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Globalisation and Labour  
Markets: Policy Issues  
Arising from the Emergence  
of China and India

**David T. Coe**

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EMERGENCE OF CHINA AND INDIA

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Senior Advisor, Asia and Pacific Department, International Monetary Fund. This paper was written when the author was a visiting scholar in the Directorate for Employment, Labour and Social Affairs of the Organisation for Economic Cooperation and Development during June and July 2007, while on leave from the IMF. 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 Institute für Weltwirtschaft in Kiel, Germany in August 2007. The views expressed are those of the author and do not necessarily represent those of the OECD, the IFW, or the IMF.

## SUMMARY

Globalisation is having important effects on labour markets in OECD countries. The global supply of labour has increased enormously with the emergence of China and India. At the same time technological advances have contributed to heightened income inequality and changed the nature of globalisation itself, most vividly demonstrated by the rapid growth of offshoring of business services that were previously nontradable. It is argued in this paper that these developments are best characterized as an intensification and broadening of the process of globalisation rather than a fundamental change in the nature of globalisation. They will, nevertheless, have long-lasting effects on OECD labour markets, increasing the urgency of implementing the labour market policies set out in the Restated OECD Job Strategy. The paper concludes that the most important implication of the emergence of China and India in the context of widespread perceptions of increasing economic inequality may be to reduce support for globalisation in OECD countries.

## RÉSUMÉ

La mondialisation a des effets importants sur les marchés du travail des pays de l'OCDE. L'offre mondiale de main-d'œuvre a augmenté considérablement avec l'émergence de la Chine et l'Inde. Dans le même temps, les progrès technologiques ont contribué à renforcer les inégalités de revenus et ont changé la nature même de la mondialisation, comme en témoigne la croissance rapide de la délocalisation des services aux entreprises, qui étaient auparavant non-échangeables. On fait valoir dans ce document que ces évolutions correspondent plus à une intensification et un élargissement du processus de mondialisation qu'à un changement fondamental de nature de la mondialisation. Elles auront, néanmoins, des effets durables sur les marchés du travail dans les pays de l'OCDE, et renforcent de ce fait l'urgence de mettre en œuvre les politiques du marché du travail identifiées dans «La stratégie de l'OCDE pour l'emploi révisée». Le document conclut que, dans un contexte de perception accrue de croissance des inégalités économiques, la principale conséquence de l'émergence de la Chine et l'Inde peut être de réduire le soutien à la mondialisation dans les pays de l'OCDE.

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## GLOBALISATION AND LABOUR MARKETS: POLICY ISSUES ARISING FROM THE EMERGENCE OF CHINA AND INDIA

### Introduction

1. The impact of globalisation on labour markets has re-emerged as an important policy issue. This is evident in the 2007 *OECD Employment Outlook*, which devotes a chapter to the issue of whether OECD workers are increasingly vulnerable in the global economy, and the June 2007 *OECD Economic Outlook*, which includes a chapter on “Making the Most of Globalisation.” The IMF also addressed this issue in a chapter on “The Globalisation of Labor” in the April 2007 *World Economic Outlook*. Policymakers’ concerns about the impact of globalisation on labour markets are, of course, a reflection of the broader public debate in OECD member countries about the inter-related concerns of downward pressure on wages, increased job insecurity, and jobs moving from OECD countries to developing countries with lower wages.

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

3. The second phenomenon is that the nature of globalisation is changing. Technological advances, particularly the 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. And in some cases 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 off-shoring. Here too China and India have been key players.

4. What are the labour market implications for OECD countries of the current wave of globalisation?<sup>1</sup> The OECD (2007a) summarizes 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.
- Offshoring, 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.

5. The OECD (2007a) concludes that globalisation increases the urgency of implementing a comprehensive policy program to reap the benefits of globalisation while addressing adjustment and

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<sup>1</sup> This paper focuses mainly on international trade rather than on foreign direct investment, capital flows, international migration, or other aspects of globalisation.

distributional concerns. The IMF's (2007) conclusions are similar: 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.

6. These policy conclusions are familiar. More detailed policy recommendations are set out in the 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.

7. This paper looks more closely at the question of whether there are special employment policy issues stemming from the emergence of China and India.

