

Trade liberalization, employment and global inequality

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Trade liberalization — which, together with marked improvements in transport systems and communications/information technologies, has been driving globalization — has suddenly acquired the status of a much-maligned monster. Industrialized nations, which earlier vigorously preached the virtues of free trade, now worry about its vices. Many developing countries feel marginalized in the emerging world economy and wonder whether their fear of free trade was not justified after all. Economists are engaged in (as yet inconclusive) debates on the “rights” and “wrongs” of trade liberalization and popular opposition to it has grown so much that a crisis of legitimacy looms.

Three main concerns underlie these developments. First, it is suspected that trade liberalization has been a major contributory factor in the growing international economic inequality. Second, it is widely believed that trade liberalization has had serious adverse effects on employment and the wages of low-skilled workers in industrialized countries. Third, there are apprehensions that trade liberalization is leading to a deterioration of global labour standards.¹

Unfortunately, in the popular view, these perfectly legitimate concerns tend to assume the status of well-established facts. The political pressures thus generated now threaten to stall the process of trade liberalization. At the international level, there is growing demand for global enforcement of environmental and labour standards. At the national level, non-tariff barriers to trade have tended to increase in the industrialized world. Labour market policies in some industrialized countries have also been increasingly geared to a cheapening of unskilled labour for the employers through various forms of wage subsidies, the reform of social security and unemployment benefit systems, and the flexibilization of labour markets.

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¹ There is perhaps a fourth concern about global economic instability which arises from the experience of the economic crises of the 1990s. But there is broad consensus now that the crises were generated by the erratic behaviour of short-term capital flows which did not have much to do with trade liberalization.

Yet, to economists, the concerns only suggest hypotheses to be explored through empirical research. That international economic inequality has been growing is not in serious dispute,² but it is certainly not clear whether and to what extent trade liberalization is responsible for this. There is consensus among economists that less skilled workers in the industrialized world have been facing either declining real wages or rising unemployment, or both, but empirical research is yet to establish that such trends have been generated by the growth of trade with the developing world. As for global labour standards, it is not even known whether they have deteriorated.

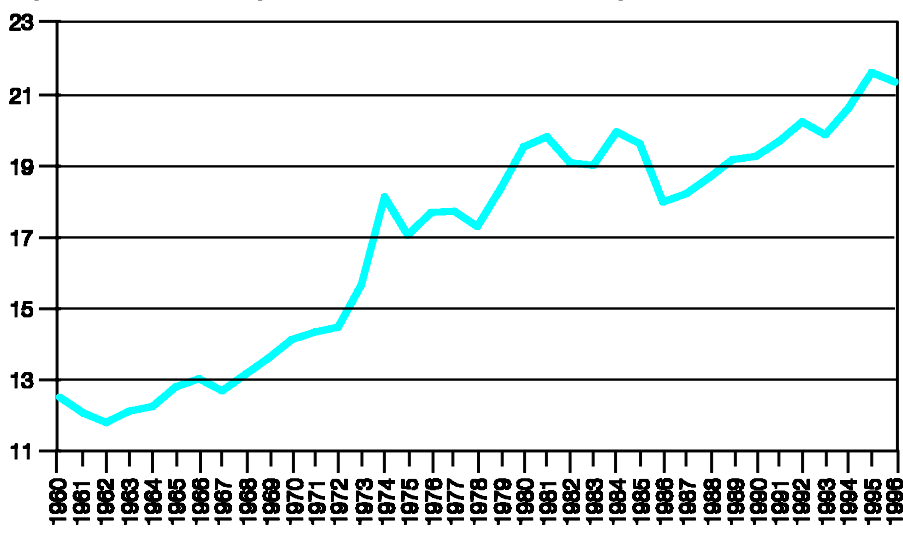
Against this backdrop, an attempt is made here to examine the extent to which the concerns have valid empirical foundation. The internationally available statistical data are analysed to study the nature and effects of growth of trade between industrialized and developing countries on international economic inequality, employment and wages in individual countries and on global labour standards. This article concentrates on examining the implications of the relevant empirical results and avoids presenting detailed descriptions of methodology and statistics. The empirical results are drawn from a larger study by the author (Ghose, 2000)³ which reviews the literature, provides detailed descriptions of the database and methodologies, and develops many of the arguments and observations more fully.

Trade and international economic inequality

Contrary to a common misconception, there has been no explosive growth of world trade since the early 1980s even though trade liberalization has certainly gathered pace. Two facts suggest this: the first emerges from figure 1, which shows the movement in the share of world exports in world GDP over the period 1960-96. The share showed a steady, rising trend for the entire period but no noticeable deviation from the long-term trend in the 1980s or 1990s. The second fact is that over the same period the growth of world GDP had actually been decelerating: the average annual rate of growth of world GDP was 5.3 per cent during 1960-70, 3.5 per cent during 1970-80, 3.1 per cent during 1980-90 and 2.3 per cent during 1990-97. The two facts together clearly rule out any sustained acceleration in the growth of world exports in any period since the 1960s.

² This statement needs to be qualified. International inequality can be measured in three possible ways: a simple measure of inequality of per capita income across countries, a weighted measure of inequality of per capita income across countries where the population of a country is used as weight, and a measure which takes account not only of population but also of inequality within individual countries. The evidence based on the first measure shows rising international inequality. The evidence based on the other two measures is yet to be properly examined.

³ Available (in English only) from the author on request, or on the ILO's web site at: <http://www.ilo.org/public/english/employment/strat/publ/ep00-3.htm>.

Figure 1. Exports of goods and services as a percentage of GDP — World

What has undoubtedly been changing is the commodity composition of world trade. Here the most significant change has been the steady rise in the share of manufactures in world exports. Once again, however, the trend is long-term in character, as figure 2 shows, and no significant deviation from the long-term trend is observed for either the 1980s or the 1990s. Thus, the

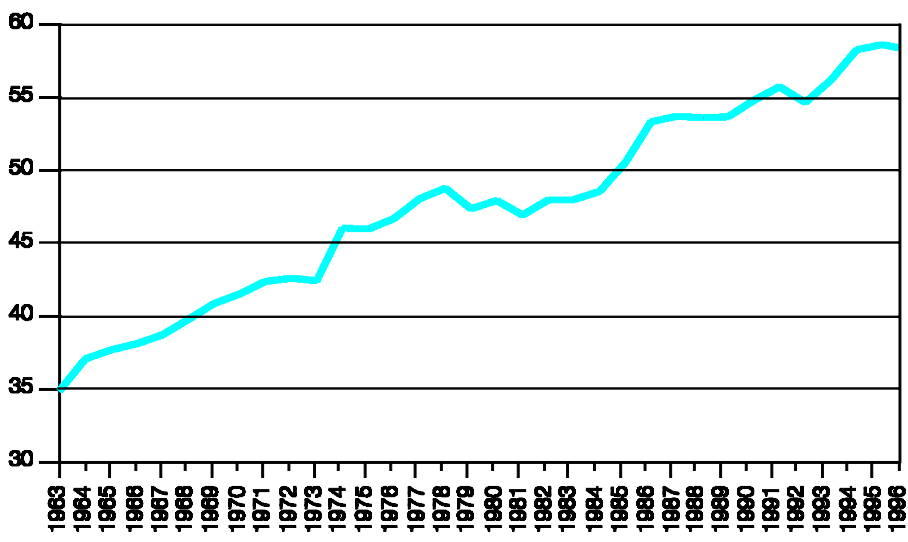
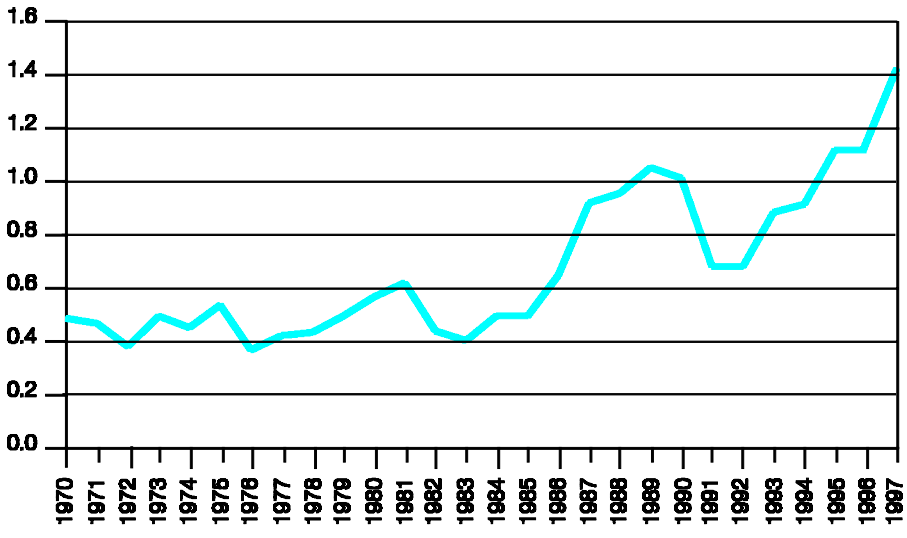
Figure 2. Manufactured exports as a percentage of exports of goods and services — World

