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Employment, Economic Development, and Poverty Reduction: Critical issues and policy challenges

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Commissioned for the
UNRISD Flagship Report on Poverty
Project on Poverty Reduction and Policy Regimes

June 2009 ▪ Geneva

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Processes of economic development that improve employment opportunities will be more egalitarian than growth regimes in which the quality of employment stagnates, or deteriorates, over time. Similarly, unequal access to decent work and persistent labour market inequalities will frustrate efforts to reduce poverty. This paper is concerned with the structure of employment, economic development, and poverty – including the role of policy in enhancing or undermining the material well-being of individuals who must work in order to survive.

We highlight three broad themes at the onset which are developed at length in the paper. First, employment cannot be taken for granted. There is no guarantee that economic growth or a particular pattern of development (e.g. industrialization) will necessarily lead to sustained improvements in employment. Second, policy is critical for realizing better quality employment. The free market orientation of much development policy over the past several decades has been associated with expanding labour market inequalities, persistent informalization, and the emergence of nonstandard and precarious forms of employment in many countries around the world. However, there is no 'one-size-fits-all' approach to employment policy – effective interventions will depend on the structural of employment and the particular institutional and economic context.

Third, the critical institutions and policies that determine the relationship between employment and poverty often lie outside of the labout market itself. Macroeconomic policy, financial institutions, the international structure of production, the nature and composition of households, and gender dynamics, all influence employment outcomes and the potential of better opportunities to translate into real differences in people's lives.

The paper first explores the relationship between economic development and the structure of employment, using the Kaldorian model of industrialization as a baseline. We examine the extent to which the traditional logic of industrialization holds in an open economy setting and the implications for employment outcomes and the role of policy. The subsequent section extends the analysis of the structure of employment with an empirical overview across a range of countries and over time. Specifically, we examine the relationships between the structure of employment and per capita income, employment growth and productivity, urban labour supply and industrial employment, and the employment effects of natural resource based exports. The third section documents significant global changes in the supply of labour: women's labour force participation, urbanization, global integration of labour forces, and international migration.

Following this general background, we then look at several brief country case studies, including Korea, Brazil, the Philippines, India, Kenya, and Cambodia, with an eye to identifying similarities, but also documenting differences. In each case, we examine the structure of employment, identify major trends, and point out the implications for poverty and living standards. In the fifth section, we bring the household into the analysis. Since income poverty is defined and analyzed at the level of the household, changes in household composition and dynamics will influence how employment impacts poverty outcomes. To illustrate the relationship between employment and poverty more directly, we estimate working poor poverty rates for Brazil and Kenya, showing how economic risks are distributed across different types of employment. The paper concludes with a discussion of policy issues.

Structure of employment, structure of production, and economic development

As economies grow and develop they typically undergo changes in the structure of production that have direct implications for the quality and quantity of employment opportunities. Put another way, an evolving structure of production implies an evolving structure of employment.[1] Employment represents the single most important source of income for the majority of the world's population – directly through individual labour market participation and indirectly through membership in households that sustain themselves on earnings from employment. Shifts in the structure of employment therefore have immediate implications for living standards and risks of income poverty.

One stylized scenario of economic development is a shift away from agriculture towards manufacturing, other types of industrial production, and services (Kaldor, 1967; Kuznets, 1971). Such a change in the productive structure will generally be associated with changes in the structure of employment. Labour tends to move out of agriculture and into industrial activities and services. However, changes in the sectoral shares of employment will not mirror those changes in the sectoral shares of production, except under exceptional circumstances. It is quite possible for manufacturing to account for a growing share of production and a stagnant, or even shrinking share, of employment, if, for example, labour productivity in manufacturing is rising rapidly. Many developing countries – e.g. India and South Africa – have experienced episodes of 'jobless growth' in their formal manufacturing sectors in recent years.

Earlier research on the changes in the structure of production and employment indicated that the industrial share of output would rise with income per capita (Kuznets, 1971). As the share of industrial production increased, the structure of employment changed – agricultural employment declined as a share of total employment and the share of industrial and service employment increased. Since earnings were higher outside of agriculture, these structural shifts in employment had important implications for average standards of living for the working class, particularly as any surplus labour in the agricultural sector was absorbed by growing industrial demand for labour (e.g. Ranis and Fei, 1961).

Shifts in the composition of consumption expenditures provide one explanation of this pattern of economic development and the associated changes in the structure of

[1] Throughout this paper, we use the term 'employment' to refer to work producing goods and services which would be included, at least theoretically, in the system of national accounts. We use the term 'unpaid labour' to refer to non-market work in services which are excluded from the system of national accounts. Note that unpaid family workers on enterprises that produce marketed goods or services represent a particular category of employment – i.e. 'contributing family worker.'

employment. Technological and productive innovations raise productivity and average incomes. If demand for agricultural goods is relatively income inelastic and demand for industrial goods and services is more elastic, then we would expect consumption patterns to shift in favour of services and industrial goods (Kuznets, 1971). The expanding markets for services and industrial goods would generate profitable new investment opportunities in these areas and growing labour demand. The scope for productivity improvements in manufacturing is particularly large due, in part, to economies of scale (Kaldor, 1967). As labour and capital move into these activities, average productivity in the economy climbs, further enhancing the demand for services and industrial products. Productivity improvements in agriculture will also be needed, to provide foodstuffs for the growing urban, industrial population given a declining rural labour force (e.g. Ranis and Fei, 1961). Economic growth is endogenous in this framework, since the changing structures of production and employment provide an impetus for productivity growth.

In this paper, we refer to this traditional pattern of economic development as 'Kaldorian,' after Nicholas Kaldor who theorized these relationships between the structure of production and economic development (e.g. Kaldor, 1967). Kaldor emphasized the importance of industrialization and the expansion of manufacturing in fueling economic growth.[2]

Open economies, globalized production and trade, and market dynamics have altered the original Kaldorian logic of endogenous structural change. Growth in average incomes may still be associated with a movement out of agriculture, due in part to inelastic demand. However, imported foodstuffs weaken the link between domestic agricultural production and urban demand for agricultural products. Balance of payments and foreign exchange frequently replace agricultural productivity as a binding constraint. Moreover, it is unclear that a movement out of agriculture will be associated with a concurrent expansion of industrial employment. Demand for manufactured goods may also be met through greater imports, due to the availability of low-cost substitutes. Intense competitive pressures among producers of manufactured exports mean that price elasticity often matters as much, if not more, than income elasticity in determining patterns of production.[3] Growth in industrial production now requires productivity improvements to keep unit labour costs low. However, high rates of productivity growth in industrial activities can cause industrial employment to fall behind industrial production, particularly if demand does not respond vigorously to the cost savings brought about through higher productivity.

Growth in service employment often outstrips the expansion of industrial employment. This was evident in earlier studies of the Kaldorian-type development trajectory (Kuznets, 1971; Kaldor, 1967). Three factors help explain the rapid growth of employment in services. First, marketed services tend to have reasonably high income elasticities. Second, the scope for sustained productivity improvements in many service activities lags behind that of industrial production – therefore, employment tends to

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[2] Others have adapted Kaldor's analysis to other development models. For example, Dasgupta and A. Singh (2006) examine the possibility that the service sector could play the role of manufacturing in a Kaldorian framework.

[3] Higher productivity gains in manufacturing than in service activities may also affect the relative consumer prices of manufactured goods and services in the course of economic development, with manufactured goods becoming less expensive (Dasgupta and A. Singh, 2006). If productivity improvements in manufacturing are captured as lower consumer prices, and if the income elasticity of manufactured goods declines as incomes rise, lower prices could free up income to be spent on relatively more costly services.

expand along with output. Finally, many types of services are less tradable than manufactured goods, suggesting that a growth in domestic incomes will increase demand for domestic services.

Therefore, contemporary movements out of agricultural may be associated with little or no growth in industrial employment and a large increase in service employment (Ghosh, 2008). Many countries appear to 'skip' the step of industrial employment growth. The potential for rapid productivity improvements in service activities is limited, on average, relative to the potential for rapid productivity growth in industry. This affects the feedback loop in the traditional economic development cum industrialization story. Of course, there are service activities that are highly tradable and activities which are driven by technological innovations – e.g. the information/telecommunications sector (Ghosh, 2008; N. Singh, 2008). High levels of global demand have led to the rapid expansion of these activities in certain circumstances. However, it is unclear that high value-added services can substitute perfectly for industrialization in the original Kaldorian logic.

In recent decades, a small number of countries have undergone an industrial transformation similar to the Kaldorian industrialization experienced in the high-income countries of North America and Western Europe. Most notably the so-called Asian Tigers, or 'newly industrialized countries,' relied on exports of manufactured products to drive their industrializations. The strategic development of other domestic sectors – e.g. capital goods and steel – was linked to the demand for inputs required of rapidly industrializing economies. Interventionist industrial policies, managed trade, and close finance-industry linkages supported this development path (Amsden, 2001; Chang, 1994). As we will see in the case of Korea, the share of industrial employment grew and living standard rose significantly – but maintaining a standard of decent work is difficult even for these successful industrializers.

For many developing countries, informal employment represents a sizeable share of total employment. Many of the earlier theories of the structural transitions associated with economic growth included a role for 'surplus labour' – often assumed to work in the agricultural sector or in informal activities (Lewis, 1954; Ranis and Fei, 1961). In surplus labour frameworks, the jobs provided by the formal economy at the prevailing wage falls short of total labour supply. Individuals who cannot find formal employment work in subsistence activities. In surplus labour theories of informality, informal employment becomes an undifferentiated residual – a kind of employment of last resort. The marginal productivity of this surplus pool of labour is often assumed to be zero. As an economy develops, productivity improvements in the formal economy increase labour demand and reduce the amount of surplus labour. Labour is re-allocated away from zero productivity activities, resulting in efficiency gains, and eventually the informal residual would disappear.

Other researchers introduced a new conceptualization of employment outside the formal sector, one that was based on the observations of livelihood strategies adopted by the urban poor (Hart, 1973; ILO, 1972). They saw the informal sector as consisting of a diverse set of activities that represent a critical source of employment income. These activities exhibited positive productivity, albeit often at low levels. Earnings in non-agricultural informal employment are typically lower than earnings in formal employment, and yet are higher than earnings in agricultural employment (Chen et al., 2005; Heintz, 2008). The higher earnings in both formal and informal non-agricultural employment provide an impetus for rural-to-urban migration (Fields, 1975; ILO, 1972).

If the growth in formal industrial employment failed to keep pace with on-going urbanization, one outcome would be the growth of employment in urban services and informal activities. Although not all non-agricultural informal employment is in the service sector, services often constitute the majority of such activities.

Therefore, we can imagine alternative trajectories for the changes observed in the structure of employment in developing countries today. A movement out of agricultural still occurs, but this labour is not automatically absorbed by a growing industrial sector. Instead, the workers move disproportionately into the service sector and informal employment. Earnings are higher, at least on average, than in agriculture. However, the scope for sustained growth in productivity is limited. Therefore, the virtuous self-reinforcing cycle of industrialization (industrialization – productivity growth – higher incomes – growing investment and domestic demand – further industrialization) never gets off the ground. A select group of countries are able to industrialize using interventionist policies and relying on dynamic export demand. However, the policy space to adopt a similar approach is not available to many countries, partly due to the intensive competitive pressures in global markets and the widespread adoption of market-driven development policies.

