

# **Trade Integration and Employment: A Theoretical and Empirical Overview**

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( Preliminary draft prepared as a input for a briefing report for  
UNDP report on Trade and Human Poverty in Asia Pacific.

Not to be quoted.

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# Trade Integration and Employment: A Theoretical and Empirical Overview

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The impact of increased integration through trade on income and employment within the developing world has been the subject of widespread debate during the past few decades. Two factors are largely considered to be responsible for the substantial rise in the extent of trade integration and interdependence: a long-term downward trend in transport and communication costs and significant reductions in trade barriers as a result of national or multilaterally agreed trade liberalization. Regional trade agreements have also contributed to expanding trade within trade blocs, both as a result of the formation of new blocs (NAFTA, MERCOSUR, ASEAN, and COMESA) and as a result of the deepening and increased coverage of existing agreements (EEC).

Increased trade integration in developed countries was mainly the result of a long-run decline in transport and communication costs. For many industrialized countries, what characterizes recent decades is an acceleration of trade with high-growth developing countries (especially Asian countries). Trade with developing countries nevertheless remains quite small in terms of absolute values in all industrialized countries (well below 5 per cent in the United States and the European Union).

Developing countries, especially in Asia, too experienced rapid integration with the global economy during the 1980s and 1990s which accompanied large scale trade liberalisation, often as part of broad programmes of structural adjustment. This was reflected in increased export sales, import penetration, foreign direct investment, competition in services and the rapid transmission of technology across national borders. The process was often accompanied by increased exchange rate fluctuations prompted by the greater mobility of international capital movements (and labour – to a limited extent). Given this larger context, the linkages between trade and employment for the developing

world are complex and layered and have been the subject of much debate, involving both theoretical issues as well as questions of interpretation of the available empirical evidence.

### **Trade and Employment – “Job Oriented or Jobless growth”**

The literature on trade liberalization and the distribution of wages and employment has two chief characteristics. The first is that it is largely geared towards explaining the experience of the developed, especially OECD, countries<sup>1</sup>. The second is that there has been very little theoretical progress and the theorems of Heckscher and Ohlin and Stolper and Samuelson (SS) continue to be the main analytical tools used to explain the relationship between international trade and the distribution of income. The experience of the developing countries has received less attention with it generally being assumed that the impact of trade liberalization in these countries is the opposite of that in developed countries. For example, it is assumed that if there is a worsening of the income distribution in developed countries, then there will be a corresponding improvement in the income distribution in developing countries, just as the standard theory of international trade predicts.

Mainstream economic theory suggests that free trade leads to improved efficiency in the overall - partners. Trade reforms (via liberalized exports and imports) are expected to result in expansion of sectoral output, and consequently, bring about an expansion in labour demand. The process of adjustment will reflect the relative comparative advantage of the country with regard to factor endowments and technology, among other things. It is expected that there will be a shift in production towards labour-intensive products, and therefore an increased demand for workers in developing countries because labour is the abundant factor endowment in their case, while there will be a relative reduction in the demand for capital since it is the relatively scarce endowment.

The recent literature on trade and income distribution elaborates the above analysis by considering capital, skilled *and* unskilled labour as the relevant factors of production. The

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<sup>1</sup>Limited literature available however - focuses more on middle income economies in Latin America.

theoretical argument is based on the assumption of complementarity of capital and skilled labour, as originally proposed by Rosen (1968) and Griliches (1969), and recently explored by Goldin and Katz (1998), and Krusell *et al.* (1997) among others. Thus, contrary to the traditional theory which treats labour as a homogenous factor of production, labour is divided into skilled and unskilled labour, the returns of which can be differently affected by international trade. It is always assumed that developed countries are abundant in skilled labour, while developing countries are abundant in unskilled labour. The employment effects associated with trade liberalization in developing countries are then often interpreted in the light of a specific factors trade model (it assumes that some production factors are immobile across sectors, and is suited for a short-run appraisal of the effects of trade policy shocks on labour demand). After trade liberalization, labour shifts from the shrinking import-competing sectors to the expanding export-oriented ones. At the end of the reallocation process, overall labour demand may either rise or fall, depending on the relative labour intensity of import-competing and export-oriented industries. The common a priori assumption is that in developing countries, given their labour endowments, the unskilled labour intensity of export industries is higher than that of import-competing sectors so that ultimately trade liberalization should bring about an increase in overall labour demand, especially for unskilled labour.

These propositions have been widely refuted on both theoretical and empirical grounds. Theoretically, it is pointed out that besides the fact that many of the assumptions required for the SS and factor price equalization results to hold are obviously unrealistic and may not be directly applied, the analysis ignores the **specificities** that characterise the growth and integration process of developing countries. These result in significant variations in the character of and experiences with structural adjustment programmes, in terms of the effects of the reallocation of resources due to a shift from import substitution to export orientation, the implications of technological 'transfers' or 'imports' of technological processes developed in the industrialised nations, the transitional costs of adjustment with path dependent implications and so on.

Trade liberalization adopted as part of structural adjustment strategies has often led to outcomes with adverse employment and welfare implications also because of:

- contractionary fiscal and monetary policies that reduce the role of the state, while limiting the entry of new firms by restricting credit provision.
- policies that lead to an appreciation of the real exchange rate, which reduces export competitiveness.
- missing complementary policies and institutions to support faster export growth.
- insufficient or inadequate complementary skills and capital commensurate with technology transfers.
- external constraints such as limited market access to developed markets.
- anti competitive practices of multinationals.
- increased financial and price volatility,
- reduced opportunities for learning,
- increased marginalization of poor with little bargaining power or skills and so on.

Overall, the empirical evidence suggests a relationship between trade liberalization, wage inequality and employment which goes contrary to the predictions of the standard theory of international trade. But the jury is still out on the linkages between trade openness and employment *per se*. It has proven difficult to use cross-sectional or other approaches to establish causality and identify the role and relative importance of other intervening factors outlined above such as the broader macroeconomic environment, geography and institutional elements. However a comparison based on broad macroeconomic aggregates relating to trade and labour market conditions over the past two decades, when trade liberalization measures were purportedly sweeping the developing world, might still be informative to discern important trends.

### **Global Labour Market Trends**

During the last 20 years, a generalized reduction in the aggregate demand for labour paralleled the developments in international trade (See ILO (1995, 1998-1999, 2005, for an overview). The unemployment rate has been growing on average across countries.

Simultaneously, the share of wage income in total income has also been falling on an average (UNCTAD, *World Development Indicators 2001*). In both cases, according to the available empirical evidence, the magnitude of change has been more substantial in case of the developed countries and there exist wide variations in intra-regional and cross country experiences. While in the average OECD country the unemployment rate grew by more than 2 per cent between 1980 and 1997, in the average non- OECD country unemployment grew by less than half a percentage point. Within developed countries (aggregate) labour demand has been falling more substantially in continental Europe while within developing countries, Latin America and sub-Saharan Africa seemingly experienced greater employment losses.

A parallel trend in terms of labour market developments has been rising wage and income inequalities – both for developed as well as liberalizing developing countries. With regard to the evolution of income inequalities in liberalizing developing countries, the picture again varies widely across regions. While empirical studies suggest that wage inequality has been constant or narrowing in most Asian countries over the past two decades (Fields, 1994; World Bank, 1995), in a number of Latin American countries that underwent significant episodes of trade liberalization, inequality seems to have increased markedly (Reventa, 1992, 1995; Wood, 1997; Robbins, 1996; UNCTAD, 1997).

Another important feature of the contemporary global economy is the structural shift in employment generation towards services. To a significant extent services have also become “tradable”, be it through cross border exchange and telecom networks (internet etc.) or through international factor mobility (FDI, labour movement). However most of the available literature focuses on manufacturing employment partly because a dominant share of global trade continues to be in goods and partly because of inadequate availability and reliability of data where services are concerned. Nevertheless, most employment in both developed and developing countries is outside of manufacturing. In developed countries the services sector accounts for about 70-80 percent of employment, whereas agriculture, rural non-farm and urban informal service sectors account for a dominant share of employment in developing countries, especially in the case of LDC’s .

## Some Recent Explanations

Recent explanations for the rising wage inequality and unemployment in developing countries following trade openness fall broadly in one of two classes: the first group consists of arguments that are extensions of the HO and SS theory; the second argues that technological changes, coming through trade, are the root of the problem. (New growth theory: Grossman and Helpman (1991), Parente and Prescott (1994) and Romer (1990).)

The first class of explanations have been put forward by Davis (1996), Wood (1999) and Feenstra and Hanson (1995) amongst others. Davis's contention is that the availability of production factors should be considered in relation to a group of countries with similar but not the same endowments rather than in relation to the global economy in order to search for explanations of intra regional employment and wage differences. Wood argues that the entry of countries like China, India, Bangladesh, Pakistan and Indonesia into the world market for goods with a high content of unskilled labour in the mid-1980s has a role to play in the explanation of increased income inequality and unemployment in medium income countries, particularly those in Latin America. His argument is that the increased supply of unskilled labour-intensive goods changed the structure of supply of goods in the world market, reducing their prices and the return to factors involved in the production of such goods. This reduced the competitiveness of the latter countries which were forced to shift towards production of goods which required semi-skilled labour and consequently resulted in rising wage dispersion.

Feenstra and Hanson, in an intuitive way suggest that with freer trade, the stages of production which demand less skilled labour (by the measure of the advanced country) will be transferred to the less developed countries where unskilled labour is relatively cheaper. Rising trade integration greatly facilitated by technological change has segmented production processes and allowed for the locational breakup of segments of individual processes with differing types of skill requirement. This has enabled what Feenstra [1998] describes as "the disintegration of production", with the associated geographical separation of different parts of the production process and increase in intra-

industry trade. However, the kind of labour that is actually demanded even in the case of developing countries is skilled when judged from the perspective of developing countries perse. The specialization of production increases the average requirements of labour in both sets of countries, since the average input will be more intensive in skilled labour. As a result, the relative demand for skilled labour increases in both regions and thus causes rising wage inequality in both groups of countries.

The new growth theorists on the other hand emphasise the effects of trade on diffusion of technical innovations, changing the technological level of the less advanced country. The consequent reallocation is biased in favour of skilled labour, since the technology being used was developed in the country where this factor is abundant as a result of which the structure of labour demand tends to move in favour of skilled labour. This leads to an increase in the returns to human capital manifested in increased inequality and employment effects due to skill shortages. Given that the mean elasticity of substitution of skilled labour for unskilled labour is larger in developed than in developing countries, since the supply of skilled labour is larger in those countries, the effects are more intensely felt in case of the latter countries. Furthermore, supply of skilled labour, levels of education, institutional factors, transactions and transport costs, regulatory and legal frameworks , social infrastructure, political stability all have a role to play in determining the level of trade and investment induced changes in wages and employment.

It has been also emphasised that it is necessary to differentiate the process of innovation – which requires cognitive human capital – from the process of productive implementation – which requires learning-by-doing. The trade induced imports of capital goods and of new technologies of developed countries are connected to the second case, which do not guarantee dynamic change in the technological level of production in developing nations. To that extent, any skill shortages that occur are bound to be transitional as labour markets adjust to changes in the structure of labour demand, with the period of transition varying according to characteristic features of the existing labour market conditions. As such the structural implications for changes in the labour market conditions of these countries need to be more fully explored.

The link between trade, growth and employment in the past has often been explored by using the employment elasticity of growth, which is also an indicator of the employment intensity of growth. In general, it is agreed upon that when developing countries open for trade, the employment elasticity in the manufacturing sectors of developing countries will rise. (The converse can occur in the manufacturing sectors of the industrialized countries, however, due to a tendency of lower employment for unskilled or relatively less skilled workers). The higher the elasticity, therefore, the more employment-generating is growth, and thus, trade as well. However, it should be pointed out that there are some important dimensions to the employment elasticity of trade. The first is that the elasticity of employment of trade is inversely related to labour productivity. That is, the higher the elasticity, the lower the productivity, and vice versa. Put another way, a higher elasticity will mean an expansion in the employment of lower skilled workers, and vice versa. Given the high levels of unemployment and excess reserves of labour supply that exist in the developing world, higher employment elasticities of growth are considered both desirable as well as the expected logical outcome of the propositions of mainstream theory.

The second dimension to the labour elasticity of trade concerns the impact of trade on the own-price elasticity demand for labour. Rodrik (1997) suggests that as trade expands, the demand for labour becomes more elastic indicating that employment would increase at given wages. But the increase in price elasticity demand for labour also means a reduction in the wage bargaining power of workers with respect to capital, and consequently, workers will end up facing a greater burden of non-wage labour costs. This takes place because trade results in the increased inflow of imported intermediate inputs/commodities (including capital), which then compete with domestic labour. That is, there is a substitution effect. Moreover, whenever trade liberalization results in an increase in the elasticities of traded commodities, given that the demand of labour is essentially a derived demand and hence depends on the production of these commodities, an increase in the elasticity of labour demand would occur.

The jury is still out regarding the theoretical validity and empirical base of most of these explanations which reinforces the need for consolidating available empirical evidence in order to arrive at a deeper understanding of processes at work. In this regard, Jayati Ghosh (2003) argues that the perception that the Northern core capitalist countries have been “exporting” jobs *in the net* to Southern countries is not borne out by a cursory examination of employment trends in even the most dynamic of Southern exporters taken as a group. On the basis of a study examining the pattern of manufacturing employment expansion in the purportedly more ‘prominent’ or ‘dominant’ developing economies of the recent past, she contends that while manufacturing jobs may have disappeared from the North, they have not reappeared equivalently in the South. Though it is true that there has been production (and employment) relocation in a number of manufacturing sub-sectors which are typically described as more labour-intensive, her contention is that in most countries this has been more than offset by decline in other sectors of manufacturing that have been hit by import competition. Also, in most of the dynamic exporting countries, the character of the export-oriented manufacturing itself has been such that employment elasticities of new production are low. As a result, the increase in manufacturing employment has been confined to a very small subset of countries, and even here many sectors do not show the expected dynamism in employment generation. She further argues that this is largely a consequence of three tendencies: First, increased trade openness which due to severe import competition has eroded a large amount of (largely labour intensive) traditional activity or recent import-substituting production. Second, the problem of fallacy of composition in exports, as a result of which only a few countries benefit substantially from access to Northern markets. Third, the pattern of technological innovation which has contributed in no small measure to the low and declining employment elasticities of production in exporting sectors as well as in other activities.

A survey of recent trends in trade and production flows alongwith developments in labour market conditions unfolding in the Asia Pacific region seems not only to refute the basic propositions of mainstream theories but also seem to suggest that the search for comprehensive explanations is far from over.