Figure 3. Foreign direct investment as a percentage of GDP — World

commodity composition of world trade cannot be said to have been particularly affected by trade liberalization.

It appears, therefore, that so far trade liberalization has not had any significant effect on the growth of world trade or output. Yet, the period since the mid-1980s has seen a fairly sharp growth in global capital flows. As figure 3 shows, the growth of flows of foreign direct investment (FDI) accelerated after 1985. Acceleration in the flows of short-term capital was even more dramatic.⁴ Viewed together, these facts appear rather puzzling; for trade liberalization, together with the growth of global capital flows, should have stimulated growth of both world exports and world GDP. Unravelling such knots requires a good deal of investigative work however, and will not be attempted here. Rather, this article will seek to show that the observed failure of trade liberalization to stimulate global growth and the observed growth of international economic inequality had some similar causes.

An important point to note in this context is that recent trade liberalization seems to have increased the trade orientation only of the developing countries;⁵ that of the industrialized countries⁶ has remained unaffected. The

⁴ This is fairly well documented; see, for example, UNCTAD (1999) and IMF (1997).

⁵ Throughout this article, the *developing* economies are defined to include all countries of Asia-Pacific except Japan, Australia and New Zealand, and all countries of Latin America and Africa.

⁶ Throughout this article, the *industrialized* economies are defined to include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Table 1. Performance of G13 economies

Percentage share of the G13 economies in:	1980	1985	1990	1995
Total exports of goods and services from developing countries	38.8	56.9	64.0	74.1
Total merchandise exports from developing countries	32.6	53.6	61.5	72.3
Total manufactured exports from developing countries	73.3	78.4	83.2	87.2
Total inflows of foreign direct investment to developing countries	...	59.2	75.5	81.7

Note: Data for Taiwan (China) were not available.

Source: Ghose, 2000.

share of exports in GDP for the industrialized countries was 19.6 per cent in 1980 and 19.3 per cent in 1995; by contrast, this share for the developing countries rose from 23.4 per cent in 1980 to 29.9 per cent in 1995. One reason could be that, unlike the developing countries, the industrialized countries already had liberal trade regimes by 1980, so that further liberalization had an insignificant effect on trade orientation. A second possible reason is that the growth of non-tariff barriers in the industrialized countries has effectively neutralized the potential effects of trade liberalization. It is perhaps not without significance, for example, that the liberalizing efforts of the developing countries had little impact on the tendency of the industrialized countries to trade mainly among themselves. The proportion of total merchandise exports of the industrialized countries to each other remained unchanged, at around 69 per cent throughout the period 1980-96.

The other important point is that the overall picture for the developing economies is quite misleading, since only a few of these (mostly large) economies actually succeeded in increasing their trade orientation; these were those with the ability to export manufactures. As table 1 shows, just 13 economies (henceforth referred to as G13 economies)⁷ accounted for much of the growth in developing countries' trade during the period 1980-95. By 1995, they accounted for 74 per cent of all exports and for 87 per cent of all manufactured exports from the developing countries; they also accounted for 82 per cent of the FDI flows into the developing countries.

The contrast between the experience of these 13 developing economies and that of the rest of the developing world is rather stark. While the trade orientation of the G13 economies increased sharply, that of the other developing economies actually declined: between 1980 and 1996, the share of exports in GDP increased from 17 to 31 per cent for the G13 economies, but

⁷ The 13 *developing* economies are: Argentina, Brazil, China, Hong Kong (China), India, Indonesia, Republic of Korea, Malaysia, Mexico, the Philippines, Singapore, Taiwan (China) and Thailand. Several of these countries and regions are now regarded as industrialized, and the Republic of Korea and Mexico are members of the OECD. It should be noted that these 13 economies account for a large proportion of both population and GDP of the developing world.

declined from 31 to 26 per cent for the other developing countries. As a consequence, the other developing economies became increasingly marginalized as participants in global trade; over the period 1980-96, the share of the industrialized economies in world merchandise exports increased from 64 to 68 per cent, that of the G13 economies increased from 10 to 21 per cent, while that of the other developing economies declined from 21 to 8 per cent.

Basically, these contrasting changes are explained by the fact that while the G13 economies rapidly expanded manufactured exports, the other developing countries remained overwhelmingly dependent on exports of primary commodities. In 1996, the share of primary commodities in total merchandise exports was 21 per cent for the G13 economies, and 72 per cent for the other developing economies. As already noted, the relative importance of primary commodities in world trade was declining rapidly; their share in world merchandise exports declined from 43 per cent in 1980 to 24 per cent in 1996. In such a context, continued dependence on exports of primary commodities could hardly have led to a growing trade orientation.

Clearly, trade liberalization has been associated with marginalization of a large majority of the developing countries, including all the countries usually classified as least developed economies. This marginalization of so many economies also largely explains why trade liberalization has so far failed to stimulate growth of world trade. It does not follow, however, that the marginalization was caused by trade liberalization. In fact, it is partly explained by the non-liberalization of trade in agricultural commodities, which are major export items for many of the marginalized economies. However, the most important explanation lies in the failure of a large majority of the developing economies to shift their export base away from primary commodities. As already noted, the declining importance of primary commodities in global trade has been a long-term trend which remained unaffected by the recent episodes of trade liberalization.⁸ Marginalization would therefore almost certainly have occurred even without trade liberalization. A little reflection suggests that the failure to expand manufactured exports (which is the real cause of marginalization), is fundamentally attributable to the low level of development of infrastructure — both physical (transportation, communications, electricity) and social (education, health, legal framework, institutions of financial and labour markets). These constitute the immobile capital stock of a country and are essential for the development of modern manufacturing.

International economic inequality, interpreted as the gap in per capita income between the richest and the poorest economies, undoubtedly increased during 1980-96; the “range” of per capita GDP (in PPP dollars) for all the countries taken together increased from 3.49 to 3.88 and the “coefficient of variation” increased from 0.95 to 1.03. But how is the growth of inter-

⁸ The trend seems to provide strong support to the well-known Prebisch-Singer thesis. See Prebisch (1950) and Singer (1950).

Table 2. Average annual growth (%) of real GDP

Countries/groups	1960-70	1970-80	1980-90	1990-97
Industrialized economies	5.2	3.2	3.0	2.0
Developing economies ¹	5.7	5.4	3.7	5.3
G13 economies ²	6.2	5.9	2.1	6.2
Other developing economies ¹	4.6	3.9	2.2	3.3

¹ The first period is 1965-70 and the last period is 1990-95. Countries of the Middle East and North Africa are excluded for the period 1965-80. Taiwan (China) is excluded for the entire period. ² Excludes Taiwan (China). The first period is 1965-70.