This discussion suggests that the changes in the structure of employment that occur over time will depend on differences in the institutional setting, the policy environment, the nature of integration into global markets and production systems, resource endowments, and the productive structures that exist. History matters and the future evolution of employment will depend, in part, on past patterns of development. Although there is no single, invariant path for the evolution of the structure of employment, we can learn from an analysis of key relationships and draw a number of general lessons.

The structure of employment will change in the course of economic growth and development. However, the direction of causation runs in both directions. The structure of employment also affects the course of economic development. Concentration in low-productivity activities with limited opportunities for upward mobility will adversely impact economic growth and living standards. This, in turn, will retard the development of domestic markets with feedback effects on the composition of employment and the scope for productivity growth. Similarly, a significant share of employment in sectors with the potential for rapid productivity growth will provide a foundation for improvements in living standards and the expansion of domestic purchasing power.

The relationship between informal employment and economic growth provides an illustration of this two-way relationship. Although time series data are limited, analysis has shown that changes in informal employment as a share of total employment are negatively related to the rate of per capita growth (Heintz and Pollin, 2003). Note that even though there is a negative relationship between the change in informalization and economic growth, the change in informal employment may still be positive even at respectable rates of growth – the increase in informal employment is simply smaller than would be the case at low rates of growth. The fact that informal employment tends to be concentrated in lower productivity activities explains why an increase in the share of informal employment may be associated with slower growth (e.g. Levy, 2008). However, lower rates of growth would also be associated with the slower expansion of formal jobs opportunities relative to the expansion of the labour force. The result would be an increase in informalization. Both effects will be evident to varying degrees in different countries. The more general point is that informal employment provides an

example of how economic growth affects the structure of employment and how the structure of employment impacts economic performance.

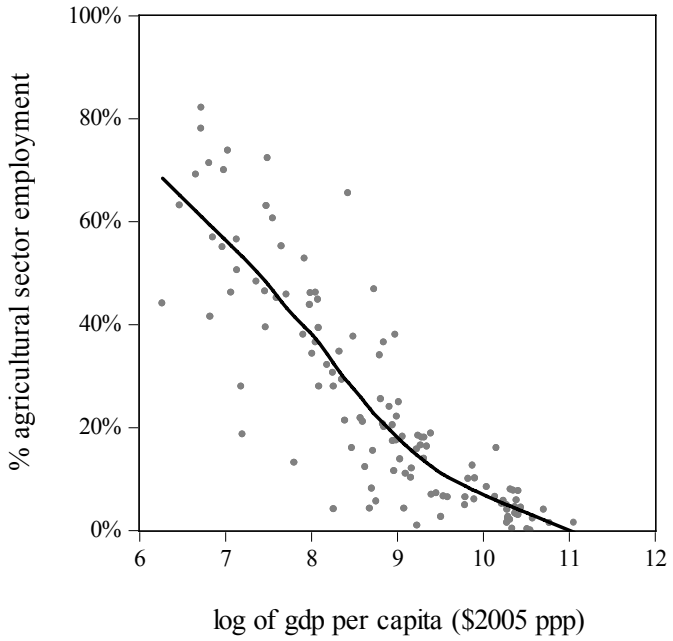
What is also clear from this initial discussion of the structure of employment and development paths is that policy matters. The Asian Tigers were able to transform their employment structures through the implementation of a set of policies that encourage rapid, and strategic, industrial development. Market-driven policies associated with neoliberal stabilization programmes have failed to deliver similar results. We will discuss policy implications in greater depth at the end of this paper.

Empirical overview: structure of employment and economic development

i. Structure of employment and per capita income

The general patterns in the broad, sectoral distribution of employment discussed above are evident when we explore cross-country comparisons of employment in agriculture, industry, and services. Figures 1 to 3 examine the changes in employment shares across countries in more detail. Figure 1 shows the relationship between per capita GDP (expressed in natural logarithms) and the share of agricultural employment for 120 countries. To minimize the impact of short-term fluctuations, the agricultural share of employment and per capita GDP are measured as 10-year averages over the period 1997-2006. A distinct negative relationship is evident – as per capita income increases, agricultural employment, as a share of total employment, drops significantly, approaching zero among the highest income countries.

Figure 1. The share of agricultural employment and per capita GDP (natural logarithm), averages 1997-2006.

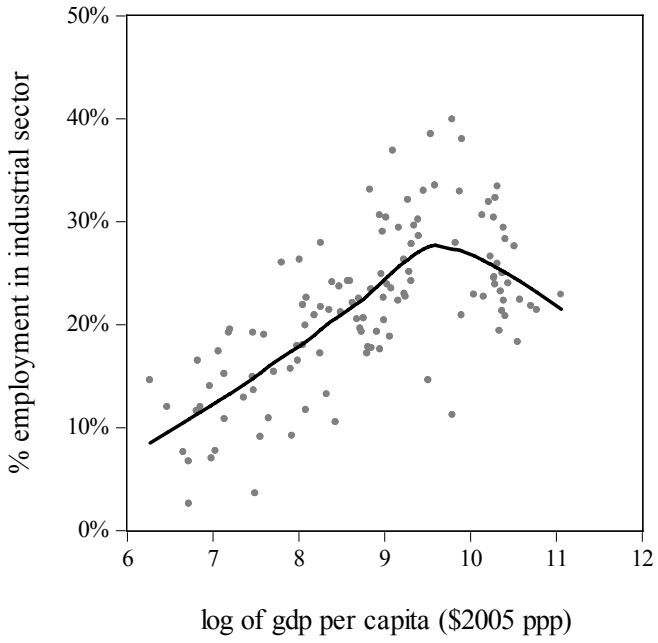


Source: World Development Indicators 2008. Line fitted using nearest neighbor algorithm (bandwidth=0.5).

Figure 2 presents a similar relationship, but plots the share of industrial employment against per capita GDP. Again, the values in the figure are 10 year averages from 1997 to 2006. Here we find a very different pattern. Industrial employment, as a share of total employment, increases with per capita income up to a point. However, as we move from middle-income to high-income economies the share of industrial employment begins to decline. The fitted line in Figure 2 shows that industrial employment reaches a maximum at just about 30 percent of total employment. In terms of the individual observations, the highest share of industrial employment observed among all 120 countries is about 40 percent.

If we expect the industrial sectors to deliver 'good jobs' for the majority of workers, the picture presented by Figure 2 suggests that this perspective is unrealistic. At best, industrial jobs will probably account for a third of total employment. Moreover, not all industrial jobs are 'good jobs.' We only have to think of working conditions in low-end manufacturing sectors. Therefore, realizing decent work for the majority of workers must necessarily include a significant role for service sector jobs. This is not to suggest that industrialization cannot provide a basis for widespread improvements in employment outcomes. However, these improvements will not be restricted to industrial employment.

Figure 2. The share of industrial employment and per capita GDP (natural logarithm), averages 1997-2006.



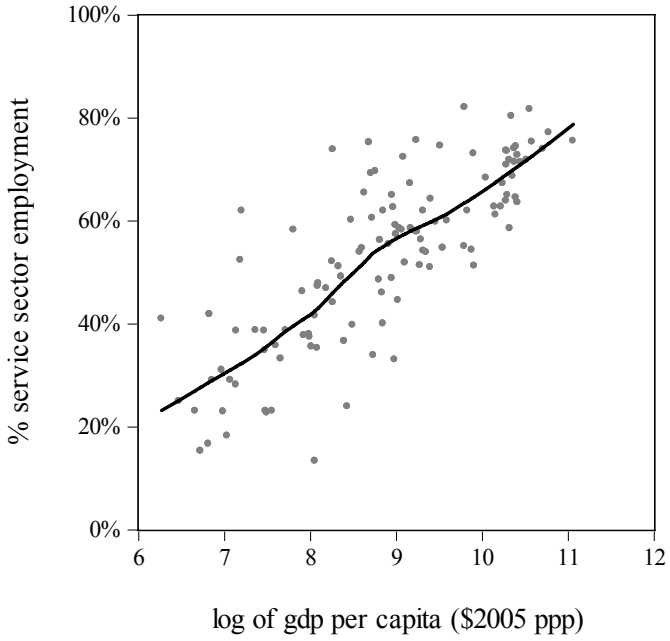
Source: World Development Indicators 2008. Line fitted using nearest neighbor algorithm (bandwidth=0.5).

The inverted "U' shape curve associated with the industrial share of employment has been analyzed at length. One interesting finding is that the turning point in the curve appears to have shifted over time (Palma, 2005). That is, the level of per capita income at which deindustrialization begins to occur has fallen (in this case, deindustrialization is defined by a fall in manufacturing's share of total employment as per capita income increases). A fundamental shift in policy regimes provides one explanation for this shift. For example, in many countries, neoliberal reforms, specifically trade liberalization,

replaced earlier strategies of import substitution industrialization (ISI), which specifically aimed at increasing industrial output and employment. This policy shift provides an explanation for the aborted process of industrialization observed in many countries that had at one time followed an ISI development strategy (Palma, 2005).

Figure 3 completes the picture by showing the relationship between the share of employment in the service sector and per capita income using 10 year averages. There is a strong positive relationship between the share of employment in services and per capita income. In many of the high income, 'post-industrial' economies, services account for 70 to 80 percent of all employment. For low-income countries, services still account for 20-30 percent of total employment. Of the 120 countries included in Figures 1 to 3, the estimated share of industrial employment exceeds the estimated share of service employment in just one case – China.[4]

Figure 3. The share of service employment and per capita GDP (natural logarithm), averages 1997-2006.



Source: World Development Indicators 2008. Line fitted using nearest neighbor algorithm (bandwidth=0.5).

The growth in the service sectors of many developing countries – particularly higher value-added services – has raised the possibility that the development of the service sector could provide an alternative path to industrialization (N. Singh, 2008; Dasgupta and A. Singh, 2006). We discuss this issue in the context of recent trends in Indian economic development later in the report. At this point, we raise only two issues.

First, services are not necessarily a substitute for industrialization. Many services constitute an important input into industrial production that raises average productivity. For example, a recent study of the relationship between manufacturing and services in South Africa found that manufacturing industries are an important source of

[4] The availability of representative labour force statistics for China is extremely limited. Therefore, China's 'exceptionalism' in terms of the share of industrial employment relative to service employment may be a product of the country's imperfect employment data.

demand for services (Tregenna, 2008). If industrial production and employment in high value services are complementary, then industrialization will support the expansion of quality jobs in service activities. However, the possibility of a complementary relationship between industrial and service sectors does not apply to services provided directly to final consumers (e.g. tourism). Therefore, the nature of the service sector matters for these critical economic relationships. Second, there has been strong growth in the international trade in services. If services become increasingly tradable, then the demand for services need not come from domestic industries or consumers, but could result from industrial growth elsewhere in the global economy. Whether the export of services can mimic the success of the export-based industrialization strategy followed by the Asian Tigers remains to be seen.

ii. Employment growth and productivity

Improvements in labour productivity will negatively impact employment when output does not respond vigorously to productivity increases. If the growth rate of output falls behind the growth rate in productivity, employment will decline.[5] More generally, changes in labour productivity will directly impact the relationship between the growth in output and the growth in employment. Numerous researchers have documented a reduction in the output elasticity of employment in many, but not all, countries over time (Ghosh, 2008; Heintz, 2006; Khan, 2006; Kapsos, 2005). The output elasticity of employment is defined as the percentage change in employment associated with a one-percent change in output. A declining elasticity indicates that employment is becoming less responsive to economic growth. One explanation for this change is that, in recent years, labour productivity has grown without a proportionate increase in demand for output. The result is fewer jobs being generated for any given increase in economic output.