## **The Asian Experience**

Asia and the Pacific, a home to more than four billion people happens to be one of the most dynamic regions in the world in terms of its economic performance over the last two decades. In recent years, the region has grown at a rate over twice the world average and is estimated to continue outpacing the rest of the world in coming years in this regard. During this period, it also experienced rapid integration into global markets for goods, services and investment. However there also exists great diversity within Asia and the Pacific – from the developed, industrialized economies (Japan, Australia and New Zealand) to the previous “Asian miracle economies” (the “tigers” – Hong Kong (China), Republic of Korea, Singapore and Taiwan, China; and the “tiger cubs” – Indonesia, Malaysia, the Philippines, Thailand) to the least developed countries (Afghanistan, Bangladesh, Cambodia, Kiribati, Lao PDR, Myanmar, Nepal, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste and Vanuatu). Several countries remain entangled in social conflicts and other tensions, with the path to economic and social development as well as democracy hampered by the lack of decent and productive employment opportunities for the population (ILO 2005).

In Asia, like other developing regions in the world, there has been considerable liberalization of trade (reduction in tariff and non-tariff barriers and quantitative restrictions to trade) recently, particularly pronounced since the 1990s. These trade liberalization measures have often been accompanied by the liberalization of policies towards foreign direct investment as well as broader macroeconomic and structural adjustment programmes, such as the removal of controls over domestic investment, deregulation of domestic product and labour markets, privatization of state enterprises and both internal and external financial liberalization.

All these events, alongwith abolition of state monopolies, reduced staffing in public enterprises and macroeconomic fluctuations resulting from short-term capital movements (Asian financial crisis) affected labour market conditions leading to *loss of millions of*

*jobs* and increased job insecurity. On the other hand, the *delocalization of production and services* from western countries to developing countries in sectors such as food processing, textiles or garments, electronics, and ICT (information & communications technologies) increased the demand for labour, thus expanding employment opportunities and raising workers' earnings, atleast in some of the more dynamic countries within Asia.

## **Growing Trade in goods and services<sup>2</sup>**

Asia has had exceptional export performance compared to other regions of the world. Intra-Asian trade has been growing much faster than trade with the rest of the world. Many Asian countries are now trading more between themselves than with other non-Asian markets – reflecting both the rising importance of Asian consumers and the growing involvement of Asian countries in different stages of global production systems. The region houses major global production systems operated by multinational enterprises. It is also the biggest destination in the developing world for foreign direct investment (FDI), with more and more of these flows originating within the region. Asia is also the largest and fastest growing outward investor, accounting for three-quarters of the total outward FDI stock of developing economies and four-fifths of total outflows during 2002-2003<sup>3</sup>. It accounts for nearly 90 per cent of net portfolio equity flows to emerging markets and has the highest level of savings, along with the largest accumulation of foreign reserves, in the world<sup>4</sup>(ILO 2005).

*Asia and the Pacific experienced rising trade in both goods and services between 1980-2003, and while trade in goods still remains substantial, share of services in total trade is rising globally as well as for Asia. For East Asia, goods trade has been rising while services trade is growing for South Asia.*

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<sup>2</sup> See Appendix, tables A1-A6.

<sup>3</sup> UNCTAD, *World Investment Report 2004: The Shift Towards Services*, (New York and Geneva, 2004).

<sup>4</sup> UNESCAP, *Meeting the Challenges in an Era of Globalization by Strengthening Regional Development Cooperation* (New York, United Nations, 2004).

As table A1 reveals, total exports almost doubled between 1980 and 1990 and between 1990 and 2003. Globally, Goods Exports as a Share of total Exports declined slightly from 83% in 1980 to 80% in 1990 and remained unchanged thereafter (Trade still remains largely goods oriented). The share of goods exports in total East Asia and Pacific exports rose marginally from 86% in 1980 to 88% in 1990 to 89% in 2003, but the same fell from 80% in 1980 to 74% in 1990 and remained unchanged at that level in 2003 for South Asia. Since this is the period which coincides with trade liberalisation in India, the structural impact of openness in terms of world trade does not seem to be that significant. Share of East Asia & Pacific in total exports rose from approx 3.9% in 1990 to 9% in 2003. South Asia's share during the same period grew marginally from 0.75% in 1980 to 0.8% in 1990 to 1.2% in 2003.

*As far as the composition of exports goes, the share of manufacturing exports and imports in goods trade is on the rise globally as well as for Asia and the Pacific. The shift has been more dramatic for East Asia than South Asia for 1990-2003, the period of higher trade growth in merchandise for both. Raw material, food and fuel (which recorded a slight rise for Asia and Pacific) trade as a percentage of global trade in goods is on a decline (Table A2). The global average annual growth rate of merchandise exports value fell slightly from 6 to 5.6, largely due to a fall in growth rate of merchandise exports of high income OECD countries from 7.3 to 4.8. However, the average annual growth rate of merchandise exports rose to 12.1 for 1990-2001 as compared to 8.8 in 1981-1990 for East Asia and Pacific, the corresponding figures being 8.3 as compared to 7.5 for South Asia, 8.6 as compared to 4 for Latin America and Caribbean and 3.3 as compared to -0.6 for Sub Saharan Africa. (Table A6, Source: WB and ADB). All these facts put together also suggest an overall decline in costs and prices in case of manufactured goods alongwith relocation of some manufacturing to the south.*

The developed and developing economies of Asia and Pacific, especially those of East and South East Asia have steadily increased their market share of world exports of manufactures. By 2004, this share has increased to 30%. Asia now accounts for 55% of world trade in office and tele-communications equipment, 45% in textiles, 47% in clothing and 35% in personal and household goods. The largest single category of

exports is office and telecommunication equipment, which is also the fast growing group of products in international trade. If present trends continue, it is expected that Asia's share will reach 50% in 10 years.

### Asia's \* Share in World's Manufactured Exports

(%)

Share in World Market  
World Export Growth Rate Asia's Share

<u>2004</u>	<u>1990-2004</u>	<u>2004</u>	<u>2004</u>
Iron and Steel	4	6	25
Chemicals	15	10	17
Office & Telecomm Equip	17	11	55
Transport Equipment	18	7	21
Textiles	3	4	45
Clothing	4	7	47
Other Machinery	6	8	27
Personal & Household Goods	3	9	35
Scientific & Precision Ist.	3	12	30
Others	17	9	26
<u>Total</u>	<u>100</u>	<u>8</u>	<u>30</u>

(Source: WTO)

\* including developing economies of Asia, Japan, Australia and New Zealand.

*There has been a rising trade surplus for East Asia while South Asia seems to be experiencing a continuous albeit declining trade deficit. As far as net exports go, at all points of time under consideration, there exists a substantial trade surplus in goods trade for East Asia and Pacific, Latin America and the Caribbean, while South Asia and LDC's as a whole experienced a trade deficit. However trade surplus rose in the case of East Asia and Pacific (from 3557 million\$ in 1990 to 100405 million \$ in 2003) and Latin America and the Caribbean (shifted from minor deficit in 80 to surplus in 90 which rose further by 2003). Trade deficit for South Asia rose by 18% in 1990 as compared to 1980 but fell by 7% in 2003. Trade in E.A and the Pacific rose substantially (value of exports rose more than five times between 1990 and 2003, while value of imports rose more than four and a half times between 1990 and 2003). In terms of world trade, the share of the region in total exports grew from approx 4.2% in 1990 to 10.09% in 2003, while share in imports grew from 4.2% to 8.85% (Table A2 and A3).*

Structurally, East Asia and Pacific have experienced a more dramatic shift in exports towards manufacturing between 1990 and 2003 (59.4% in 1990 to 81% in 2003: largely due to China, Indonesia, Thailand and Philippines) away from food, fuel and agricultural raw materials. Fuel imports rose slightly though. The composition of manufactured exports has also changed, especially in East and South East Asia. As this region has moved up in the international division of labour, particularly in the case of relatively high middle income countries like Malaysia and Thailand, the share of natural resource based and labour-intensive exports has fallen from 53% in 1990 to 37% in 2000 (see Table 2.8). Instead, we see the rapid emergence of high-tech exports, with the share rising from 24% to 41%. This process of export diversification has laid the basis for continued high growth rates of exports from the region. Market shares are growing in products like electronics, office machines, telecommunications equipment, etc., which are currently witnessing the fastest growth in world trade. As opposed to the trends in East Asia, there was no major transformation in the structure of manufactured exports from South Asia. The share of low technology, labour-intensive and resource based products, representing largely the traditional exports, remained, more or less, unchanged at 85%. Textiles and clothing continue to be the major export of the region.

South Asian trade also rose substantially (even in terms of share in total world exports, which rose marginally from 0.69% in 1980 to 0.79% in 1990 to 1.13% in 2003). The value of exports doubled between 1980 and 1990 and more than tripled between 1990 and 2003, imports rose more than one and a half times between 1980 and 1990 and more than doubled between 1990 and 2003).

However broad structural shifts in value terms for both exports and imports (as pointed out below), were much more substantial during the period between 1980 and 1990 when the rise in both exports and imports was less accentuated. South Asia has moved towards manufacturing exports (71.2% in 1990 to 79% in 2003) in the same time period though the shift is less dramatic than that for East Asia and Pacific. There has been a rise in the share of fuel exports and imports and a decline in food and agricultural raw materials,

with the decline, just like the rise in manufacturing, being more gradual between 1990 and 2003 (the period of trade liberalisation) as compared to the earlier decade (Table A2 and A3).

### **Employment Trends – 1980-2000<sup>5</sup>**

In order to characterize the structure of employment and the labour market shifts that have accompanied trade liberalization measures, a descriptive overview of the employment shifts from 1980 to 2000 is now attempted. Following Palinvel (2006), the calculations here are based on LABORSTA Labour Statistics Data Base, International Labour Organization.<sup>6</sup>

**Table 1: Growth in Labour force (Selected regions, selected years, percentage)**

<i>Region</i>	<i>Annual labour force growth rate</i>	<i>Annual GDP growth rate</i>
Region	1993-2003	1993-2003
World	1.8	3.5
Latin America and the Caribbean	2.3	2.6
East Asia	1.3	8.3
South East Asia	2.4	4.4
South Asia	2.3	5.5
Middle East & North Africa	3.3	3.5
Sub-Saharan Africa	2.8	2.9
Transition Economies	-0.1	0.2
<b>Industrialized economies</b>	0.8	2.5

*Source: World Employment Report 2004-05, ILO, Geneva, p.27*

A commonly agreed feature characterising growth in the Asia and Pacific region over the past decade has been **relatively higher GDP growth rates**, higher than the global

<sup>5</sup> (See Appendix: Table A7, A8 and A9).

<sup>6</sup>Due to problems with availability of employment data from China, consistent figures for the decade of 1980's are not available.

average accompanied by **relatively low growth rates of employment** (See ILO (2005), ADB (2005) amongst others). At the same time, except in the case of East Asia where the growth in labour force was actually lower than the global average, both South East Asia and South Asia have experienced relatively higher labour force growth rates too. This further accentuates the need for employment oriented growth in these regions.

The primary sector continues to employ the largest number of people in Asia, though its share in total employment has been declining in absolute as well as relative terms. At the sectoral level, the services sector experienced the highest increase in employment (82.1 million approx) as compared to the secondary sector (28.1million) between 1990 and 2000. The primary sector's share in total employment fell from 13.85% in 1990 to 12.63% in 2000 while that of the tertiary sector grew from 20% approx to about 25%. At the sectoral level, manufacturing employment growth was evidenced in absolute (95.6 million) as well as relative terms, though the growth rate (0.34) was much lower as compared to the earlier decade. Where services are concerned, "Wholesale and Retail Trade and Restaurants and Hotels" experienced the highest absolute growth (47.1 million) followed by construction activities (21.4 million), "Transport, Storage and Communication" (14.7 million) and "Financing, Insurance, Real Estate and Business Services" (10 million), most of which are related to external trade and investment. There was a substantial rise of employment in "Activities not adequately defined" (58.1 million).

### **Employment Elasticities and Employment growth since the nineties: Cross country and Intra regional perspectives<sup>7</sup>**

In most of the available literature, employment elasticities are normally calculated to estimate the employment intensity of output growth and alongwith data on employment growth and unemployment rates, to assess whether growth could be characterized largely as 'job oriented' or 'jobless'. In this regard, Kaspos (2005) has recently come up with detailed estimates of overall, sectoral as well as demographic employment elasticities for

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<sup>7</sup> The data sources are ILO's Global Employment Trends (GET) database (ILO, 2005b). ILO Key Indicators of the Labour Market (KILM) , World Development Indicators 2004 (WB Database). In particular ILO (2005) report on 'Labour and Social Trends in Asia and the Pacific 2005' and Kaspos (2005) results are used.

various countries and regions across the globe using a multivariate log-linear regression model with country dummy variables,  $D_i$ , interacted with log GDP for generating the point elasticity. Alongwith data from the ILO (2005), the results from his analysis are used here to arrive at some understanding of the broader macroeconomic<sup>8</sup> picture. The time period being looked at is roughly 1991-2003, with further classification, wherever data is available, into three quarters 1991- 1995, 1995-1999, 1999-2003<sup>9</sup> ( Tables 2 ).

It is important to remember that parallel trends in employment and employment elasticities of output do not conclusively establish any direct causality between trade openness and employment per se given the operation of a multitude of other factors at the larger macroeconomic level but can still be informative in terms of arriving at broad trends. In particular, this becomes important while using estimates of employment elasticity of output that only take into account ( as in the case of estimates used here) of information pertaining to historical employment and output growth as no other variables that may influence either employment performance or overall economic performance are controlled for in such calculations.

Also while regression techniques like the ones used by Kaspos help to “smooth” results by giving average incremental changes over time, the estimates arrived at can exhibit marked volatility and uncertainty arising out of sample size problems especially when calculated for relatively short time periods and with data restrictions resulting in relatively small number of observations for each period in each country.

Lastly, while elasticity and other quantitative measures are indicative of trends in employment, they do not necessarily translate into a positive overall macroeconomic

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<sup>8</sup> The level of sector dis-aggregation utilized is quite broad and therefore ignores potentially important within-sector heterogeneity, as well as between-sector interrelationships and interdependence. However, these broad categories are still useful due to their overall data coverage and cross-country comparability.

<sup>9</sup> The classification is significant as they coincide with important global economic events: 1991-95 (dissolution of the former Soviet Union), 1995-1999 (East Asian and Mexican financial crises), 1999-2003 (bursting of global equities market bubbles financial crises in Argentina and the Russian Federation contraction in economic growth economic recovery in South-East Asia).

performance in a given country or region. Success with regard to rising employment intensities does not automatically lead to other favourable outcomes, such as improved quality and nature of jobs and working environments. It is therefore important to assess trends in employment elasticities together with other important economic variables, such as trends in inequality, real wages, productivity levels and labour market conditions. Towards this end, the last section attempts to carry out a brief survey of existing conditions of employment and other development indicators in context of Asian labour markets.