Source: Ghose, 2000.

national economic inequality linked to the phenomenon of marginalization? The figures in table 2 show two things: (i) that the marginalized countries suffered a mild deceleration in growth; and (ii) that there was in fact convergence between the industrialized economies and the G13 economies, at the same time as there was divergence between the industrialized and the G13 economies, on the one hand, and the other developing economies, on the other. Thus, the process of growth of international economic inequality actually conceals a remarkable process of convergence. It is nevertheless arguable that marginalization led to a slow-down in economic growth in some of the poorest countries and hence contributed to the growth of inequality. But marginalization was not caused by trade liberalization: in fact the evidence suggests that trade liberalization actually brought about a process of convergence between the industrialized economies and a few developing economies, by inducing growth of two-way trade in manufactures.

It must also be said that an important explanation for the growth of international inequality (in the limited sense of inequality of per capita income across countries) actually lay in the pattern of population growth across countries. During 1980-96, the average annual rate of population growth was 0.6 per cent in the industrialized countries, 1.8 per cent in the G13 economies and 2.8 per cent in the other developing economies. So the marginalized countries not only achieved relatively low rates of economic growth but also had to contend with relatively high rates of population growth. The growth of international economic inequality essentially reflects the difficulties that many developing countries face in building physical and social infrastructure and in restraining population growth.

Trade, employment and wages

It is widely believed that trade liberalization has been a major cause of the growing inequalities between skilled and unskilled labour in industrialized countries. Since the late 1970s, the gaps between skilled and unskilled labour in terms of wages and unemployment rates have been widening in these countries. This has also been a period when barriers to

international trade have been gradually falling. Many economists argue that these developments are causally linked. Trade liberalization, the argument runs, has led to a relocation of the production base for unskilled-labour-intensive manufactures from industrialized to developing countries, thereby causing a decline in the demand for unskilled labour in the former. This has led either to a decline in the wages of unskilled labour or, where there are wage rigidities, to a rise in the unemployment rate of unskilled workers.

The argument, derived from the standard theories of international trade, appears plausible enough but is not strongly supported by the empirical evidence available so far.⁹ There is consensus among economists that two-way trade in manufactures between the industrialized countries and some developing countries of Asia and Latin America has been growing, that less-skilled workers in the industrialized world have been facing either declining real wages or rising unemployment or both, and that the growing gaps between skilled and unskilled workers are not adequately explained by the observed supply-side developments in labour markets. But there is no consensus on the idea that the changes in trade patterns in fact explain the labour market developments. In the first place, there are controversies about the appropriate methodology to be used for empirically assessing the effects of trade on labour markets. Second, most of the available estimates show the effect of trade to have been rather small. Third, the observed movements in relative prices do not seem to suggest trade as a major cause of the labour market changes. Finally, a competing hypothesis, which focuses on autonomous technological change, appears to perform better in some respects in explaining the labour market developments.

A striking aspect of the debate is the almost exclusive focus on the effects of trade on labour markets in industrialized countries. Trade theorists have always argued that growth of trade between industrialized and developing countries would lead to job losses for unskilled workers in industrialized countries and job gains for unskilled workers in developing countries, but that job gains in developing countries would be far larger than job losses in industrialized countries.¹⁰ Thus, global welfare would increase and it would be possible for industrialized countries to find new employment for the adversely affected unskilled workers, by transforming them into skilled workers as the demand for skilled workers rose. Yet the current debate is mostly about whether or not growth of trade has had adverse consequences for unskilled workers in industrialized countries.

There is an obvious need to refocus the debate, and the empirical analysis presented in this article should be viewed in that context. The analysis

⁹ The literature is large and is reviewed in Ghose (2000). See, in particular, Collins (1998); Borjas, Freeman and Katz (1996); Berman, Bound and Griliches (1994); Krugman (1995); Wood (1994); Machin and Van Reenen (1998); and Leamer (1998).

¹⁰ Trade theory also implies that, at the same time, there would be job losses for skilled workers in developing countries and job gains for them in industrialized countries.

starts from two premises. First, the trade relevant in the present context is the trade in manufactures between the industrialized countries and a few developing economies which have recently emerged as important exporters of manufactures. This also means that the focus of analysis has to be on employment and wages in manufacturing rather than in the whole economy. Second, to get a balanced view, employment and wage effects in both the industrialized and the relevant developing countries must be considered together.

Given the premises, the analysis focuses on eight selected economies: two industrialized economies (Japan and the United States) and six of the G13 economies (China, India, Indonesia, Malaysia, the Philippines and Taiwan (China)). It considers the labour market effects, in Japan and the United States, of the growth of two-way trade in manufactures between each of these two industrialized countries and the G13 economies. Similarly, it considers the labour market effects, in the six developing economies, of the growth of two-way trade in manufactures between each of these six economies and the industrialized economies. The database is derived from relevant United Nations and World Bank sources. The methodology consists of, first, identification of the most important items of export and import for each of the countries concerned, and classification, on this basis, of four-digit (in the cases of Japan, the United States, India, Indonesia, Malaysia and the Philippines) or three-digit (in the cases of China and Taiwan (China)) manufacturing industries into five categories: “export-oriented”, “import-competing”, “food, beverage and tobacco”, “petroleum and related” and “others”; and, second, a comparative analysis of the changes in employment and wages in the different categories of industries.¹¹

It will be noticed that all the selected developing countries are in Asia. This selection is dictated by the fact that, in the case of the Latin American emerging economies, a basic precondition for the applicability of the standard trade theories does not seem to be satisfied: the export-oriented industries turn out to be no more labour-intensive than the import-competing industries. A review of the existing literature on some of these countries suggests that the reason may lie in the fact that the export-oriented industries in these countries are dominated by subsidiaries of transnational corporations.¹²

¹¹ Detailed descriptions of the database and the methodology, as also the lists of export-oriented and import-competing industries for each of the economies, are available in Ghose (2000). The terms “three-digit” and “four-digit” refer to standard United Nations classification systems for statistics on trade and industry. It is worth pointing out that the methodology used here assumes that general factors such as technological change affect employment and wages in all branches of manufacturing in the same way; thus, divergences in the behaviour of employment and wages between export-oriented and import-competing industries arise because of trade. This methodology differs from the two standard methodologies used in the literature: the factor-content approach, which relies on estimates of the labour-content of exports and imports, and the Stolper-Samuelson approach, which relies on estimates of the effects of relative price changes (induced by trade) on employment and wages. None of these approaches is free of weaknesses.

¹² Cf. Ghose (2000).

It will also be noticed that “food, beverage and tobacco” industries and “petroleum and related” industries are not included among either export-oriented or import-competing industries. The reason is that trade orientation of these resource-based industries does not really reflect Heckscher-Ohlin comparative advantage. As such, analysis of the labour market effects of trade in resource-intensive products falls outside the scope of this article.

Trade, employment and wages: Japan and the United States

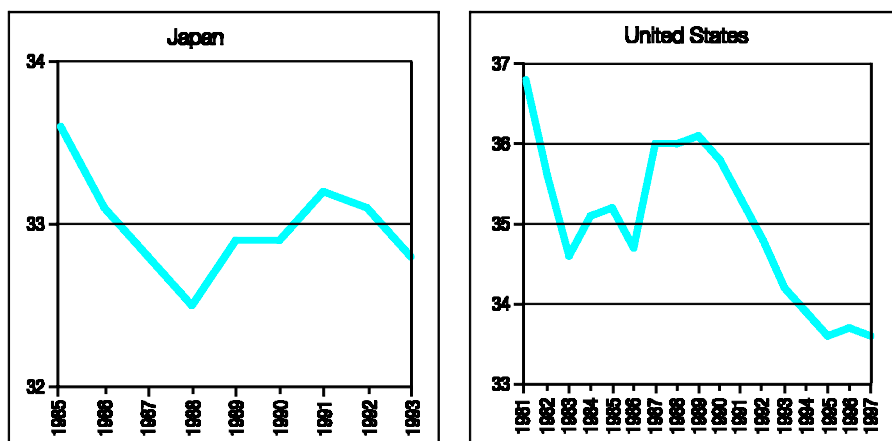
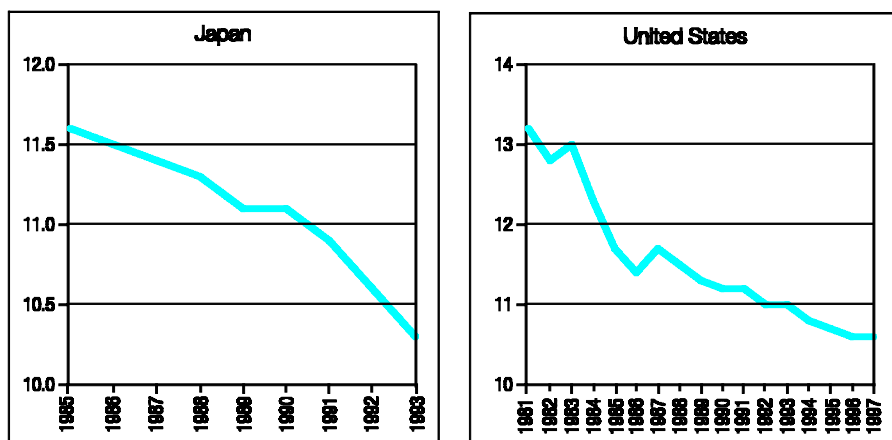
As expected, Japan and the United States export mainly skill-intensive manufactures to the G13 economies and import mainly labour-intensive manufactures from them. During the period 1989-91, the average value of the ratio of labour productivity in export-oriented industries to that in import-competing industries was 2.5 for Japan and 1.8 for the United States. This ratio, though not a perfect measure, is an adequate and widely used proxy for the relative labour-intensity of exports and imports.