### 1) China and India

8. China and India are different than other developing and transition countries. Most obvious 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>2</sup> Not only are they large, they have also been among the fastest growing countries in the world: over the past ten years, economic growth has averaged about 9½% a year in China and 7% in India, compared with about 2½% in advanced countries (IMF, 2007).

9. Rapid economic growth means that China and India are catching up. But both remain relatively poor, with per capita incomes of about \$1740 and \$730, respectively, in 2005, well below average per capita income of \$43,560 in the United States and \$32,097 in the Euro zone.<sup>3</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, and in India with the pro-market reforms in 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.

10. 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 similar diasporas – one thinks of the Jewish diaspora and the Lebanese diaspora in West Africa and parts of South America – none have contributed to the development of large developing countries like the Chinese and Indian diasporas. China's large and wealthy diaspora in east Asia were the first investors to seize the opportunity of 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,

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<sup>2</sup> The other so-called *BRICs* have comparatively small populations of 186 million in Brazil and 143 million in Russia. The United States is the third most populous country in the world at 296 million, although this is somewhat smaller than the total population of the Euro zone of 314 million. All figures are from the World Bank (2007) and refer to 2005.

<sup>3</sup> Valued at purchasing power parity exchange rates, which are arguably less relevant in this context, per capita incomes in 2005 are \$6760 in China, \$3452 in India, \$41,890 in the U.S., and \$28,807 in the Euro zone (World Bank, 2007).

although its contribution may prove to be more intellectual than financial (Huang and Khanna, 2003). Both countries have large, highly educated, and prosperous diaspora in Silicon Valley, the technological epicenter 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>4</sup>

11. 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

12. In Baldwin's story, globalisation has consisted of two great unbundlings, both of which stemmed from technological advances that decreased the cost of trade resulting in rapid 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.<sup>5</sup> 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.

13. The second unbundling has been stimulated by falling communication and co-ordination costs that have ended the need to perform 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. A characteristic of the second unbundling is the importance of trade in intermediate inputs, including services. It is useful to distinguish between two types of unbundling: if the unbundling occurs fully 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. This note focuses on the labour market implications in OECD countries of offshoring and onshoring.

14. Baldwin (2006, pp. 22-24) identifies three episodes of offshoring. The first was the Maquiladora program on the Texas-Mexican 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 off-shored labour-intensive production stages to nearby east Asian nations. It then strengthened as Taiwan, Korea, Singapore, and Hong Kong in turn off-shored 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 off-shoring from more developed east Asian economies, and the

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<sup>4</sup> *Business Week* reported in 1998 that nearly 40% of Silicon Valley start-ups in the 1990s had at least one founder of Indian origin, as quoted in Pandey *et al.* (2004). Relative to per capita income, India invests far more than China on tertiary education, of which the Indian Institutes of Technology and the Indian Institutes of Management are the best known examples (Kochhar *et al.*, 2006). However, in Silicon Valley a larger proportion of Chinese have doctorates in engineering compared with Indians, while the opposite is true for MBAs; this is reflected in occupations, with Indians more likely to be executives and managers and Chinese more likely to be in technical, nonmanagerial positions (Dossani, 2002).

<sup>5</sup> Falling transportation costs also facilitated international migration by lowering the cost of passage, facilitating factor mobility and substituting for trade flows.

<sup>6</sup> See also Ahn *et al.* (2007). Increased trade between developed countries in western and northern Europe and transition countries in eastern and central 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).

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 is sometimes 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.

15. By contrast, Baldwin's (2006) third example of offshoring is the recent phenomena 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 highly educated, English-speaking Indian diaspora in the United States were key players in this unbundling.

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

### 3) The Offshoring Debate: Is it a “Big Deal” or “Business as Usual”?

17. The recent phenomenon of the offshoring of business services has stimulated a debate in the business press and the 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 from an economic standpoint whether values of items produced abroad come on planes and ships or over fiber-optic cables?” His answer: “Well, no, the economics is basically the same.”<sup>7</sup> Bhagwati *et al.* (2004) are on this side of the debate, arguing that the effects of offshoring are not qualitatively different from those of conventional trade in goods.

18. On the other side of the debate is Alan Blinder (2007b). Blinder pre-emptively 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 is it simply more “business as usual.” Blinder's view is that it is a big deal for the U.S. economy in that it will force major changes in the U.S. industrial structure and in the types of jobs as well as in wages, job security, turnover, etc.