The results summarised in Table 2 shed light on *global* trends in employment and productivity between 1991 and 2003. First, for every 1-percentage point of additional GDP growth, total employment has grown between 0.3 and 0.38 percentage points during the three periods between 1991 and 2003. This implies that *around two-thirds of the economic growth realized between 1991 and 2003 can be attributed to gain in productivity, while one-third resulted from increased labour supply.*

Of the three periods, employment growth was strongest in the period from 1995 to 1999, which was also the period with the strongest global economic growth. Significantly, during the most recent period there has been a slight decline in the rate of GDP growth coupled with a reduction in the employment intensity of growth.

**Table 2. Employment elasticities and GDP growth (1991-1995, 1995-1999 and 1999-2003 - Asia and the Pacific**

	Total Employment Elasticity			Average Annual GDP Growth (%)		
	1991-1995	1995-1999	1999-2003	1991-1995	1995-1999	1999-2003
<b>China</b>	0.14	0.14	0.17	12.7	8.3	8.1
<b>Korea, Rep.</b>	0.3	0.17	0.38	7.4	3.4	5.6
<b>Singapore</b>	0.21	0.54	0.62	9.6	5.4	2.8
<b>Indonesia</b>	0.37	-0.08	0.43	7.6	-0.3	4.1
<b>Malaysia</b>	0.31	0.51	0.67	9.5	3.7	4.6

<b>Philippines</b>	0.99	0.69	0.76	2.8	3.4	4.4
<b>Thailand</b>	0.09	0.14	0.38	8.6	-0.6	4.8
<b>Cambodia</b>	0.52	0.59		7.9	6.6	6.5
<b>Bangladesh</b>	0.38	0.48	0.06	4.6	5	5.3
<b>India</b>	0.4	0.43	0.36	6.3	6.3	5.3
<b>Pakistan</b>	0.49	0.96	0.63	4.5	3	3.9
<b>Sri Lanka</b>	0.14	0.82	0.19	5.6	4.8	3.4
<b>Vietnam</b>	0.24	0.26	0.35	8.8	6.9	7
<b>East Asia</b>	<b>0.14</b>	<b>0.14</b>	<b>0.18</b>	<b>11.6</b>	<b>7.4</b>	<b>7.7</b>
<b>South-East Asia</b>	<b>0.39</b>	<b>0.2</b>	<b>0.42</b>	<b>7.4</b>	<b>1.6</b>	<b>4.8</b>
<b>South Asia</b>	<b>0.4</b>	<b>0.49</b>	<b>0.36</b>	<b>6</b>	<b>5.8</b>	<b>5.1</b>
<b>Latin America</b>	0.65	0.7	0.45	3.5	2.7	1.4
<b>Caribbean</b>	0.43	0.37	-0.42	1.9	5.2	2.5
<b>Middle East</b>	1.1	1.29	0.91	3.9	3	4.1
<b>North Africa</b>	0.3	0.74	0.51	2.2	4.8	4.1
<b>Sub-Saharan Africa</b>	0.73	0.82	0.53	1.1	3.2	3.2
<b>Central and Eastern Europe</b>	0.24	0.01	-0.19	2	3	3.5
<b>CIS</b>	0.19	0.28	0.18	-10.9	-0.1	7.2
<b>Western Europe</b>	-0.09	0.36	0.42	1.5	2.5	1.7
<b>North America</b>	0.67	0.44	0.23	3.1	4.1	2.4
<b>Japan</b>	0.34	0.2	-0.24	1.1	1	1.6
Global Total	0.34	0.38	0.3	2.9	3.6	3.5

Source: Kaspos 2005

Though structural transformation is clearly a long run phenomenon, the time period covered here gives some indication of current sectoral trends in employment and output. In this regard, according to Kaspos (2005), the sectoral employment elasticity relative to GDP indicate whether employment is growing or shrinking in a given sector, both overall as well as relative to other sectors. The sector value-added elasticity gives an indication of the extent to which growth in a given sector is being driven by productivity or employment. The former may be indicative of labour substituting technological change and the potential for a future sector-specific labour surplus (Kaspos, 2005).

**Table 3: Sectoral Elasticities –Value Added and GDP**

Table 3 -

	Agriculture		Industry		Services		Sector Value-added Growth and Total Growth, 1991-2003 (Average Annual %)			
	Elasticity, 1991-2003	Value Added	Elasticity, 1991-2003	Value Added	Elasticity, 1991-2003	Value Added	Agriculture	Industry	Services	GDP
	GDP	Added	GDP	Added	GDP	Added				Growth
<b>China</b>	0.09	0.23	0.07	0.06	0.47	0.5	3.7	12.5	8.8	9.7
<b>Korea, Rep.</b>										
<b>Singapore</b>	0.83	-2.29	-0.38	-0.29	0.65	0.65	-3.1	5.9	6	6
<b>Indonesia</b>	-0.03	0.23	1.11	0.91	1.16	1.04	2.2	4.5	3.5	3.7
<b>Malaysia</b>	0.16	1.01	0.58	0.47	0.6	0.59	1	7.2	5.9	5.9
<b>Philippines</b>	0.2	0.34	0.69	0.69	1.36	1.14	2.3	3.4	4.3	3.6
<b>Thailand</b>	-0.28	-0.12	0.9	0.7	0.85	0.87	1.6	5.2	3.9	4.2
<b>Cambodia</b>										
<b>Bangladesh</b>	0.26	0.35	0.71	0.51	0.03	0.03	3	7.2	4.9	4.9
<b>India</b>	0.38	0.78	0.28		0.54	0.41	2.8	6	7.7	6
<b>Pakistan</b>	0.8	0.69	0.71	0.65	0.44	0.37	3.4	4.2	4.5	4.1
<b>Sri Lanka</b>	1.01	2.67	0.02	0.04	-0.15	-0.16	1.7	5.6	5.2	4.5
<b>Vietnam</b>	0.13	0.23	0.09	0.06	0.91	0.98	4.3	11.4	7	7.6
<b>East Asia</b>	0.1	0.23	0.07	0.06	0.47	0.5	3.7	12.5	8.8	
<b>South-East</b>										
<b>Asia</b>	0.01	0.02	0.82	0.68	1.08	0.99	2.1	5.4	4.6	
<b>South Asia</b>	0.38	0.71	0.41	0.37	0.46	0.36	2.9	5.9	6.9	
Latin										
America	-0.16	-0.33	0.63	0.54	1.09	1.04	2.5	2.2	2.6	
<b>Caribbean</b>	-0.38	-0.11	-0.21	0.05	1.02	0.99	2.5	3.7	3.8	
<b>Middle East</b>	2.06	1.94	1.1	0.26	0.8	0.7	3.9	1.3	4.6	
<b>North</b>										
<b>Africa</b>	0.88	0.55	0.45	0.43	0.77	0.76	2.4	3.2	4	
<b>Sub-Saharan</b>										
<b>Africa</b>	0.69	0.82	0.88	0.9	0.89	0.79	2.3	2	2.8	

<b>Central and Eastern Europe</b>	-0.51	-1.06	-0.11	0.09	0.51	0.47	0.7	2.9	3.4
<b>CIS</b>	0.23	0.41	0.65	0.42	0.02	0.15	-1.2	-4.1	-0.5
<b>Western Europe</b>	-1.08	-1.39	-0.5	0.49	0.74	0.62	1	1.1	2.5
<b>North America</b>	-0.02	-0.09	0.26	0.27	0.6	0.53	3.5	3	3.7
<b>Japan</b>	-2.04	0.95	-0.83	-0.14	0.76	0.49	-2.1	-0.4	2.1
<b>Global Total</b>	0.24	0.41	0.21	0.28	0.61	0.57	2	2.1	3

Source: Kaspos 2005

Beginning with the GDP-relative employment elasticity, it is clear that at the global level, all three sectors have experienced some employment growth over the full period, though the *services employment elasticity* with respect to GDP was nearly *three times* as large as the corresponding figure for agriculture and services. This implies that at the global level there is evidence of structural change, as employment is being generated in the service sector at a considerably faster rate than in the other sectors. However, this structural change has not been associated with a net loss of jobs in manufacturing or agriculture.

In terms of value-added growth and value-added elasticities, *the service sector was both the fastest growing sector and the sector with the most job-intensive growth*. Indeed, for every 1-percentage point of growth in service sector value added, employment increased by 0.57 percentage points (while the corresponding growth in productivity was 0.43 percentage points). On the other hand, in the agricultural sector and especially in the industrial sector, value-added growth has been driven substantially more by gains in productivity than by gains in employment (table 3).

The *Asia and Pacific region* has indisputably witnessed *the most dynamic growth of all among all the regions in the world between 1991 and 2003, with average annual GDP growth over the three periods ranging between 7.4 per cent and 11.5 per cent in East Asia, and between 5.1 and 6.0 per cent in South Asia, higher as compared to global*

averages as well as the average for most other regional sub groupings. Yet, the employment elasticity is just about same as the global average, below several other developing regions (Latin America, Middle East and Africa) as well as North America. It was however higher than the very low employment elasticities of the transitional economies, Japan and Western Europe. The region also struggled through the Asian financial crisis during the second period with adverse economic and growth effects in countries in South-East Asia in particular. This is evidenced by South-East Asia's sharp drop in output growth in the 1995 to 1999 period to about 1.6% on an average.

Trends in unemployment rates, growth in labour force, sectoral and value added employment elasticities etc provide further details on both the region's successes as well as struggles in terms of moving towards a more job oriented growth. According to ILO (2005) estimates, despite strong economic growth in Asia, recent trends show the labour market situation was largely unchanged in 2004. *Unemployment edged up by half a million from 2003, reaching 73.8 million in 2004 (Table 1). This increase marked the fifth consecutive year since 1999 in which the year-over-year number of unemployed had increased. The unemployment rate was marginally down in East Asia (from 3.7 per cent in 2003 to 3.6 per cent in 2004) and South-East Asia (from 6.3 per cent in 2003 to 6.2 per cent in 2004), but stayed virtually unchanged in South Asia (4.8 per cent).* However, the Asia-Pacific unemployment rates shown in Table 4 are still the lowest amongst regions in the world (ILO 2005).

**Table 4: Unemployment, employment and labour force in Asia and the Pacific, 1999, 2003-2004 (millions)**

	1999	2003	2004
<b>Unemployment</b>	66.4	73.3	73.8
<b>Employment</b>	1 471.7	1 562.8	1 587.9
<b>Labour Force</b>	1 538.1	1 636.1	1 661.7

Source: 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005).

Breaking down these regional results by economic sector provides some additional information on overall trends (Table 3). The value-added growth rates reveal that *East Asia and South-East Asia's growth has been led by growth in industry*, which grew at an

average annual rate of 12.8 per cent in the former and at 5.4 per cent in the latter, followed by growth in services, which grew at 8.8 per cent in East Asia and 4.6 per cent in South-East Asia. *Service-sector growth in South Asia*, at 6.9 per cent, *slightly outpaced* the 5.9 per cent *average annual growth rate in the region's industrial sector*.

**Table 5: Labour market indicators in Asia and the Pacific, 1999, 2003-2004**

	Unemployment Rate (%)		Employment Growth rate (%)	GDP growth rate (%)		Labour force participation rate (%)		Annual labour force growth rate (%)
	2003	2004	2004	2003	2004	1999	2004	1999-2004
<b>East Asia</b>	3.7	3.6	1	6.7	7.8	77.1	75	0.9
<b>South-East Asia</b>	6.3	6.2	2	5	6.3	70.3	70.2	2.2
<b>South Asia</b>	4.8	4.8	2.3	7.8	6.4	60.5	60	2.3
<b>Total</b>	4.5	4.4	1.6	6.7*	7.3*	69.6	68.3	1.6

\* Average, including Central Asia.

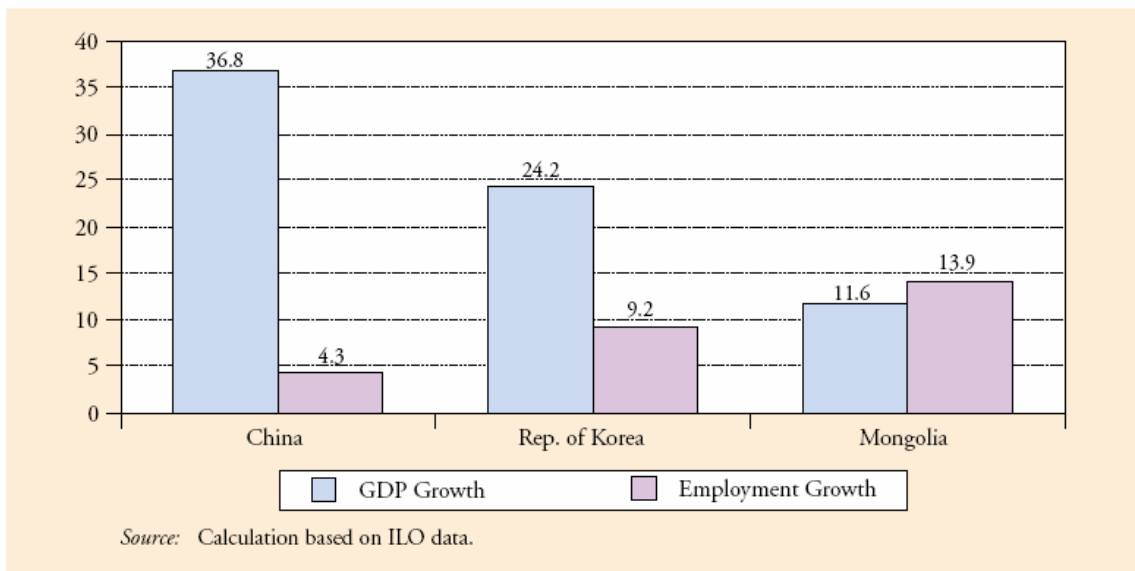
Sources: 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005); and Asian Development Bank, *Asian Development Outlook 2005 Promoting Competition for Long-term Development* (Hong Kong, China, ADB, 2005).

### **East Asia,**

Total employment elasticities (0.15) have remained quite low in comparison with global figures (table 2) in East Asia. Combined with high GDP growth rates (average 9%), this implies that the region has experienced robust productivity growth. Within East Asia, China has the lowest employment elasticity of 0.15, though it increased marginally in the last quarter. The Republic of Korea, which belongs to the group of first tier NIE'S, also experienced low GDP employment elasticity, which fell during the crisis period to recover slightly in the last quarter.

