has been a similar move in many states. There are many websites demanding protection for American workers, including one with the title “[www.yourjobisgoingtoindia.com](http://www.yourjobisgoingtoindia.com)”. So far these demands have been resisted by the US administration and with George Bush as president there is unlikely to be any radical change in this issue. In Britain, the IT trade union, Amicus, has campaigned strongly against off-shoring, although so far without much success. The Minister for Trade and Industry, Patricia Hewitt, has explicitly rejected protectionism, arguing that the appropriate response to foreign competition is to do things better — or do something else.

This paper examines some of the issues raised by the new division of labour that is now emerging. It is primarily concerned with the rich economies of the North, in particular with the employment impact of trade with low-wage economies. In view of current protectionist sentiments in the North this is an important topic. The paper begins by describing what has already happened in the manufacturing sector. This is followed by an examination of the rapidly growing North-South trade in services, in particular the development of “offshoring”, whereby service activities that were previously performed at home are transferred to other countries. The paper concludes with a brief case study which illustrates why competition with low wage economies is a subject of legitimate concern in rich countries.

## MANUFACTURING

The international division of labour in manufacturing involves trade between countries at many different levels of development. It also involves the exchange of both finished and intermediate products. International trade in intermediate products is increasing rapidly, especially in high-tech manufacturing where the global fragmentation of production processes is most advanced (Chart 1).

Chart 1: Imported Inputs as a Share of Total Inputs in Manufacturing



Source: Bhardan, Jaffe and Kroll (2003)

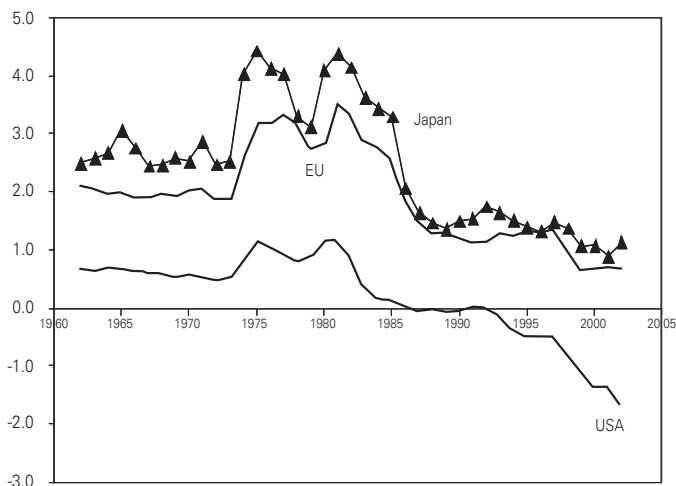
The effects on the North of manufacturing trade with low-wage economies are as follows. The importation of cheap goods, such as clothing, leads to job losses in the domestic industries that compete with these imports. However, the money which is spent on these imports returns eventually to the North in the form of export demand. Thus, exports from the North to the South increase. Some of these exports may consist of manufactured goods, such as sophisticated machinery, and some of services, such as banking or insurance. There are also indirect effects to consider. Because of cheap imports, clothing and similar items cost less than before, so that consumers have more money to spend on other things. Some of this money will go on extra manufactured goods and some on services, thereby generating additional employment for northern workers. If the market mechanism functions smoothly, there will be no overall change in northern employment as a result of North-South trade. There will be fewer people employed in manufacturing but more in services. Moreover, per capita income will on average be higher because the North will have more goods and services at its disposal than before. This is the classic justification for free trade.

