

# Globalisation and labour markets: implications of the emergence of China and India

David T Coe<sup>1</sup>

## Introduction

The impact of globalisation on labour markets has re-emerged as an important policy issue, reflecting the broader public debate about the interrelated concerns of downward pressure on wages, increased job insecurity, and jobs moving from OECD countries to developing countries with lower wages.

Two relatively recent phenomena are at play here. One is the accelerating participation in world trade of many developing and transition countries, particularly the large, vastly populated economies of China and India (Graph 1). These countries' increased trade and foreign direct investment (FDI) have, according to IMF estimates, contributed to a fourfold rise in the effective global labour force over the past two decades (IMF (2007a)).

The second phenomenon is that the nature of globalisation is changing. Technological advances, and particularly sharp reductions in communication and coordination costs, have allowed the emergence of global supply chains that are increasingly fragmented geographically (OECD (2007b)). To feed these supply chains, international trade is increasingly in intermediate inputs rather than in final goods and services or commodities. Moreover, often these intermediate inputs are business services that were previously non-tradable but are now, with technological advances, tradable. This type of international trade, whether in services or other intermediate inputs, is referred to as offshoring. Here too China and India have been key players.

What are the labour market implications of the current wave of globalisation for OECD countries?<sup>2</sup> OECD (2007a) summarises them as follows:

- There has been an overall improvement in employment and unemployment rates and continued real wage growth during the past decade, albeit in the context of rising earnings inequality and a reduced share of labour income.
- Heightened import competition and increased offshoring have had little if any impact on aggregate employment, but they have affected the sectoral composition of employment and reduced the demand for low-skilled workers relative to medium- and high-skilled workers.

---

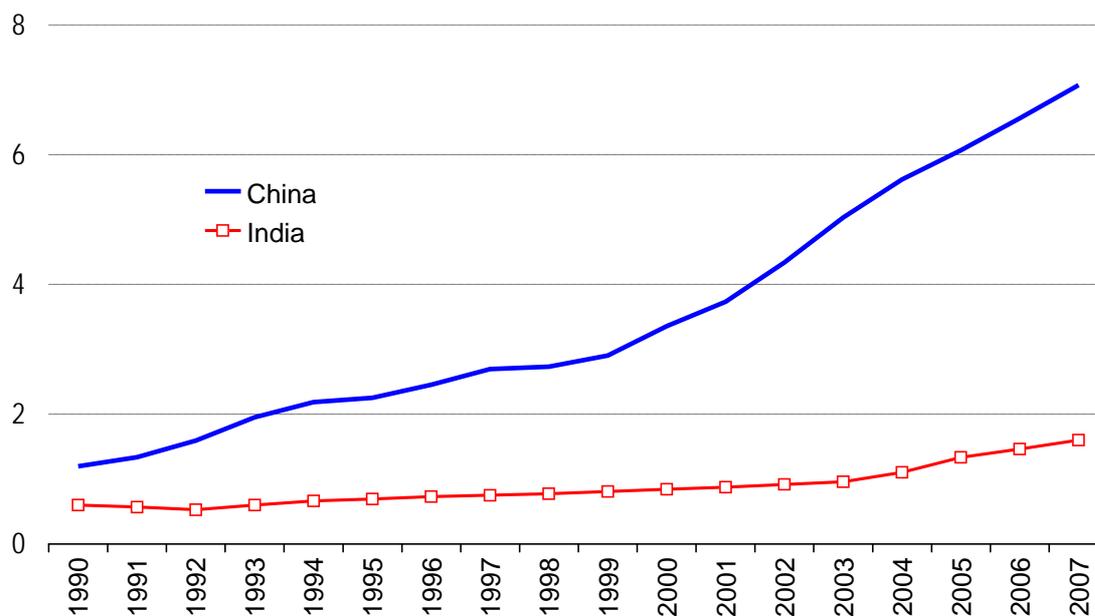
<sup>1</sup> This paper is a revised version of Coe (2007), written when the author was on leave from the IMF as a visiting scholar in the Directorate for Employment, Labour and Social Affairs of the Organisation for Economic Co-operation and Development during June and July 2007. He thanks DELSA for its hospitality and Martine Durand, Alexander Hijzen, John Martin, Mark Pearson, Paul Swaim and Raymond Torres for helpful comments and suggestions. The paper also benefited from fruitful discussions with Dennis Snower during a visit to the Institut für Weltwirtschaft (IfW) in Kiel, Germany in August 2007. The paper was not presented at the BIS Conference in Honour of Palle Andersen.

<sup>2</sup> This paper focuses mainly on international trade rather than on FDI, capital flows, international migration, or other aspects of globalisation.

- Offshoring, and particularly intra-industry offshoring, may also have caused wages and employment to become more sensitive to economic shocks, and is a potentially important source of vulnerability for workers.

Graph 1  
Shares in world trade<sup>1</sup>

As a percentage of total world trade in goods and services



<sup>1</sup> Trade is defined as the sum of exports and imports of goods and services.

Source: IMF, World Economic Outlook database.

OECD (2007a) concludes that globalisation increases the urgency of implementing a comprehensive policy programme to reap the associated benefits while addressing adjustment and distributional concerns. The IMF's conclusions are similar: IMF (2007a) states that policies should seek to improve the functioning of labour markets, strengthen access to education and training, and ensure adequate social safety nets that cushion the impact on those adversely affected without obstructing the process of adjustment.

These policy conclusions are familiar. More detailed policy recommendations are set out in the so-called "Restated OECD Jobs Strategy" (OECD (2006)). While the strategy has been refined to put more weight on promoting labour market participation and employment and to take into account concerns about low incomes of certain groups, the broad lines are consistent with the original 1994 OECD Jobs Study. This is reassuring, not least because it bolsters confidence in the pertinence of the analysis of labour market policies by the OECD and the IMF during the past 10 to 15 years. But it is noteworthy that there are no specific recommendations related to the emergence of China and India as major trading nations and key players in the segmentation of value chains and the growth of offshoring.

This paper looks more closely at the question of whether there are special employment policy issues or other, more general, policy implications stemming from the emergence of China and India.

## 1. China and India

China and India are different from other developing and transition countries. The most obvious difference is their enormous size: they are the only countries in the world with populations exceeding a billion – 1.3 and 1.1 billion, respectively – and together they account for 38% of world population.<sup>3</sup> Not only are they large, they have also been among the fastest-growing economies in the world: during the 10 years to 2007, economic growth has averaged about 9½% a year in China and 7% in India, compared with about 2½% in advanced countries (IMF (2007b)).

Rapid economic growth means that China and India are catching up. But both remain relatively poor, with per capita incomes of about USD 1,740 and USD 730, respectively, in 2005, well below average per capita income of USD 43,560 in the United States and USD 32,097 in the euro area.<sup>4</sup> This income disparity points to potentially large gains from trade with industrial countries to take advantage of the gap in wage levels adjusted for productivity. In both countries, however, these possible gains from trade have only recently started to be exploited: in China, this started with the open-door policy in the late 1970s; in India, with the pro-market reforms of the early 1990s (Kochhar et al (2006)). When countries this large rapidly increase their integration into the world economy, it is bound to have major impacts on trade and the pace of globalisation.