Why would aggregate demand lag behind productivity growth? Greater global integration and increased competitive pressures provide one explanation. Competition on global markets creates pressures to reduce unit labour costs. Unit labour costs can be reduced by raising productivity without a proportionate increase in wages. When living standards do not keep pace with productivity improvements, the growth in output, relative to the growth in productivity, will fall. When an increasing share of output is being produced for export markets, this potential intensifies. Since the goal is not to produce for the domestic market, little is gained by insuring an adequate level of demand at home. If large numbers of countries pursue this strategy simultaneously, uncoordinated competition can result in the underdevelopment of markets at the global level. High-income countries may act as 'consumers of last resort,' in which competition among producers results in lower prices for relatively high-income consumers. Nevertheless, if demand in affluent markets responds sluggishly to reductions in unit labour costs at the point of production, the result would be a weakening of the relationship between output and employment growth.

Macroeconomic policies that aim to restrict demand contribute to these dynamics. Restrictive monetary policy regimes which target very low rates of inflation

[5] This is a simple identify. Suppose we define labour productivity (λ) in terms of output per worker: $\lambda = Y/E$, in which Y is output and E employment. This implies that employment can be expressed in terms of output and productivity: $E = Y/\lambda$. Taking the log of both sides and differentiating with respect to time gives us the following relationship: $\dot{E}/E = \dot{Y}/Y - \dot{\lambda}/\lambda$. That is, the growth rate of employment is equal to the growth rate of output minus the growth rate of labour productivity.

operate by attempting to reign in purchasing power at the macroeconomic level. Restrictive fiscal policies similarly reduce demand – directly, through government spending, and indirectly, through the various fiscal multipliers.

We can examine the relationship between employment growth and productivity growth directly. Using data from 35 countries in Asia, Latin America, and Eastern Europe, we investigate how a 1 percentage point increase in the growth rate of productivity affects the rate of growth of employment. We estimate the relationship for various time periods, roughly spanning one decade each: 1961-1970, 1971-80, 1981-1990, 1991-2000, 2001-08. We also estimate the relationship over the entire time period, 1961-2008. The results are summarized in Table 1.

Table 1. Estimates of the impact of productivity growth on employment growth, regressional analysis, 1961-2008, 35 countries.

	Estimated impact of productivity growth on employment growth	Constant (%)	Number of obs.
1961-70	-0.07 (0.022)	2.4 (0.15)	315
1971-80	-0.15 (0.025)	2.8 (0.19)	350
1981-90	-0.13 (0.032)	2.4 (0.17)	350
1991-2000	-0.28 (0.032)	2.2 (0.18)	350
2001-08	-0.54 (0.049)	3.4 (0.25)	280
1961-2008 (all years)	*-0.21 (0.014)*	*2.1 (0.08)*	*1,645*

Source: Time series data were taken from the Groningen Growth and Development Centre, Total Economy Database. Employment is measured by number of workers. Productivity is measured by GDP per worker. Countries include: Albania, Bulgaria, Hungary, Poland, Romania, Bangladesh, Cambodia, India, Indonesia, Malaysia, Myanmar, Pakistan, Philippines, Korea, Sri Lanka, Taiwan, Thailand, Vietnam, Argentina, Barbados, Brazil, Bolivia, Colombia, Chile, Costa Rica, Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Peru, St. Lucia, Trinidad and Tobago, Uruguay, and Venezuela. The database only contained information on total labour force, not employment, for countries in Africa and the Middle East. The estimated equation included a lagged endogeous variables (the growth rate of employment lagged one period) and country fixed effects.

We find, as expected, that increases in the rate of productivity growth tends to slow down the rate of employment growth. This relationship is apparent throughout the estimates in Table 1. The magnitude of the negative effect of productivity growth on employment growth becomes larger as we move closer to the present. For example, during the period 1961 to 1970, we estimate that a 1 percentage point increase in the growth rate of productivity would result in a -0.07 percentage point reduction in the rate of employment growth – a very small effect. This indicates that output growth tended to increase along with the growth rate in productivity. However, in the period 2001-08, the same 1 percentage point increase in the growth rate of productivity would result in a -0.54 decline in the growth rate of employment – a much more significant impact. This would occur if, for example, productivity improvements or macroeconomic policies

were no longer supporting growth in aggregate demand in the same way they did in the past.

This discussion has focused on the relationship between productivity growth and employment growth across all sectors of the economy. However, we expect that the change in the relationship between productivity growth and employment growth would be more pronounced for the industrial sectors – in which the scope for productivity growth is larger – than for other sectors. If this is true, we could see a divergence in the industrialization of output and the industrialization of employment.

iii. Urbanization and industrial employment

In the 'Kaldorian' narrative of economic development, based largely on the histories of today's high-income countries, we expect labour to move out of agriculture and into both industrial and service employment. Labour supply would respond to the higher earnings potential in these sectors and we would witness a migration from rural to urban areas, where the new employment opportunities are concentrated. A growing share of labour in urban industrial employment would be associated with rising living standards and lower rates of poverty, particularly as the surplus labour in rural regions dwindles.

However, as we have already discussed, rural-to-urban migration may occur even without a corresponding rise in industrial employment. In addition, as labour moves out of agriculture it may no longer be absorbed by growing labour demand in the industrial sector – the result would be a rise in the share of service employment and informal urban employment.

Table 2 illustrates recent trends in the growth of urban populations, total population, and industrial employment for 11 developing countries. In all cases, the urban population is growing faster than the total population. Note that these are annual average growth rates spanning 20-25 years. The cumulative effect of even modest differentials in the growth rate of the urban population can be substantial over the entire period. For example, in the case of Mexico, the urban population grew at an average rate of 2.2 percent a year and the total population grew at 1.7 percent a year, a difference of just 0.5 percent. This relatively small differential is sufficient to raise the urban share of the total population from 67 percent in 1981 to 76 percent by 2005.

Table 2. Annual growth rates of urban population, total population, and industrial employment, 11 selected countries.

	Urban population annual growth rate	Total population annual growth rate	Industrial employment growth rate	Years	Source
Bolivia	3.6%	2.2%	4.2%	1981-2003	GGDC
Botswana	7.8%	2.6%	7.2%	1981-2003	UNIDO
Brazil	2.6%	1.7%	1.6%	1981-2005	GGDC
Costa Rica	3.9%	2.4%	3.2%	1981-2006	ILO
India	2.8%	1.9%	0.6%	1981-2002	UNIDO
Indonesia	4.6%	1.5%	3.7%	1985-2006	ILO
Korea	2.2%	0.9%	1.5%	1981-2006	ILO
Mexico	2.2%	1.7%	1.8%	1981-2005	GGDC
Peru	2.3%	1.8%	1.2%	1981-2005	GGDC
Philippines	4.3%	2.3%	2.1%	1981-2006	ILO
Thailand	1.9%	1.2%	4.2%	1981-2006	ILO

Source: For population growth rates: World Development Indicators, 2008. For industrial employment, see source column in table (GGDC=Groningen Growth and Development Center 10-sector database; UNIDO=Industrial Statistics Database, 3-digit ISIC; and ILO=LABORSTA database, ILO, Geneva).
Note: Industrial employment includes manufacturing, construction, and utilities. For Botswana and India, industrial employment only includes manufacturing.

There appears to be a positive relationship between the growth rate of the urban population and the growth rate of industrial employment.[6] This suggests that as labour demand in the industrial sector increases, so does rural to urban migration. However, in most of the countries examined here, the growth in the urban population exceeds the growth in industrial employment opportunities. This indicates that, over time, industrial employment will account for a decreasing share of total urban employment. Rural-to-urban migrants who are not employed in industrial jobs will work in the service sector, in informal employment, or will become unemployed. Of course, not all industrial employment is located in urban areas, but the majority of such opportunities are concentrated in and around cities. The trends presented in Table 3 indicate that the growth of industrial employment will not be sufficient to maintain even a constant share of total urban employment, given the rates of urbanization.

Not all countries follow the same employment growth path. In Table 2, two exceptions are Bolivia and Thailand. In both cases, industrial employment grew faster than the urban population and the share of industrial employment expanded along with urbanization. In this respect, Bolivia and Thailand seem to adhere more closely to the traditional narrative of industrialization and urbanization. However, this pattern of employment growth is not as commonplace as it once had been during the economic histories of the high-income countries of North America and Western Europe.

iv. Natural resource exports and the structure of employment

Many developing countries rely on the export of natural resource based products to support employment, earn foreign exchange, and generate income. Exports of these

[6] The correlation coefficient between the growth in the urban population and the growth in industrial employment across the 11 countries in Table is 0.77.

products have specific implications for the structure of employment and production and it is worth examining these dynamics in some detail.

The impact of natural resource exports on the structure of production and employment is often framed within the context of the 'Dutch disease' – the term coined for the unexpected negative consequences on the economy of the Netherlands after the discovery of large natural gas reserves. Often, the analysis of the 'Dutch disease' or a possible 'resource curse' focuses on situations in which there is a sudden discovery of a previously unknown endowment of natural resources or in which there is a rapid increase in commodity prices. However, a similar analysis can be applied to situations in which the development strategy involves a reliance on the export of natural resources. Here we focus on how natural resource exports impact the structure of employment.

A common theoretical explanation of Dutch disease effects focuses on the real exchange rate and the allocation of resources between tradable and non-tradable sectors. An increase in the value of natural resource exports (either through quantity, e.g. new discoveries, or price effects) leads to an appreciation of the real exchange rate. The price of non-tradable goods and services rises relative to tradable goods, triggering a reallocation of resources to the non-tradable sector (see, for example, the model developed by Neary and van Wijnbergen, 1986). However, if the tradable sector is characterized by positive externalities and, therefore, possesses greater potential for productivity growth, the result of a boom in natural resource exports may be slower economic growth (Humphreys, Sachs, and Stiglitz, 2007; Sachs and Warner, 1997; Neary and van Wijnbergen, 1986).

The manufacturing sector is often identified as the principal victim of Dutch-disease dynamics. Growth of natural resource exports can slow or even reverse the process of industrialization. This affects employment dynamics – supporting the growth of employment in the agricultural and service sectors relative to the expansion of industrial employment.

The real exchange rate is only one mechanism through which a 'resource curse' may manifest itself. Palma (2005) offers a different explanation of Dutch disease outcomes. If governments manage economic policy in the face of a balance of payments or foreign exchange constraint, resource-poor countries may have an incentive to pursue policies to support industrial development in order to increase manufacturing exports and foreign exchange earnings. However, resource-rich countries, which generate foreign exchange through natural resource exports, do not have the same incentive to pursue a program of industrial development. In addition, human capital investments may also suffer resulting in lower levels of skills and educational attainment (Humphreys, Sachs, and Stiglitz, 2007). Auty (2001) proposes a related argument, arguing that resource-poor countries do not generate nearly the same magnitude of rents as resource-rich countries and, therefore, cannot support large bureaucracies on natural resource tax revenues or protect inefficient sectors that represent the vested interests of political and economic elites. Similar rent-seeking arguments have been advanced by others (Sachs and Warner, 1997).