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

#### 3.1 Labour Market Effects of Offshoring

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

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<sup>7</sup> As quoted in Bhagwati *et al.* (2004). A summary of the debate from Mankiw's perspective is on his blog (<http://gregmankiw.blogspot.com/>): click on “How to Be an Apostate,” July 2007. There was an earlier U.S. debate about the material offshoring effects of NAFTA, in which presidential candidate Ross Perot famously warned of the “great sucking sound” of U.S. jobs moving to Mexico.

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

- 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. Computer programmers, for example, may be affected by offshoring whereas gardeners or caregivers are unlikely to be.
- 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.
- 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.

21. 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 incomes of different types of workers and on job security, and how long or smooth the transition process is likely to be.

### **3.2 How Many Service Jobs Have Been or Might Be Offshored?**

22. 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 on the order of 0.3% to 0.7% in the United States and those European countries for which estimates are available.<sup>10</sup> Relative to layoffs, offshoring may have accounted for 4% to 5% of total large-scale layoffs in the United States and the EU15, 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

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<sup>9</sup> In Grossman and Rossi-Hansberg’s (2007) model, which focuses on trade in tasks rather than trade in complete 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, i.e., as it trades *less*, by technology transfers, as noted by Samuelson (2004). See also Saint-Paul (2007) who presents a model in which trade liberalization 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.

<sup>10</sup> Two recent studies based on firm-level data estimate that offshoring of services by British firms (Hijzen *et al.*, 2007) or FDI by German firms (Klodt and Christensen, 2007) increase rather than decrease employment.

has thus far cost a limited number of U.S. jobs, but argues that this is just the tip of a much larger iceberg of *potentially* offshorable jobs.

23. 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 not requiring 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.

24. 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 EU15 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 get different, but still large estimates.<sup>11</sup>

25. 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 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.”

26. The problem with such statements, of course, 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, 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, 2006b; 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.

27. Estimating the actual number of jobs that might in future be offshored or onshored is, of course, much more difficult than estimating the outer limits of jobs potentially offshorable. This difficulty is compounded by the fact that technological progress, which is a driving force in offshoring, is also a driving force in the destruction of low-skill jobs through automation. Empirical studies find that the latter effect has been much more important than the former, and this is likely to remain so in future (Kirkegaard, 2007; OECD, 2007d). Suffice it to say, that the actual number of jobs lost to offshoring will undoubtedly be much less than the potential number of job losses.

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<sup>11</sup> See the summaries, including estimates from management consulting firms, in Kirkegaard (2007) and van Welsum and Vickery (2005).

### 3.3 Impacts on Incomes and Job Security

28. 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 (2007) and Baldwin (2006) emphasize that offshoring will affect relatively high-skilled workers, and this is supported by anecdotal evidence: Indian workers reading x-rays of patients in industrial countries, developing software for firms in OECD countries, and preparing tax forms for citizens of industrial countries.<sup>12</sup> Although some medium- and low-skilled tasks have been offshored, other tasks, such as those performed by gardeners, garbage collectors, and caregivers, are, with current technology, not offshorable.

29. Whether on balance highly skilled service tasks are offshored or onshored in a specific country will depend on that country's comparative advantage. Assuming that computer and information services embody higher skill levels than other business services, which includes accounting and other back-office operations, then the fact that more industrial countries tend to run balance of payments surpluses in the former than the latter suggests that, at least thus far, industrial countries still have a comparative advantage in services embodying higher levels of skills.<sup>13</sup>

30. Moreover, the comparative advantage of the Chinese and Indian economies may remain in low- or medium-skilled tasks for some time given the challenges of increasing the average education levels of their vast populations while at the same time improving the quality of education. 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 great caution and care are needed to extrapolate developments in Bangalore to India as a whole, or developments in the coastal regions of China to China as a whole. China and India undoubtedly have an extremely large supply of unskilled labour, but the supply of skilled labour is more limited.

31. There is another reason to be cautious about whether offshoring will disproportionately affect high-skilled workers. Trade in tasks allows specializations based on relative factor intensities to operate at the level of individual tasks, in addition to operating at the industry and firm levels. Whereas final goods trade may already have caused industrial countries to specialize in skill-intensive goods and services such as cutting-edge medical equipment and services, there probably remain some low-skilled workers in those industries who may have been largely protected from foreign competition. With increased trade in tasks, these shelters from global competition may tend to disappear as the low-skilled tasks in industries with an overall comparative advantage are offshored.<sup>14</sup>

32. 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

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<sup>12</sup> From media and other reports cited in Grossman and Rossi-Hansberg (2006, p. 23).