Another way that China and India differ from most other developing and transition countries is that they both have large, entrepreneurial diasporas. While there are other similarly entrepreneurial diasporas, none have contributed to the development of large developing countries like the Chinese and Indian diasporas. Investors from China's large and wealthy diaspora in East Asia were the first to seize the opportunity offered by China's open-door policy (Cheung (2004)), contributing more than half of China's FDI during the 1990s (Huang and Khanna (2003)). India, after keeping the diaspora at arm's length prior to the 1990s, now embraces it, although its contribution may prove to be more intellectual than financial (Huang and Khanna (2003)). Both countries have large, highly educated, and prosperous diasporas in Silicon Valley, the technological epicentre of the world's technological leader, and there has been a steady flow of highly educated and trained professionals returning home from the West.<sup>5</sup>

The Chinese and Indian diasporas have played key roles in adopting new technologies that have facilitated the fragmentation of global value chains, including the growth of outsourcing, what Baldwin (2006) has referred to as the "second great unbundling".

## 2. Baldwin's great unbundlings

According to Baldwin, globalisation has consisted of two great unbundlings, both of which stemmed from technological advances that decreased the cost of trade, resulting in rapid

---

<sup>3</sup> The other so-called BRIC economies have comparatively small populations: 186 million in Brazil and 143 million in Russia. The United States is the third most populous country in the world at 296 million inhabitants, although this is somewhat smaller than the total population of the euro area (314 million). All figures are from World Bank (2007) and refer to 2005.

<sup>4</sup> Valued at purchasing power parity exchange rates, which are arguably less relevant in this context, per capita incomes in 2005 were USD 6,760 in China, USD 3,452 in India, USD 41,890 in the United States, and USD 28,807 in the euro area (World Bank (2007)).

<sup>5</sup> *Business Week* reported in 1998 that nearly 40% of Silicon Valley startups in the 1990s had at least one founder of Indian origin, as quoted in Pandey et al (2004).

increases in the quantity of trade. The first unbundling was stimulated by rapidly falling transportation costs that ended the necessity of making goods close to where they are consumed. Globalisation associated with this unbundling took place in two waves, one from roughly 1850 to 1914, and the other from the 1960s and continuing to the present. The rise in trade resulting from the first unbundling was primarily in final goods and services and in commodities.

The second unbundling has been stimulated by falling communication and coordination costs that have ended the need to keep most manufacturing stages in the same factory or in close proximity. This has allowed the geographic fragmentation of global value chains. Baldwin dates the start of this episode of globalisation from about the mid-1980s, roughly coinciding with the time when internet usage became commonplace, although arguably it started as early as the 1960s. A characteristic of the second unbundling is the importance of trade in intermediate inputs, initially intermediate goods and more recently also intermediate services. It is useful to distinguish between two types of unbundling: if the unbundling occurs within the borders of a country, whether among affiliates of a firm or to other firms, it is referred to as outsourcing; if, on the other hand, the unbundling is to other countries, it is referred to as offshoring. And, of course, for every country that offshores there is a recipient country that onshores.

Baldwin (2006) identifies three episodes of offshoring. The first was the Maquiladora programme on the Texas-Mexico border that boomed in the 1980s following the NAFTA agreement (Feenstra and Hanson (1997)). The second, most spectacular, episode was in East Asia.<sup>6</sup> This unbundling started in the 1970s as Japanese manufacturers offshored labour-intensive production stages to nearby East Asian nations. It then strengthened as Taiwan (China), Korea, Singapore, and Hong Kong SAR in turn offshored labour-intensive tasks to other countries where lower cost more than made up for lower productivity levels. China, as one of the main recipients of offshoring from more developed East Asian economies, and the Chinese diaspora were key players in this unbundling. The unbundlings in East Asia and along the Texas-Mexico border mainly affected production or assembly tasks and trade in intermediate goods, referred to as material offshoring. Blue-collar workers performing these tasks were, by and large, the same types of workers affected by earlier episodes of globalisation.

By contrast, the third example of offshoring given by Baldwin (2006) is the recent phenomenon of unbundling reaching into offices. Tasks that were previously viewed as non-tradable became tradable when telecommunication costs dropped to almost zero. Many of these tasks were business services performed by white-collar workers, some of whom were highly skilled. The classic, but by no means the only, example of service offshoring is the moving of call centres from the United States to India. The members of the highly educated, English-speaking Indian diaspora in the United States were key players in this unbundling.

Globalisation today reflects both of Baldwin's two types of unbundlings. An important question is whether the most recent unbundling phenomenon – material and service offshoring – merely represents an intensification of the process of globalisation or a fundamental change in its nature.

---

<sup>6</sup> Increased trade between developed countries in western and northern Europe and transition countries in central and eastern Europe since the early 1990s appears to be mainly a mixture of trade in final products and offshoring of intermediate inputs similar to that which took place in East Asia; see Ekholm and Hakkala (2006) and Lorentowicz et al (2005).

### 3. The offshoring debate: is it a “big deal” or “business as usual”?

The recent phenomenon of the offshoring of business services has stimulated a debate in the business press and academic literature in a number of OECD countries. In the United States, the debate was triggered by Gregory Mankiw, former Chairman of the Council of Economic Advisors, who stated in a 2004 interview that offshoring “is probably a plus for the economy in the long run” and asked “... does it matter [...] cables?” His response: “Well, no, the economics is basically the same”.<sup>7</sup> Bhagwati et al (2004) are also on this side of the debate, arguing that the effects of offshoring are not qualitatively different from those of conventional trade in goods.

On the other side of the debate is Alan Blinder. Blinder (2007b) emphasises that he considers the debate to be neither about comparative advantage nor about the presumption that there are gains from trade, both of which he accepts. Instead, he says the debate is about whether offshoring and the entry of China and India into the global economy is a “big deal” or simply “business as usual”. Blinder’s view is that it is a big deal for the US economy in that it will force major changes in the US industrial structure and in the types of jobs available as well as in wages, job security, turnover, etc.

A good starting point to assess this debate is to consider the labour market effects of offshoring, including possible job losses.

#### Labour market effects of offshoring

The key labour market effects of offshoring identified in the literature appear to be the following:<sup>8</sup>

- Trade will increasingly affect workers doing particular tasks rather than workers in particular firms, sectors, or skill groups.<sup>9</sup> Data entry or computer programming tasks, for example, may increasingly be offshored by labour-intensive as well as capital-intensive industries.
- Whereas globalisation has in the past had a disproportionately large effect on low-skilled production or assembly workers, offshoring may increasingly also affect skilled workers, including in the service sector. However, some low-skilled service sector jobs are unlikely to become offshorable.
- The impact on relative wages will depend on a variety of structural features of economies, including factor endowments, the configuration of sectoral factor intensities, relative factor demands, and the relative factor intensities of tasks offshored.

---

<sup>7</sup> Mankiw and Swagel (2006). There was an earlier US debate about the material offshoring effects of NAFTA, in which presidential candidate Ross Perot famously warned of the “giant sucking sound” of US jobs moving to Mexico.