Not all countries experience the Dutch disease or encounter a resource curse to the same degree (Humphreys, Sachs, and Stiglitz, 2007). Therefore, there is not deterministic relationship between natural resource exports and economic outcomes. Policy choices are important in influencing the developmental impact of such resource endowments (Auty, 2007). The rents generated from natural resources can be

challenged to productive investment which support dynamic productivity gains and improve employment opportunities. Non-tradable investments (e.g. infrastructure) are often complementary to productive activities in tradable sectors. Savings generated by natural resource exports can, with the appropriate institutions in place, finance fixed investments. In short, the reality of a resource curse is contingent on the institutional and policy environment, recognizing that policy formulation is endogenous to the political dynamics surrounding natural resource endowments.

Here we are concerned with the impact of natural resource exports on the structure of employment – and the implications for creating decent work opportunities and supporting poverty reduction. Specifically, we would like to know whether those countries with substantial exports have less industrial employment (e.g. manufacturing) and more employment in less tradable sectors (e.g. services) than countries with fewer resource-based exports. To examine this possibility, we look at cross-country evidence involving 98 countries over the 5 year period 2002-2006. Data are taken from the World Bank's *World Development Indicators 2008*. To reduce the impact of short-run fluctuations, we average the relevant variables for each country over the five years. We examine the impact of resource-based exports on the share of industrial employment and the share of employment in services. Resource-based exports are divided into two categories – agricultural exports (food and agricultural raw materials) and mineral-based exports (minerals and fuel).

The results of simple cross country regressions are contained in Table 3. The explanatory variables include: resource-based exports as % of GDP (either agricultural or minerals and fuels), per capita GDP, and the square of per capita GDP. We examine two dependent variables: industrial employment as a share of total employment and services employment as a share of total employment.

Table 3. Effect of natural resource exports (agricultural exports and minerals and energy exports) on the share of employment in industry and services, cross-country regression results, 2002-6.

	Industrial share employment		Services share employment	
	(1)	(2)	(3)	(4)
ag exports (% of GDP)	-0.22*** (0.13)		0.09 (0.24)	
min. & fuel exports (% GDP)		0.014 (0.063)		0.228** (0.110)
per cap GDP	0.64* (0.16)	0.70* (0.16)	2.07* (0.29)	2.09* (0.28)
per cap GDP^2	-0.015* (0.004)	-0.016* (0.004)	-0.034* (0.008)	-0.034* (0.007)
constant	21.35* (1.29)	19.73* (1.06)	43.72* (2.31)	42.59* (1.83)
N	98	98	98	98
R^2-adj	0.171	0.146	0.522	0.542

** Significant at the 1% level, ** significant at the 5% level, *** significant at the 10% level.*
Source: Data come from World Development Indicators 2008.

Beginning with the industrial employment equations, we find that higher agricultural commodity exports (food and raw materials) are associated with a smaller share of industrial employment, but mineral and fuel exports do not appear to affect the

share of industrial employment (Equations 1 and 2 in Table 3). In both cases, higher per capita income is associated with a larger share of industrial employment, but per capita income affects industrial employment at a decreasing rate. This is consistent with the inverse "U" pattern we observed earlier with regard to the industrial share of employment.

Turning to the share of employment in services, we discover a different pattern. Higher agricultural commodity exports (food and raw materials) do not affect the share of services employment, but mineral and fuel exports have a positive impact (Equations 3 and 4 in Table 3). Similar to the case of the industrial employment share, higher per capita income is associated with a larger share of industrial employment, but at a decreasing rate. However, the turning point with respect to the share of service employment occurs at a much higher level of per capita income than in the case of industrial employment.[7] Again – this is broadly consistent with the analysis that has already been presented.

Why might agricultural commodity exports have a different impact on the structure of employment than mineral and fuel exports? Agricultural production is typically labour intensive. Therefore, an increase in the value of agricultural exports could be associated with a reallocation of labour to agricultural production. The share of industrial employment falls in a cross-country comparison because countries that depend on agricultural commodity exports do not experience as rapid of a movement of labour out of agriculture as countries with lower levels of commodity exports. This may inhibit industrialization. In contrast, the extraction of minerals and fuels tends to be more capital intensive. An increase in the value of these exports generates typical 'Dutch disease' effects – it does not necessarily encourage a more rapid growth of industrial employment, but does reallocate resources into the less tradable sector – in this case services.

These results represent broad generalizations. The estimates contained in Table 3 do not control for a number of factors – perhaps most importantly, the policy environment. Nevertheless, they do suggest that reliance on natural resource exports will affect the structural of employment – specifically, the creation of employment opportunities in the industrial sector with a large scope for sustained productivity improvements. Having said this, natural resource exports do generate resources which could be used to support the creation of better quality employment opportunities and can relax binding constraints which could limit policy choices (e.g. foreign exchange constraints or balance of payments problems). We return to these issues in the policy discussion at the end of this paper.

Global trends in labour supply – four developments deserving of attention

Up to this point, we have focused on the various relationships observed between economic development and the structure of employment. We find few contemporary examples of countries that are following the typical Kaldorian path to improving the average quality of employment – due to changes in the global economy and fundamental shifts in policy. Without being explicit, the focus of this discussion has

[7] The estimates in Table 3 suggest that the share of industrial employment reaches a maximum at a per capita income of about $21,000 ($2005). In contrast, the share of service employment reaches a maximum at a per capita income of about $30,600. There is a natural upper limit on the share of service employment (i.e. 100%). Censored regression estimates using a Tobit estimator do not significantly change the results reported in Table 3. Therefore, we report the basic OLS estimates in the table.

primarily been on labour demand – how structural shifts in domestic demand, productivity, and exports change the level and composition of labour demand. In recent years, there have been other far-reaching developments on the supply-side of labour markets around the world. Here we highlight four labour supply issues that are of particular importance: women's labour force participation, urbanization, greater integration of the global work force, and international migration.

i. Women's labour force participation

Over the past several decades, one of the most significant transformations of the employment situation in a large number of countries has been a notable increase in women's labour force participation (ILO, 2008; Tzannatos, 1999; Horton, 1999; Çağatay and Özler, 1995). The impact of this shift on the total labour force is often ambiguous. This is because, in many parts of the world, men's labour force participation rates have been falling, while women's rates have been increasing. Nevertheless, the growth in women's paid employment remains, on average, an important global trend. The ILO estimates that in 2007 women's employment worldwide totalled 1.2 billion, an increase of over 18 percent in ten years (ILO, 2008).

Table 4 presents estimates and projections of labour force participation by broad geographical regions from 1980 to 2010. Table 4 includes only low and middle income countries. The numbers are taken from the Economically Active Population Estimates and Projections (EAPEP 5th edition, 2008 revision) of the ILO. Trends in women's labour force participation rates vary significantly from region to region. The most dramatic increases are apparent in Latin America and the Caribbean. In these countries, the rapid growth in women's labour force participation pulled up the total labour force participation rate – i.e. total labour supply increased relative to the size of the working age population – and fundamentally transformed the nature of the region's labour supply. In sub-Saharan Africa and East and Southeast Asia, women's labour force participation increased, but by a relatively modest amount.[8] However, it is important to note that in these regions women's labour force participation was relatively high on average, even at the beginning of the period show in Table 4 (1980).

[8] In the case of East and Southeast Asia, both women's and men's labour force participation rates are projected to fall somewhat by 2010.

Table 4. Estimates and projections of women's, men's, and total labour force participation rates, 1980-2010.

		1980	1990	2000	2010
Latin America and Caribbean	All	60.1%	62.3%	67.5%	70.5%
	Men	83.8%	84.9%	83.8%	83.0%
	Women	36.7%	40.2%	51.6%	58.4%
	Ratio	*0.44*	*0.47*	*0.62*	*0.70*
Sub-Saharan Africa	All	71.3%	71.7%	71.9%	72.4%
	Men	82.7%	82.9%	82.6%	81.1%
	Women	60.1%	60.8%	61.5%	63.8%
	Ratio	*0.73*	*0.73*	*0.75*	*0.79*
East and Souteast Asia	All	79.4%	79.9%	79.5%	77.9%
	Men	88.9%	87.1%	86.5%	84.8%
	Women	69.5%	72.2%	72.1%	70.7%
	Ratio	*0.78*	*0.83*	*0.83*	*0.83*
South Asia	All	63.9%	63.6%	61.7%	62.0%
	Men	88.5%	87.0%	84.6%	84.2%
	Women	37.4%	38.5%	37.2%	38.5%
	Ratio	*0.42*	*0.44*	*0.44*	*0.46*
Middle East/North Africa	All	53.4%	54.9%	53.0%	53.1%
	Men	80.6%	80.1%	77.5%	75.8%
	Women	25.6%	28.6%	27.5%	29.3%
	Ratio	*0.32*	*0.36*	*0.35*	*0.39*
Eastern Europe	All	76.4%	74.2%	67.7%	68.9%
	Men	81.5%	79.5%	73.0%	73.6%
	Women	71.7%	69.3%	62.7%	64.5%
	Ratio	*0.88*	*0.87*	*0.86*	*0.88*

Source: ILO, Economically Active Population Estimates and Projections, 5th edition, 2008 revision.

In South Asia and the Middle East and North Africa regions, women's labour force participation rates also increased, but from a much lower base. The speed of increase was significantly lower than was apparent in the Latin America and Caribbean region. Perhaps the most interesting pattern captured in Table 4 occurred in the transition economies of Eastern Europe. During the market-based transition away from centrally planned economies, the countries of Eastern Europe experienced a significant drop in both men's and women's labour force participation rates. The ratio of women's to men's labour force participation rates remained relatively constant throughout this transition, but the level of labour force participation plunged in absolute terms. Therefore, it is not accurate to state that women's labour force participation has grown significantly in all countries around the world. What is true is that there has generally been an increase in women's labour force participation in most developing countries over the past three decades, if we exclude the transitional economies as a special case. The speed with which women's labour force participation rates have grown varies widely. And, in general, the ratios of women's labour force participation rates to men's have grown in most regions of the world.

The growth in women's labour force participation, although uneven, has changed the nature of labour supply. In some cases, women's entry into the paid labour market has meant that labour supply has increased more quickly than the growth of the working age population. However, even when the labour force participation rate of the

entire working age population has remained relatively constant, the composition of employment has shifted, with a larger share of women working in remunerative employment. Women typically spend more time in unpaid household and care work. Their increased labour force participation means that women work a 'double shift' – part of their day is spent in paid work and part performing unpaid caring labour. However, given a limited amount of time available in a day, women's growing labour force participation will represent a reallocation of labour away from non-market activities and to market activities – even when participation rates in unpaid care and household work remain high.