The above argument assumes that the market mechanism operates smoothly so that workers displaced by competition from cheap imports are quickly redeployed elsewhere in the economy. In reality, the transition is rarely this smooth. Displaced workers may lack the skills required to occupy the new jobs available in other parts of the economy, or they may be located in the wrong part of the country, or wages may be inflexible so they remain unemployed. As a result, it may be some time before total employment recovers from the initial loss of jobs. There are also distributional issues to consider. The destruction of certain types of manufacturing employment through trade with low-wage economies, or structural change of any kind, means a shift in the skill and geographical composition

of the demand for labour. Even if total employment in the economy as a whole is unaffected, certain localities and certain types of worker may be seriously harmed. For example, many localities in the advanced economies have never recovered from the effects of industrial collapse in the 1970s and 80s. Many older workers who lost their jobs during this period have never worked again. Younger workers may have found new jobs in the service sector, but these are often inferior to the industrial jobs that were lost. The same is likely to be true of the changes now occurring because of cheap imports from the South. Large structural changes always produce many casualties, and dealing with their consequences may be far more difficult than is acknowledged by most advocates of free trade.

How important are the effects of North-South trade in practice? Manufactured imports from low-wage economies in the South have increased dramatically in recent years, but in monetary terms manufactured exports from the North to these countries have also increased, though not as fast. As a result, there has been deterioration in the manufacturing trade balance of the North with the South. This can be seen clearly in Chart 2, which shows what has happened since 1962. In late 1970s and early 80s, following the rise in oil prices, there was a massive increase in manufactured exports from the North to the oil producing countries of the South. To pay for oil, the North required a large surplus in its manufacturing trade during this period. With the collapse of oil prices in the mid-80s, the manufacturing trade balance fell back sharply. There was then a period of stability followed by a renewed decline which has lasted until this day. In the case of Europe the deterioration has been gradual, but in America the balance of manufacturing trade with developing countries has deteriorated dramatically in recent years.

Chart 2: Balance of Manufacturing Trade with Developing Countries (percent of GDP)\*

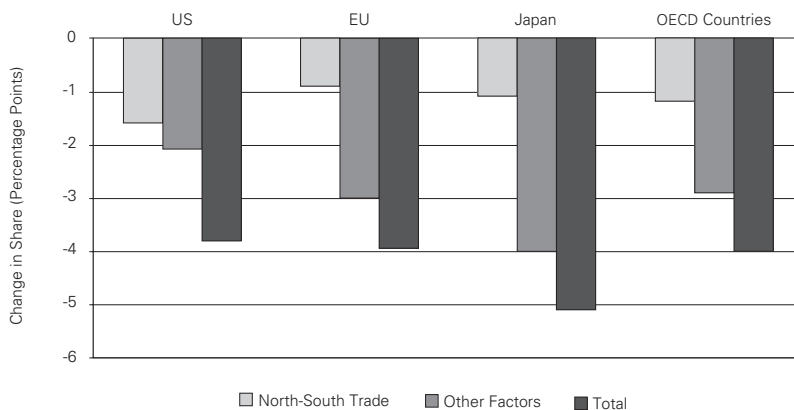


Source: UNCTAD database

\*Development Countries = UN definition less Korea, Singapore and Taiwan; EU = Unweighted average of France, Germany, Italy and UK

Few would deny that the growth of North-South trade has affected the size and structure of northern manufacturing industry. How large are these effects? Estimates reported in Rowthorn and Coutts (2004) suggest that, taking into account both direct and indirect effects, the OECD countries as a whole have lost around 9 million manufacturing jobs because of competition from Southern imports over the past forty years. They have also gained around 1.5 million manufacturing jobs through increased exports to the South. If we restrict our attention to the past decade, the imbalance between jobs created and destroyed in this sector is even more striking. Between 1992 and 2002, exports to the South created an extra 0.4 million manufacturing jobs. During the same period, imports from the South eliminated 5.4 million manufacturing jobs giving a net loss of 5 million jobs in this sector. This is not a huge figure compared to total employment of 400 million, but the impact on particular types of worker or on certain localities has been much greater than such a comparison would suggest.