<sup>13</sup> Data presented in Amity and Wei (2005, Table 6) show that the five largest surplus countries in computer and information services in 2002 were all OECD countries, whereas only two OECD countries were among the six largest surplus countries in other business services.

<sup>14</sup> This assumes imperfect mobility of low-skilled workers across industries and that unskilled workers in certain industries receive rents that could be eroded by an expansion of task trade.

offshoring was having a disproportionately large effect on skilled tasks.<sup>15</sup> Of 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.

33. Offshoring may also have important effects of 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 (2007), who present evidence, based on industry-level data for 1980-2002 for eleven OECD countries, that the elasticity of labour demand has increased substantially; and, based on industry-level data for 17 OECD countries, that more intensive offshoring is associated with more elastic labour demand.<sup>16</sup> Evidence of heightened job insecurity also comes from U.S. 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.

### **3.4 Will the Transition be Smooth or Disruptive?**

34. Whether the unbundling of tasks occurs smoothly or in a massive and disruptive transition – what Blinder (2007, p. 9) characterizes 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.

35. Baldwin (2006) argues that the second unbundling is inherently unpredictable because of the complexity and poorly understood nature of the interconnectedness of tasks; their interaction with technological advances, itself unpredictable; and possible tipping-point and agglomeration effects. These factors suggest that the transition to the long-run equilibrium is likely to be characterized by sudden changes, at least at the level of specific tasks and specific enterprises.

36. 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, p. 108) 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. Moreover, it will take some decades before the education sectors in China and India are able to educate their citizens to acquire

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<sup>15</sup> See Ahn *et al.* (2007), 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 premium in Austria, which they suggest reflects that Austria is poor in human capital relative to its trading partners.

<sup>16</sup> The increasing sensitivity of employment to wages may reflect an increase in the speed with which labour demand responds, i.e., it may mainly reflect an increase in the short-run rather than the long-run elasticity. See also OECD (2007a).



sophisticated and complex skills that would allow them to have a comparative advantage in more technologically advanced services.<sup>17</sup> Capacity to onshore new types of tasks will also require 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.

37. 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.

38. A final issue is how many other developing and transition countries join the party as onshoring destinations, and how rapidly. Thus far the participation of many countries in sub-Saharan Africa, the Middle East, Central Asia, and South America appears to be limited and often non-existent. For a number of reasons discussed below, others countries may find it difficult to emulate China and India's recent successes as onshoring destinations.

39. 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.

### ***3.5 Summary of the Debate***

40. A tentative summary of the debate, although not one that the protagonists would necessarily subscribe to, might be the following. The long-run effects of offshoring will be positive and aggregate employment and unemployment will be largely unaffected. In the transition, however, offshoring will affect the sectoral distribution of employment and may have potentially large and lasting impacts on the relative wages, the sectoral distribution of jobs, and job security of workers who were previously largely insulated from international competition. The transition will be smoother in countries with flexible labour and product markets, with good educational institutions and training systems, and with effective employment and innovation policies. While 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 the process is likely to play out over a relatively long time period.

#### **4) Other Offshoring Issues**

41. That somewhat anodyne summary glosses over a number of loose ends 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.

##### ***4.1 How Unique are Recent Episodes of Offshoring?***

42. There have been a number of idiosyncratic factors behind each of the prominent episodes of offshoring. It is striking, for example, how important were the roles played by diasporas and factors such

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<sup>17</sup>Blinder (2007, p. 15) does not dispute this estimate. See also Gereffi and Wadhwa (2005) for an analysis of the numbers of engineering graduates with comparable qualifications in China and India compared with the United States.

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 – in final as well as intermediate goods and services – are, of course, well documented in the standard gravity-model literature (Anderson and van Wincoop, 2003), and have recently been shown to also be significant determinants of bilateral capital flows (Portes and Rey, 2005), remittance flows (Lueth and Ruiz-Arranz, 2006), and technology transfers (Keller, 2002).

43. 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 played a key role in the east Asia unbundling and the Maquiladora unbundling.<sup>18</sup> And 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 U.S.-Mexico border.