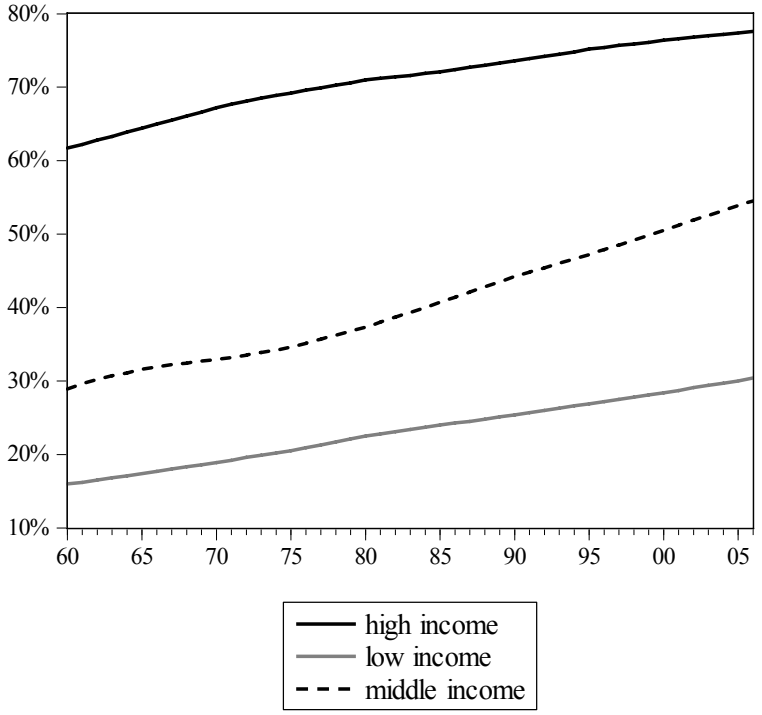
It is also important to recognize that women's increased labour force participation coincided with changes in the structure of employment associated with economic growth and development - specifically, the limited growth in formal industrial employment and the more rapid increase of the share of service and informal forms of employment. More and more women around the world are being employed in service activities (ILO, 2008). The service jobs which employ women are often less well paid and more precarious. Improving the quality of employment for women will therefore require a specific focus on employment in the service sector.

ii. Urbanization

As has already been pointed out, an increasing share of the world's population lives in cities and urban centres. Figure 4 shows the trends in the urban population's share of total population from 1960 to 2006. The trends are disaggregated into three country groupings: high-income countries, middle-income countries, and low-income countries.[9] Two observations are immediately obvious. First, the urban share of the population is highest for the high-income countries and lowest for the low-income countries. We have already seen that the share of agricultural employment is highest for lower income countries and smallest for higher income countries. Figure 4 suggests, not surprisingly, that processes of urbanization will be associated with changes in the structure of employment. Second, in all three country groupings, the share of the urban population has been growing steadily. There is some slight indication in the graph that the growth of the share of the urban population has slowed somewhat for the high-income grouping. Nevertheless, urbanization is clearly a global phenomenon.

[9] The definitions for high-, low-, and middle-income countries are taken directly from the World Development Indicators database.

Figure 4. Urban share of total population (percent) by country grouping, 1960-2006.



Source: World Development Indicators, 2008.

What this suggests is that the urban labour supply has been growing, and will likely continue to grow, faster than the total population. This raises serious questions about the associated trends in urban employment opportunities and whether urban labour demand will grow sufficiently to absorb the expanding urban work force. As we have already argued, in most cases growth in industrial employment will be insufficient to accommodate this increasing labour supply. In most countries, earnings from informal urban employment on average remain above earnings in agriculture – providing an incentive for continued rural-to-urban migration. Continued urbanization may place downward pressure on urban earnings in the future and could lead to widening inequalities. Both of these possibilities have important implications for poverty and inequality.

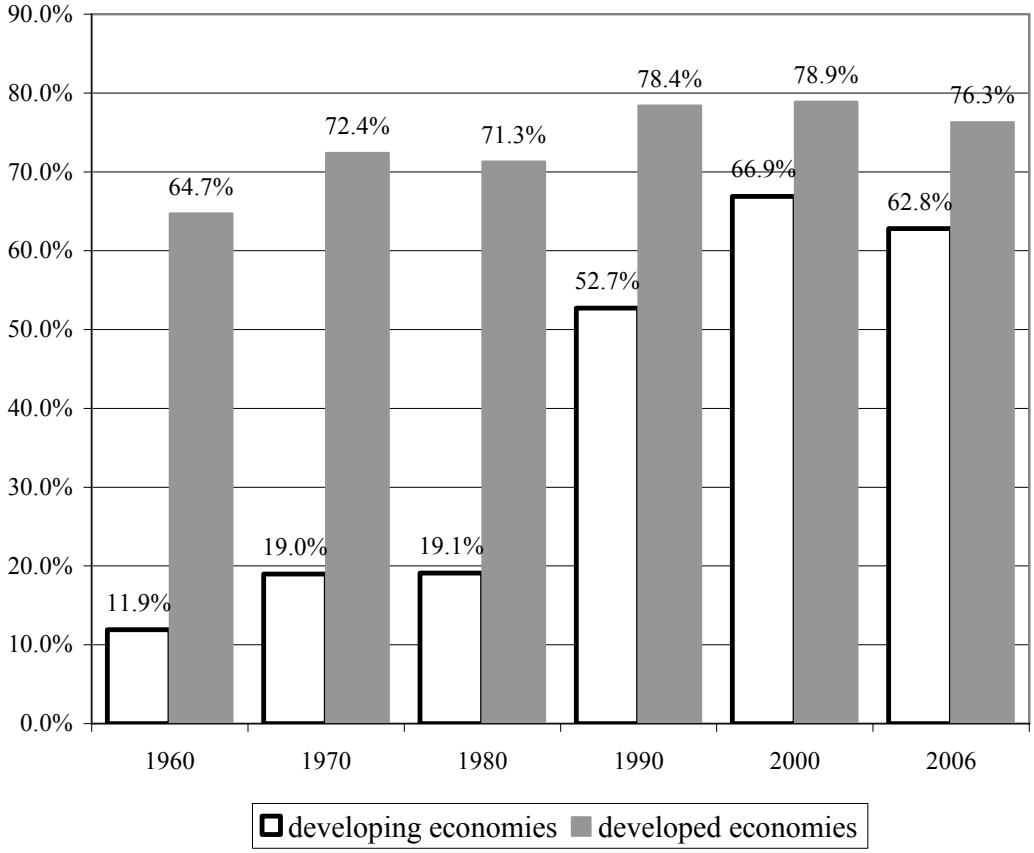
iii. Integration of the global workforce

As the countries of the world re-orient their economies to produce for a more integrated, common global market, the labour forces of individual countries become increasingly consolidated into what could be considered a single global labour supply, albeit still deeply segmented. Richard Freeman (2006) has made this point in terms of what he identifies as the doubling of the global labour pool. With the market reforms in Easter Europe, Central Asia, and, perhaps most significantly, China, and India's adoption of more outward oriented economic policies, the number of workers engaged in production for the global market has increased enormously in recent decades. The increase in the global pool of labour has outstripped the increase in the global pool of capital, making labour relatively more abundant and capital relatively scarcer (Freeman, 2006). An abundance of labour relative to capital will place downward pressure on labour's terms of trade, at least until global capital accumulation can catch up.

Whether the economic and geopolitical changes which Freeman discusses has produced an actual doubling of the global pool of labour is subject to debate and qualification (i.e. substitutability and mobility may be highly imperfect), but his general point remains valid: global production for international markets has increased dramatically – effectively meaning that the workforce which is integrated, directly or indirectly, into global markets has expanded much more rapidly than the world's population. Since developing countries, in which labour is abundant relative to capital, have been entering areas of global production that have been dominated by the high-income nations, we would expect that the global ratio of available labour to available capital would have risen in recent years. The relative scarcity of capital has been made more severe by neoliberal policies which discouraged fixed capital investment (Akyüz, 2006).

Figure 5 illustrates one dimension of the integration of the global workforce: the rise in the share of manufactured exports originating in developing economies, representing the new global division of labour. The growth in manufactured exports contributes to an intensification of trade competition. Not only are developing countries competing with the established manufacturing sectors of advanced industrial countries, they also are competing with each other. Improving a country's global competitive position has emerged as a cornerstone of export-orient growth strategies in which expanding the export sector becomes the engine of industrial development. Ironically, the competitive pressures unleashed may make industrial development more difficult, since intense competition erodes the resources available to invest in industrial production and up-grading.

Figure 5. Exports of manufactured goods as a percentage of total exports, 1960-2006.



Source: UNCTAD Handbook of Statistics 2008 and UNCTAD Globstat Development and Globalization Facts and Figures (globstat.unctad.org).

The growth in industrial production for global markets has transformed the relationship between labour demand and potential sources of labour supply. Demand for production is no longer associated with increased demand for labour among a small set of highly industrialized countries. Today production can be sourced (and labour services purchased) from a wide range of competing countries. Labour in these countries can be said to be integrated, since one set of workers in one geographical location can easily substitute for an equivalent set of workers elsewhere. The increase in the global substitutability of labour will tend to raise the elasticity of labour demand (Rodrik, 1997). As labour demand becomes more elastic, improvements in the terms under which labour is exchanged will become more difficult to secure without risking job losses.

In some countries, the growth of women's labour force participation has coincided with the expansion of global production, leading to a 'feminization' of export-oriented employment, at least initially (Seguino, 2000; Elson, 1996). Low wages paid to women made these export industries more competitive on global markets. The trends in global labour supply, reviewed briefly in this section, interact in various ways. For example, in Cambodia the growth in the labour-intensive garment industry was associated with increased employment of young women who often migrated away from their families in rural areas to work in industrial jobs in the cities. In this case, women's labour force participation, urbanization, and the integration of the global workforce all

impact the structure of employment, household incomes, and poverty risks in complex ways.

iv. International migration

Movement across international boarders also affects labour supply and the global distribution of human resources. The total number of international migrants has grown steadily in recent decades, reaching nearly 200 million by 2005 (Table 5). This total includes refugees and asylum seekers.[10] However, most of the world's migrants go abroad for economic reasons. As Table 5 indicates, women account for a growing share of global migrants. In many cases, women's migration is associational – i.e. women migrate to stay with or join their families. However, an increasing number of women are migrating for economic reasons (UN, 2005).

Table 5. Estimated global stock of international migrants, 1960-2005.

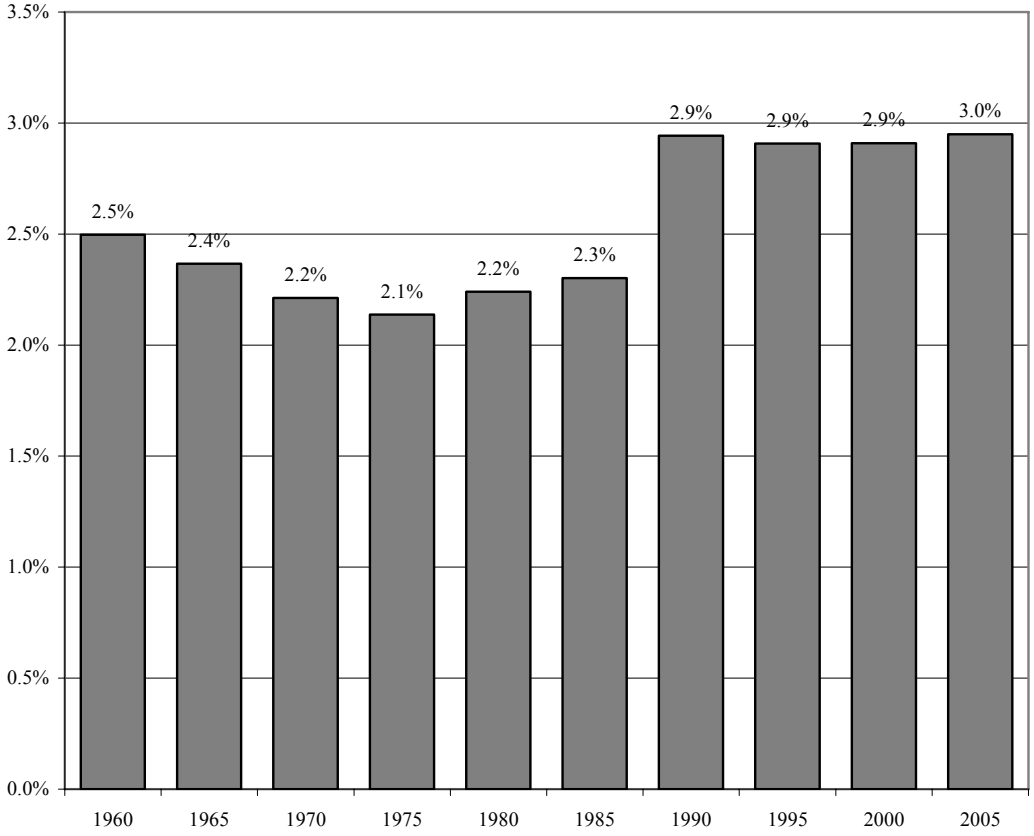
	Total stock of international migrants (millions)	Women as a % of total migrants
1960	75.5	46.8%
1965	78.4	47.1%
1970	81.3	47.2%
1975	86.8	47.4%
1980	99.3	47.2%
1985	111.0	47.2%
1990	154.9	49.0%
1995	165.1	49.3%
2000	176.7	49.7%
2005	190.6	49.6%

Source: World Migrant Stock 2005 Revision, UN Department of Economic and Social Affairs.