Chart 3: Changes in the Employment Share of Manufacturing 1992-2002



Source: Rowthorn and Coutts (2004)

Chart 3 gives further information on the period 1992-2002. In the OECD as a whole, the share of manufacturing in total employment fell by 4,0 percentage points during this period. In the EU and Japan, about one quarter of the fall was due to North-South trade and the rest was due to other factors such as rapid productivity growth in manufacturing and shifts in the composition of demand away from manufacturing towards services.<sup>2</sup> However, North-South trade was more important in the United States, where it accounted for almost half of the fall in the manufacturing share. This represents a net loss of roughly 2 million manufacturing jobs. Such a loss reflects the surge of manufactured imports into the US from China and other low wage economies in recent years. This is a large

<sup>2</sup> For further details see Rowthorn and Coutts (2004), table 2.

number of jobs to lose in the space of decade, especially given the weak overall demand for labour during the recession at the end of the period.

## SERVICES

The importation of services from low-wage economies is nothing new. One of the attractions of holidays in poor countries is that they are cheap, although climate and other attributes are probably more important, as witnessed by the popularity of high-wage Australia as a tourist destination. What is new in the present situation is the rapid growth of international trade in services that were previously regarded as non-tradable. The main factor behind such a development is the revolution in information and communications technology, as exemplified by the internet and the global telephone network. This is neatly expressed in the following quotation from a recent UNCTAD report,

“Services typically need to be produced when and where they are consumed. In the past decade or so, advances in information and communications technologies have made it possible for more and more of these services to be produced in one location and consumed elsewhere — they have become tradable. The implication of this “tradability revolution” is that the production of entire service products (or parts therefore) can be distributed internationally — in locations offshore from firm’s home countries — in line with the comparative advantages of individual locations and the competitiveness-enhancing strategies of firms. This is well known in the manufacturing sector” (UNCTAD, 2004, p. 25)

The offshoring of services on can be done in two ways: internally, through the establishment of foreign affiliates of the parent company, or else by outsourcing to a third-party located abroad. The former is sometimes known as “captive offshoring” and the latter as “offshore outsourcing” (Table 1).

Table 1: Offshoring and Outsourcing – Some Definitions

<i>Location of Production</i>	<i>Internalized or Externalized Production</i>	
	<i>Internalized</i>	<i>Externalized (“outsourcing”)</i>
Home Country	Production kept in-house at home	Production outsourced to third-party provider at home
Foreign Country (“offshoring”)	Production by foreign affiliate, e.g. <ul style="list-style-type: none"> <li>• Infeon’s centre in Dublin</li> <li>• DHL’s centre in Prague</li> <li>• British Telecom’s call centres in Bangalore and Hyderabad</li> </ul> <b>“intra-firm (captive) off-shoring”</b>	Production outsourced to third-party provider abroad, <ul style="list-style-type: none"> <li>To <b>local company</b>, e.g.               <ul style="list-style-type: none"> <li>• Bank of America’s outsourcing of software development to Infosys in India</li> </ul> </li> <li>To <b>foreign affiliate of another TNC</b>, e.g.               <ul style="list-style-type: none"> <li>• A US company outsourcing data processing to ACS in Ghana</li> </ul> </li> </ul>

Fonte: UNCTAD (2004)

There are many different reasons why a firm may offshore some of its service production. The quality of service may be higher in another country or it may be rational to concentrate activities at a single location. For example, a computer helpline to serve a number of different countries may be located in a single place where there is a plentiful supply of people with the skills to handle enquiries. Another benefit may be reverse learning, whereby the offshoring firm may acquire capabilities that are later diffused throughout the global organization. These factors help to explain why a number of specialist services are off-shored to high-wage countries such as Ireland and the Netherlands. They may also play a role in the offshoring of jobs to low-wage countries, but in such countries cost is likely to be the predominant factor. Bardhan and Kroll (2003) provide the following list of attributes that make a job ripe for offshoring to a developing country:

- No Face-to-Face Customer Servicing Requirement
- High Information Content
- Work Process is Telecommutable and Internet Enabled
- High Wage Differential with Similar Occupation in Destination country
- Low Setup Barriers
- Low Social Networking Requirement