Unemployment figures reflect the job creation performance of the countries. The Chinese unemployment rate rose substantially while it declined in the Republic of Korea. (ILO 2005, Table A 10). As far as growth in labour force is concerned, the East Asian region has the lowest labour force growth rate in developing Asia, with an average annual growth rate of 0.9 per cent. This low rate stems primarily from a major slowdown in population growth in China and the Republic of Korea. Overall, labour force participation (the proportion of the working-age population that is working or looking for work) in East Asia is high; the rate is just below 80 per cent in China and close to 70 per cent in the Republic of Korea. The labour force participation rate has been declining in China, but rising in Korea. Labour force growth in East Asia is projected to slow down to 0.7 per cent per annum from 2005 to 2015(ILO 2005). The main cause will be slower population growth in China, but it will decrease in all economies in the sub region. The total number of new entrants to the labour force will nevertheless be high given the massive size of the Chinese population in particular, projected at around 60 million until 2015 (over six million new entrants each year)<sup>10</sup>.

Figure 1: GDP and employment growth, East Asia, 1999-2003 (%)



Source: 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005).

<sup>10</sup> ILO, *Global Employment Trends*, (Geneva, ILO, 2004).

The value-added growth rates (Table 3) reveal that East Asian growth has been led by growth in industry, which grew at an average annual rate of 12.8 per cent followed by growth in services, which grew at an average of 8.8 per cent. However, the sector employment-to-GDP elasticities were very low: a 1-percentage point increase in GDP was associated with an increase of 0.1 percentage point in agricultural employment, 0.07 percentage points in industrial employment and 0.47 percentage points in employment in services. The value-added elasticities indicate that East Asia's industrial output growth is being led by robust productivity gains. The same is true to a lesser extent for the region's agricultural sector, while growth in services has corresponded with roughly equal gains in employment and productivity. Expectedly, then labour productivity has also grown rapidly. Output per person employed in East Asia grew at an annual rate of 5.8 per cent between 1993 and 2003<sup>11</sup>.

These trends are indicative of a move towards rising capital intensity of production, especially in manufacturing, which together with rising unemployment suggest "jobless" growth in the region. For instance, as pointed out in the ILO report (2005), in a first tier NIC such as Republic of Korea (and in other countries such as Singapore and Taiwan, China) , there has been a shift towards capital intensive engineering exports away from labour-intensive industries such as clothing, footwear and toys. The latter industries have virtually disappeared in face of rising wages resulting in a severe loss of competitiveness for them as bases for export oriented manufacturing, especially since the financial crisis of 1997/98 (ILO 2005).

### **Growing contradictions of the Chinese growth experience- high growth, rising unemployment and emergence of labour shortages**

As pointed out above, what remains significant as far as the East Asian experience is concerned (and indeed even the overall Asian experience given the importance of the Chinese economy in the context of growing intra-regional trade) is an increasing

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<sup>11</sup> *World Employment Report 2004-05* (Geneva, ILO, 2005), Figure 1.4a, p. 41.

unemployment rate as well as an abysmally low employment elasticity in case of the Asian manufacturing giant which also largely accounts for the substantially low overall employment elasticity of the East Asian region as a whole (0.15), much lower than that for South East Asia, South Asia as well as the global total.

Overall, both the Chinese percentage share of value added<sup>12</sup> (52% in 2003) as well as value added growth over 1991-2003 (12.5) is the highest for industry where the employment elasticities relative to both GDP as well as value added growth are very low (0.7 and 0.06). *The figures indicate not merely a structural shift in employment from both agriculture and industry towards services, but also that the impressive growth (9.7%) overall is largely productivity driven rather than employment-led with sectoral employment elasticities not very high even for services compared to most other economies within the entire region.* At the same time real manufacturing wages more than doubled between 1990 and 2001 further strengthening grounds for belief in an exceptionally high productivity growth in manufacturing ( See appendix: table A15).

The importance of the Chinese economy is highlighted further by the manner in which the picture changes once figures pertaining to China are taken out while looking at the employment trends for the 1990s<sup>13</sup>. Absolute growth in manufacturing employment fell in Asia (without China) between 1990 and 2000 as compared to the earlier decade (11.3 million as compared to 22.1 million). However, more interestingly, the comparative rise in manufacturing employment is higher (11.3 million) when considered for Asia without China between 1990-2000 than when figures for China are taken into account for the same period (growth in manufacturing employment falls to 5.6 million) *suggesting the relocation of some manufacturing employment within Asia from China with the Chinese share in total manufacturing employment in China in Asia falling from 53% to about 47.9% of total manufacturing employment* . At the same time, the overall growth rate of employment in manufacturing rises from 0.34 to 1.41 if Asia without China is considered.

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<sup>12</sup> See appendix, Table A11.

<sup>13</sup> See appendix, table A7, A8, and A9.

China's *share* in total primary sector employment as well as its share in various activities within the tertiary sector also fell in 2000 as compared to 1990 except in the case of "Wholesale and Retail Trade and Restaurants and Hotels" and "Community, Social and Personal Services". The latter sector, it must be noted, is not directly linked to external trade and investment either. In absolute terms, China contributed substantially to overall growth in employment in 'construction', 'Wholesale and Retail Trade and Restaurants and Hotels' and 'Community, Social and Personal Services', but its contribution was less significant for "Financing, Insurance, real Estate and Business Services" where otherwise Asia experienced a substantial rise in employment. Another significant aspect is the massive rise in figures for employment under the heading "Activities not adequately defined" (58.1 million) for which China contributed more than 97% of the total employment during 1990-2000. Growth rates of employment also fell overall in Asia once China is taken into account for sectors where otherwise employment is growing fastest i.e. "Financing, Insurance, real Estate and Business Services," and 'Transport, Storage and Communication.'

China's unemployment rate climbed from 2.5 per cent in 1990 to 3.1 percent in 2000 and 4.3 per cent in 2003 (ILO 2005), and with high average growth rates ( approx above 9%), the trends clearly are worrisome in terms of their implications for not merely immediate but even long term employment creation and structural transformation in the economy.

Interestingly, according to the ILO (2005), a recent development is that along with increasing unemployment, labour shortages have emerged in China and labour costs are rising. There are indications that a booming economy and emerging skill shortages have pushed labour costs higher in recent years. For example, between 2001 and 2003 labour costs in both China and India, the two largest economies in the region, went up by 20 and 25 per cent, respectively. However their impact on the huge gap in labour costs between developing Asia and the industrialized world is negligible (Table 6).

**Table 6. Labour cost in Selected Countries**

	2001(US\$)	2003(US\$)	Change%
China	0.5	0.6	20.0

<b>India</b>	0.8	1.0	25.0
<b>Korea, Rep. of</b>	8.1	9.9	22.0
<b>Spain</b>	10.8	13.8	28.0
<b>United States</b>	19.9	21.6	8.5

Source: *Oxford Economic Forecasting, 2004*. As reported in “Labour Cost Gap Widens between India and China”, by Anil Sasi, in *The Hindu Business Line, December 11, 2004* and quoted in ‘*Labour and Social Trends in Asia and the Pacific- 2005*’, ILO (2005)

According to recent reports <sup>14</sup> in southeast China, there is a labour shortage of 2 million threatening the export processing zones along the coast that have been the foundation for global production. The situation is expected to get worse as the demographic transition proceeds faster on the one hand, and, factories keep opening at the current breakneck pace on the other. Following is the excerpt from the ILO (2005) report on this trend.

These (labour) shortages have pushed up minimum wages to levels equivalent to those in Thailand and way above levels in Bangladesh, Vietnam, Cambodia and Indonesia. Chinese workers in a sneaker factory earn 30 per cent more than their counterparts in Vietnam and 15 per cent more than in Indonesia. In addition to wage increases, companies in China are offering a wide range of supplemental benefits to retain workers. Other large companies are moving production to lower cost countries such as Vietnam or inland in China where labour is cheaper. The rising costs are leading to growing concerns over how China can maintain a competitive position in global production systems. The reasons behind the labour shortages are worth noting. Very significantly, the shortages are linked to the lack of specific skills and training – so that experienced skilled workers are able to strongly leverage job offers. For every experienced skilled worker, there are 88 vacancies and for every factory technician there are 16 vacancies.... Recruitment, retention and localization of staff are now top of the agenda for many firms in China. (p.10)

However it might be too soon to state whether this shortage is more than a transitory phenomenon and would not disappear with time as labour markets adjust to the new demand conditions. The existence of a substantial secondary and tertiary educated population alongwith increased investments in education, training, R&D expenditures etc lend further credence to this view. What remains more perturbing however are the changes in labour market conditions accompanying trade liberalisation, brought about by

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<sup>14</sup> T. Fuller, “Costs rise in China amid labor shortage”, *International Herald Tribune*, Wednesday, April 20, 2005, pp. 1 and 10; T. Fuller, “Shoemaker, its workers and today’s global labor”, *International Herald Tribune*, Wednesday, April 20, 2005, p. 13; “The cost of doing business in China”, *The Economist*, 16 April 2005.

massive labour shedding in the state-owned enterprises on one hand and falling employment intensities of production on the other.

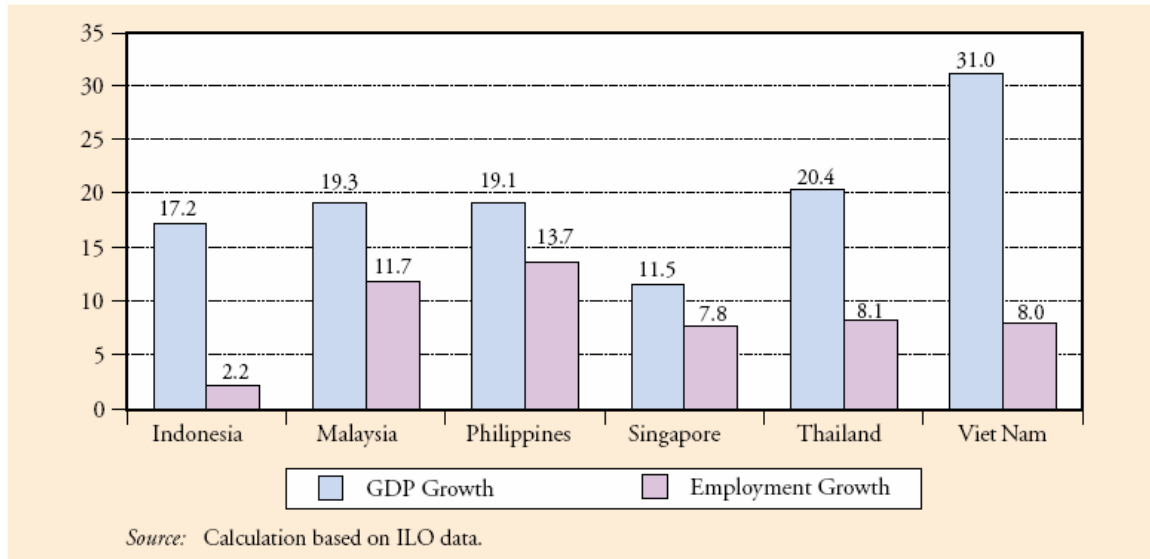
### **South-East Asia**

According to Tables 2 and 3 above, South-East Asia *experienced a large degree of volatility in overall economic and employment performance in the three periods, with an average employment elasticity of about 0.34 and a lower average GDP growth rate as compared to the rest of the region.* From 1991 to 1995, the region's output grew by over 7.4 per cent and the overall employment elasticity of 0.39 was high enough to translate into a reduction in total unemployment. In the period corresponding with the financial crisis (95-99), the region's overall employment elasticity fell to 0.2, indicating that the reduction in output was met with a greater relative decline in employment growth than in productivity growth. South-East Asia has experienced slower economic growth since 1999 than before the financial crisis of 1997/98, although some recent improvements have been observed.

Cambodia and Viet Nam, the two relatively less developed economies in the region, have been the best sub regional performers since 1999 where output growth is concerned with annual average GDP growth rates of 7.3 and 6.5 per cent, respectively. *However, the GDP-relative employment elasticity was much lower for Vietnam than for Cambodia and is a cause of concern given high unemployment rates, which more than doubled by 2003 (5.8%) as compared to 1996 (Table 3).* On the other hand, output growth has remained under 5.0 per cent in Singapore, Thailand and the Philippines, and under 4.0 per cent in Indonesia, the sub region's largest economy. *Employment growth since 1999 has been strongest in Malaysia and the Philippines, but disappointingly low in Indonesia, the largest country within the sub region, with an average GDP employment elasticity of 0.24.* The three countries had similar GDP growth, but employment creation in Indonesia remained a fraction of those in the other countries. Infact there has been a rising trend in employment elasticity in most other countries (except in case of Philippines) within the subgroup, even during the period of the financial crisis (95-99), but employment

elasticity actually turned negative in Indonesia. This might also have pulled down the average figures where otherwise there was a rising trend, albeit small, for most other countries within the group.

Figure 2: GDP and employment growth, South-East Asia, 1999-2003 (%)



Source: 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005).

Not surprisingly, according to ILO (2005) unemployment in Indonesia rose sharply from 6.4 per cent in 1999 to 9.6 per cent in 2004, largely because GDP growth (particularly in manufacturing) was insufficient to create enough jobs to absorb the estimated 2.0 to 2.5 million annual new entrants into the labour market. Simultaneously, unemployment in the Philippines too increased and the unemployment rates are the highest amongst all other countries within the region, while Malaysia showed little change. *But everywhere in South-East Asia the unemployment rate was higher in 2004 than in 1996, indicating that the sub region's employment performance has been weak in recent years.*

Besides the financial crisis, other structural factors have probably also contributed to the poor labour market performance over the past few years. For instance, the sub region's high labour force growth rate was estimated at 2.2 per cent per year, resulting from high population growth rates and rising labour force participation rates. Moreover, there has been increasing pressure on urban labour markets due to rising internal migration from

rural to urban areas. It is important to remember that the South-East Asian labour markets vary considerably (Table 7), indicative of their different abilities to create employment.

**Table 7: Labour market indicators, selected countries in South-East Asia**

	Unemployment rate (%)				Labour participation force rate, latest year, (%)			Employment to population ratio, latest year
	1996	1999	2003	2004	Total	Male	Female	
<b>Cambodia</b>	...	...	3.5	3.1	84.0	84.2	83.9	70.4
<b>Indonesia</b>	4.0	6.4	9.1	9.6	71.2	84.5	57.8	61.7
<b>Lao PDR</b>	...	...	...	...	83.9	90.3	77.7	...
<b>Malaysia</b>	2.5	3.4	3.6	3.5	66.5	82.0	50.7	59.8
<b>Myanmar</b>	...	...	...	...	78.9	89.5	68.4	59.8
<b>Philippines</b>	7.4	9.6	11.4	11.8	66.9	82.6	51.1	...
<b>Singapore</b>	3.0	4.6	5.4	4.0	69.7	83.6	55.3	61.0
<b>Timor-Leste</b>	...	...	...	...	82.3	85.8	76.3	...
<b>Thailand</b>	1.1	3.0	1.5	2.1	83.8	89.7	78.0	72.6
<b>Viet Nam</b>	2.7	...	5.8	5.6	81.4	84.5	78.3	73.2

Source: Statistical Annex; and Asian Development Bank, *Asian Development Outlook 2005 Promoting Competition for Long-term Development* (Hong Kong, China, ADB, 2005).