Although the total population of international migrants has been growing, the relationship between the number of migrants and the world's population has been more stable. Figure 6 charts the change in the stock of international migrants as a percent of total world population from 1960 to 2005. International migrants have increased relative to the size of the world's population, but this increase has been relatively modest. Since 1990, the stock of international migrants as a percent of the world's population has remained around 3 percent. This implies that international migration has tended to increase with the size of the total population – at least since the beginning of the 1990s.

[10] According to the UN Department of Economic and Social Affairs estimates of the world migrant stock, about 7.1 percent of all global migrants were refugees in 2005.

Figure 6. International migrant stock as a percentage of the world population, 1960 - 2005.



Source: World Migrant Stock 2005 Revision, UN Department of Economic and Social Affairs.

The level of international migration may seem modest – e.g. 3 percent of the total population – but it is important to bear in mind that the international migrant population is not distributed evenly across the countries of the world. In addition, countries experience uneven patterns of emigration. For countries with high levels of migration, remittances from employment can constitute a sizeable inflow of financial resources – e.g. Mexico, Ghana, and the Philippines, to name a few. In high-income countries, international migrants may be concentrated in low-paid, contingent, and unprotected forms of employment. For example, in the U.S., non-citizens account for a disproportionate share of employment as day labourers, part-time workers, and temporary hires – categories of work which tend to be significantly more precarious on average (Carré and Heintz, forthcoming). In some cases, migrant workers are caught up in highly exploitative, illegal employment arrangements. Despite these labour market disadvantages, remittances, financed through employment income and sent back to the country of origin, often constitute a sizeable component of household income, thereby reducing the risks of poverty.

Patterns of economic development and employment outcomes: country examples

In this section, we present specific country examples to highlight trends in employment and how these relate to different patterns of development and the potential for reducing income poverty. What is evident in these brief reviews is the heterogeneity

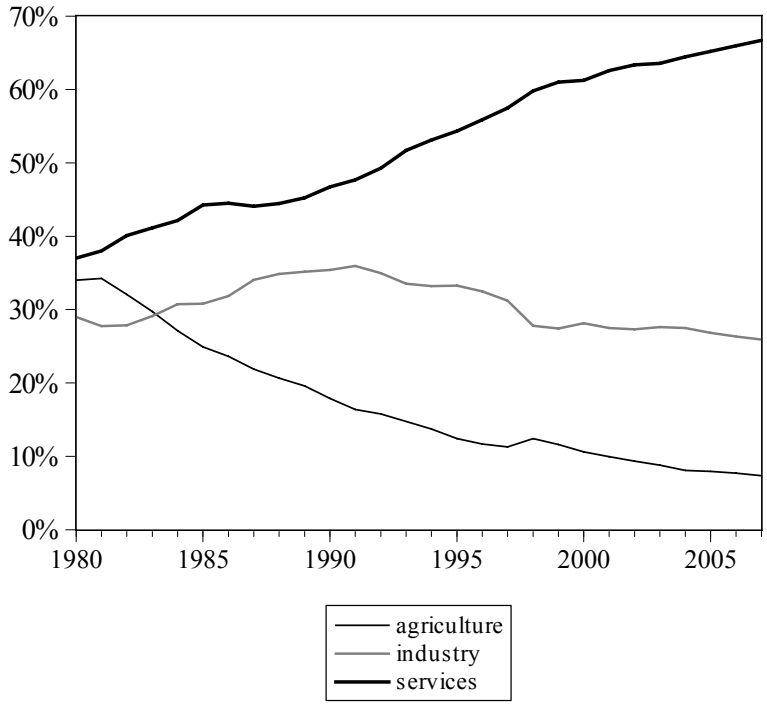
of experiences and outcomes. Moreover, the case studies suggest that we cannot expect employment to simply take care of itself. Even countries that are put forward as models of development for having achieved a version of Kaldorian industrialization (e.g. the Republic of Korea) have experienced far-reaching changes in labour market outcomes in recent years, associated with a deterioration in the average quality of employment and growing inequalities. We use four of the five types of economies identified by Ghosh (2008) to structure these examples: economies that have made the transition to manufacturing (Korea), cases of stalled industrialization (Brazil and the Philippines), cases of 'service-led growth' (India), and economies in which agriculture dominates (Kenya and Cambodia). We have already considered Ghosh's fifth category, mineral rich economies, in the more general discussion of natural resource based exports in the previous section.

Korea

The Republic of Korea provides an example of a country that has recent undergone a 'typical' pattern of industrialization in which the share of industrial employment increased over a sustained period of time. Average living standards rose, dramatically reducing the incidence of poverty. However, by the time of the East Asian financial and economic crisis, the industrial share of employment had begun to fall, and service employment increasingly dominated the labour market. The crisis had a dramatic, long-run impact on Korea's labour markets, fundamentally reshaping employment arrangements and effectively destroying any guarantee of lifetime regular employment.

Figure 7 shows the shares of employment in agriculture, industry, and services for Korea from 1980 to 2007. At the start of this period, 1980, Korea had already been undergoing a process of industrialization, and industrial employment stood at 29 percent of total employment. The share of industrial employment continued to grow until the early 1990s, when it reached a maximum at 36 percent in 1991. Services comprised a growing share of all employment, exceeding 50 percent by 1993. Throughout this entire time period, agriculture's share of total employment fell continuously. In 1980, agriculture still accounted for a third of all employment in Korea. By 2007, its share had dropped to just over 7 percent.

Figure 7. Share of employment by sector, Republic of Korea, 1980-2007.



Source: ILO Laborsta Database.

Table 6 shows average shares of both employment and output over 5 year periods from 1981 to 2006. In agriculture, the share of employment fell faster than the share of output, indicating that productivity improved in agriculture as labour was reallocated to industrial and service employment. In the industrial sectors, the share of employment increased along with the share of output in the 1980s, but in the 1990s the shares of both employment and output declined. However, the share of industrial employment declined much more rapidly than did the share of industrial output (which only fell slightly) – indicating an increase in labour productivity. The growth in productivity reduced industrial demand for labour.[11] In the services, we observe the opposite pattern – the share of employment in services increased faster than the share of service output. This indicates that productivity growth in services lagged behind the average growth in labour productivity for the economy as a whole. Slower productivity growth in services would limit the ability of the economy to replicate the same rate of improvement in employment earnings for service workers that was evident in manufacturing employment during the period of rapid industrialization.

[11] The case of Korea provides an illustration of the more general trend presented earlier in Table 1. During Korea's rapid industrialization, productivity improvements we associated with industrial employment growth, indicating that industrial output was growing fast enough to compensate for any labour displacement associated with productivity gains. By the 1990s, this relationship between industrial employment and productivity no longer held.

Table 6. Average shares of employment and output, Republic of Korea, 1980-2006.

	1981-85	1986-90	1991-95	1996-00	2001-06
	Employment Shares				
Agriculture	29.6%	20.7%	14.6%	11.5%	8.9%
Industry	29.2%	34.3%	34.2%	29.4%	27.3%
Services	41.1%	45.0%	51.2%	59.1%	63.8%
	Output Shares				
Agriculture	14.9%	10.5%	7.1%	5.3%	4.0%
Industry	38.1%	41.3%	41.8%	40.8%	39.7%
Services	46.9%	48.3%	51.1%	53.9%	56.3%

Source: ILO Laborsta Database and World Development Indicators.

After the East Asian financial crisis, the Korean labour market experienced a dramatic growth in short-term employment contracts – called 'non-regular' employment in Korea. Non-regular employment is usually defined in terms of two specific types of short-term employment: temporary employment and daily employment. Non-standard employment therefore represents an erosion of permanent employment, in which people could expect to retain a relationship with a particular employer over much of their working lives. In the Korean Economically Active Population Survey (EAPS), temporary employment refers to workers with a contract of less than one year or workers hired for a specific task. Daily employment refers to workers with a contract of less than one month.

Statistics on non-regular employment were only collected beginning in 2001. Nevertheless, estimates show that non-standard employment, broadly defined, has grown rapidly, from 17 percent of total employment in 2001 to 29 percent in 2006 (Grubb, Lee, and Tergeist, 2007).

Table 7 shows the distribution of employment across the categories of regular, temporary, and daily employment for Korea in 2005. Estimates are disaggregated by sex, size of enterprise, and rural/urban location. Average hours of work and average hourly earnings are also shown. Both average hours of work and average hourly earnings are lower in non-regular categories of employment. This implies that the earnings potential in these jobs (hours worked multiplied by hourly earnings) is significantly lower than in regular employment. Women who work in paid employment are much more likely to work in non-regular jobs than are men. Most of this employment is urban employment. Non-regular employment is not restricted to small scale enterprises, but also occurs in larger firms.

Table 7. Share of employment, weekly hours, and hourly earnings by employment status, region, and sex. South Korea, 2005.

	Distribution of employment		Weekly Hours		Hourly earnings (won)	
	M	F	M	F	M	F
Urban employment						
Regular employee	40.2%	25.0%	59	39	14,570	10,871
Small scale	1.5%	1.4%	43	31	9,589	7,942
Other enterprises	38.7%	23.6%	59	47	14,771	11,059
Temporary employee	15.2%	28.6%	33	24	7,140	6,048
Small scale	4.7%	10.2%	31	21	6,287	5,105
Other enterprises	10.4%	18.4%	34	25	7,529	6,580
Daily employee	8.2%	10.1%	25	14	6,709	4,332
Small scale	3.2%	5.4%	22	14	6,403	4,173
Other enterprises	5.0%	4.7%	23	16	6,908	4,515
Employer	9.9%	3.5%	52	54	n/a	n/a
Small scale	6.0%	2.9%	53	54	n/a	n/a
Other enterprises	3.9%	0.6%	50	52	n/a	n/a
Own-account	16.9%	12.6%	50	45	n/a	n/a
Contributing family	0.9%	9.1%	44	57	n/a	n/a
Rural employment						
Regular employee	0.9%	0.8%	40	32	9,009	7,760
Temporary employee	0.4%	0.8%	25	20	5,507	4,874
Daily employee	0.3%	0.8%	22	13	6,481	3,399
Employer	0.3%	0.1%	57	59	n/a	n/a
Own-account	6.4%	3.1%	43	39	n/a	n/a
Contributing family	0.5%	5.5%	42	43	n/a	n/a

Source: Estimates calculated from the 2005 EAPS (Economically Active Population Survey) by Miyoung An of Handong Global University in Pohong, South Korea. See Heintz (2008) for details.
Note: Small scale enterprises have fewer than 5 employees. 'Other enterprises' have 5 or more employees.