In theory, growth of trade with the G13 economies can be expected to reduce employment in import-competing industries and increase employment in export-oriented industries. So the share of the export-oriented industries in total manufacturing employment should rise and the share of the import-competing industries should fall. Because the import-competing industries are more labour-intensive than the export-oriented industries, employment of unskilled workers should decline while that of skilled workers rises and, hence, the relative wage of skilled workers should rise.¹³ Employment per unit of manufacturing output would obviously fall but total employment in manufacturing may rise or fall, depending upon what happens to total manufacturing output.

Figure 4 presents the actual movements in the shares of export-oriented and import-competing industries in total manufacturing employment in the two countries in recent periods. In both countries, the share of import-competing industries steadily declined, as expected. However, the behaviour of the share of export-oriented industries was quite contrary to expectation: in both countries, this share also declined. The decline was more consistent and sharper in the United States, though it should be noted that data for Japan were available for a significantly shorter period.

An even clearer picture emerges from table 3, which presents the actual growth of employment in different categories of manufacturing industry. In Japan, employment declined in import-competing industries and stagnated in export-oriented industries. The same trends are observed in the United States in the first eight years of the 1980s. But during 1988-95 (a period of relatively rapid trade expansion), employment declined in both the export-oriented and

¹³ If labour market regulations and/or trade unions prevent a fall in the relative wage of unskilled workers, then unskilled workers will face a higher unemployment rate. In both Japan and the United States, however, wages are generally thought to be fairly flexible.

Figure 4. Share of export-oriented industries in total manufacturing employment**Share of import-competing industries in total manufacturing employment**

the import-competing industries in the United States, and at roughly the same rate. In both countries, employment growth was positive only in “food, beverage and tobacco” industries and in “other manufacturing” industries. In Japan, this growth was significant enough to make the overall employment growth in manufacturing positive. In the United States, however, the overall employment in manufacturing slowly declined throughout the 1980s and the 1990s.

Thus, it is incorrect to argue that the unskilled worker faced declining employment while the skilled worker enjoyed a boom in demand; both types of worker seem to have faced declining or stagnant demand in the

Table 3. Annual average rate of growth (%) of employment

		Export-oriented industries	Import-competing industries	Food, beverage, tobacco	Other manufacturing	Total manufacturing
Japan	1985-93	0.0	-0.7	1.4	0.9	0.7
United States	1981-89	0.0	-2.4	0.0	0.0	0.0
	1990-97	-0.8	-0.7	0.0	1.1	0.0
	1988-95	-1.7	-1.6	0.6	0.0	0.0
	1981-97	-0.7	-1.7	0.2	0.2	-0.3

Note: Statistically insignificant values are put as 0.0.

Source: Ghose, 2000.

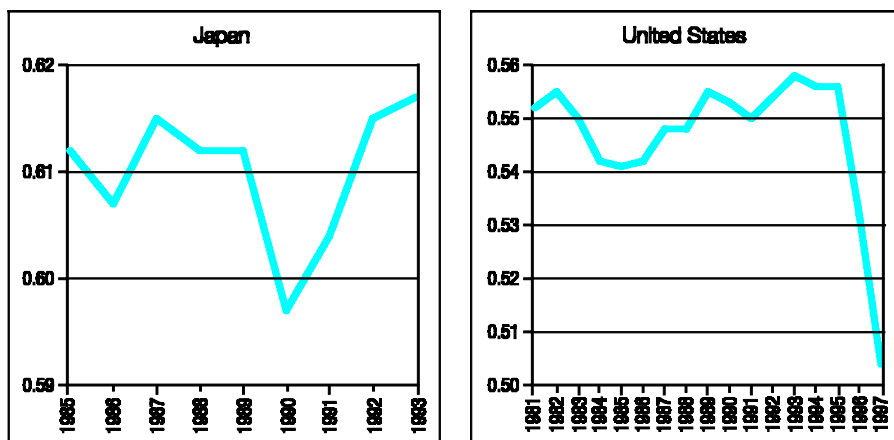
manufacturing sector.¹⁴ This suggests that there were factors other than trade with the G13 economies which affected employment growth in all branches of manufacturing. For the purpose of this article, it is not particularly important to know what these factors were. The important point to note is that the observed decline in the employment of unskilled workers in the import-competing industries could not have been due solely or even largely to trade with the G13 economies.

This judgement, together with the fact that the import-competing industries accounted for less than 12 per cent of total manufacturing employment in these countries even in the mid-1980s, yields the conclusion that, at least in the cases of Japan and the United States, the growth of trade with the G13 economies had only a very small adverse effect on the employment of unskilled workers in manufacturing. When, in addition, it is recognized that manufacturing accounted for around 23 per cent of the total employment in both economies in the mid-1980s, it would appear quite absurd to attribute the growth of unemployment of unskilled workers in these economies to trade with the G13 economies.

These results already suggest that the growth of trade with the G13 economies is unlikely to have been responsible for the growing wagegap between skilled and unskilled workers in the two industrialized economies. Indeed, figure 5 shows that there was no significant declining trend in the ratio of the wage in import-competing industries to that in export-oriented industries in either Japan or the United States. In the context of the countries concerned, this ratio is an acceptable proxy for the ratio of the wage of unskilled workers to that of skilled workers. Thus, there is no strong evidence to suggest that the skill premium was rising in the manufacturing sector in either Japan or the United States. This result seems surprising, particularly in the context of the United States, since a considerable body of empirical

¹⁴ The "food, beverage and tobacco" industries and "other manufacturing" industries are less labour-intensive than the import-competing industries, but more labour-intensive than the export-oriented industries in these countries.

Figure 5. Ratio of wage per worker in import-competing industries to that in export-oriented industries



research shows that the skill premium in the United States economy was indeed rising; but it only means that the skill premium was rising in non-manufacturing sectors of the economy, very probably in services.

Trade, employment and wages: Six developing economies

In theory, developing countries are expected to export labour-intensive manufactures to industrialized countries and to import skill-intensive manufactures from them. The estimates presented in table 4 show that this expectation is borne out in five of the six cases studied. China seems to be the exception to the rule; at first sight, its exports appear to be no more labour-intensive than its imports. A little probing reveals, however, that China's exports and imports are not very different from those of India or Malaysia in terms of specific items. This directs attention to the fact that China's exports are produced very largely by foreign capital in special economic zones, while its import-competing products are produced very largely by state enterprises which are known to be substantially overstaffed.¹⁵ It can be plausibly argued that even though China's export-oriented industries are intrinsically more labour-intensive than its import-competing industries, this is not reflected in the relative labour productivity because work motivation and management efficiency are systematically poorer in the import-competing industries. As will be shown below, this argument is strongly supported by all the other evidence on labour market changes in China.