According to the information given in Table 2 the wage differential is greatest for comparatively unskilled occupations, such as telephone operator, and least for the highly skilled occupations such as financial analyst. However, the term “unskilled” should be interpreted with caution in this context. The occupations concerned require literacy and numeracy, and many require familiarity with a foreign language. Operations involving verbal communication, such as call centre operator, are often classified as low-skill jobs in rich countries because they require linguistic knowledge and cultural familiarity that are widespread in the locality. In a developing country, however, the ability to speak a foreign language and to interact easily with foreigners is by no means universal. This may explain why call centre operators in India are university graduates. It is interesting that they earn so little as compared to professional workers. It may be that they have studied subjects that give them the skills required to communicate effectively with English-speaking foreigners, but not those required to enter the more highly paid professions.

In geographical terms, North-South outsourcing has been dominated by English-speaking countries, such as Britain and the United States, and by countries that were previously in their formal and informal empires, such as India and the Philippines, where knowledge of English is fairly widespread. Over the longer term, economic forces will eventually draw all countries into the global network. Until now, North-South outsourcing has been concentrated mainly on less skilled activities, such as call centres, basic data processing, basic programming and the like. However, countries or regions that have specialized in these activities are moving up the value hierarchy. This is partly because wages are rising and partly

because they are acquiring new organizational and technical skills. Moving up the value hierarchy is a normal feature of development and is familiar in the manufacturing sector. Today’s exporters of sophisticated manufactured goods, such as Korea and Taiwan, began by exporting clothes, toys, basic household goods and the like. The same transition will inevitably occur in services. As wages rise in the exporting country or region, it becomes less economic to offshore basic services to such a location and the users go elsewhere to a place where wages are lower. This is relatively easy because set-up costs are comparatively low. Basic ICT enabled services are footloose for the same reason that traditional light manufacturing is footloose.

Table 2: Hourly Wages for Selected Occupations US and India, 2002/2003

Occupation	Hourly Wage US	Hourly Wage India
Telephone Operator	\$12.57	Under \$1.00
Health Record Technologists/ Medical Transcriptionists	\$13.17	\$1.50-\$2.00
Payroll Clerk	\$15.17	\$1.50-\$2.00
Legal Assistant/ Paralegal	\$17.86	\$6.00-\$8.00
Accountant	\$23.35	\$6.00-\$15.00
Financial Researcher/ Analyst	\$33.00-\$35.00	\$6.00-\$15.00

Source: Bardhan and Kroll (2003), p. 5

## THREAT TO JOBS IN THE NORTH

The effect of service offshoring on employment in the North has so far been small. Goldman-Sachs estimate that 300,000 to 500,000 jobs have been lost in the US because of service offshoring, which is a mere fraction of the estimated 2 million manufacturing jobs which the country has lost in the past decade through competition with cheap imports from low-wage economies. As to the future, it is difficult to make firm predictions although most analysts agree that the potential job losses are large.

The present debate on service offshoring was ignited by a report in 2002 by John McCarthy of Forrester Research in which he estimated that 3.3 million American service jobs would move abroad by 2015. Since then he has revised this estimate upwards slightly to 3.4 million (Table 3). According to the report, the following major occupational categories are at risk to losing jobs to offshoring: management; business and financial; computer and mathematical; life, physical and social science occupations; legal; arts, design, entertainment, sports and media; sales and related; office and administrative support. In the United States, these account for approximately 56 million jobs or 40 percent of total employment. By implication, there is little or no risk of being offshored for the remain-



ing occupational categories. Even amongst the at risk groups McCarthy believes that most jobs are safe for the foreseeable future at least. This is reflected in his estimate that 3.4 million American service jobs would move abroad by 2015.<sup>3</sup> Tilton of Goldman Sachs considers this figure to be somewhat conservative and suggests that up to 6 million service jobs may be offshored from the US over the next decade. Bhardan and Kroll (2004) also consider McCarthy to be on the conservative side, although they provide no estimate of their own. Instead, they list a number of occupations which they believe to be at risk of offshoring. The total number of people employed in these occupations is currently 14 million, although even on a worst case scenario many of these jobs would survive.