Most non-standard employment is concentrated in the service sector – including retail trade, hotels, restaurants, administrative support, and educational services. In rural areas, agricultural employment accounts for a significant share of non-standard employment. In addition, construction work comprises an important share of daily employment. Male workers dominate non-regular employment in construction (Heintz, 2008).

The restructuring of employment arrangements nuances the picture of Korea as a success story of the East Asian path to industrialization. Certainly, Korea was able to transition out of agriculture and build a highly successful industrial economy. As Korea's economy matured, service employment increasingly dominated industrial employment. Earnings improved and employees could generally count on stable, decent employment. All this changed after the East Asian crisis. The dramatic growth of non-regular employment introduced much greater instability in terms of the duration of employment relationships, hours of work, and earnings. Of course, a foundation of stable, regular employment remains. However, the restructuring of employment arrangements has redistributed economic risk to working individuals and introduced greater inequality in employment outcomes.

Brazil and the Philippines

Brazil and the Philippines both represent middle-income countries in which a rapid expansion of industrial employment and a sustained improvement in average industrial productivity have not been apparent in recent decades. In this respect, their development trajectories deviate from those of the Asian Tigers and the earlier patterns of industrial development documented for the high-income economies of North America and Western Europe. Both countries experienced periods of industrial growth, in the 1960s and 1970s, but in both cases industrial development was not sustained (Ghosh, 2008). Agricultural employment currently accounts for a relatively small, and falling, share of total employment and the expansion of the service sector has generated an increasing share of the new employment opportunities in recent years.

Table 8 presents the average sectoral distribution of employment and output in both Brazil and the Philippines from 1980 to 2006. Industrial employment has accounted for between 20 and 24 percent of total employment in Brazil and 14 to 17 percent of total employment in the Philippines over this period. In Brazil, both the share of industrial employment and the share of industrial output have declined on average over this period, although there is some indication of an upturn from 2001 to 2006. Output has fallen faster in Brazil, suggesting a reduction in average productivity in industrial activities. In the Philippines, the share of industrial employment has risen somewhat while industrial output has fallen – again, this would suggest a decline in industrial productivity. Throughout this period, employment in agricultural has declined and service employment has grown steadily.

Table 8. Average shares of employment and output, Brazil and the Philippines, 1980-2006.

	1981-85	1986-90	1991-95	1996-00	2001-06
	Brazil employment shares				
Agriculture	28.9%	24.1%	27.3%	24.0%	20.5%
Industry	23.5%	23.5%	20.2%	19.8%	21.0%
Services	47.7%	52.3%	52.5%	56.1%	58.5%
	Brazil output shares				
Agriculture	10.7%	9.6%	7.7%	5.5%	6.2%
Industry	44.9%	43.2%	36.8%	26.3%	28.7%
Services	44.4%	47.2%	55.5%	68.2%	65.1%
	Philippines employment shares				
Agriculture	51.1%	46.8%	45.1%	39.2%	37.2%
Industry	14.0%	14.9%	15.8%	16.4%	15.4%
Services	34.9%	38.3%	39.1%	44.4%	47.4%
	Philippines output shares				
Agriculture	24.0%	23.1%	21.6%	17.9%	14.9%
Industry	38.0%	34.7%	32.8%	31.7%	31.8%
Services	38.0%	42.2%	45.6%	50.4%	53.3%

Source: ILO Laborsta Database and World Development Indicators.

The lack of dynamism in the industrial sectors of Brazil and the Philippines in recent years limits the improvement in employment opportunities associated with industrialization. We have already seen that Brazil and the Philippines are experiencing relatively rapid rates of urbanization, but industrial employment has fallen short of the increase in urban labour supply. The two countries have responded to the growth in urban labour supply in somewhat different ways. In Brazil, employment in informal activities and jobs, much of which is concentrated in service activities, help to absorb

the growing labour supply. In the Philippines, informal employment also accounts for a significant share of domestic employment. However, in the Philippines another outlet for surplus labour was developed. Labour is exported via large-scale migration overseas, actively supported by government policies.

We first examine the structure of employment in Brazil. Table 9 shows the distribution of employment across agricultural and non-agricultural activities, formality status (formal or informal), and employment status category (wage employees, own-account workers, employers, and contributing family workers).[12] According to the estimates in Table 9, the share of non-agricultural informal employment is identical to the share of non-agricultural formal employment – 41 percent. Informal employment represents a sizeable, and important, component of the structure of employment in Brazil. Note that employed women are more likely to work in non-agricultural informal employment than are employed men. This is due to the large number of domestic workers in Brazil, the vast majority of whom are women.

[12] The definitions of informal employment used are based on the recommendations of the 17th International Conference of Labour Statisticians (ICLS). The precise definitions are based on the variables available in the PNAD 2007 survey data. The formal sector is defined to include all enterprises with 5 or fewer employees, own-account workers in professional occupations, and the public sector. Informal wage employment is defined to include all wage employees without a carteira de trabalho, domestic workers, and temporary agricultural employees. Informal self-employment is defined to include all self-employed individuals working outside of the formal sector.

Table 9. Structure of employment in Brazil. Distribution of employment by employment status, agricultural/non-agricultural sector, formality status, and sex, 2007.

Employment Category	Number employed			Percent of Total		
	Male	Female	TOTAL	M	F	TOT
Formal, non-agricultural						
Pvt. formal employee	16,910,679	9,519,926	26,430,605	33%	25%	30%
Public employees	3,560,926	4,601,150	8,162,076	7%	12%	9%
Formal own-account	568,888	599,940	1,168,828	1%	2%	1%
Formal employer	575,429	208,780	784,209	1%	1%	1%
Formal, agricultural						
Formal employee	147,542	16,044	163,586	0.3%	0.0%	0.2%
Formal self-employed	48,043	4,485	52,528	0.1%	0.0%	0.1%
TOTAL FORMAL	*21,811,507*	*14,950,325*	*36,761,832*	*43%*	*39%*	*41%*
Informal, non-agricultural						
Informal employee (excluding domestic)	7,532,732	4,790,937	12,323,669	15%	13%	14%
Domestic worker	409,871	6,214,878	6,624,749	1%	16%	7%
Informal own-acc't	8,721,828	5,089,100	13,810,928	17%	13%	15%
Informal employer	1,558,830	660,610	2,219,440	3%	2%	2%
Contributing family worker	432,132	829,676	1,261,808	1%	2%	1%
TOTAL INFORMAL NON-AGRIC.	*18,655,393*	*17,585,201*	*36,240,594*	*36%*	*46%*	*41%*
Informal, agricultural						
Informal employee, permanent	2,299,094	237,892	2,536,986	4%	1%	3%
Informal employee, temporary	1,879,499	301,350	2,180,849	4%	1%	2%
Informal self-empl'd	3,919,952	554,414	4,474,366	8%	1%	5%
Contributing family worker	1,189,497	1,673,175	2,862,672	2%	4%	3%
TOTAL INFORMAL AGRICULTURAL	*9,288,042*	*2,766,831*	*12,054,873*	*18%*	*7%*	*14%*
Other categories						
Prod. for own-use	1,429,282	2,384,875	3,814,157	3%	6%	4%
Other/unknown	94,825	219,397	314,222	0%	1%	0%
ALL EMPLOYED	***51,279,049***	***37,906,629***	***89,185,678***	***100%***	***100%***	***100%***

Source: Author's calculations based on PNAD 2007 data.

We also find that earnings are generally highest in formal employment and lowest in agricultural employment. Workers in non-agricultural informal employment earn more, on average, than do most agricultural workers. Table 10 summarizes average (mean) monthly earnings of employed Brazilians by employment category. Note that not all categories of informal employment have lower earnings – informal employers (i.e. the owners of unregulated enterprises) earn more on average than formal employees and formal own-account workers. In all categories of employment, women earn less than men. This is due to a combination of lower average hourly earnings and fewer hours of paid work each month. Nevertheless, the hierarchy of earnings, with non-

agricultural informal workers earning more than most agricultural workers, suggests that there will be continued economic pressures for ongoing rural-to-urban migration even if rural migrants have no chance of being employed in a formal job. Of course, some caution is warranted in drawing conclusions too hastily – these estimates do not take into account other factors such as differences in the costs of living between the rural and urban areas of Brazil.

Table 10. Average monthly earnings by employment category, Brazil, 2007.

Employment Category	Ave. Monthly Earnings (reais)		
	Male	Female	TOTAL
Formal, non-agricultural			
Pvt. formal employee	1040	809	957
Public employees	1882	1295	1550
Formal own-account	2760	1529	2125
Formal employer	5080	3503	4653
Formal, agricultural			
Formal employee	725	526	706
Formal self-employed	4500	1284	4273
TOTAL FORMAL	*1285*	*1017*	*1179*
Informal, non-agricultural			
Informal employee (excluding domestic)	669	549	622
Domestic worker	454	327	335
Informal own-acc't	915	512	766
Informal employer	2491	2038	2356
Contributing family worker	n/a	n/a	n/a
TOTAL INFORMAL NON-AGRIC.	*936*	*513*	*733*
Informal, agricultural			
Informal employee, permanent	521	425	512
Informal employee, temporary	308	304	307
Informal self-empl'd	655	336	616
Contributing family worker	n/a	n/a	n/a
TOTAL INFORMAL AGRICULTURAL	*517*	*312*	*494*
ALL EMPLOYED	***1047***	***740***	***922***

Source: Author's calculations based on PNAD 2007 data.

Table 11 presents the distribution of private non-agricultural employment across four broad economic sectors: manufacturing, construction, other industrial activities, and services. Manufacturing jobs are much more likely to be formal than are service and construction jobs. Nearly two-thirds of all service employment is informal. These patterns of employment indicate that a sizeable share of a growing urban labour supply will be absorbed into informal employment, in the absence of a proportionate growth in

formal employment opportunities. For migrants out of agriculture, this may represent an improvement in their living standards as long as the current earnings gaps persist. However, we expect that increased labour supply will tend to lower average earnings in informal employment over time, as workers crowd into the informal economy. Moreover, earnings in informal employment are much lower than earnings in formal private sector jobs. Progress in terms of poverty reduction will be far slower if informal employment expands and the returns to labour in these forms of precarious employment do not improve.

Table 11. Employment by broad economic sector and informality status, Brazil, 2007.

	Formal	Informal	Unknown	Informal as % of total
Manufacturing	7,972,286	4,909,716	20,993	38%
Construction	1,450,390	4,552,040	7,741	76%
Other industrial	374,103	145,003	304	28%
Services	15,619,571	27,684,508	283,013	64%

Source: Author's calculations based on PNAD 2007 data.