¹⁵ See, for example, World Bank (1997).

Table 4. Ratio of labour productivity in export-oriented industries to that in import-competing industries, average, 1989-91

4-digit classification	
India	0.51
Indonesia	0.37
Malaysia	0.67
Philippines	0.31
3-digit classification	
China	0.98
Taiwan (China)	0.56

Source: Ghose, 2000.

Obviously, growth of trade with the industrialized countries should increase the share of labour-intensive (export-oriented) industries and reduce the share of skill-intensive (import-competing) industries in total manufacturing employment. The employment intensity of manufacturing output, therefore, should rise and, in all probability, so should total manufacturing employment. Furthermore, since the demand for unskilled workers is expected to rise and that for skilled workers is expected to fall, the wage differential between skilled and unskilled workers should decline.

Except in the case of Taiwan (China), which has pursued a trade-oriented strategy for a long period, the liberalization process as well as trade expansion started in the mid-to-late 1980s. It can thus be argued that the estimates presented in table 5 strongly support the proposition that trade increases the employment intensity of manufacturing output. For Taiwan (China), the elasticity could not be estimated for lack of a suitable deflator for manufacturing output and, for the Philippines, the data on employment showed some obvious problems of inter-temporal comparability. In all the

Table 5. Employment elasticity: Manufacturing sector

	Period 1	Period 2	The full period
4-digit classification			
India	-0.28 (81-86)	0.35 (87-94)	0.16 (81-94)
Indonesia	0.60 (81-87)	0.72 (88-96)	0.73 (81-96)
Malaysia	-0.28 (81-87)	0.85 (88-95)	0.65 (81-95)
Philippines	—	0.00 (88-97)	—
3-digit classification			
China	0.27 (80-86)	0.53 (87-96)	0.44 (80-96)
Taiwan (China)	—	—	—

Note: The elasticities are estimated by dividing the rate of growth of employment by the rate of growth of real output. In the case of the Philippines, employment growth during the relevant period was statistically insignificant. In the case of Taiwan (China) no estimates could be derived because real output growth could not be estimated (for lack of a suitable deflator).

Source: Ghose, 2000.

other sample economies, the employment elasticity increased quite significantly in the period of trade expansion.

Figure 6, which presents the movements in the share of export-oriented industries in total manufacturing employment, confirms the linkage between trade expansion and growth of employment intensity of output for three economies (China, Indonesia and Malaysia). In addition, it shows that in Taiwan (China), too, trade expansion increased the employment elasticity in manufacturing. However, the share of export-oriented industries in total manufacturing employment declined in both India and the Philippines for much of the relevant period. There is not much more that can be said on the developments in the Philippines given the limitations of the data. The case of India can be probed a little further (see below).

Figure 7, which presents the movements in the share of import-competing industries in total manufacturing employment, springs some surprises. The share declined in only two of the countries — China and Indonesia. In the other countries, the share rose fairly steadily. Even in Indonesia, it showed a sharp rise towards the end of the period. Under certain circumstances, this growth of employment in import-competing industries could have pre-empted the rise in the employment elasticity observed in five of the six countries. The reason this did not happen is that the import-competing industries accounted for a much smaller proportion of manufacturing employment than the export-oriented industries in all the countries.

Thus it seems that, more often than not, growth of trade with the industrialized countries stimulated rather than hurt employment growth in the import-competing industries. The estimates presented in table 6 confirm this further. They show, moreover, that even where the share of import-competing industries in total manufacturing employment declined (as in China and Indonesia) employment growth in those industries was still very significant. In fact, in none of the economies did employment growth in import-competing industries turn negative or even slow down during the period of trade expansion; it actually accelerated nearly everywhere. Obviously, it cannot be said that growth of trade reduced the demand for skilled workers.

In general, growth of trade seems to have stimulated employment growth in all branches of manufacturing, and hence in the manufacturing sector as a whole. In India, the employment elasticity in manufacturing rose more because of the growth of “food, beverage and tobacco” industries (which are less labour-intensive than the export-oriented industries but more labour-intensive than the import-competing industries) than because of the growth of export-oriented industries.

It thus appears that there is an important asymmetry between developing and industrialized economies in terms of the employment effects of trade: trade hurts employment in import-competing industries of industrialized countries but stimulates employment growth in all branches of manufacturing industries in developing countries. The reasons for this asymmetry are not explored in this article, but a few ideas can be proposed. First, growth of trade

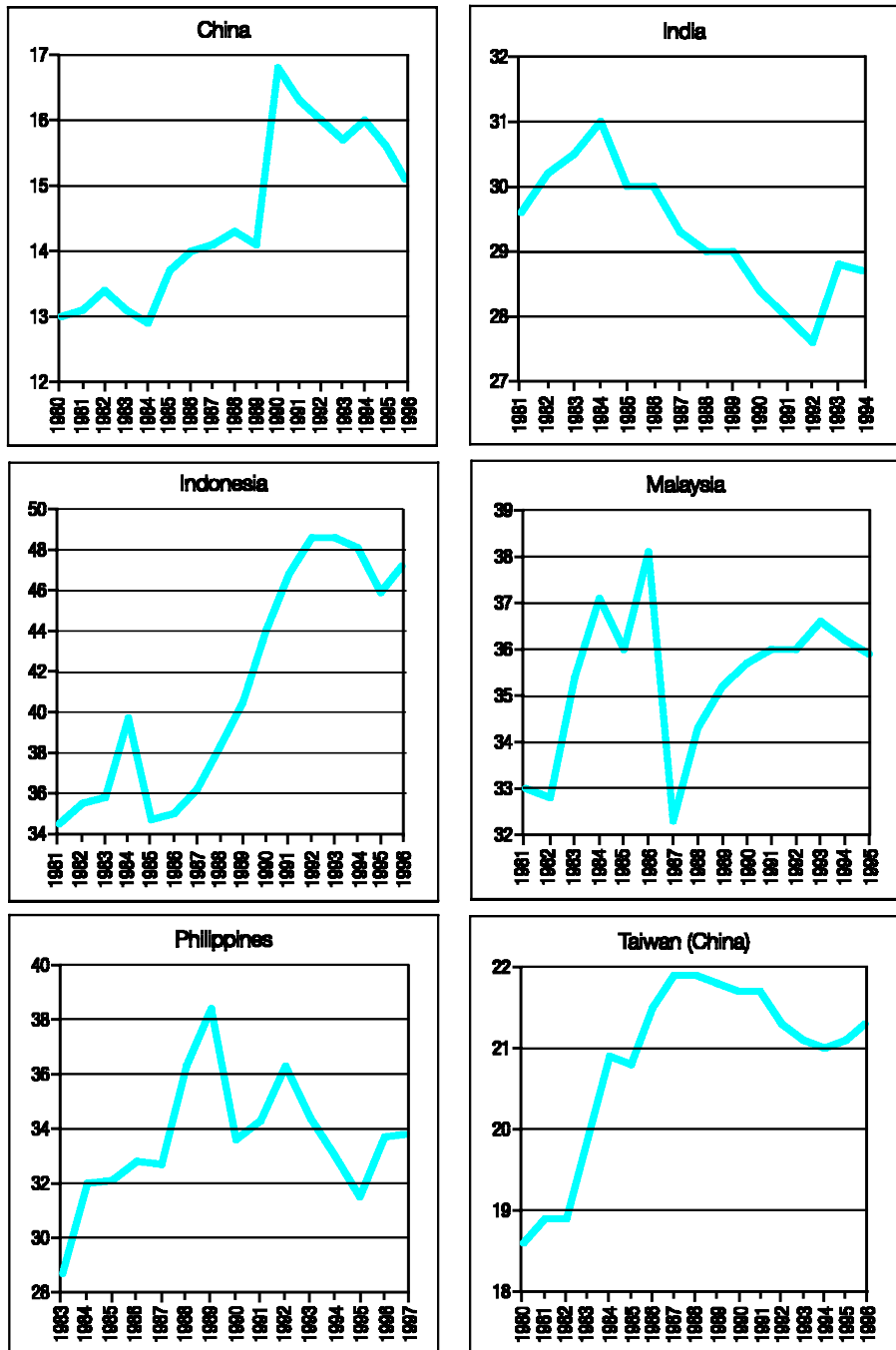
Figure 6. Share of export-oriented industries in total manufacturing employment