Table 3: Estimated Number of White-Collar Jobs Lost Through Offshoring

	Jobs Lost to to date (2003)	Projected Job Loss	Jobs at at Risk	Total Employment (2001)
US	300-500 thousand (Goldman Sachs)	Up to 6 million over 10 years (Goldman Sachs)  3.4 million over 13 years (Forrester Research)	14.1 million (UC Berkeley)	136.9 million
UK		750 thousand over 12 years (Forrester Research)		27.5 million
Rest of EU		400 thousand over 12 years (Forrester Research)		136.3 million

Sources: Forrester Research - McCarthy (2004), Parker (2004), Goldman-Sachs - Tilton (2003), UC Berkeley - Bardhan and Kroll (2004); OECD (2003).

There are only a few estimates available for other countries. Andrew Parker of Forrester Research has investigated the prospects in a number of individual European countries. He estimates that 750,000 service jobs will be offshored from the UK and 400,000 from the rest of the EU over the twelve years up to 2015. As a proportion of total employment the UK figure is similar to the

<sup>3</sup> McCarthy's study considers four main factors affecting the offshoring decision: whether the service is delivered locally, whether the necessary skills are available offshore, to what extent technology supports the business process, and whether the process is defined consistently and is well documented. Based on these factors, McCarthy assigns a rank from 1 to 5 to each occupation indicating how rapidly jobs are likely to move offshore in the future. For example, for occupations ranked at level 2, 1.5 percent of jobs are expected to move offshore by 2005, 3.5 percent by 2010 and 8.0 percent by 2015. The relevant percentages are then applied to 505 service occupations defined by the Bureau of Labor Statistics to compute the number of service jobs that are likely to move offshore. (This footnote is based on the summary of McCarthy's method given in Garner (2004)).

McCarthy's estimate for the US. The figure for the rest of the EU is much lower both absolutely and relative to total employment.

It is difficult to know whether these estimates are small or large. As a percentage of total employment or in comparison with the annual turnover of jobs the pace of outsourcing looks fairly small. For example, the estimates of Forrester Research for the US and the UK imply that the number of service jobs offshored by 2015 is equivalent to some 2 percent of total employment and 6 percent of employment in the broad occupational categories in question. These are similar in magnitude to the loss of manufacturing jobs over the past decade because of low wage imports. They are a mere fraction of the huge structural shifts that have hit manufacturing industry over the past thirty years. Even so, for particular types of worker and particular locations, they could have serious implications.

## AN EXAMPLE

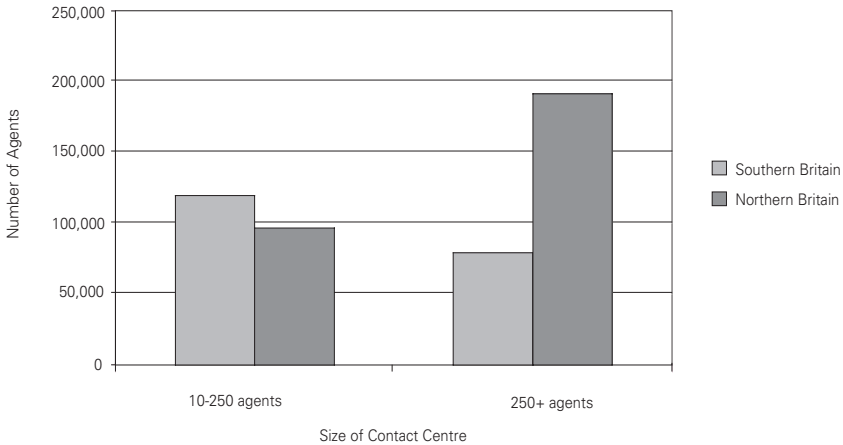
To illustrate this point consider the following example from Britain. Mainland Britain is conventionally divided into two geographical areas — Northern Britain and Southern Britain. The dividing line between the two areas runs roughly from the River Severn to the Wash. Southern Britain comprises everywhere to the south of this line including the London. Northern Britain comprises the rest of the mainland including Scotland and Wales. The economic structure of the two areas is different and their economic performance has been different. Although both areas have failing and successful parts, Southern Britain as a whole has been more dynamic than the Northern Britain in recent decades. It has suffered less from the decline of industrial manufacturing and mining employment, and it has gained a disproportionate share of the new jobs in such dynamic areas as financial and business services. Northern Britain has gained service jobs, but many of these have been in the public sector financed by transfers from the central government. Growth in the private sector in this part of the country has been quite weak and unemployment is still very high amongst older workers and younger unskilled workers.