At the sectoral level, agricultural growth seems to be driven more by productivity growth, while growth in industry and particularly services seems to be led by employment growth (Table 3). Here though Singapore has been experiencing a rising trend in employment elasticity over the period, value added employment elasticity is low for both Industry and agriculture but comparatively higher for services. Given the percentage share of services in value added (65% in 2003<sup>15</sup>) as well as the fact that value added growth (6%) over 1991-2003 is higher than that for industry, there appears to be a structural shift in employment generation and GDP growth towards services, while growth in Industry (5.9% in terms of value added) is largely productivity driven.

In the case of Indonesia, figures for percentage share in value added, value added growth as well as sectoral employment elasticities relative to GDP and value added, all clearly

<sup>15</sup> See Appendix, table A11.

suggest a structural shift towards both industry and services away from agriculture in terms of both output and employment generation. Moreover high value added employment elasticities suggest an employment led growth process. The rise in unemployment rates then seems to be more a result of low rates of output and value added growth than any productivity bias in growth.

Malaysia and Philippines, both of which performed strongly in terms of employment growth, show varying trends in terms of percentage share in value added and value added growth where the contribution of industry was higher for Malaysia while that of services was higher in the case of the latter country. Growth rate of GDP was higher for Malaysia (5.9% as compared to 3.6% for latter). However, in both cases GDP growth as well as value added growth is more employment led in services, with employment elasticity being greater than unity for Philippines. For Vietnam, though value added growth in industry is the highest, it is largely productivity led, whereas a high value added growth in services seems to be largely employment led.

Labour force growth rates have been high (2.2 per cent annually between 1999 and 2004: table 1) but are projected to slow down to 1.8 per cent annually between 2005 and 2015. Still, 5 million new entrants are estimated to enter the labour market every year during this period, further increasing the need for generation of new employment opportunities to prevent persistence of existing high levels of unemployment. The challenge is going to be especially crucial in Indonesia, given the existing high levels of unemployment and underemployment.

## **South Asia**

South Asia experienced strong *growth between 1991 and 2003 (average 5.6%)*. *The average employment intensity trends in South Asia have been more similar to South-East Asia than East Asia (average employment elasticities varying between 0.36 to 0.49 )*<sup>16</sup>,

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<sup>16</sup> *One explanation put forward in Kaspos is this is that while East Asia's working-age population expanded by around 18 per cent between 1991 and 2003, owing to different fertility patterns, the working-age population in both South-east Asia and South Asia grew by about 32 per cent. Thus, for a given rate of*

higher than South-East Asia during 1991-1994 and 1994-1999 and falling slightly below the South East Asian figure during the last quarter 1999-2003.

However, both the trend employment elasticities as well as GDP growth rates fell slightly over the three periods. Within South Asia, great variations were experienced with overall employment elasticity rising in the second period for almost all countries, especially Pakistan and Srilanka, but falling in the third period. The decline was significant for Bangladesh and Srilanka, which otherwise also, alongwith India, have low employment elasticity figures on the average. The overall employment elasticity for India, the largest economy within the group, was estimated at 0.4.

The estimated employment growth has been stronger in Sri Lanka but weaker in India and especially in Pakistan. These trends are confirmed by unemployment figures. The latest available figures show that the unemployment rate in Sri Lanka declined from 11.3 per cent in 1996 to 8.4 per cent in 2004 (it still remains high though), whereas it increased substantially in India from 2.2 per cent in 1995 to 4.3 per cent in 2000 and in Pakistan from 5.4 in 1996 to 8.3 per cent in 2003. The unemployment rate also increased in Bangladesh. According to ILO (2005), the decreasing employment-to-population ratios in India, Pakistan and Bangladesh<sup>17</sup> indicate declining demand for workers in these countries. *The South Asian employment-to-population ratio of about 57 per cent is one of the lowest in the world; lower than only Central and Eastern Europe (non- European Union) and the Middle-East and North Africa regions (ILO 2005).*

*At the same time, the rising unemployment rates show that people are actively, but unsuccessfully, looking for work. These two trends together suggest that employment creation has been unable to absorb the growing labour force.*

Overall prospects for the sub region's labour market largely depend on the performance of India, which has the largest share in the sub regional GDP (80 per cent). South Asia's

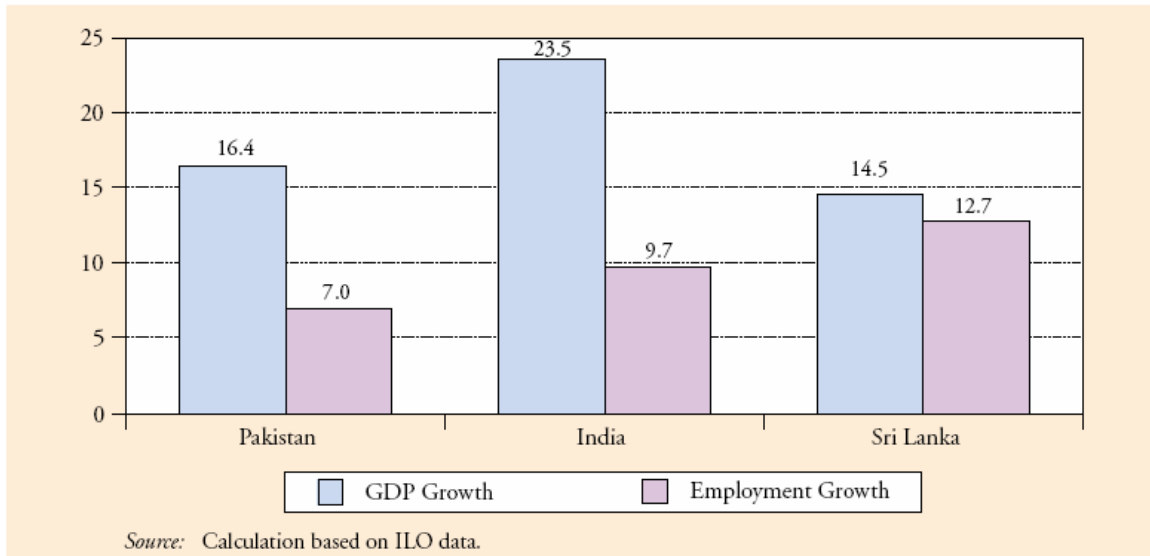
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*GDP growth, South-east Asia and South Asia require a higher relative employment elasticity to maintain stable unemployment.*

<sup>17</sup> See appendix, table....

GDP growth rate has been stronger in recent years (7.8 per cent in 2003 and 6.4 per cent in 2004), and is forecast to stay above 5 per cent in the next few years.

Figure 3: GDP and employment growth, South Asia, 1999-2003 (%)



Source: 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005)

In terms of *sectoral trends*, South Asia provides a contrast to East and South East Asia, for growth in agriculture has been driven mainly by employment growth, while around two-thirds of industrial and services output growth has been due to growth in labour productivity.

In the case of Bangladesh, despite both high value added growth as well as a relatively higher employment generation and employment intensity in industry, the rise in unemployment rates and recent fall in employment elasticity seem to be surprisingly the result of a chiefly productivity led growth in services for which sectoral employment elasticities are very low even though services contributed towards more than 50% of the total value added and GDP in 2003.

For India, there seems to be a structural shift in terms of percentage share in value added (51% in 2003), value added growth (7.7) and employment generation towards services as compared to industry. However in terms of value added growth, growth is more

employment led in agriculture and relatively more productivity led in services till date. The stronger employment growth in Sri Lanka seems to have arisen out of very high sectoral employment elasticities of GDP as well as value added in agriculture, even though agriculture's percentage share in value added has declined considerably over 1990-2003 (from 26% to about 19% ). What is even more surprising are the very low employment elasticities (negative for services) for industry and especially for services whose respective shares in value added growth and GDP are much higher<sup>18</sup>.

However, the performance of South Asian countries (except Sri Lanka) remains comparatively poorer in terms of most qualitative labour market and human development indicators emphasizing the need to go beyond quantitative indicators in order to arrive at a deeper assessment of overall employment conditions in the region.

### **Asian labour market conditions: an overview**

As indicated earlier, it is important to look beyond unemployment and broad elasticity estimates to understand more fully the structural impact on labour market conditions which increased openness might bring in its wake.

As far as earnings are concerned, in the case of Asian developing countries which have undergone substantial trade liberalization and become major exporters, growth in output and productivity seem to have been accompanied by rising real wages.

Real manufacturing wages in China more than doubled between 1990 and 2001 (ILO 2005), reflecting remarkably high productivity growth in the sector. In other open economies in East and South-East Asia such as the Republic of Korea, Malaysia and Singapore, real wages increased between 60 to 80 per cent, though the recovery (from the effects of the Asian financial crisis which also had impacted real wage levels) was slower

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<sup>18</sup> Here the small sample size problem and other problems with elasticity estimates might have a role to play.

in Indonesia and Thailand. More modest increases of between about 10 to 20 per cent occurred in Thailand whilst wages were basically flat or declining in the Philippines, India, Nepal, Pakistan and Sri Lanka.

On the other hand, the gender gap in manufacturing wages has narrowed in some countries, most significantly in Malaysia and the Republic of Korea – countries where the male to female wage ratio has traditionally been among the highest in the region. Despite this trend, men in these countries still earn 60 per cent more than women. In Thailand and the Philippines, male wages are about 30 per cent higher than female wages. Wage differences in other countries are smaller or negligible.

According to available literature, *Asian labour markets suffer from considerable underutilization of labour, which takes the form of both unemployment and underemployment.* Underemployment too, can manifest itself in various forms - time based underemployment, skill based underemployment, overstaffing and underemployment arising due to inadequate availability of complementary inputs – and it remains extremely difficult to find reliable data on these indicators. Time based underemployment (on which data is more easily available) has been rising in most developing nations in the region (table 8).

**Table 8: Time-Based Underemployment Rates for Selected Developing Asian nations**

	As Share of Labour Force (%)	As Share of Employed (%)
Bangladesh	35.4	
Cambodia		29.6
Indonesia		34
Nepal	27.4	
Pakistan	21.9	
Philippines		17

Thailand	3.8	4
Vietnam		11( urban), 56 (rural)
Source: ADB (2005)		

Underemployment rates in South East Asia are alarming, and though they have been declining in recent years, their magnitude still remains a cause of concern. In Indonesia, for example, a total of 31.4 million workers in 2002 (or 34.3 per cent of the labour force) were underemployed (working less than 35 hours a week) compared with 34.1 million in 1996, according to Labour Force Survey data (ILO 2005). The estimates for Vietnam again are a cause of concern.

Underemployment is also particularly high in South Asia, especially in case of agriculture (including agricultural wage workers) which is characterized by both low productivity and low earnings. This becomes even more significant considering the fact that though its share has been declining over the years, primary sector employment continues to contribute more than 60% of total employment in South Asia and about 50% of the total employment in Asia till 2000.

Another important feature is dualism in the labour markets with a rising share of workers in the informal economy that is typically characterized by low productivity, low remuneration jobs that are not recognized or protected by law and that offer little or no social protection, rights at work or representation and voice. Data on the informal economy is usually scant and is commonly proxied by non-agricultural self-employment as a per cent of total non-agricultural employment. According to ILO estimates, this indicator for the 1990/2000 period was far above the world average in South Asia (50 per cent as compared to 32 per cent), well below the world average in East Asia (18 per cent) and about equal to the world average in South-East Asia (33 per cent)<sup>19</sup>.

<sup>19</sup> Though self employment as a percentage of total non agricultural employment has been declining in recent years (ilo2005) this doesn't imply a decline in informality. Infact there are indications that informal wage employment, where working conditions are often poorer might be on a rise. (ADB 2005).

Available recent estimates<sup>20</sup> show that informal employment in developing Asia comprises about 65 per cent of non-agricultural employment, but there are large differences across countries. In the newly industrializing Asian economies, such as Malaysia and Singapore, the informal economy accounted for less than 10 per cent of labour absorption, while in countries such as Thailand, the Philippines, Indonesia and India it accounted for half to more than three-quarters of non-agricultural employment (Table 9).

**Table 9: Informal employment in non-agricultural employment, by sex, 2000 or latest available year**

	Informal employment as percentage of non-agricultural employment	Women's informal employment as percentage of women's non-agricultural employment	Men's informal employment as percentage of women's non-agricultural employment
India	83	86	83
Indonesia	78	77	78
Philippines	72	73	71
Thailand	51	54	49

Source: ILO, *Women and Men in the Informal Economy: A Statistical Picture*, (Geneva, ILO, 2002).

*The increased underutilization and flexibilisation of the labour force is linked intimately with the rising incidence of “working poverty”.* In several developing countries within the Asia and the Pacific, workers are working hard and for long hours<sup>21</sup> – but are not earning enough to sustain themselves above the poverty line. The proportion of employed persons living in a household whose members are estimated to be below the US\$1 a day poverty line in 2004 was 11 per cent in South-East Asia, 16 per cent in East Asia and 36 per cent in South Asia. *Taking the US\$2 a day poverty line, the proportion of the working poor rose to 47 per cent in East Asia, 58 per cent in South-East Asia, and an appalling 87 per cent in South Asia* (ILO 2005). The challenge therefore for Asia is not just one of creating

<sup>20</sup>Source: *Women and Men in the Informal Economy: A Statistical Picture*, ILO, Geneva, 2002

<sup>21</sup> Working hours are comparatively the longest for Asian workers as a whole (ILO 2005).

jobs for the unemployed and for the new entrants to the labour force, but also about improving the productivity and earnings of the available jobs.

Overall, the available data suggest that gender gaps in literacy rates, labour force participation rates, unemployment rates and wage levels have been reduced in several countries. The good news is that female labour force participation rates have been increasing fastest in those countries with the largest gender differentials and in a few countries, namely the more industrialized ones, the gap between male and female manufacturing wages has narrowed slightly.

However *women workers still remain disadvantaged and discriminated against*, so that many countries, especially in South Asia, are still far from achieving the goals of gender equity and female empowerment. The indicators for female share of non-agricultural wage employment show that women in South Asia still hold only about 20 per cent of paying jobs outside agriculture. Another indicator based on the ratio of girls to boys in education shows that both East Asia and South-East Asia and the Pacific sub regions have made steady progress towards achieving universal primary education and gender parity at the primary school level. At the same time, however, several countries in the region particularly in South Asia are still far from achieving gender parity in primary and secondary education by 2015 (ILO 2005).