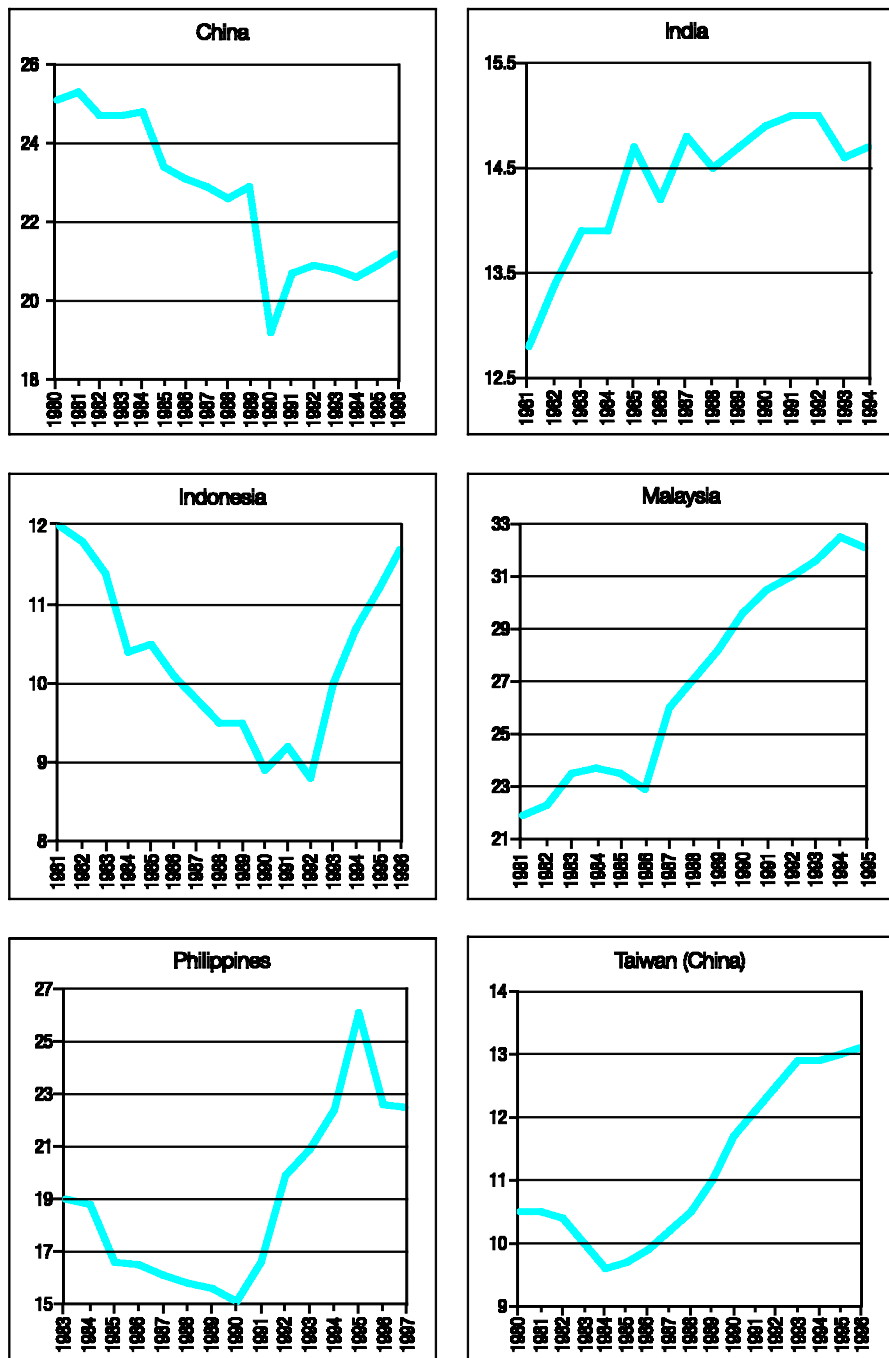
Figure 7. Share of import-competing industries in total manufacturing employment

Table 6. Annual average rate of growth (%) of employment

		Export-oriented industries	Import-competing industries	Food, beverage, tobacco	Other manufacturing	Total manufacturing
4-digit classification						
India	1981-86	0.0	0.0	-6.2	0.0	-1.6
	1987-94	1.9	2.5	3.2	2.1	2.4
	1981-94	0.0	2.0	0.0	1.3	1.1
Indonesia	1981-87	11.1	7.3	10.5	12.5	10.8
	1988-96	11.7	12.2	5.2	7.8	9.3
	1981-96	13.1	9.9	6.7	10.5	10.5
Malaysia	1981-87	0.0	0.0	0.0	-4.5	-1.8
	1988-95	12.8	14.8	4.3	10.9	12.2
	1981-95	8.1	10.8	2.0	5.9	7.6
Philippines	1983-87	2.0	-5.5	0.0	0.0	0.0
	1988-97	0.0	5.6	0.0	0.0	0.0
3-digit classification						
China	1980-86	4.8	2.3	4.0	3.4	3.7
	1987-96	7.2	5.3	6.0	9.3	6.2
	1980-96	7.5	4.5	5.9	7.7	5.9
Taiwan (China)	1980-89	6.0	4.0	3.7	1.6	3.9
	1990-96	-0.8	1.5	0.0	-1.5	0.0
	1980-96	1.7	2.9	0.9	-1.4	0.9

Note: Statistically insignificant values are put as 0.0. In the case of the Philippines, there appeared to be a break in the series between 1987 and 1988.

Source: Ghose, 2000.

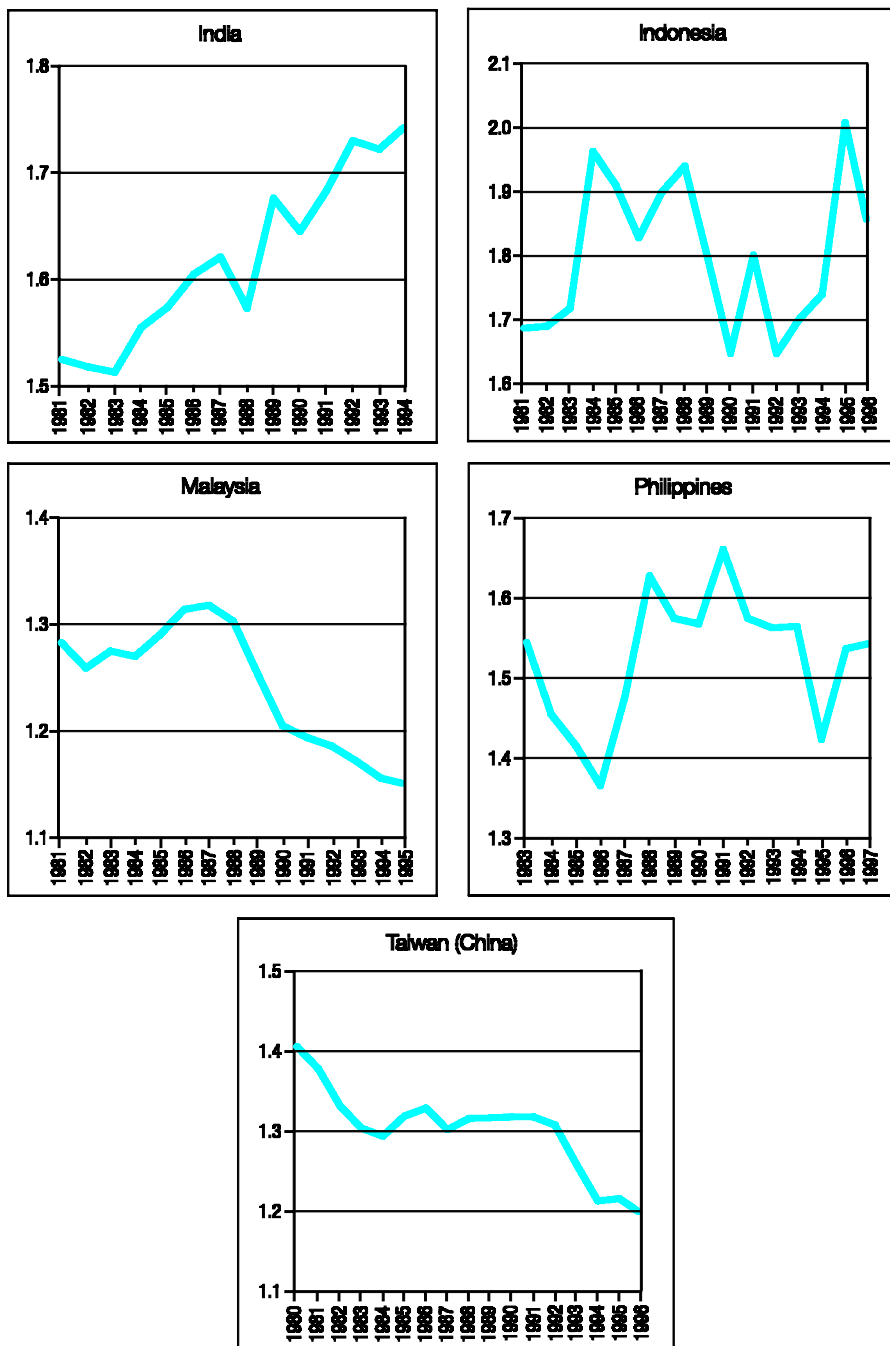
relaxes the foreign exchange constraint faced by many developing economies and thus stimulates growth of manufacturing industries of all types.¹⁶ Second, trade liberalization encourages inflows of FDI to all branches of manufacturing in developing countries. Third, the income elasticity of demand for the import-competing products is high in the case of developing countries but low in the case of industrialized countries. Finally, the existence of surplus labour in most developing countries makes simultaneous expansion of employment in all branches of manufacturing possible.¹⁷