<sup>8</sup> See Bhagwati et al (2004), Baldwin (2006), Mankiw and Swagel (2006), Grossman and Rossi-Hansberg (2008), Blinder (2007b), OECD (2007a,b) and IMF (2007a).

<sup>9</sup> In the Grossman and Rossi-Hansberg (2008) model, which focuses on trade in tasks rather than trade in goods, there is a productivity effect not present in conventional trade models whereby the productivity of workers in the offshoring country increases as they move to jobs where their comparative advantage is greatest. Thus, the technology transfer, which occurs in the transferring country’s import sector, is unambiguously positive for the offshoring economy. This contrasts with potentially harmful effects on a country’s export sector if its comparative advantage is eroded, ie as it trades less, by technology transfers, as noted by Samuelson (2004). See also Saint-Paul (2007), who presents a model in which trade liberalisation can have a negative effect on the more developed country if the less developed country has a greater comparative advantage in newly traded goods than in existing goods.

- Offshoring is likely to increase uncertainty and heighten job insecurity. This is partly because little is known about how tasks are organised within firms, making it difficult to predict which tasks may be unbundled and how rapidly, but also because offshoring may increase the responsiveness of employment and wages to economic shocks.
- In the long run, offshoring is likely to have beneficial economic effects for both the offshoring as well as the onshoring economies, although not all workers, industries, or sectors will be affected the same. Aggregate employment and unemployment will in the long run be determined by macroeconomic policies and structural aspects of labour markets.

Whether offshoring is a “big deal” or not will depend on a number of closely related aspects of the transition to long-run equilibrium: how many jobs have already been “lost”, how many jobs might be lost, the potential impacts on job security and the incomes of different types of workers, and how long or smooth the transition process is likely to be.

#### **4. How many service jobs have been or might be offshored?**

Hard data on how many jobs have actually been lost due to offshoring are scarce, but estimates that are available suggest the effects have been limited to date. Baldwin (2006) summarises the estimates as in the order of 0.3 to 0.7% in the United States and those European countries for which estimates are available. Relative to layoffs, offshoring may have accounted for 4 to 5% of total large-scale layoffs in the United States and the (at that time) EU 15, and potentially less in Japan (Kirkegaard (2007)). There is also evidence, however, that the importance of service outsourcing, and hence presumably the impact on employment, has been steadily increasing in recent years (Amiti and Wei (2005)). Blinder (2007a,b) agrees that offshoring has thus far cost a limited number of US jobs, but argues that this is just the tip of a much larger iceberg of potentially offshorable jobs.

Van Welsum and Vickery (2005) have estimated the number of jobs in OECD economies that could potentially be offshored. They use detailed occupational and task descriptions to classify occupations according to the following “offshorable attributes”: intensive use of ICTs, an output that can be traded/transmitted by ICT, high codifiable knowledge content, and no requirement for face-to-face contact. Blinder (2007a) does a similar exercise for the United States based on a distinction between impersonally delivered services, which can be delivered electronically from afar with little or no degradation of quality, and personally delivered services, which can not be delivered electronically or which suffer degradation when delivered electronically.

Van Welsum and Vickery (2005) estimate that in 2003 close to 20% of total employment could potentially be affected by ICT-enabled offshoring of services in the EU 15 countries, Australia, Canada and the United States. Blinder’s estimates for the United States are somewhat larger, at 22 to 29%. Other studies using different methodologies yield different, but still large estimates.<sup>10</sup>

The most important point about these estimates, which are indisputably large, is that they refer to the potential number of service sector jobs that could be exposed to international competition. While the authors of these studies are careful to make the distinction between potential job losses and the number of job losses that might actually occur – van Welsum

---

<sup>10</sup> See the summaries, including estimates from management consulting firms, in Kirkegaard (2007) and van Welsum and Vickery (2005).

and Vickery (2005) refer to their estimates as the “outer limits” – the public debate is often less nuanced. Cohen (2007), for example, reporting for the *New York Times* cites Blinder as warning “that as many as 30 million to 40 million Americans could lose their jobs to lower paid workers abroad”.

The problem with such statements is that they confuse the distinction between absolute and comparative advantage: the implicit assumption is that industrial countries will have no comparative advantage in any of the service sector jobs newly exposed to international competition; that is, that industrial countries will only offshore jobs but not onshore jobs. This ignores the fact that the United States, the United Kingdom and a number of other industrial countries are net exporters of services, and in many cases this net surplus has been increasing in recent years (van Welsum and Reif (2006), Amiti and Wei (2005)). Many newly traded services may be in areas where OECD countries have a comparative advantage. The net effect might be that OECD economies onshore more services than they offshore, potentially resulting in a net increase in service jobs in OECD countries. This, in fact, is what Hijzen et al (2007) find based on an analysis of British firm-level data: firms that import services have faster employment growth than those that do not.<sup>11</sup>

### **Impacts on incomes and job security**

A key issue is whether offshoring will affect the relative wages of workers differently than earlier episodes of globalisation. In the past, skill-biased technical change and globalisation have tended to restrain wages of the low-skilled. It is more likely that offshoring will be a big deal in industrial countries if offshoring, particularly offshoring of services, affects medium- and high-skilled workers more than low-skilled workers. Indeed, Blinder (2007b) and Baldwin (2006) emphasise that offshoring will affect relatively high-skilled workers, and this is supported by anecdotal evidence: workers in India reading X-rays of patients in advanced countries, developing software for firms in advanced countries, and preparing tax forms for citizens of advanced countries.<sup>12</sup> Moreover some low-skilled tasks, such as those performed by gardeners, refuse collectors and carers are, with current technology, not offshorable, suggesting that wages for these jobs are unlikely to be affected by offshoring.

Whether on balance highly skilled service tasks are offshored or onshored in a specific country will depend on that country’s comparative advantage. The comparative advantage of the Chinese and Indian economies is likely to remain in low- or medium-skilled tasks for some time given the challenges of improving the quality of education and increasing the average education levels of their vast populations. But China and India are made up of disparate regions and states at very different levels of development. Thus, factor proportions in Bangalore, for example, may mean that Bangalore has a comparative advantage in skilled labour and high technology relative to, for example, the United States as a whole. If this is so, substantial numbers of high-skilled tasks may in future be offshored to Bangalore. But developments in Bangalore cannot be extrapolated to India as a whole, or developments in the coastal regions of China to China as a whole.

In general the available evidence suggests that offshoring has tended to increase the wages of skilled workers relative to those of unskilled workers, which is the opposite of what would be implied if offshoring was having a disproportionately large effect on skilled tasks.<sup>13</sup> Of

---

<sup>11</sup> Similarly, Klodt and Christensen (2007) estimate that German firms investing abroad increase employment.

<sup>12</sup> From media and other reports cited in Grossman and Rossi-Hansberg (2008).