### **Concluding Comments**

The debate on the effects of trade liberalisation in the developing world is an ongoing one. However, the process of growth and liberalisation that has unfolded in Asia does indicate that all is not well as far as the linkages between trade and employment go. Earlier, adverse employment and wage effects in other parts of the developing world such as Latin America which went contrary to tenets of mainstream theory were explained in terms of comparatively cheaper labour costs in the Asian region given its vast reserves of relatively unskilled labour. However, available trends fail to signify any major restructuring of labour demand, even in case of unskilled workers, in favour of the Asian nations. High growth and increased trade has been accompanied in most cases by

disappointingly low growth rates of employment and rising unemployment and underemployment. In particular, the share of employment in the informal sectors, with low wages and poorer working conditions seems to be on the rise. Increased flexibilisation and rising job insecurity also have accompanied trade liberalisation in most cases. As pointed out by Ghosh ( 2003) , it seems then that rising unemployment across globe is not indicative of a transference of ‘jobs’ from the north to the south , but rather is more a case of ‘disappearing jobs’ where the global economy as a whole is unable to create sufficient employment opportunities for all.

Regional variations are important in this context. While East Asia is moving on a high growth high productivity trajectory, inadequate employment generation in the Chinese economy remains a cause of worry. In South East Asia too, the process of economic recovery from the crisis of 1997-1998 has been marked by a slower employment growth performance in particular. To the extent that China with its massive population, is facing a shortage of skilled labour, while its unemployment rate is rising, the principle of comparative advantage and specialization based on factor endowments becomes increasingly redundant in providing an adequate explanation. Furthermore, though the South Asian subcontinent experienced relatively higher employment elasticities during the nineties, it seems to have experienced comparatively the least degree of broad structural transformation as far as sectoral employment generation, productivity levels as well as other development indicators are concerned. For instance, even in case of external trade, the structural shift towards manufacturing and services was more pronounced during the decade of 80’s than during the 1990’s when the subcontinent actually witnessed substantial trade liberalization and rising export and import levels. This seems to indicate that the structural impact of increased trade openness was not very dramatic.

Theoretically there is a need to go beyond standard explanations to analyze and understand the mechanisms at work. Several issues need to be considered over here: Is rising unemployment transitional or structural? How long is the time period of adjustment? Are there any path dependent implications? How important are regional and other contextual specificities? How do technological processes accompanying increased trade

liberalisation affect employment creation and labour requirements for developing countries?

Empirically, there is a need to address the issue of trade and labour market outcomes from a consistent regional and cross-country perspective. There is also a need to explore more fully the role of trade in production internationalization (through outsourcing, vertical specialization, international exchange of intermediate inputs and FDI etc) and their effect on labour market conditions. The nature of work conditions in the services sector, where employment generation is the highest needs to be looked at more carefully to analyze the role of increased openness on creation of productive and decent jobs.

For a large number of people in developing countries within the Asian region, (in particular, in South Asia), the key issues remain: high levels of unemployment and underemployment; a high incidence of working poverty; low employment generation in high-productivity sectors; low adult literacy rates; and large gender gaps in education, participation, unemployment, and wages. In this context, it becomes even more important to ensure that long term trade and growth gives rise to higher, more productive and qualitatively better employment opportunities.

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**Table A1: Total Exports of Goods and Services**

Country/Region	Total Exports of Goods and Services (BoP, Million US\$)				Goods Exports as a Share of Total Exports of Goods and Services (%)			
	1980	1990	2000	2003	1980	1990	2000	2003
Bangladesh	885	1903	6611	8062	82	80	87	87
China		57374	279561	485003		90	89	90
India	11249	23028	63764	82735	75	80	70	72
Indonesia		29295	70619	68547		92	93	92
Korea, Rep.	19815	73295	206481	230339	87	87	85	86
Malaysia	14098	32665	112370	118600	92	88	88	89
Nepal	224	379	1433	1066	43	48	68	65
Pakistan	2958	6217	9576	14837	79	79	86	80
Philippines	7235	11430	41267	37812	80	72	90	92
Singapore	24285	67489	165816	30715	80	81	84	
Sri Lanka	1293	2293	6378	6541	82	81	85	78
Thailand	7939	29229	81762	93882	81	78	83	83
<b>East Asia &amp; Pacific</b>		<b>166961</b>	<b>613922</b>	<b>840351</b>		<b>86</b>	<b>88</b>	<b>89</b>
Europe & Central Asia			390513	574651			80	83
Middle East & North Africa	178457	128863	205786		92	86	83	
South Asia	17303	34113	88413	114304	77	80	74	74
Sub-Saharan Africa	87572	79085	106505		90	86	85	
Latin America & Caribbean	113818	169970	418901	442768	85	84	87	87
Middle income	508231	624349	1554573	2086172	90	84	85	86
Least developed countries	3265	22137	48510			79	82	
<b>World</b>	<b>2305866</b>	<b>4259175</b>	<b>7832401</b>	<b>9336865</b>	<b>83</b>	<b>80</b>	<b>80</b>	<b>80</b>

Source: World development Indicators (2004).

**Table A2: Composition of Goods Exports**

Country/Region	Exports of goods Total (US\$ Millions)			Agricultural Raw materials (%)			Food (%)			Fuel (%)	
	1980	1990	2003	1980	1990	2003	1980	1990	2003	1980	1990
Bangladesh	722	1524	7050	18.7	6.8	2.1	12.5	14.3	7.7	0.0	1.3
China		51519	438270		3.5	0.6		12.7	4.4		8.3
India	8445	18477	59338	5.0	4.1	1.3	28.2	15.6	11.3	0.4	2.9
Indonesia		26807	63254	14.1	5.0	5.0	7.6	11.2	11.4	71.9	44.0
Korea, Rep.	17245	63659	197637	1.4	1.3	0.9	7.4	3.3	1.4	0.2	1.0
Malaysia	12963	28806	105000	31.0	13.8	2.4	15.0	11.7	8.6	24.7	18.3
Nepal	96	181	694	48.0	3.0		21.4	13.2			
Pakistan	2341	4927	11869	20.5	10.2	1.6	23.5	9.3	10.4	7.1	1.3
Philippines	5788	8186	34842	6.1	1.9	0.6	35.9	18.9	6.0	0.7	2.2
Singapore	19430	54679		10.3	2.6	0.0	8.1	5.2		25.2	17.9
Sri Lanka	1062	1853	5133	18.1	5.8		47.0	34.3		15.4	0.7
Thailand	6449	22810	78083	11.2	5.1	4.7	47.0	28.7	14.2	0.1	0.8
Vietnam				23.2			29.5		25.4	32.4	
East Asia & Pacific		143633	750893		6.1	2.0		15.3	8.0		13.5
Latin America & Caribbean	97042	141984	386830	4.3	3.6	2.0	32.3	25.9	17.0	31.1	23.8
Middle East & North Africa	164694	110469		1.2	0.8		3.4	3.5		87.2	77.9
South Asia	13271	27122	84593	10.0	5.4	2.0	28.0	15.9	11.0	2.8	2.3
Sub-Saharan Africa	78902	67822		6.1		..	22.0		..	26.6	
Middle income	455238	524255	1797916		4.3	2.0		16.8	10.0		22.4
Least developed countries		17472	38173	17.4		..	34.9		..	3.5	
<b>World</b>	<b>1910269</b>	<b>3409952</b>	<b>7440178</b>	<b>4.4</b>	<b>3.0</b>	<b>2.0</b>	<b>12.5</b>	<b>9.7</b>	<b>8.0</b>	<b>10.9</b>	<b>7.7</b>

Source: World development Indicators (2004).

**Table A3: Composition of Goods Imports**

Country/Region	Imports of goods Total (US\$ Millions)			Agricultural Row materials (%)			Food (%)			Fuel (%)	
	1980	1990	2003	1980	1990	2003	1980	1990	2003	1980	1990
Bangladesh	2372	3791	9492	5.9	5.4	7.3	23.6	19.0	19.8	9.5	16.5
China		42354	393618		6.1	3.8		8.7	3.6		2.4
India	16314	27914	68208	1.7	4.0	3.3	9.0	3.2	5.8	44.6	27.3
Indonesia		21455	39546	3.5	4.7	5.3	12.7	5.1	11.4	16.2	8.9
Korea, Rep.	21859	66109	175476	11.3	8.1	2.5	9.8	5.6	5.6	29.9	15.8
Malaysia	10569	26280	79300	1.9	1.4	1.1	11.9	7.3	5.1	15.2	5.3
Nepal	283	641	1682	0.6	7.0		4.3	14.8		17.7	8.7
Pakistan	4857	7411	11978	3.4	4.0	6.0	13.0	17.4	10.3	27.0	20.9
Philippines	7727	12206	36095	2.1	2.4	1.0	7.8	10.3	7.0	28.4	14.9
Singapore	22400	56311		5.7	1.7	0.0	8.5	6.1		28.7	15.9
Sri Lanka	1845	2326	6005	1.1	1.8		20.4	19.1		24.3	12.6
Thailand	8352	29561	66909	3.5	4.7	2.7	5.2	5.0	4.9	30.4	9.3
Vietnam			17760	2.1			36.7		6.2	5.2	..
East Asia & Pacific		140076	650488		4.2	3.0		7.4	5.0		6.3
Latin America & Caribbean	98385	111488	349139	2.3	2.9	2.0	12.5	10.6	8.0	18.7	13.2
Middle East & North Africa	85727	94092		3.0	3.1		19.0	19.1		7.4	4.4
South Asia	26129	42334	98682	2.4	4.0	4.0	12.4	9.4	8.0	34.7	23.2
Sub-Saharan Africa	61682	51931		1.7			9.7			8.8	
Middle income	345160	458699	1599591	2.7	3.6	2.0	11.6	9.9	7.0	18.8	9.6
Least developed countries	20504	24136	43515	2.1			19.6			13.3	
<b>World</b>	<b>1898391</b>	<b>3395714</b>	<b>7345944</b>	<b>4.2</b>	<b>3.2</b>	<b>2.0</b>	<b>10.8</b>	<b>9.1</b>	<b>7.0</b>	<b>25.0</b>	<b>10.9</b>

Source: World development Indicators (2004).

**Table A4: Composition of Service Exports**

Country/Region	Service Exports Total (US\$)			Travel (%)			Transport (%)			Insurance and Financial Services (%)		
	1980	1990	2003	1980	1990	2003	1980	1990	2003	1980	1990	2003
Bangladesh	163	379	1012	7.5	4.8	14.3	18.5	18.5	18.1		0.0	8.1
China		5855	46734		29.7	37.5			17.0		3.9	1.0
India	2804	4551	23397	52.2	33.7	16.8	15.0	15.0	13.3	1.2	2.7	3.5
Indonesia		2488	5293		86.5	78.5			16.6			0.1
Korea, Rep.	2570	9637	32702	14.4	32.8	16.7	60.1	60.1	54.0	1.9	0.0	2.4
Malaysia	1135	3859	13600	28.0	43.6	43.8	41.6	41.6	20.6	0.6	0.1	2.5
Nepal	127	199	371	40.8	53.4	65.9	5.9	5.9	11.9			0.2
Pakistan	617	1290	2968	22.8	10.3	8.3	41.3	41.3	56.6	1.8	1.2	2.3
Philippines	1447	3244	2970	22.1	14.4	49.6	14.2	14.2	19.7		0.4	3.8
Singapore	4856	12811	30715	29.5	36.3	13.0	26.9	26.9	39.0	1.1	0.7	9.0
Sri Lanka	231	440	1408	42.9	29.2	30.6	18.8	18.8	40.5	1.0	4.1	3.5
Thailand	1490	6419	15798	58.2	67.4	50.1	20.1	20.1	22.3	0.5	0.2	0.9
Vietnam												
East Asia & Pacific		23329	89457	38.0	46.8	44.0	23.9	23.9	19.0	0.6	1.3	..
Latin America & Caribbean	16776	27986	55938	40.7	48.0	51.0	27.5	27.5	22.0	6.7	4.2	6.0
Middle East & North Africa	13763	18393		33.4	28.9	51.0	25.1	25.1	26.0		1.4	2.0
South Asia	4032	6992	29711	44.1	28.8	19.0	19.8	19.8	17.0	1.4	2.3	3.0
Sub-Saharan Africa	8670	11263		29.5	34.4	60.0	39.5	39.5	23.0	6.0	5.1	3.0
Least developed countries	3265	4666		18.6	26.8	50.0	30.5	30.5	24.0	1.3	1.6	2.0
Middle income	52993	100094	288256	37.0	40.2	47.0	28.4	28.4	24.0	5.1	3.0	3.0
<b>World</b>	<b>395597</b>	<b>849223</b>	<b>1896687</b>	<b>26.0</b>	<b>32.8</b>	<b>30.0</b>	<b>33.4</b>	<b>33.4</b>	<b>22.0</b>	<b>2.9</b>	<b>6.2</b>	<b>3.0</b>

Source: World development Indicators (2004).

**Table A5: Composition of Service Imports**

Country/Region	Service Imports (USD millions)			Travel (%)			Transport (%)			Insurance and Financial Services (%)			C
	1980	1990	2003	1980	1990	2003	1980	1990	2003	1980	1990	2003	
Bangladesh	173	365	1711	3.3	11.1	10.3	64.3	56.2	75.5	6.0	5.2	7.6	26
China		4352	55306		10.8	27.7		74.6	33.2		2.2	8.7	
India	157	3571	25710	3.8	6.5	13.8	60.0	56.1	36.7	5.3	5.6	6.5	31
Indonesia		6056	17400		13.8	18.0		46.1	28.1		3.9	1.7	
Korea, Rep.	3293	10252	40313	10.6	27.0	25.1	61.3	39.0	33.8	0.5	0.3	1.3	27
Malaysia	2957	5485	17500	24.5	26.4	16.4	44.3	46.2	36.1			3.4	31
Nepal	81	120	265	29.2	27.1	31.6	30.1	38.7	44.5	2.5	3.1	6.7	38
Pakistan	853	1940	3294	9.6	20.8	29.8	64.5	60.2	51.1	3.0	1.2	4.7	22
Philippines	1439	1761	4197	7.4	6.3	15.2	52.1	55.7	53.6	0.8	3.4	8.6	39
Singapore	2912	8642	29579	11.4	20.8	17.0	38.3	40.7	46.0	4.3	9.0	7.0	46
Sri Lanka	351	639	1709	9.5	11.5	16.9	60.4	62.3	58.4	6.5	6.6	5.8	23
Thailand	1644	6309	18169	14.8	22.7	16.2	64.4	56.7	47.1	5.9	5.3	6.3	14
Vietnam						..			..				
East Asia & Pacific		25914	119597	16.9	17.7	22.0	52.2	54.2	36.0		4.0	6.0	28
Latin America & Caribbean	2964	35726	68715	32.0	33.6	27.0	40.7	35.0	29.0	6.1	5.8	19.0	22
Middle East & North Africa	5245	42380	28645	12.6	5.7	25.0	26.0	23.1	42.0	2.9	3.4	6.0	58
South Asia	3127	6707	33085	6.5	11.9	16.0	61.7	57.6	41.0	4.8	4.4	6.0	27
Sub-Saharan Africa	19127	19606		16.9	17.2	28.0	41.2	39.2	46.0	6.2	5.6	7.0	35
Least developed countries		9135		10.6	10.7	14.0	56.3	43.2	61.0	5.6	4.0	6.0	28
Middle income	1177	126700	316252	19.4	19.4	27.0	34.7	34.8	30.0	4.4	4.5	9.0	41
World	43948	871086	1852198	23.9	29.5	28.0	37.6	29.7	27.0	3.6	5.6	8.0	35

Source: World development Indicators, (2004).