This is the background against which the present British debate about offshoring should be viewed. Some years ago the government made a big and successful effort to attract contact centres (call centres, help desks etc.) to Northern Britain to fill some of the gap left by the collapse of industrial employment. As result, there are now 290,000 people directly employed as contact centre “agents” in Northern Britain, answering queries and approaching actual and potential customers. In addition there are 160,000 others working in these centres in supervisory and ancilliary occupations. This amounts to almost 3.7 percent of total employment in Northern Britain and 22 percent of employment in the area's financial and business services. Since the original intention was to create employment for people with few formal qualifications, a majority of these jobs are in large call centres which handle routine enquiries and formal qualifications are not very important (Chart 4). According to a recent government report (DTI 2003), such call centres are vulnerable to off-

shoring and the expectation is that many of the jobs will move to cheaper locations abroad, such as India and the Phillipines where wages are 10-15% of what a call centre agent receives in Britain. So far the number of contact centre places offshored is small, but the potential is very large (Chart 5).

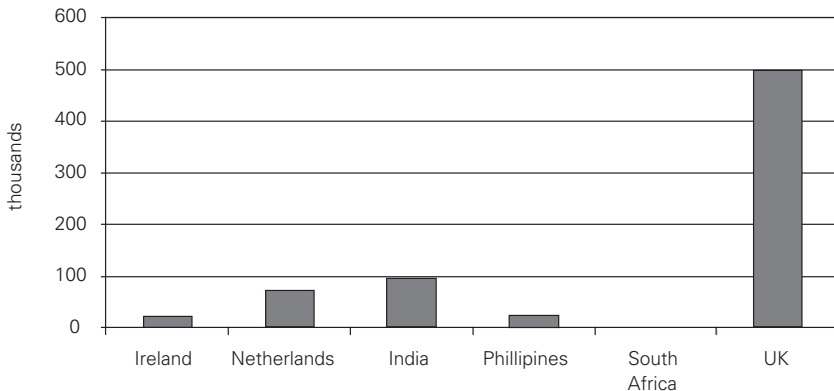
The DTI report projects that the number of people employed in contact centres in Britain as a whole will continue to increase, although at a slower rate than the past. However, given the potential for offshoring and even automation of the more basic tasks, this projection should be treated with caution. Even if total employment in contact centres does rise, the disappearance of the basic, large-scale centres would be a serious loss to the old industrial cities of Northern Britain where most of them are located. It is not surprising that there is concern in these communities about offshoring.

Chart 4: Regional Location of Cacontact Center Agents in Mainland Britain



Source: DTI

Chart 5: Contact Centers: Number of Agent Positions



Source: DTI

## CONCLUDING REMARKS

The offshoring of service jobs poses a number of threats. The workers who lose their jobs, together with their families and localities, will suffer loss of income. So will those who have to compete with such laid-off workers or who must accept lower wages so as to prevent their jobs being offshored. This is what primarily motivates trade unions when they organize to prevent offshoring. However, the trade unions also use another argument to win public support and influence policy makers. Some of the service jobs already threatened by offshoring are relatively skilled, and the number of these is likely to increase as countries like India develop and move up the value hierarchy. The unions argue that the loss of these jobs will weaken the economies of the North and eventually undermine their ability to compete with the emerging economies of Asia and elsewhere.