<sup>13</sup> See Hijzen et al (2005) and Feenstra and Hanson (1997). In contrast to these studies, Ekholm and Hakkala (2006) find no statistically significant effect from offshoring in the Nordic/Baltic region on the wage bill share of different types of workers; and Lorentowicz et al (2005) find that offshoring has actually lowered the skill

course this may change in future if highly skilled jobs in OECD countries that are potentially offshorable actually do get offshored. Thus far, however, there appears to be little evidence that offshoring is disproportionately affecting high-skilled labour. If anything, the effects of offshoring appear to be consistent with the broader literature on the effects of skill-biased technical change and globalisation, as well as the evidence of increasing earnings inequality in most OECD countries.

Offshoring may also have important effects on workers' actual or perceived job security, and on labour's bargaining power. This would result, for example, if globalisation increased the responsiveness of employment and wages to economic shocks by increasing the own-price elasticity of labour demand, as hypothesised by Rodrik (1997). This hypothesis is supported by recent research by Hijzen and Swaim (2008), who present evidence, based on industry-level data for OECD countries, that the elasticity of labour demand has increased substantially and that more intensive offshoring is associated with more elastic labour demand.<sup>14</sup> Evidence of heightened job insecurity also comes from US survey data, where Anderson and Gascon (2007) find evidence that workers in tradable industries and occupations express higher levels of economic insecurity than other workers.

### **Will the transition be smooth or disruptive?**

Whether the unbundling of tasks occurs smoothly or in a massive and disruptive transition – what Blinder (2007b) characterises as a “new industrial revolution” – will depend on a variety of macroeconomic and structural factors, both in OECD countries and in current and potential onshoring countries. An important set of factors are the macroeconomic, financial and exchange rate policies in China, India and their industrial country trading partners that will determine the overall size and configuration of world current account balances. Structural policies in OECD countries are also important since countries with flexible labour and product markets, with good educational institutions and training systems, and with effective employment and innovation policies will more easily and rapidly adapt to the challenges and opportunities from increased trade and offshoring.

The actual (not potential) number of tasks that become tradable and how rapidly they actually start to be traded will also depend on developments in onshoring countries. A key issue is the capacity in China and India to onshore new types of tasks from OECD countries. Bhagwati et al (2004) argue that growth in China and India in the near term is likely to remain concentrated in low-end information technology services that are already being exported to the United States. Capacity to onshore new types of tasks will require investments in education in both countries, improvements in infrastructure in India, and strengthened English-language skills, property rights, intellectual property rights enforcement, and rule of law in China (van Welsum and Xu (2007), Catching and Viswanath (2007)). These structural aspects of the Chinese and Indian economies suggest a drawn-out transition.

There is also the issue of how rapidly wages for suitably skilled workers in China and India respond to increased onshoring given the limited availability of skilled labour. There are already some tentative signs of rising real wages and anecdotal evidence of labour shortages in the coastal regions of China and in Bangalore. Other things equal, rising real wages in China and India will erode their comparative advantage and limit the number of tasks that are offshored.

---

premium in Austria, which they suggest reflects that Austria is poor in human capital relative to its trading partners.

<sup>14</sup> The increasing sensitivity of employment to wages may reflect an increase in the speed with which labour demand responds, ie it may mainly reflect an increase in short-run rather than long-run elasticity. See also OECD (2007a).

Other things equal, the longer the transition takes, the less likely it is to be disruptive. But regardless of how long the transition is, it is clear that the ongoing integration of China and India into the world economy is likely to have lasting effects on the distribution of income and on job security in OECD countries.

## 5. Other offshoring issues

There are a number of other issues relevant to an assessment of the labour market policy implications of offshoring. These include the idiosyncratic nature of recent episodes of offshoring, the role of immigration and tourism, and the nature of technological progress.

### How unique are recent episodes of offshoring?

How many other developing and transition countries are likely to join the party as onshoring destinations, and how rapidly? There have been a number of idiosyncratic factors behind each of the prominent episodes of offshoring that suggest that many countries may find it difficult to emulate China and India's recent successes as onshoring destinations. It is striking, for example, how important were the roles played by diasporas and factors such as geographic distance, cultural similarities or familiarity, and common languages in each of Baldwin's (2006) three "second unbundling" examples. The empirical significance of the latter set of factors as determinants of bilateral trade is well documented in the standard gravity model literature (Anderson and van Wincoop (2003)), and they have recently also been shown to be significant determinants of bilateral capital flows (Portes and Rey (2005)), remittance flows (Lueth and Ruiz-Arranz (2006)) and technology transfers (Keller (2002)).

An important question is whether any of these factors or a subset of them are critical for unbundling to take place on a significant scale. The Chinese and Indian diasporas played key roles in two of Baldwin's examples: geographic proximity and cultural similarities or familiarity were central to the East Asia and Maquiladora unbundling episodes.<sup>15</sup> Moreover, a common language, English, was important in the offshoring of tasks from the United States to India, while familiarity with trading partners' languages and cultures was also important in East Asia and along the US-Mexico border.

The fact that the English language is unique as the lingua franca of international business suggests that other developing countries without large English-speaking populations may find it difficult to replicate the success of India in onshoring service jobs from developed English-speaking countries. Although French companies have set up call centres in some francophone countries in Africa, the potential for offshoring in other languages is probably limited by the size of the markets and perhaps also by limited capacity in terms of human capital, entrepreneurial skills, and market institutions in candidate developing countries.<sup>16</sup>

The above considerations raise the following questions: how unique were the three episodes of unbundling and are they likely to be replicated? It is not clear, for example, if other diasporas, many of which have limited financial and human capital and entrepreneurial resources, could play a similar role to that played by the Chinese and Indian diasporas recently. Emulating India's success as a centre for onshoring of IT and ICT-enabled services may be particularly elusive since the emergence of IT companies in India was stimulated by

---

<sup>15</sup> Reductions in tariffs and non-tariff barriers under NAFTA were also important in the Maquiladora unbundling.

<sup>16</sup> For these reasons, Blinder (2007b) argues that offshoring of services will have a larger effect on English-speaking countries than on continental Europe or Japan.

a number of one-time events, including the Y2K problem, the internet-telecom boom, and the dotcom boom in the late 1990s (Pandey et al (2004)). These considerations suggest it will be very difficult for other countries (including China, which was one of the first countries to benefit from material onshoring) to emulate the success of India in services offshoring (van Welsum and Xu (2007), Catching and Viswanath (2007)).

Becoming a centre for onshoring of intermediate material inputs and final assembly may be less difficult, but even here some of the cultural and geographic factors discussed above are likely to be important. For example, some countries in central and eastern Europe, the Baltic region, and North Africa have benefited from onshoring from nearby developed countries in western and northern Europe with whom they share cultural and linguistic similarities or familiarities and, in the case of North Africa, colonial ties. Furthermore, Asian countries are likely to continue to benefit from increasing integration of regional supply chains (Burton et al (2006)).<sup>17</sup>

It is an open question, however, if countries in sub-Saharan Africa, South America, Central Asia and the Middle East – relatively distant from major industrial countries, lacking strong cultural or linguistic links to industrial countries, and without the benefit of large, prosperous and entrepreneurial diasporas – will be able to emulate the recent success of India and China, and to a lesser extent Mexico and countries in Central America and central and eastern Europe, as onshoring destinations vis-à-vis OECD countries.