44. The fact that the English language itself 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>19</sup>

45. The above considerations raise the questions of 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, 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 a number of one-time events, including the Y2K problem, the internet-telecom boom, and the dot-com 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).

46. 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 Baltics, 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. And Asian countries are likely to continue to benefit from increasing integration of regional supply chains (Burton *et al.*, 2006).<sup>20</sup>

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<sup>18</sup> Reductions in tariffs and non-tariff barriers under NAFTA were also important in the Maquiladora unbundling.

<sup>19</sup> For these reasons, Blinder (2007b, pp. 23-24) argues that offshoring of services will have a larger effect on English-speaking countries than on continental Europe or Japan.

<sup>20</sup> Another example of the importance of geographic and cultural proximity and language is North Korea, which is a recipient of material offshoring from South Korea, and this is widely expected to increase sharply when North Korea emerges from isolation.

47. 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 in eastern and central Europe, as onshoring destinations from OECD countries.

#### **4.2 Immigration and Tourism**

48. 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>21</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).

49. Certain types of tourism can also be a substitute for offshoring. The most prominent example here is medical tourism in which OECD citizens travel to certain developing countries to receive medical treatment to take advantage of lower costs, less waiting times, or some combination of the two.<sup>22</sup> 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).

50. Business travel, on the other hand, may be complementary to offshoring. While much coordination and management can be done at a distance, face-to-face, personal interaction on major decisions, strategies, and policies is likely to remain important to manage supply chains spread across different countries. So business travel by senior executives from headquarters may increase as offshoring rises.

#### **4.3 Technology and Technological Progress**

51. A final issue concerns the nature of technological progress. Globalisation in the form of rapid increase in international trade has been spurred by advances in technology that have lowered the cost of trade. Because of this, many argue that geographic distance is now less of a constraint on trade; indeed, globalisation is sometimes caricatured by the phrase “the world is getting smaller.”<sup>23</sup> Trade costs, of course, are not only the costs of transportation but also 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.

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<sup>21</sup> The factor-price equalization theorem implies that the impact of increased immigration may also be similar to the impact of trade liberalization (Mundell, 1957).

<sup>22</sup> Increased immigration of medical professionals to OECD countries – the so-called medical brain drain – could potentially reduce medical tourism by decreasing waiting times, although regulatory and licensing requirements in OECD countries are likely to limit declines in costs.

<sup>23</sup> Coe *et al.* (2007) present evidence on the declining importance of distance as a determinant of bilateral trade; see Leamer (2007) for the contrary, but conventional, view in the academic literature.

52. 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.

53. 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>24</sup> To the extent that the globalisation of technology represents an increase in the global R&D effort, rather than merely 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.

54. Technology has contributed to the unbundling of production to take advantage of economies of scale. In future, technology may contribute to new bundlings or to rebundlings to take advantage of economies of scope. An example would be an internet site where if a customer buys a book on Brazil, she is also offered a CD of Brazilian music, the address of a local Brazilian restaurant, a vacation in Brazil at the beach or to have cosmetic surgery, etc. How important such rebundlings might be or how they would play out in terms of comparative advantages is not at all clear.

55. The pace of technological progress and change is inherently unknowable. But it would clearly be foolhardy to base policies on an assumption that technological advance will slow.

## **5) Policy Implications and the Restated OECD Jobs Strategy**

56. 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 characterized as an intensification and broadening of the process of globalisation rather than a fundamental change in the nature of globalisation. Does this have important implications for labour markets 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. These are bread-and-butter issues faced by policy makers in all OECD economies.

### **5.1 Labour Market Policies in OECD Countries**

57. What, then, are the implications for labour market policies in OECD countries? One set of implications concerns policies directed at specific sectors or industries. The recent phenomena 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

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<sup>24</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.

particular types of skills or occupations, such as relatively low-skill “knowledge-based” jobs, that become tradable and where developing countries have or may soon develop a comparative advantage (Baldwin, 2006; Blinder, 2007b).

58. Assistance or training programs 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 programs 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 programs. The implications for training programs and education policies are that they should aim to facilitate lifetime employment, potentially in a variety of different jobs or industries (Blinder, 2007b).