This is, of course, an old argument which has appeared throughout history when established economies are challenged by rising commercial or industrial powers. It raises two distinct, although related issues. Success in international competition does not depend on absolute strength alone, but also on the strength of one's rivals. If the objective is to succeed in international competition, this can be done by preserving or increasing the absolute strength of one's own economy or by inhibiting the development of rival economies. Such behaviour is routine in commercial life. Indeed, as Karl Marx pointed out long ago, the struggle to create and undermine intellectual monopolies is the essence of competition in a knowledge-based economy. What goes for firms is also true, up to a point, for countries. The transfer of knowledge abroad may simultaneously weaken the sending country and strengthen recipient countries, thereby shifting the balance of competitive power at both ends. This is the kind of fear to which many of the opponents of offshoring appeal. Free traders typically dismiss such fears as unfounded on the grounds that international trade is a process from which all gain. A "win-win situation" as they put it. In general, I think they are right, but it would be foolish to deny that there is also a zero-sum dimension. As Paul Samuelson (2004) has recently shown, there are situations in which one country's gain is another's loss.

If offshoring does result in the large-scale transfer of knowledge and skills to other countries, then it could theoretically weaken the sending countries by undermining their capacity to compete. The standard answer is that they should become even more inventive and even more skilled to make up for what they have lost to their rivals. This is certainly a desirable path to take. It helps to raise global income and ensure that international trade really is a win-win process. It is also in the long-run the most viable option. Seeking to freeze the status quo by preventing knowledge and skills moving offshore is a losing game in the modern world. If the objective is to keep jobs at home or maintain the national productive base this is best achieved by doing things better than before. This is certainly the stance of the British government. In a variety of speeches the Industry Minister, Patricia Hewitt has argued forcefully that protectionism is not the answer. At

most Britain should ask for a level playing field so that taxes, subsidies and regulations are not used unfairly to promote offshoring to the disadvantage of British workers. For example, a high rate of value-added tax is currently charged on contact centre operations if they remain in Britain, but not if they are relocated to other countries. Some modification to these rules is mentioned as a possibility in the DTI report mentioned but otherwise the report itself stresses that the response to competition must be positive.

The position of Patricia Hewitt, and of the British government in general, is summarized in the following passage from a speech she gave to the Confederation of British Industry on 25<sup>th</sup> February 2004,

“First, we must create a system of world trade that is fair as well as free. We cannot demand market opening, sometimes overnight, from poor countries — while delaying market opening whenever it might hurt us. (...) Second, we have to protect people without resorting to protectionism. (...) But, as our economy changes, so will our jobs. And the faster the change in technology and trade — and however good for us as consumers — the more difficult the disruption will be for us as workers. I’m not going to make the false promise that every job that exists today will still exist in ten years’ or five years’ or even one year’s time. But we can and we must promise that anyone facing the loss of their job will get the help they need. We’re not going to compete against India or China, or Poland or Slovenia on lower wages. We have to compete on quality. Enterprise, innovation, skills: that’s how we will sustain job growth, the lowest levels of unemployment and the highest levels of employment that we’ve seen for decades.”

The damage caused by foreign competition and the ability of the government to deal with this damage depends crucially on the health of the economy at large. If the economy is depressed and the demand for labour is weak, then displaced workers may find it very difficult to find alternative employment. And if they do, the wages may be much lower or they may only get their job at the expense of someone else in the locality. This explains why the response to offshoring is more vehement in the US than it is in the UK, despite fact that the number of jobs concerned is similar in relation to total employment. The American economy has been slow to recover from the 2001 recession and the demand for labour is still quite weak, whereas the British economy has enjoyed its longest period of uninterrupted growth in history. When the economy is booming the overall demand for labour is strong and displaced workers can more easily find alternative employment. However, even under these circumstances, there will be many workers who experience serious financial and psychological costs when they lose their jobs. Thus, even in a booming economy an active policy of redeployment and compensation is required to deal with the casualties of foreign competition and to avoid the hostility it may otherwise provoke.

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