### **Immigration and tourism**

Immigration is another subject of intense debate in many countries and, like offshoring, it is a key aspect of globalisation. While a full discussion of the implications of immigration and immigration policies is beyond the scope of this paper, it is worth noting that the potential impact of immigration on OECD labour markets may, under certain assumptions, be similar to the impact of offshoring.<sup>18</sup> In particular, if immigrants are not covered by the same labour market policies as OECD workers, the impacts may be qualitatively similar; if immigrants are subject to the same working conditions and receive the same wages as in their country of origin, as opposed to those prevailing in the host OECD country, the impact will be essentially the same as offshoring (Saint-Paul (2007)).

Certain types of tourism represent a type of offshoring. The most prominent example is medical tourism, whereby OECD citizens travel to certain developing countries to receive medical treatment to take advantage of lower costs, shorter waiting times, or some combination of the two. In some cases, medical tourism may also reflect different regulatory regimes making some procedures more readily available in developing countries. And some developing countries with highly trained health professionals may also develop comparative advantages in certain types of medical procedures (Brown (2007), Kurlantzick (2007)).

### **Technology and technological progress**

A final issue concerns the nature of technological progress. Globalisation in the form of a rapid increase in international trade has been spurred by advances in technology that have lowered the cost of trade. Trade costs are not only the costs of transportation but also

---

<sup>17</sup> Another example of the importance of geographic and cultural proximity and language is North Korea: the country is a recipient of material offshoring from South Korea, and this is widely expected to increase sharply when North Korea emerges from isolation.

<sup>18</sup> The factor-price equalisation theorem implies that the impact of increased immigration may also be similar to the impact of trade liberalisation (Mundell (1957)).

include the costs of search, information, coordination, communication and so on. With technological advances such as the internet, these costs have fallen dramatically and some have largely been eliminated. This raises the question of whether the pace of globalisation associated with the decline in these costs may slow.

Even if communication and coordination costs are unlikely to fall further, innovation to take advantage of these lower costs will continue, including innovation to expand offshoring to a wider range of tasks and to a wider group of countries. Other aspects of technological progress will also undoubtedly continue, and this too may further expand the scope of offshoring. Progress in areas related to voice recognition and computer-generated oral communication, for example, may decrease the importance of proficiency in the English language, allowing other developing countries to more easily emulate the success of India.

Technology itself is increasingly being globalised as R&D is offshored by multinational corporations to laboratories and R&D centres in China and India. This suggests that technological spillovers, which in the past were generally considered to flow from OECD countries to developing countries, may increasingly flow both ways.<sup>19</sup> To the extent that the globalisation of technology represents an increase in the global R&D effort, rather than a substitution of R&D among different countries, this will boost world productivity and incomes, and will also tend to increase relative incomes of R&D workers.

## 6. Policy implications

The above discussion suggests that while the emergence of China and India has developed hand in hand with the new phenomenon of offshoring, this is best characterised as an intensification and broadening of the process of globalisation rather than a fundamental change in its nature. Does this have important implications for labour market policies, or for economic policies more generally, in OECD countries? Is it a “big deal”? The answer must be yes: increased trade and the enormous growth in the global labour supply will affect the composition of employment, the distribution of wages and incomes, transitions into and out of employment and unemployment, job security, and other important aspects of the labour market; and it may also affect public support for liberal trade policies. These are bread-and-butter issues faced by policymakers in all OECD economies.

### Labour market policies in OECD countries

What are the implications for labour market policies in OECD countries? One set of implications concerns policies directed at specific sectors or industries. The recent phenomenon of offshoring adds another, important reason to question the effectiveness of industrial or employment policies in industrial countries that seek to target sunrise industries or sectors. Such policies are even less likely to be effective in a world where international trade increasingly affects tasks rather than firms or industries. The possibility of perverse effects may even have increased: for example, if policies target particular types of skills or occupations, such as relatively low-skill “knowledge-based” jobs that become tradable and in which developing countries have or may soon develop a comparative advantage (Baldwin (2006), Blinder (2007b)).

---

<sup>19</sup> Coe et al (1997) provide evidence of the importance of R&D spillovers from industrial to developing countries, but explicitly assume, citing UNESCO figures indicating that 96% of world R&D was done in industrial countries in 1990, that there were no spillovers from developing to industrial countries. Nowadays such an assumption would not be tenable for many emerging market countries.

Assistance or training programmes targeted to firms or industries may also be increasingly ineffective if trade mainly affects tasks. Moreover, the unpredictability of which tasks might be unbundled suggests that it may be futile to target specific jobs or tasks for assistance. The implication for assistance programmes is that they should be targeted to helping workers adjust, regardless of the sector or industry in which they were previously employed, through, for example, general worker retraining programmes. The implications for training programmes and education policies are that they should aim to facilitate lifetime employment, potentially in a variety of different jobs or industries (Blinder (2007b)).

A related point concerns the provision of targeted assistance to workers displaced by international trade, such as the Trade Adjustment Assistance programme in the United States. To the extent that technological change and innovation are the driving forces behind job losses, whether through offshoring or through outsourcing within the same country, it would seem that the same benefits should be made available to both groups of affected workers (Aldonas et al (2007)). Special programmes aimed at specific types of workers result in a proliferation of different types of assistance programmes that unduly increase complexity and administrative and bureaucratic costs. There is, however, a political economy justification, which is that assisting workers affected by international trade may help to ensure continued public support for trade liberalisation policies. It is not clear, however, that such assistance should be narrowly targeted only to workers who lose jobs and to their communities rather than to a broader group of workers adversely affected by globalisation.

A more general implication for labour market policies is that the unpredictability of which tasks might be unbundled, how rapidly they may be unbundled, and which tasks may actually be offshored or outsourced implies an additional premium on policies to increase labour and product market flexibility.<sup>20</sup> Countries with relatively flexible labour and product markets will be better able to avoid increases in long-term or structural unemployment due to offshoring. By contrast, policies aimed at resisting change, whether through employment protection legislation or industrial policies, are likely to become increasingly costly in a world of accelerating change. However, as emphasised in the Restated OECD Jobs Strategy, there are different roads to success, and different countries will choose different policy packages (OECD (2006, 2007a)). It is important, however, that policy packages be coherent to take advantage of potential policy complementarities (OECD (2006), Coe and Snower (1997)). In a few European countries, for example, policies to increase flexibility have gone hand in hand with policies to provide better social protection to improve worker security. In many other European countries further social reforms aimed at greater economic flexibility and social protection are needed (Sapir (2005)).

### **Is anything important missing from the Restated OECD Jobs Strategy?**

The restated strategy has four pillars (OECD (2006)): setting appropriate macroeconomic policies; removing impediments to labour market participation and job-search; tackling labour and product market obstacles to labour demand; and facilitating the development of labour force skills and competencies. While the strategy is meant to apply to all OECD countries, it highlights the need to take into account policy interactions as well as national social preferences and circumstances, implying that different types of policy packages can be successful and that policy priorities will differ among countries.