**Table A6: Average Annual Growth of Services and Merchandise Trade during 1981-2001**

	Service exports		Merchandise exports		Service Imports		Goods Imports	
	1981-90	1990-2001	1981-90	1990-2001	1981-90	1990-2001	1981-90	1990-2001
Bangladesh	9.6	7.3	9.1	13.5	8.1	8.5	5.2	9.2
Cambodia			22.7	36.3				
China		17.8	13.4	14.6		26.5		17.2
India	5.1	15.2	8.1	8.7	9.6	16.0	5.8	7.9
Indonesia		8.9	2.1	7.9		10.3		5.9
Korea, Rep.	14.8	11.4	14.5	8.5	13.0	12.2	12.2	9.1
Malaysia	13.5	14.3	9.4	11.1	6.9	11.9	10.6	10.7
Mongolia		10.2	5.1	-5.3		4.9		-2.1
Nepal	5.2	10.6	13.9	13.6	16.8	5.9	9.2	10.5
Pakistan	8.2	0.9	9.0	5.0	8.8	2.6	4.5	3.5
Philippines	9.9	5.0	4.1	14.1	4.1	14.6	6.0	8.9
Sri Lanka	7.3	11.7	6.8	9.2	6.4	9.8	2.5	8.5
Thailand	16.5	7.6	14.5	10.4	15.9	9.6	15.3	7.5
Vietnam			23.4	19.2				
East Asia & Pacific		12.1	8.8	12.1		14.0		11.8
South Asia	5.8	12.4	7.5	8.3	8.0	11.6	5.1	7.0
Sub-Saharan Africa	3.1	3.3	-0.6	3.3	0.7		-0.9	
Latin America & Caribbean	5.5	6.1	4.0	8.6	2.8	6.7	2.2	11.5
High income OECD	8.4	4.8	7.3	4.6	8.9	4.7	6.9	4.8
World	8.2	5.5	6.0	5.6	7.4	5.2	6.3	5.7

Source: World Bank (2003) and ADB (2004)

**Table A7: Employment In Asia by Sector (in millions)**

Sector	South Asia			East Asia (without China)			East Asia (with China)		Asia (without China)			Asia (with China)	
	1983	1993	2000	1980	1990	2000	1990	2000	1980	1990	2000	1990	2000
1 Agriculture, Hunting, Forestry and Fishing	244.9	299.8	296.0	76.3	98.8	96.2	439.9	429.7	321.2	398.6	392.1	739.8	725.7
2 Mining and Quarrying	1.9	2.9	2.7	0.7	1.1	0.4	9.9	6.4	2.6	4.0	3.1	12.8	9.1
3 Manufacturing	40.6	53.2	57.7	13.3	22.7	29.6	109.0	110.0	53.9	76.0	87.3	162.2	167.8
4 Electricity, Gas and water	1.1	1.6	1.8	0.3	0.6	0.5	2.5	3.3	1.4	2.1	2.3	4.1	5.2
5 Construction	8.7	14.3	21.4	5.0	6.8	9.8	31.1	45.3	13.7	21.2	31.3	45.4	66.8
6 Wholesale and Retail Trade and Restaurants and Hotels	25.8	36.4	49.9	15.7	25.2	40.2	53.6	87.1	41.5	61.6	90.1	89.9	137.0
7 Transport, Storage and Communication	9.8	13.7	19.5	4.2	6.5	10.8	22.1	31.1	14.0	20.2	30.3	35.8	50.5
8 Financing, Insurance, real Estate and Business Services	2.1	4.1	5.9	3.1	5.7	12.2	8.3	16.5	5.2	9.8	18.2	12.4	22.4
9. Community, Social and Personal Services	29.5	39.2	43.1	13.0	18.1	19.9	34.8	40.2	42.5	57.3	63.0	74.0	83.2
10 Activities not adequately defined	2.2	2.5	2.5	0.0	0.1	0.7	113.4	171.6	2.2	2.6	3.2	115.9	174.1
<b>Total</b>	<b>366.7</b>	<b>467.7</b>	<b>500.5</b>	<b>131.6</b>	<b>185.5</b>	<b>220.4</b>	<b>824.6</b>	<b>941.2</b>	<b>498.3</b>	<b>653.2</b>	<b>720.8</b>	<b>1292.3</b>	<b>1441.7</b>

Source: Palivel (2006)( *forthcoming* ) Calculated based on LABORSTA Labour Statistics Data Base, International Labour Organization.

**Table A8: Percentage Shares of Employment by Sector in Asia**

Sector	South Asia			East Asia (without China)			East Asia (with China)		Asia (without China)			Asia (with China)	
	1983	1993	2000	1980	1990	2000	1990	2000	1980	1990	2000	1990	2000
1 Agriculture, Hunting, Forestry and Fishing	66.79	64.10	59.14	57.96	53.24	43.65	53.35	45.66	64.46	61.02	54.40	57.24	50.34
2 Mining and Quarrying	0.52	0.62	0.54	0.55	0.59	0.19	1.20	0.68	0.53	0.62	0.43	0.99	0.63
3 Manufacturing	11.09	11.38	11.53	10.08	12.25	13.44	13.21	11.69	10.82	11.63	12.12	12.55	11.64
4 Electricity, Gas and water	0.31	0.34	0.36	0.24	0.30	0.23	0.30	0.36	0.29	0.33	0.32	0.31	0.36
5 Construction	2.37	3.06	4.28	3.78	3.68	4.46	3.77	4.82	2.74	3.24	4.34	3.51	4.63
6 Wholesale and Retail Trade and Restaurants and Hotels	7.03	7.78	9.97	11.96	13.57	18.24	6.50	9.25	8.33	9.42	12.50	6.96	9.50
7 Transport, Storage and Communication	2.68	2.93	3.89	3.20	3.48	4.89	2.68	3.30	2.82	3.08	4.20	2.77	3.51
8 Financing, Insurance, real Estate and Business Services	0.57	0.88	1.19	2.33	3.05	5.54	1.00	1.75	1.04	1.49	2.52	0.96	1.56
9. Community, Social and Personal Services	8.05	8.37	8.60	9.88	9.76	9.05	4.23	4.27	8.53	8.77	8.74	5.73	5.77
10 Activities not adequately defined	0.59	0.53	0.49	0.02	0.08	0.33	13.76	18.23	0.44	0.40	0.44	8.97	12.07
<b>Total</b>	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Palivel (2006)( *forthcoming* ) .Calculated based on LABORSTA Labour Statistics Data Base, International Labour Organization.

**Table A9: Growth Rates in Employment in Asia**

Sector	South Asia		East Asia (without China)		East Asia (with China)	Asia (without China)		Asia (with China)
	1980s	1990s	1980s	1990s	1990s	1980s	1990s	1990s
1 Agriculture, Hunting, Forestry and Fishing	2.04	-0.19	2.62	-0.26	-0.23	2.18	-0.16	-0.19
2 Mining and Quarrying	4.38	-1.21	4.17	-9.37	-4.31	4.32	-2.58	-3.42
3 Manufacturing	2.73	1.16	5.53	2.68	0.10	3.49	1.41	0.34
4 Electricity, Gas and water	3.58	1.94	5.89	-0.92	3.07	4.12	0.81	2.43
5 Construction	5.12	5.93	3.22	3.71	3.85	4.46	3.98	3.94
6 Wholesale and Retail Trade and Restaurants and Hotels	3.51	4.62	4.81	4.79	4.98	4.02	3.88	4.29
7 Transport, Storage and Communication	3.37	5.16	4.36	5.25	3.46	3.67	4.15	3.51
8 Financing, Insurance, real Estate and Business Services	6.88	5.46	6.34	7.98	7.12	6.56	6.40	6.12
9. Community, Social and Personal Services	2.87	1.36	3.37	0.96	1.44	3.02	0.96	1.18
10 Activities not adequately defined	1.40	-0.17	19.03	17.75	4.23	1.85	1.96	4.15
<b>Total</b>	<b>2.46</b>	<b>0.97</b>	<b>3.49</b>	<b>1.74</b>	<b>1.33</b>	<b>2.74</b>	<b>0.99</b>	<b>1.10</b>

Source: Palinvel (2006)( *forthcoming* ) . Calculated based on LABORSTA Labour Statistics Data Base, International Labour Organization.

**Table A 10. Unemployment – Total 1990, 1995, 1999-2003**  
(Per cent of total labour force)

	1990	1995	1999	2000	2001	2002	2003	avg. 99-03
<b>East Asia</b>								
China	2.5	2.9	3.1	3.1	3.6	4	4.3	3.6
Korea, Rep. of	2.4	2	6.3	4.1	3.8	3.1	3.4	4.1
Mongolia	...	5.5	4.7	4.6	4.6	3.4	3.5	4.2
<b>South-East Asia</b>								
Cambodia	...	...	...	2.5	2.8	3	3.5	3
Indonesia	...	...	6.4	6.1	8.1	8.9	9.1	7.7
Lao PDR	...	...	...	...	...	...	...	...
Malaysia	5.1	3.1	3.4	3	3.5	3.5	3.6	3.4
Myanmar	...	...	...	...	...	...	...	...
Philippines	8.1	8.4	9.6	10.1	9.8	11.4	11.4	10.5
Singapore	1.7	2.7	4.6	4.4	3.4	5.2	5.4	4.6
Timor-Leste	...	...	...	...	...	...	...	...
Thailand	2.2	1.1	3	2.4	2.6	1.8	1.5	2.3
Viet Nam	...	...	...	6.4	6.3	6	5.8	6.1
<b>South Asia</b>								
Afghanistan	...	...	...	...	3.4	3.4	3.3	...
Bangladesh	1.9	2.6	...	3.3	...	...	...	...
India	...	2.2	...	4.3	...	...	...	...
Iran, Islamic Rep. of	...	...	...	12.6	12.4	12.3	...	...
Nepal	...	...	1.1	...	...	...	...	...
Pakistan	3.1	5.4	5.9	7.8	7.8	8.3	8.3	7.6
Sri Lanka	14.4	12.5	9.1	8	7.7	8.7	9.2	8.5
<b>Pacific Islands</b>								
Fiji	6.4	5.4	...	...	...	...	...	...
Kiribati	...	...	1.5	...	...	...	...	...
Papua New Guinea	...	...	...	2.8	...	...	...	...
Solomon Islands	...	...	...	...	4.9	...	...	...
Vanuatu	...	...	...	...	...	...	...	...
<b>Developed (Industrialized) Economies</b>								
Australia	6.9	8.4	7	6.4	6.9	6.4	6	6.5
Japan	2.1	3.2	4.7	4.7	5	5.4	5.3	5
New Zealand	7.8	6.3	6.8	6	5.3	5.2	4.7	5.6

**Note:** Australia: 1995: estimates based on population census; Bangladesh: 1995 column shows data for 1996: persons aged 10 and over; Korea, Rep. Of: 1992, 2000: population census; Pakistan: 1990: computed from 87-88 survey results; Singapore: 1990, 2000: population census, Sri Lanka: 1990, 2003: whole country Laborsta data has been supplemented by data on unemployment rate from ADB, Asian Development Outlook 2005 (Table A6).

Source: **Statistical Annexe**, 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005).

**Table A 11: Sectoral shares in total value added (% of GDP)**

	Agriculture, value added (% of GDP)				Industry, value added (% of GDP)				Services, value added (% of GDP)	
	1980	1990	2000	2003	1980	1990	2000	2003	1980	1990
China	30.1	27.0	16.4	14.6	48.5	41.6	50.2	52.3	21.4	30.4
Korea, Rep	..	..	4.3	3.2	..	..	36.2	34.6	..	..
Singapore	..	..	NA	0.1	..	..	NA	34.9	..	..
Indonesia	24.0	19.4	17.2	16.6	41.7	39.1	NA	43.6	34.3	41.3
Malaysia	22.6	15.2	8.8	9.7	41.0	42.2	50.7	48.5	36.3	41.3
Philippines	25.1	21.9	15.8	14.5	38.8	34.5	32.3	32.3	36.1	41.3
Thailand	23.2	12.5	9.0	9.8	28.7	37.2	42.0	44.0	48.1	50.0
Cambodia	..	..	39.6	34.5	..	..	23.3	29.7	..	..
Bangladesh	31.6	30.3	25.5	21.8	20.6	21.5	25.3	26.3	47.8	41.3
India	38.9	31.3	24.6	22.2	24.5	27.6	26.6	26.6	36.6	41.3
Pakistan	29.5	26.0	26.7	23.3	24.9	25.2	23.1	23.5	45.6	41.3
Sri Lanka	27.6	26.3	19.9	19.0	29.6	26.0	27.3	26.3	42.8	41.3
Vietnam	..	38.7	24.5	21.8	..	22.7	36.7	40.0	..	30.4
East Asia & Pacific	28.5	24.9	16.1	14.4	45.0	40.0	NA	49.3	26.5	30.4
Latin America & Caribbean	10.3	9.0	6.8	7.1	38.9	35.7	29.3	26.7	50.7	50.0
Middle East & North Africa	14.5	18.6	13.9	13.4	41.3	32.8	35.4	36.9	44.2	41.3
South Asia	37.2	30.7	25.2	22.4	24.2	26.7	26.1	26.2	38.6	41.3
Sub-Saharan Africa	18.6	19.4	18.3	16.5	37.6	33.6	29.8	31.0	43.8	41.3
Least Developed Countries	37.1	36.3	34.0	27.9	18.7	20.7	23.5	26.1	44.2	41.3
Low & middle income	20.7	17.9	12.8	11.8	38.5	36.9	34.9	34.3	40.8	41.3
High income: OECD	3.7	2.7	1.9	..	37.2	32.5	28.0	..	59.1	60.0

Source: WDI (2005).