It is already clear that wage inequality need not decline in developing countries as a result of the growth of trade with industrialized countries. On the one hand, the demand for skilled labour increases rather than declines; on the other hand, the existence of excess supply of unskilled or low-skilled labour could pre-empt growth of unskilled wages. Figure 8 presents the movements

¹⁶ The notion of a "foreign exchange constraint" is defined and developed in Chenery and Strout (1966).

¹⁷ The notion of surplus labour and labour-surplus economy were developed by Arthur Lewis in a classic article (Lewis, 1954).

Figure 8. Ratio of wage per worker in import-competing industries to that in export-oriented Industries



in the ratio of the wage in import-competing (skill-intensive) industries to that in export-oriented (labour-intensive) industries — a proxy for the ratio of skilled wage to unskilled wage.¹⁸ The wage gap, viewed over the entire period, declined in Malaysia and Taiwan (China), remained unchanged in Indonesia and the Philippines, and increased in India. However, if attention is confined to the relevant periods of trade expansion, the trends are somewhat different: the wage gap declined in Malaysia, the Philippines and Taiwan (China) and increased in India and Indonesia. These results should not appear particularly surprising, since it is known that Malaysia and Taiwan (China) were facing a scarcity of unskilled labour, while India and Indonesia remained labour-surplus economies. The interesting possibility suggested by the actual experiences of Malaysia and Taiwan (China) is that, if India and Indonesia can sustain trade growth for a period, the surplus labour could disappear and the wage gap could start declining in these economies too.

Trade and labour standards

In assessing the effects of trade on labour standards, it is useful to start by clarifying issues at the conceptual level. Assume that the global economy is composed of two countries (North and South) and two products (machines and textiles). Assume, furthermore, that (a) machines are more skill-intensive than textiles in both countries and, therefore, labour standards are higher in the machines sector in each country; and (b) labour standards in both machines and textiles sectors are higher in North than in South. All of these are standard assumptions of the Heckscher-Ohlin model. Under autarky, both countries produce both products, even though the ratio of available skilled to unskilled workers is higher in North. When trade occurs, North specializes in machines and South specializes in textiles. As a result, overall labour standards unambiguously decline in the textiles sector and rise in the machines sector. In North, labour standards improve because the textiles sector disappears and there is also a simultaneous improvement in standards in the machines sector. In South, however, the change in labour standards is ambiguous. On the one hand, the machines sector disappears causing a fall in standards and, on the other hand, there is an improvement in standards in the textiles sector; the direction of change in overall labour standards, therefore, depends on the initial gap between the two sectors and the extent of improvement in the textiles sector.

Complete specialization, of course, is an extreme assumption. In reality, both products would continue to be produced in both countries in changed quantities. North would now produce more machines and fewer textiles and South would produce more textiles and fewer machines. It can still be concluded that, on a global view, labour standards decline in the textiles sector

¹⁸ Data on wages in China were available for too short a period.

and rise in the machines sector. In North, too, there is an unambiguous improvement in labour standards since fewer textiles are produced and standards rise in the machines sector. In South, once again, the change is ambiguous; fewer machines are produced, standards decline in the machines sector, more textiles are produced, and standards rise in the textiles sector.

Further extension of the illustrative example is possible, but the main points are already clear. On a global view, trade between an industrialized country and a developing country will always lead to a lowering of labour standards in the industries in which the developing country specializes. This is a perfectly predictable result and should not be a source of concern; prevention of a deterioration in global labour standards in particular industries would require a ban on trade between industrialized and developing countries in competing products. The real concern should be about changes in labour standards in the trading countries. In this regard, the theoretically predicted outcomes of trade between industrialized and developing countries are as follows: overall labour standards improve in industrialized countries, labour standards for unskilled workers improve in developing countries and labour standards for skilled workers deteriorate in developing countries.

Thus there are no *a priori* reasons to suppose that trade between industrialized and developing countries leads to a deterioration in labour standards in either industrialized or developing countries. In fact, standards cannot decline in industrialized countries unless deliberate efforts are made to lower them, in an attempt to protect the labour-intensive industries. In the case of developing countries, it is possible (though not inevitable) for overall labour standards to decline. But the reason can only be a decline in labour standards for skilled workers; labour standards for unskilled workers cannot decline. Given the empirical finding that trade actually stimulates the demand for skilled workers in developing economies, it can be asserted with some confidence that overall standards cannot decline because of trade.

What do our empirical results suggest about the effects of trade on labour standards? These results, of course, relate to the effects of trade on employment and wages; the effects of trade on other labour standards are difficult to analyse except through case studies. However, the trends in employment and wages can be plausibly regarded as good indicators of the trends in overall labour standards. If, in any given situation, employment and real wages improve, it is highly unlikely that other labour standards will decline.¹⁹

To start with, a general question can be asked: during the period of trade expansion, did labour standards decline in any of the economies considered in this article? It may be recalled that manufacturing employment stagnated in the United States but grew at a reasonable rate (in relation to the rate of growth of the labour force) in Japan. Furthermore, manufacturing employment grew at an accelerated rate in five of the six developing economies

¹⁹ When employment and real wages change in the same direction, the direction of change in labour standards is unambiguous. Ambiguities arise when they change in opposite directions.

considered; the only exception was the Philippines. These conclusions can be viewed together with the trends in real wages to derive judgements on the trends in labour standards. The estimates presented in table 7 suggest that the real wage declined in the United States but grew at a fairly rapid rate in Japan as also in four of the six developing economies (India, Indonesia, Malaysia and the Philippines).²⁰ For lack of adequate information, real wages could not be estimated for China and Taiwan (China), but, given the trends in employment growth in these economies, there is little reason to doubt that real wages grew at a healthy rate. Thus the available evidence suggests that, as a result of trade expansion, labour standards improved in all the countries except in the United States and the Philippines, and they showed deterioration only in the United States (where employment stagnated and real wages declined).