Does the recent wave of globalisation affect the conclusions of the Restated OECD Jobs Strategy? In terms of labour market policies the leitmotif of the original as well as the restated strategy is the need to improve labour market flexibility to reduce high and persistent

---

<sup>20</sup> See Layard (2005) for an agnostic view on the benefits of labour market flexibility and mobility.

unemployment while strengthening social safety nets and other activation policies to ease transitions back to employment. Both reports emphasise that this is best done through active labour market policies to strengthen incentives rather than through passive income support measures that may dull incentives. This remains the challenge for labour market policies. This is not to deny that elaboration of some of the more detailed recommendations in the strategy may be useful to reflect that international trade increasingly affects tasks rather than firms or industries. In general, however, the policy recommendations in the Restated OECD Jobs Strategy appear to remain valid and relevant. The recent acceleration of globalisation does not suggest any major lacunae in the strategy,<sup>21</sup> although it does increase the urgency of implementing the policies recommended in the strategy. Such a conclusion is consistent with the view that the emergence of China and India and the growth of offshoring have intensified globalisation but do not represent a fundamental change in its nature.

### **Support for globalisation**

The recent intensification of globalisation has occurred against the backdrop of the perception of an ongoing and sustained rise in economic inequality. Although the increase in inequality has been fairly general, it has been particularly large in some countries, and has often been especially pronounced when comparing the very top of the income distribution with the rest of the population: in the United States, for example, on some measures income inequality is greater today than at any time since the so-called “gilded age” of the 1920s (Scheve and Slaughter (2007)). And it is not only the low-skilled who are affected: workers with relatively high levels of education are also experiencing declining real wages. Aldonas et al (2007) present figures showing that in the United States the group of workers with masters and college degrees experienced a decline in average real earnings from 2000 to 2005, as did workers with lower levels of education; the only group of workers that did not experience a decline were those with doctorate, professional JD and MBA graduate degrees.

While the causes of the rise in income inequality are not fully understood, the balance of empirical research indicates that skill-biased technical change has been a more powerful driver of increased wage dispersion than increased trade, itself partly a reflection of technological advance (OECD (2007b), IMF (2007b)). Nevertheless, the acceleration of globalisation could in future further erode labour’s bargaining power, potentially leading to wage stagnation or further declines in relative wages of low- and medium-skilled workers (OECD (2007a), Hijzen and Swaim (2008)).

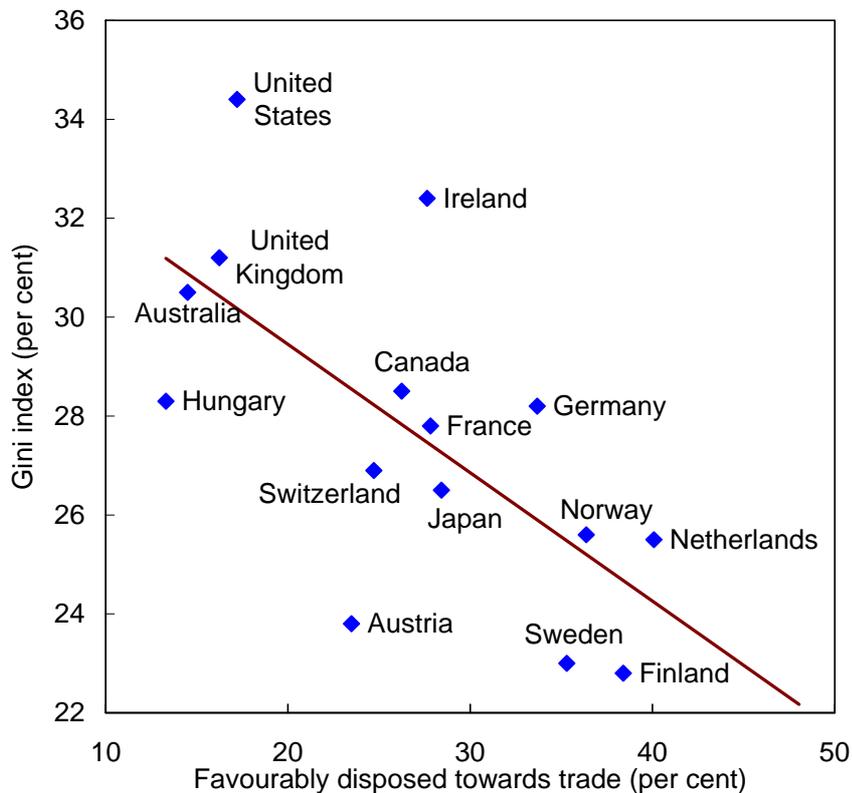
The fact that the recent acceleration of globalisation has coincided with rises in income inequality in some countries has important implications for public support for globalisation. Voters whose incomes have been stagnant in an environment where globalisation is boosting the incomes of a few may see themselves as outsiders not benefiting from globalisation and may increasingly identify with the losers from globalisation. This may even be the case if voters view technology as the driving force behind income developments, since increased trade may be the most evident manifestation of technological change. Moreover, voters have the political power to influence trade policies that can slow, halt, or even reverse the process of globalisation, whereas they are largely unable to influence the pace of technological advance.

---

<sup>21</sup> It could be argued that a key omission of the original OECD Jobs Study was that it did not address the political economy of reforms and the possible importance of political complementarities emphasised in Orzag and Snower (1998). The Restated Jobs Strategy does discuss the issue of policy complementarities and presents some econometric evidence on their significance.

Graph 2

**Inequality and attitudes toward trade**



The Gini index is a measure of income inequality. At 0, there is perfect equality; at 100, there is total inequality. The Gini index is from the mid-1990s. Attitudes toward trade are from a 2003 survey. The graph shows that the higher the level of income inequality, the less positive are the attitudes toward trade.

Sources: Förster and Pearson (2002); International Social Survey Programme (2007).

Public opinion surveys in many countries indicate that an individual's relative economic status has a very strong positive association with pro-trade attitudes (Mayda and Rodrik (2005), Scheve and Slaughter (2007); see Graph 2 above). Aldonas et al (2007) argue, for example, that the US public are becoming more protectionist because of stagnant or falling incomes, not because they do not understand the benefits of globalisation but because the benefits of globalisation appear to be increasingly unevenly divided (Scheve and Slaughter (2007)). This suggests that the public appreciate that trade liberalisation can potentially be a Pareto improvement in the sense that the gains to the winners exceed the losses to the losers. But they also understand that liberalisation is only an improvement for the nation as a whole if the losers are actually compensated, which is seldom the case (Blinder (2007b)).