59. A related point concerns the provision of targeted assistance to workers displaced by international trade, such as the Trade Adjustment Assistance program in the United States. To the extent that technological change and innovation are the driving forces behind jobs lost, 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 programs aimed at specific types of workers result in a proliferation of different types of assistance programs 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 is necessary to ensure continued public support for trade liberalization 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 globalization.

60. 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>25</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 emphasized 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).

## **5.2 Support for Globalisation**

61. The recent intensification of globalisation has occurred against the backdrop of the perception of an ongoing and sustained rise in economic inequality. One indication of this rising inequality is the decline in the wage share in national income since 1980 in most OECD countries (OECD, 2007c). 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 (OECD, 2007d): 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

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<sup>25</sup> See Layard (2005) for an agnostic view on the benefits of labour market flexibility and mobility.

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.

62. 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). 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 high-skilled workers (OECD, 2007a; Hijzen and Swaim, 2007).

63. 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.

64. 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). Aldonas *et al.* (2007), for example, argue that the U.S. public is 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 appreciates that trade liberalization can potentially be a Pareto improvement in the sense that the gains to the winners exceed the losses to the losers, leaving the nation as a whole ahead. But they also understand that liberalization is only a Pareto improvement if the losers are *actually* compensated, which is seldom the case (Blinder, 2007b).

65. 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.

66. 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 (Coe and Snower, 2007). 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 liberalization policies or to resist protectionist policies that could halt or reverse globalisation.<sup>26</sup> Policy makers need to ensure that the gains from trade are sufficiently

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<sup>26</sup> Coe and Snower (2007) analyse the political complementarity between globalisation and redistribution, focusing on the extent to which the adverse incentive effects arising from redistribution offset the gains from globalisation, and the types of redistribution that are least costly, allowing the winners and losers to derive the largest possible gains from globalisation. See also Orzag and Snower (1998), who analyse the economic and political complementarities with regard to unemployment benefits and taxes.

shared to generate political consent, and that social policies are in place to facilitate adjustment of those workers adversely affected by globalisation and technological change.<sup>27</sup> Only in this way will it be possible to maintain a political consensus for an open trading system and globalisation.

### 5.3 *Is Anything Important Missing from the Restated OECD Jobs Strategy?*

67. The restated strategy has four pillars (OECD, 2006): set appropriate macroeconomic policies; remove impediments to labour market participation and job-search; tackle labour- and product-market obstacles to labour demand; and facilitate the development of labour force skills and competencies. While the strategy is meant to apply to all OECD countries, the report 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.

68. Does the recent wave of globalisation affect the conclusions of the Restated OECD Job 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 unemployment while strengthening social safety nets and other activation policies to ease transitions back to employment. Both reports emphasize 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 Job Strategy appear to remain valid and relevant.<sup>28</sup> The recent acceleration of globalisation does not suggest any major lacunae in the strategy,<sup>29</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 the nature of globalisation.

69. Broad policy recommendations to reverse the decline in support for globalisation, as discussed above, would need to go well beyond labour market policies and, hence, arguably lie well outside the scope of the Restated OECD Job Strategy.

## Conclusions

70. The emergence of China and India as major trading countries during the closing decades of the 20<sup>th</sup> century and the associated rise in technologically-enabled offshoring is certainly, from an 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,

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<sup>27</sup> See Anderson and Gascon (2007) and the ambitious recommendations to redistribute income in Scheve and Slaughter (2007) and in Aldonas *et al.* (2007).

<sup>28</sup> This apparently is also Blinder’s view: after a recent debate with Bhagwati at Harvard, Blinder was asked if he would advocate different economic policies than he would have a decade ago, to which he replied “no” (as reported on Mankiw’s blog).

<sup>29</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 emphasized in Orzag and Snower (1998). The Restated Jobs Strategy does discuss the issue of policy complementarities and presents some econometric evidence on their significance.

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 policy makers agree that this most recent episode of globalisation – like previous episodes of globalisation – will have beneficial economic effects, not only in China and India but also in their trading partners.

71. 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, eastern and central Europe, and North Africa as onshoring destinations from OECD countries.

72. The emergence of China and India and the rise of offshoring have not changed the fundamental nature of globalisation, although it has 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 Job Strategy, and the policy recommendations in the strategy remain valid and relevant.

73. 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. Policy makers 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. Only in this way will it be possible to maintain a political consensus for an open trading system and globalisation.



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