If changes occur in labour standards during a period of trade expansion, it does not, of course, necessarily follow that they are due to trade expansion. But, as the analysis in the preceding section has shown, there are good reasons to believe that growth of trade with industrialized countries did in fact have a stimulating effect on employment and wages in the developing economies. On the other hand, in the case of the two industrialized countries, there were factors other than the growth of trade with developing economies which negatively influenced employment and wages in manufacturing. In the United States, in particular, the trends in manufacturing employment and wages reflected, in large part, a general process of deindustrialization. The mildly declining labour standards in manufacturing in the United States, cannot therefore be attributed solely or even largely to the growth of trade with developing economies.

The basic conclusion that emerges from this analysis is that there are no convincing theoretical or empirical grounds for believing that the growth of trade between industrialized and developing countries has been responsible for deterioration in labour standards in either group of countries. Thus, if standards have deteriorated in any economy during a period of trade expansion, then this is quite likely to have been policy-induced. In industrialized countries, the pressure of competition arises not so much from trade with developing countries as from trade with other industrialized countries. It is in this context that labour policy reforms have been carried out and these reforms may have led to a deterioration of labour standards in some cases. Moreover, as stated earlier, efforts seem to have been made to protect labour-intensive industries by cheapening unskilled labour in some industrialized countries. In the case of developing countries, too, there may have been cases where, in the face of competition for foreign investment, lowering of labour

²⁰ An intriguing fact is that in India, Indonesia and Malaysia, employment growth accelerated during the period of trade expansion while wage growth actually decelerated. A possible explanation is that a significant proportion of the incremental employment was created in relatively small-scale enterprises. Empirical verification of such a hypothesis, however, is beyond the scope of this article.

Table 7. Annual average rate of growth (%) of real wage per worker

		Export-oriented industries	Import-competing industries	Food, beverage, tobacco	Other manufacturing	Total manufacturing
4-digit classification						
India	1981-86	2.8	4.0	9.4	2.8	4.6
	1987-94	0.7	2.0	2.3	0.0	1.3
	1981-94	1.4	2.5	4.1	1.5	2.1
Indonesia	1981-87	3.8	6.0	3.4	5.2	4.4
	1988-96	3.7	0.0	0.0	0.0	0.0
	1981-96	2.4	2.5	2.6	1.9	2.3
Malaysia	1981-87	4.8	5.4	5.6	3.2	4.7
	1988-95	5.1	3.5	1.9	2.3	3.6
	1981-95	2.9	2.0	2.4	1.7	2.3
Philippines	1983-87	0.0	0.0	0.0	0.0	0.0
	1988-97	0.8	0.0	0.0	2.2	1.5
	1983-97	—	—	—	—	—
Japan	1985-93	1.4	1.5	0.6	2.0	1.6
United States	1981-89	1.1	1.1	0.0	0.7	0.9
	1990-97	1.6	0.6	0.0	1.0	1.1
	1988-95	0.0	0.0	-0.8	0.0	-0.4
	1981-97	0.5	0.4	-0.4	0.3	0.3

Note: Statistically insignificant estimates are put as 0.0. For Taiwan (China), real wages could not be estimated as no suitable deflator was available from the sources used in this paper.

Source: Ghose, 2000.

standards has been used as an inducement to potential foreign investors; but the evidence presented here certainly does not suggest that such policy-induced deterioration in labour standards has been widespread.

Concluding observations

The analysis in this article shows that the fears and apprehensions felt about the effects of trade liberalization are either unfounded or vastly exaggerated. The empirical evidence examined here indicates fairly strongly, if not conclusively, that explanations for the undesirable developments usually attributed to the growth of trade between industrialized and developing countries are actually to be found elsewhere.

The growth of international economic inequality has not been caused by trade liberalization; in fact, it is more correct to say that the lack of progress in liberalizing trade in agricultural products has been a contributory factor. However, the most important reasons lie elsewhere. The poorer economies, with their low level of development of physical and social infrastructure, are not in a position to benefit from trade liberalization in a world where demand is shifting away from primary commodities to manufactures. Then there is the

fact that population is growing at a much higher rate in these economies than elsewhere in the world. Thus, while liberalization of trade in agricultural commodities will certainly help, for the growth of international inequality to be restrained, the main focus of international policy should be on infrastructure development in the poorer economies.

The growth of trade in manufactures with some developing countries has certainly had adverse effects on employment and wages of low-skilled workers in the industrialized countries, but such effects have been quite small. At the same time, both skilled and unskilled workers in the developing countries concerned have derived significant benefits from trade-induced growth of employment and wages. The global net effects are certainly positive and substantial.

The analysis strongly suggests the hypothesis that the labour market problems which emerged in the industrialized countries in the 1980s and 1990s were in fact policy-induced. In some cases, the policies themselves could have been motivated by a desire to protect labour-intensive manufacturing industries (when the right response should have been “skilling of the low-skilled”) but, more generally, were responses to pressures of competition generated by the growth of trade between the industrialized countries. This, of course, is only a hypothesis which requires substantiation through empirical research.

There is little reason to believe that the growth of North-South trade has led to a deterioration in labour standards in the trading economies. In fact, the evidence shows that, in general, trade has helped raise labour standards in developing economies. Obviously, it is quite likely that labour standards have deteriorated in the marginalized countries, but this is associated with decline rather than growth of trade. As for the industrialized countries, the experience of the United States shows that labour standards may have deteriorated in rare cases, but the main explanation does not lie in the expansion of trade with developing economies. The analysis in this article also suggests that if labour standards have deteriorated in any of the emerging economies, the explanation is more likely to be found in the policies pursued than in trade expansion as such.

References

- Berman, Eli; Bound, John; Griliches, Zvi. 1994. “Changes in demand for skilled labor within US manufacturing: Evidence from the Annual Survey of Manufactures”, in *Quarterly Journal of Economics* (Cambridge, MA), Vol. 109, No. 2 (May), pp. 367-397.
- Borjas, George J.; Freeman, Richard B.; Katz, Lawrence F. 1996. “Searching for the effect of immigration on the labor market”, in *American Economic Review* (Nashville, TN), Vol. 86, No. 2 (May), pp. 246-251.
- Chenery, Hollis B.; Strout, Alan M. 1966. “Foreign assistance and economic development”, in *American Economic Review* (Nashville, TN), Vol. 56, No. 4 (Sep.), Part I, pp. 679-733.
- Collins, Susan M. (ed.). 1998. *Exports, imports and the American worker*. Washington, DC, Brookings Institution Press.

- Ghose, Ajit K. 2000. *Trade liberalization and manufacturing employment*. Employment Paper 2000/3, Geneva, ILO. Available on the ILO's web site at: <http://www.ilo.org/public/english/employment/strat/publ/ep00-3.htm>.
- IMF. 1997. *World Economic Outlook*. Washington, DC, May.
- Krugman, Paul R. 1995. *Technology, trade and factor prices*. Working Paper No. 5355. Cambridge, MA, National Bureau of Economic Research.
- Leamer, Edward E. 1998. "In search of Stolper-Samuelson linkages between international trade and lower wages", in Collins, pp. 141-203.
- Lewis, W. Arthur. 1954. "Economic development with unlimited supplies of labour", in *The Manchester School of Economic and Social Studies* (Manchester), Vol. 22, No. 2 (May), pp. 139-191.
- Machin, Stephen; Van Reenen, John. 1998. "Technology and changes in skill structure: Evidence from seven OECD countries", in *Quarterly Journal of Economics* (Cambridge, MA), Vol. 113, No. 4 (Nov.), pp. 1215-1244.
- Prebisch, Raul. 1950. *Economic development of Latin America and the principal problems*. New York, NY, UN Economic Commission for Latin America.
- Singer, Hans W. 1950. "The distribution of gains between investing and borrowing countries", in *American Economic Review* (Nashville, TN), Vol. 40 (Papers and Proceedings), pp. 473-510.
- UNCTAD. 1999. *Trade and Development Report 1999*. New York and Geneva.
- Wood, Adrian. 1994. *North-South trade, employment and inequality: Changing fortunes in a skill-driven world*. Oxford, Clarendon Press.
- World Bank. 1997. *China 2020: Development challenges in the new century*. Washington, DC.