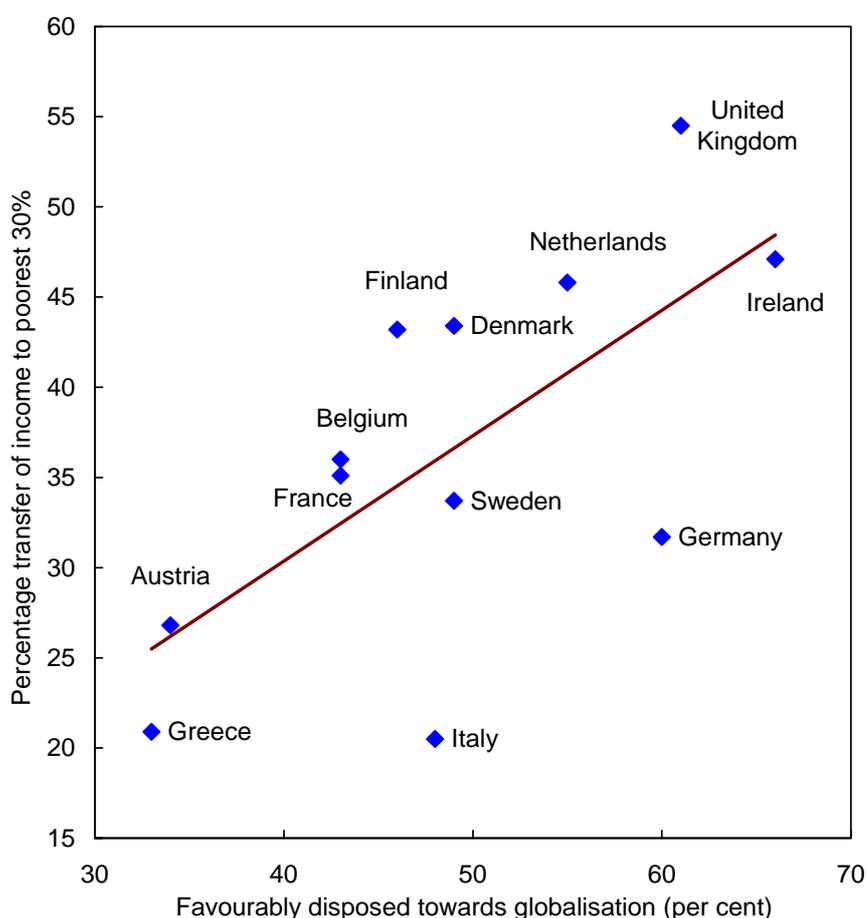
The most important policy implication of the emergence of China and India may stem from the fact that it has coincided with the perception of widespread increases in economic inequality in many OECD countries. The large number of potentially offshorable jobs – and here it is the potential number of offshorable jobs that is relevant, not the smaller number of jobs that actually get offshored – exposes new groups of white-collar workers, many of whom may be politically active, to international competition. If large numbers of workers believe that their jobs are potentially at risk of being offshored, while the benefits from globalisation are not being fairly shared, they are likely to be an increasingly receptive audience for special interest protectionists.

Policymakers need to ensure that the gains from trade are broadly shared and that social policies are in place to facilitate adjustment of those workers adversely affected by globalisation and technological change. One way to do this is to improve education and training, which is crucial to adapt successfully to globalisation. But this is likely to have only limited effects in the short run since educational reforms are often difficult to implement and have an impact only as new generations of students complete their education.

In the time frame relevant for political decisions, redistribution policies to compensate losers or outsiders may be key to obtaining political support for continued participation in – or to prevent a retreat from – globalisation. This appears to be the case in the European Union: countries that do relatively more redistribution, proxied by the percentage of total benefit payments that are paid to the lowest 30% of the working age population, are those where the population is most in favour of globalisation (Graph 3).

Graph 3

**Income transfers and attitudes toward globalisation**



Income transfer data are from the mid-1990s; attitudes toward globalisation from a 2003 survey. The graph shows that the more income is redistributed to the poorest 30% of the population, the more positive are attitudes toward globalisation.

Sources: European Commission (2003); Förster and Pearson (2002).

Although the need to compensate the losers from globalisation has been widely appreciated, the question of how best to do so has not received much attention. The changing nature of globalisation in recent years, however, suggests that this issue may become increasingly

important in some countries because larger groups of workers may now consider themselves as losers. To maintain political support for globalisation, therefore, compensation may need to be broadened beyond the narrowly defined group of workers who lose their jobs due to trade liberalisation to also include redistribution to employed workers at the low end of the income distribution.

Increased economic inequality and heightened protectionism suggest the potential importance of political complementarities between policies to redistribute the benefits of globalisation and liberal trade policies to foster globalisation (Snower and Coe (2008)). That is, redistribution policies, which in general have adverse economic effects, may nevertheless be necessary to create the political consensus that makes it politically feasible to implement trade liberalisation policies or to resist protectionist policies that could halt or reverse globalisation.

## **7. Conclusions**

The emergence of China and India as major trading countries during the closing decades of the 20th century and the associated rise in technologically enabled offshoring is certainly, from a historical perspective, a “big deal”. Offshoring may have potentially long-lived effects on the sectoral distribution of employment, relative wages, and the job security of workers, many of whom were previously not exposed to international competition. The impact on workers in specific types of jobs or at different skill levels may be sudden and unpredictable. For the economy as a whole there could be large disruptions in the short run, particularly in countries with relatively inflexible labour markets. However, a variety of factors suggest the process is likely to play out over a relatively long time period. In the long run, most economists and policymakers agree that this most recent episode of globalisation – like previous episodes – will have beneficial economic effects, not only in China and India but also in their trading partners.

Although the pace of technological progress is inherently unknowable, it is unlikely to slow. Nevertheless, it is not clear how many other developing and transition countries will be able to emulate the recent success of India and China, and to a lesser extent Mexico and countries in Central America, central and eastern Europe, and North Africa as onshoring destinations vis-à-vis OECD countries.

The emergence of China and India and the rise of offshoring have not changed the fundamental nature of globalisation, although they have changed the pace at which globalisation progresses and the types of workers it affects. This has increased the urgency of implementing policies to improve labour market flexibility to reduce high and persistent unemployment while strengthening social safety nets and other activation policies to ease transitions back to employment. The recent acceleration of globalisation does not suggest any major lacunae in the Restated OECD Jobs Strategy, and the policy recommendations in the strategy remain valid and relevant.

The most important policy implication of the emergence of China and India in the context of widespread perceptions of increasing income inequality in many OECD countries has to do with political support for globalisation. The large number of potentially offshorable jobs exposes new groups of workers to international competition, and these workers may increasingly be a receptive audience for special interest protectionists. Policymakers need to ensure that the gains from trade are broadly shared and that social policies are in place to facilitate adjustment on the part of those workers adversely affected by globalisation and technological change. Only in this way will it be possible to maintain a political consensus for an open trading system and globalisation.