**Table A12: Employment – Total 1990, 1995, 1999-2003**  
(Thousand)

	1990	1995	1999	2000	2001	2002	2003	avg. 99-03
<b>East Asia</b>								
China**	639 090	680 650	713 940	720 850	730 250	737 400	744 320	729 352
Korea, Rep. of	18 085	20 432	20 281	21 156	21 572	22 169	22 139	21 463
Mongolia	...	768	814	809	832	871	927	850
<b>South-East Asia</b>								
Cambodia**	...	...	...	5 275	6 243	6 400	...	5 973
Indonesia	75 851	82 038	88 817	89 838	90 807	91 647	...	90 277
Lao PDR	2 085	...	...	...	...	...	...	...
Malaysia	6 685	7 645	8 838	9 322	9 357	9 543	9 870	9 386
Myanmar**	15 221	17 590	...	...	...	...	...	...
Philippines**	22 532	25 698	27 762	27 775	30 085	30 252	31 553	29 485
Singapore	1 537	1 702	1 886	2 095	2 047	2 017	2 034	2 016
Timor-Leste	385	...	...	...	...	...	...	...
Thailand	30 842	32 573	32 087	33 001	33 484	34 263	34 677	33 502
Viet Nam	...	...	38 120	38 368	39 094	40 162	41 179	39 385
<b>South Asia</b>								
Afghanistan	5 981	...	...	...	...	...	...	...
Bangladesh	50 159	...	...	51 764	...	...	...	51 764
India <sup>b</sup>	311 949	350 309	...	374 638	373 325	389 645	...	379 203
Iran, Islamic Rep. of <sup>a</sup>	12 108	14 542	...	...	...	...	...	...
Nepal	...	...	9 463	...	...	...	...	9 463
Pakistan**	29 797	31 407	37 296	36 847	37 481	38 882	39 900	38 081
Sri Lanka	5 964	5 316	6 159	6 308	6 212	6 663	6 943	6 457
<b>Pacific Islands</b>								
Fijia,**	89	97	114	112	...	...	...	113
Kiribatia	11	8	...	...	...	...	...	...
Papua New Guinea	1 879	...	...	...	...	...	...	...
Solomon Islands	26	33	...	...	...	...	...	...
Vanuatu	...	...	...	...	...	...	...	...
<b>Developed (Industrialized) Economies</b>								
Australia	7 837	8 218	8 720	8 951	9 063	9 248	9 459	9 088
Japan	62 490	64 570	64 620	64 460	64 120	63 300	63 160	63 932
New Zealand	1 481	1 633	1 750	1 779	1 823	1 877	1 921	1 830

**Notes:** Iran, Islamic Rep. Of: 1991: Asian Productivity Organization (APO), Population census; 1996: ESCAP; Other years: APO, Official estimates. Singapore: Labour force surveys except 2000: Population census. Sri Lanka: Geographical coverage: Excluding northern and eastern province, 1990, 2003: whole country, ...indicates that the data is not available

**Source:** Statistical Annexe, 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005).

**Table A13: Employment – Female 1990, 1995, 1999-2003**  
(Thousand)

	1990	1995	1999	2000	2001	2002	2003	avg. 99-03
<b>East Asia</b>								
China	...	...	...	...	...	...	...	...
Korea, Rep. of	7 376	8 256	8 303	8 769	8 991	9 225	9 108	8 879
Mongolia	...	361	387	392	408	431	458	415
<b>South-East Asia</b>								
Cambodia	...	...	...	2 737	3 226	...	...	2 982
Indonesia	29 423	31 729	33 908	...	...	33 064	...	33 486
Lao PDR	975	...	...	...	...	...	...	...
Malaysia	2 374	2 588	2 987	3 236	3 301	3 401	3 546	3 294
Myanmar	...	...	...	...	...	...	...	...
Philippines	8 185	9 505	10 631	10 516	11 751	...	...	10 966
Singapore	620	658	799	824	898	880	911	862
Timor-Leste	172	...	...	...	...	...	...	...
Thailand	14 386	14 795	14 366	14 836	15 013	15 391	15 596	15 040
Viet Nam	...	...	19 091	19 076	19 257	19 807	20 217	19 490
<b>South Asia</b>								
Afghanistan	2 035	...	...	...	...	...	...	...
Bangladesh	19 716	...	...	19 395	...	...	...	19 395
India	83 009	93 805	...	107 377	94 507	103 797	...	101 894
Iran, Islamic Rep. of	...	...	...	...	...	...	...	...
Nepal	...	...	4 727	...	...	...	...	4 727
Pakistan	3 473	3 816	5 197	5 159	5 248	5 693	...	5 324
Sri Lanka	1 987	1 655	...	2 052	1 934	2 231	2 197	2 104
<b>Pacific Islands</b>								
Fiji	...	...	...	...	...	...	...	...
Kiribati	...	...	...	...	...	...	...	...
Papua New Guinea	774	...	...	...	...	...	...	...
Solomon Islands	...	...	...	...	...	...	...	...
Vanuatu	...	...	...	...	...	...	...	...
<b>Developed (Industrialized) Economies</b>								
Australia	3 253	3 541	3 803	3 945	4 028	4 113	4 232	4 024
Japan	25 360	26 140	26 320	26 300	26 290	25 940	25 970	26 164
New Zealand	646	720	794	806	830	852	876	831

**Notes:** Iran, Islamic Rep. Of: 1991: Asian Productivity Organization (APO), Population census; 1996: ESCAP; Other years: APO, Official estimates. Singapore: Labour force surveys except 2000: Population census. Sri Lanka: Geographical coverage: Excluding northern and eastern province, 1990, 2003: whole country, ...indicates that the data is not available

**Source:** Statistical Annexe, *'Labour and Social Trends in Asia and the Pacific- 2005'*, ILO (2005).

**Table A 14. Labour Force Participation Rate (aged 15-64) 1990, 1995, 2000, 2010  
(Per cent)**

	Total				Male				Female			
	1990	1995	2000	2010	1990	1995	2000	2010	1990	1995	2000	2010
<b>East Asia</b>												
China	84.9	85.4	84.9	82.6	89.6	90	89.5	87.3	79.9	80.3	80	77.6
Korea, Rep. of	64.4	67.1	68.9	72.3	77.4	79.2	79.8	80.1	51.1	54.7	57.8	64.2
Mongolia	81.6	81.5	81.7	82.4	87.5	86.8	86.3	85.9	75.6	76.4	77.1	78.9
<b>South-East Asia</b>												
Cambodia	85.6	87.1	84	84.3	86.3	88.4	84.2	84.8	85.2	85.9	83.9	83.9
Indonesia	68.3	69.6	71.2	74.5	84.4	84.3	84.5	85.2	52.1	54.8	57.8	63.7
Lao PDR	83.9	84.2	83.9	83.8	91.2	91.1	90.3	89.4	76.9	77.6	77.7	78.3
Malaysia	65.4	66.2	66.5	67.5	84	83.2	82	80.1	46.4	48.7	50.7	54.7
Myanmar	79.3	79	78.9	78.5	90.1	89.7	89.5	88.8	68.5	68.4	68.4	68.5
Philippines	65.7	66.3	66.9	68.5	83	82.8	82.6	82.6	48.1	49.5	51.1	54.2
Singapore	69.2	70.1	69.7	65.1	83.8	84.9	83.6	77.3	54.4	55.3	55.3	52.5
Timor-Leste	84	84.3	82.3	82.2	89.8	90.1	85.8	88	77.8	79.2	76.3	75.6
Thailand	84	83.9	83.8	83.2	89.5	89.6	89.7	89.6	78.5	78.2	78	76.9
Viet Nam	84.5	82.9	81.4	78.1	88.1	86.2	84.5	81.1	81	79.6	78.3	75.1
<b>South Asia</b>												
Afghanistan	68.7	68.6	68.5	68.5	87.9	87.1	86.3	84.9	48.1	48.7	49.5	50.9
Bangladesh	78.8	78.9	78.8	78.9	89.4	89.1	88.7	88.2	67.3	67.8	68.2	69
India	66	66.4	66.5	67	87.9	87.6	86.9	85.9	42.4	43.5	44.6	46.6
Iran, Islamic Rep. of	53.9	55.1	55.6	62	83.1	82.3	79.9	80.7	22.2	26.3	30	42.6
Nepal	73.7	73.3	73	72.3	89.1	88.1	87.1	85.2	57.4	57.7	58.2	59
Pakistan	60.4	60.9	62.1	65.1	87.9	86.9	85.9	84.7	29.5	33.2	36.9	44.8
Sri Lanka	64.2	64.8	65.1	67	83.7	83.2	82.5	82.6	42.8	44.7	46.5	50.7
<b>Pacific Islands</b>												
Fiji	57	59.2	61.8	66.9	87.9	85.3	84.4	81.9	28.1	32.8	39	51.1
Kiribati	...	...	...	...	...	...	...	...	...	...	...	...
Papua New Guinea	79.2	79.2	78.6	78.1	89.2	88.5	87.3	86.1	68.6	69.3	69.1	69.4
Solomon Islands	87.2	87.3	85.6	84.4	91.6	91	86.9	88.9	83.8	82.5	81.9	79.8
Vanuatu	...	...	...	...	...	...	...	...	...	...	...	...
<b>Developed (Industrialized) Economies</b>												
Australia	73.5	74.7	75.1	74.4	84.7	84.4	83.2	80.2	61.9	64.8	66.9	68.4
Japan	70.2	71.9	73.3	75.3	84.2	84.5	85	84.6	56.2	59.2	61.6	66
New Zealand	72.5	74.3	75.2	74.3	82.7	83.2	82.4	79.4	62.6	65.6	67.8	69.3

**Source:** Statistical Annexe, *'Labour and Social Trends in Asia and the Pacific- 2005'*, ILO (2005).

**Table A 15. Manufacturing wage indices 1990, 1995, 1999-2001**  
(1999=100)

	1990	1995	1999	2000	2001
<b>East Asia</b>					
China	100	129.2	179	200.7	...
Korea, Rep. of	100	140.8	155.6	165.2	168.6
Mongolia	...	62.2	...	...	...
<b>South-East Asia</b>					
Cambodia	...	...	...	...	...
Indonesia	100	172.4	160.9	...	...
Lao PDR	...	...	...	...	...
Malaysia	100	125.1	...	148.4	161.4
Myanmar	...	...	...	...	...
Philippines	100	100.6	77.3	78.3	...
Singapore	100	136.3	171.6	183.4	186.5
Timor-Leste	...	...	...	...	...
Thailand	100	117.7	114.9	...	...
Viet Nam	...	...	...	...	...
<b>South Asia</b>					
Afghanistan	...	...	...	...	...
Bangladesh	...	...	...	...	...
India	100	74.5	68.7	...	...
Iran, Islamic Rep. of	100	...	...	...	...
Nepal	100	...	...	...	...
Pakistan	100	100.7	71.5	71.2	...
Sri Lanka	100	108.6	102.3	107.6	97.7
<b>Pacific Islands</b>					
Fiji	100	...	...	...	...
Kiribati	...	...	...	...	...
Papua New Guinea	...	...	...	...	...
Solomon Islands	100	87.5	...	...	...
Vanuatu	...	...	...	...	...
<b>Developed (Industrialized) Economies</b>					
Australia	100	102.3	107.8	108	108.3
Japan	100	111.9	116.5	116.5	117.9
New Zealand	100	99.2	107.4	107.6	108.3

**Note:** ...indicates that the data is not available.

Source: **Statistical Annexe**, 'Labour and Social Trends in Asia and the Pacific- 2005', ILO (2005).

	Employment			Average Annual GDP			Average Employment Rates		Annual Growth
	Total Elasticity			Growth (%)			1991-1995	1995-1999	1999-2003
	1991-1995	1995-1999	1999-2003	1991-1995	1995-1999	1999-2003	1991-1995	1995-1999	1999-2003
<b>China</b>	0.14	0.14	0.17	12.7	8.3	8.1	1.8	1.2	1.4
<b>Korea, Rep.</b>	0.3	0.17	0.38	7.4	3.4	5.6	2.2	0.6	2.1
<b>Singapore</b>	0.21	0.54	0.62	9.6	5.4	2.8	2.0	2.9	1.7
<b>Indonesia</b>	0.37	-0.08	0.43	7.6	-0.3	4.1	2.8	0.0	1.8
<b>Malaysia</b>	0.31	0.51	0.67	9.5	3.7	4.6	2.9	1.9	3.1
<b>Philippines</b>	0.99	0.69	0.76	2.8	3.4	4.4	2.8	2.3	3.3
<b>Thailand</b>	0.09	0.14	0.38	8.6	-0.6	4.8	0.8	-0.1	1.8
<b>Cambodia</b>	0.52	0.59		7.9	6.6	6.5	4.1	3.9	6.5
<b>Bangladesh</b>	0.38	0.48	0.06	4.6	5	5.3	1.7	2.4	0.3
<b>India</b>	0.4	0.43	0.36	6.3	6.3	5.3	2.5	2.7	1.9
<b>Pakistan</b>	0.49	0.96	0.63	4.5	3	3.9	2.2	2.9	2.5
<b>Sri Lanka</b>	0.14	0.82	0.19	5.6	4.8	3.4	0.8	3.9	0.6
<b>Vietnam</b>	0.24	0.26	0.35	8.8	6.9	7	2.1	1.8	2.5
<b>East Asia</b>	<b>0.14</b>	<b>0.14</b>	<b>0.18</b>	<b>11.6</b>	<b>7.4</b>	<b>7.7</b>	<b>1.6</b>	<b>1.0</b>	<b>1.4</b>
<b>South-East Asia</b>	<b>0.39</b>	<b>0.2</b>	<b>0.42</b>	<b>7.4</b>	<b>1.6</b>	<b>4.8</b>	<b>2.9</b>	<b>0.3</b>	<b>2.0</b>
<b>South Asia</b>	<b>0.4</b>	<b>0.49</b>	<b>0.36</b>	<b>6</b>	<b>5.8</b>	<b>5.1</b>	<b>2.4</b>	<b>2.8</b>	<b>1.8</b>
<b>Latin America</b>	0.65	0.7	0.45	3.5	2.7	1.4	2.3	1.9	0.6
<b>Caribbean</b>	0.43	0.37	-0.42	1.9	5.2	2.5	0.8	1.9	-1.1
<b>Middle East</b>	1.1	1.29	0.91	3.9	3	4.1	4.3	3.9	3.7
<b>North Africa</b>	0.3	0.74	0.51	2.2	4.8	4.1	0.7	3.6	2.1
<b>Sub-Saharan Africa</b>	0.73	0.82	0.53	1.1	3.2	3.2	0.8	2.6	1.7
<b>Central and Eastern Europe</b>	0.24	0.01	-0.19	2	3	3.5	0.5	0.0	-0.7
<b>CIS</b>	0.19	0.28	0.18	-10.9	-0.1	7.2	-2.1	0.0	1.3
<b>Western Europe</b>	-0.09	0.36	0.42	1.5	2.5	1.7	-0.1	0.9	0.7
<b>North America</b>	0.67	0.44	0.23	3.1	4.1	2.4	2.1	1.8	0.6
<b>Japan</b>	0.34	0.2	-0.24	1.1	1	1.6	0.4	0.2	-0.4
<b>Global Total</b>	0.34	0.38	0.3	2.9	3.6	3.5	1.0	1.4	1.1