## References

- Aldonas, G, R Lawrence and M Slaughter (2007): "Succeeding in the global economy: a new policy agenda for the American worker", *Financial Services Forum Policy Research Paper*, June.
- Amiti, M and S-J Wei (2005): "Fear of service outsourcing: is it justified?", *Economic Policy*, April, pp 309–47.
- Anderson, J and E van Wincoop (2003): "Gravity with gravitas: a solution to the border puzzle", *American Economic Review*, vol 93, no 1, March, pp 170–92.
- Anderson, R and C Gascon (2007): "The perils of globalization: offshoring and economic insecurity of the American worker", *Federal Reserve Bank of St Louis Working Paper 2007–004A*, February.
- Baldwin, R (2006): "Globalisation: the great unbundling(s)", paper for the Finnish Prime Minister's Office, Economic Council of Finland as part of EU Presidency, September.
- Bhagwati, J, A Panagariya and T N Srinivasan (2004): "Muddles over outsourcing", *Journal of Economic Perspectives*, Fall, pp 93–114.
- Blinder, A (2007a): "How many US jobs might be offshorable?", *CEPS Working Paper* no 142, March.
- (2007b): "Offshoring: big deal, or business as usual?", *CEPS Working Paper* no 149, June.
- Brown, P (2007): "Have surgery. Go sightseeing", *New York Times*, Business, 24 March.
- Burton, D, W Tseng and K Kang (2006): "Asia's winds of change", *Finance and Development*, June.
- Catching, R and A Viswanath (2007): "Can China and India move up the value chain?", *Far Eastern Economic Review*, July/August.
- Cheung, G (2004): "Chinese diaspora as a virtual nation: interactive roles between economic and social capital", *Political Studies*, pp 664–84.
- Coe, D (2007): "Globalisation and labour markets: policy issues arising from the emergence of China and India", *OECD Social, Employment and Migration Working Papers*, no 63, DELSA/ELSA/WD/SEM(2007)18, November.
- Coe, D, E Helpman and A Hoffmaister (1997): "North-South R&D spillovers", *The Economic Journal*, January, pp 134–49.
- Coe, D and D Snower (1997): "Policy complementarities: the case for fundamental labour market reform", *IMF Staff Papers*, March, pp 1–35.
- Cohen, P (2007): "In economics departments, a growing will to debate fundamental assumptions", *New York Times*, 11 July.
- Ekholm, K and K Hakkala (2006): *International production networks in the Nordic/Baltic region*, Department of Economics, Stockholm University, Centre for Business and Policy Studies, mimeo.
- European Commission (2003): "Globalization", *Flash Eurobarometer* no 151b.
- Feenstra, R and G Hanson (1997): "Foreign direct investment and relative wages: evidence from Mexico's maquiladoras", *Journal of International Economics*, vol 42, issue 3–4, pp 371–94.
- Förster, M and M Pearson (2002): "Income distribution and poverty in the OECD area: trends and driving forces", *OECD Economic Studies*, no 34, pp 7–39.

Grossman, G and E Rossi-Hansberg (2008): *Trading tasks: a simple theory of offshoring*, Princeton University, mimeo, February.

Hijzen, A, H Görg and B Hine (2005): "International outsourcing and the skill structure of labour demand in the United Kingdom", *The Economic Journal*, October, pp 860–78.

Hijzen, A, M Pisu, R Upward and P Wright (2007): "Employment, job turnover and trade in producer services: firm-level evidence", *University of Nottingham GEP Working Paper 2007/37*, August.

Hijzen, A and P Swaim (2008): "Offshoring, labour market institutions and the elasticity of labour demand", *University of Nottingham GEP Working Paper 2008/05*.

Huang, Y and T Khanna (2003): "Can India overtake China?", *Foreign Policy*, July/August, pp 75–81.

International Monetary Fund (2007a): *World Economic Outlook*, April.

——— (2007b): *World Economic Outlook*, October.

International Social Survey Programme (2007): *National Identity*.

Keller, W (2002): "Geographic localization of international technology diffusion", *American Economic Review*, vol 92, no 7, March, pp 120–42.

Kirkegaard, J (2007): "Offshoring, outsourcing, and production relocation – labor-market effects in the OECD countries and developing Asia", *Petersen Institute for International Economics Working Paper 07–2*, April.

Klodt, H and B Christensen (2007): "Home market effects of foreign direct investment: the case of Germany", *Kiel Institute for the World Economy Working Paper*.

Kochhar, K, U Kumar, R Rajan, A Subramanian and I Tokatlidis (2006): "India's development: what happened, what follows?", *Journal of Monetary Economics*, July, pp 981–1019.

Kurlantzick, J (2007): "Medical tourism: sometimes sightseeing is a look at your x-rays", *New York Times*, 20 May.

Layard, R (2005): *Happiness: lessons from a new science*, New York, Penguin Group (USA), Inc.

Lorentowicz, A, D Marin and A Raubold (2005): "Is human capital losing from outsourcing? Evidence for Austria and Poland", *Munich Economics Discussion Paper 2005–22*, November.

Lueth, E and M Ruiz-Arranz (2006): "A gravity model of workers' remittances", *IMF Working Paper* no 06/290, December.

Mankiw, G and P Swagel (2006): "The politics and economics of offshore outsourcing", *Journal of Monetary Economics*, July, pp 1027–56.

Mayda, A and D Rodrik (2005): "Why are some people (and countries) more protectionist than others?", *European Economic Review*, vol 49, issue 6, August, pp 1393–430.

Mundell, R (1957): "International Trade and Factor Mobility", *American Economic Review*, vol 47, no 3, June.

Organisation for Economic Co-operation and Development (2006): *Boosting Jobs and Incomes: Policy Lessons from Reassessing the OECD Jobs Strategy*.

——— (2007a): *OECD Employment Outlook*.

——— (2007b): "Moving up the value chain: staying competitive in the global economy", main findings of a study presented to the OECD's 2007 Ministerial Council meeting.

- Orzag, J and D Snower (1998): “Anatomy of Policy Complementarities”, *Swedish Economic Policy Review*, no 5, pp 303–43.
- Pandey, A, A Aggarwal, R Devane and Y Kuznetsov (2004): “India’s transformation to knowledge-based economy – evolving role of the Indian diaspora”, *Evalueserve White Paper*, July.
- Portes, R and H Rey (2005): “The determinants of cross-border equity flows”, *Journal of International Economics*, February, pp 269–96.
- Rodrik, D (1997): *Has globalization gone too far?*, Institute for International Economics.
- Saint-Paul, G (2007): “Making sense of Bolkestein-Bashing: trade liberalization under segmented labour markets”, *Journal of International Economics*, vol 73, no 1, pp 152–74.
- Samuelson, P (2004): “Where Ricardo and Mill rebut and confirm arguments of mainstream economists supporting globalisation”, *Journal of Economic Perspectives*, Summer, pp 135–46.
- Sapir, A (2005): “Globalisation and the reform of European social models”, background document for presentation at the ECOFIN Informal Meeting in Manchester, 9 September.
- Scheve, K and M Slaughter (2007): “A new deal for globalization”, *Foreign Affairs*, July/August.
- Snower, D and D Coe (2008): “Globalization and redistribution”, *Kiel Institute for the World Economy Working Paper*, forthcoming.
- van Welsum, D and X Reif (2006): “Potential impacts of international sourcing on different occupations”, *DSTI Information Economy Working Paper*, DSTI/ICCP/IE(2006)1.
- van Welsum, D and G Vickery (2005): “Potential offshoring of ICT-intensive using occupations”, *DSTI Information Economy Working Paper*, DSTI/ICCP/IE(2004)19.
- van Welsum, D and T Xu (2007): “Is China the new centre for offshoring of IT and ICT-enabled services?”, *DSTI Information Economy Working Paper*, DSTI/ICCP/IE(2006)10.
- World Bank (2007): *World Development Indicators*.