We do not have similar detailed statistics on informal employment in the Philippines. Nevertheless, the National Statistics Office does generate estimates that provide some indication of the relative size of informal employment. In April 2008, there were an estimated 10.4 million operators of informal enterprises in the Philippines (own-account workers and employers) in agricultural and non-agricultural activities.[13] This represents about 20 percent of all employment. In Brazil, informal own-account workers and employers account for 22 percent of all employment, agricultural and non-agricultural combined (Table 9 above). Based on this measure alone, the degree of informalization would appear to be roughly the same in the two countries. However, the composition of this employment is different. Agricultural employment, as a share of total employment is larger in the Philippines than in Brazil, and this is also the case in terms of informal self-employment. In the Philippines, 40 percent of informal own-account workers and employers work on farms. In Brazil, 28 percent of such employment is agricultural. Therefore, non-agricultural informal employment may be smaller in the Philippines than in Brazil.[14]

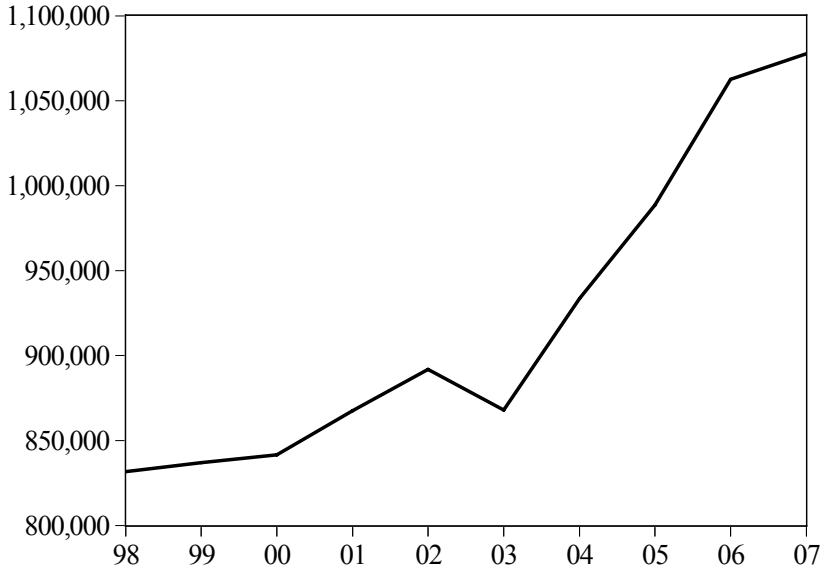
Informal employment represents only one way in which the country's labour supply is absorbed. The Philippines has responded to its labour surplus by actively promoting emigration for employment overseas. In 2007, the Philippines Overseas Employment Administration (POEA) estimated that the stock of Filipino migrants totaled 8.7 million, or about 15 percent of the working age population.[15] These economic migrants remitted over $14.4 billion, an amount equivalent to roughly 10 percent of GDP. Figure 8 shows the trends in the deployment of overseas workers from the Philippines, based on official government estimates. 'Deployed' workers include new hires and re-hires and, in this respect, are a measure of the flow of migrants, in contrast to the stock of migrant workers. There has been a steady upward trend in deployment of overseas workers from the Philippines.

[13] www.census.gov.ph/data/sectordata/2008/pr090501.htm (accessed June, 2009).

[14] We do not have estimates of informal wage employment in the Philippines, so a detailed comparison is not possible in this paper.

[15] 2007 Overseas Employment Statistics, Philippines Overseas Employment Administration.

Figure 8. Deployment of overseas workers (migrants) from the Philippines, 1998-2007.



Source: Philippines Overseas Employment Administration.

Filipino migrants work in a variety of occupations and activities. According to the POEA, some of the larger job categories include production jobs, labourers, domestic workers, cleaners, caregivers, sea-based workers, and certain skilled professions (e.g. nurses). There is a gender division in the types of work undertaken, with a large share of women working as domestic workers and caregivers and men more likely to work as production workers, sea-based workers, and labourers. Professionals and technicians represent a small share of Filipino migrants – according to POEA estimates, only 14 percent of new hires in 2007 were skilled professional and technical workers. The majority of Filipino migrants work in less skilled, lower wage, and often more precarious jobs overseas.

Research has suggested that income from remittances has had a significant impact on income poverty in the Philippines (e.g.Yang and Martínez, 2005). Therefore, there is a direct link between employment and poverty reduction with an added twist – poverty reduction comes about, not through expanding decent work in the home country, but by exporting labour services. In this regard, labour power becomes a tradable service involving the physical relocation of human beings. Nevertheless, it is important to recognize that not all households have access to income from remittances, and many continue to depend on domestic employment opportunities for their primary source of income. Therefore, the export of labour services is an imperfect substitute for improving domestic employment opportunities.

India

In India, the dynamics of employment and the structure of production do not fit neatly into traditional categories. India is unlike countries such as Brazil and the Philippines, in that India's economy has exhibited remarkable dynamism in particular sectors and enclaves in recent years – including manufacturing. However, unlike Korea, an expansion in the output of the manufacturing sector has not translated into more manufacturing employment. In its formal industrial sectors, India has experienced

'jobless growth' – in which output has expanded, but employment has stagnated or declined. A large share of India's employment is still concentrated in agrarian activities – in this respect, India appears similar to other economies dominated by agriculture. In contrast to the performance of India's rural economy, a number of high-value added service sectors have taken off in recent years – perhaps the most well-known being tradable information technology and communications services. Nevertheless, the informal, or 'unorganized' sector, continues to account for a large share of India's urban employment

Table 12 provides a general overview of the structure of employment in India in terms of broad economic sectors. The table presents separate estimates for rural and urban areas. Not surprisingly, agriculture dominates employment in rural India. Agricultural employment accounts for over 60 percent of men's rural employment and 80 percent of women's rural employment. Taken together, service activities are the second most important source of rural employment. In urban areas, service employment clearly dominates. Despite the record of jobless growth, manufacturing remains an important source of urban employment, accounting for about a quarter of employment for both employed men and employed women.

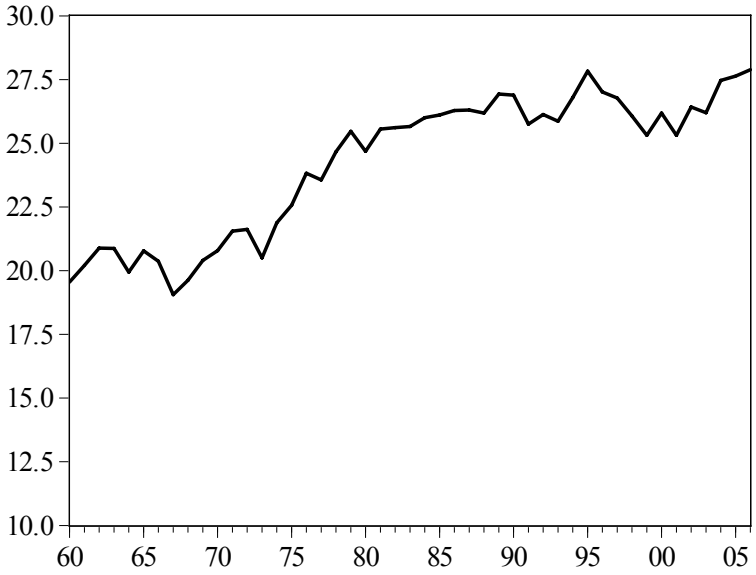
Table 12. Distribution of employment by economic sector in India, 2004.

	Male	Female	Male	Female
Agriculture	66.2%	81.4%	6.0%	14.7%
Mining	0.6%	0.4%	0.9%	0.2%
Manufacturing	8.0%	8.7%	23.6%	25.4%
Construction	6.9%	1.7%	9.3%	4.5%
Trade/hotel/restaurant	8.3%	2.8%	28.1%	13.1%
Transport/storage/communications	3.9%	0.2%	10.7%	1.6%
other services	5.9%	4.6%	20.7%	40.2%
SERVICE TOTAL	*18.1%*	*7.6%*	*59.5%*	*54.9%*
Other activity	0.2%	0.2%	0.7%	0.3%
TOTAL	**100%**	**100%**	**100%**	**100%**

Source: NSS REPORT No. 515. Employment and Unemployment Situation in India 2004-5.

As mentioned above, industrial output has comprised a rising share of GDP in India (Figure 9). In other words, industrial output has grown faster on average than the economy as a whole over the past four and a half decades. However, an industrialization of output has not led to a consistent industrialization of employment throughout this period. Recently, employment growth has stagnated in the industrial sector (Ghosh, 2008).

Figure 9. Industrial share of GDP, India, 1960-2006.



Source: World Development Indicators, 2008.

Economic growth rates have risen in India and this growth has been accompanied by dynamic developments in high value-added services – most notably the ITC sector – that has included a significant expansion of employment (albeit from a very low base). The combination of higher growth and the emergence of new service sectors has generated speculation that India is following a new economic model, one that by-passes traditional industrialization by embracing new opportunities made possible by advancements in communications and computer technology (e.g. N. Singh, 2008; Dasgupta and A. Singh, 2006).

A number of factors make a 'services-led' development path a possibility. First, services may have positive productivity impacts on other sectors of the economy, including the industrial sector (N. Singh, 2008). Therefore, growth in services can potentially support higher productivity and better standards of living in the domestic economy. Second, the service sector often has significant upstream and downstream linkages to other sectors of the economy (Tregenna, 2008). Third, the high value-added services are mostly tradable – e.g. information services. Along the traditional Kaldorian development path, growth in domestic industrial production, fueled by productivity improvements, produced the market for an expanding service sector. In a globally integrated world, industrial growth need not precede the expansion of services, if those services are tradable. Fourth, the scope for technological innovation and economies of scale may be greater for certain services than is generally assumed (N. Singh, 2008; Dasgupta and A. Singh, 2006).[16] This would allow services to usurp the role played by industry, at least in part, in the traditional Kaldorian model.

[16] For example, substantial economies of scale are likely to be prevalent in certain knowledge-based service activities, such as research, creation of innovative designs, and expanding technical know-how. The fixed costs associated with such activities are often substantial, but the marginal costs of reproducing a piece of information may be negligible. See Romer (1990) for a discussion in the context of growth models with endogenous technical change.

There are a number of difficulties associated with the conceptualization of a services-led growth path for India. Recent analysis of the drivers of growth in India suggests that the two most important sectors have been manufacturing and finance (Chandrasekhar, 2007). The ITC sector does not yet feature prominently. From an employment perspective, this pattern of growth is worrying. Industrial growth has not generated industrial employment. Despite its remarkable growth, employment in the ITC sector remains relatively small if we compare it to overall service employment in India. Also, individuals must have sufficient skills to take advantage of employment opportunities in the ITC sector (N. Singh, 2008). In the case of India, skilled workers that have been displaced from industrial employment due to the lack of employment growth are often able to move into these jobs (Ghosh, 2008). However, it is unlikely that rural-to-urban migrants or workers in the informal economy enjoy sufficient upward labour market mobility to take advantage of the opportunities in the ITC sector – limiting the poverty-reducing impact of service-led development.

Finally, service-led development that relies on the promotion of tradable services will almost certainly lead to growing inequalities among workers in service activities. Tradable services will enjoy higher returns to labour and improved opportunities while non-tradable services (services tied closely to the domestic market – including a large share of urban informal employment) may not realize equivalent advantages. Poor workers are more likely to be concentrated in non-tradable services, suggesting that these individuals and their families may be left behind under a service-led growth paradigm.

Kenya and Cambodia

Kenya and Cambodia represent two countries in which agricultural employment still dominates. Both are low-income countries in which the share of industrial employment remains quite small. In addition, both countries have a fledgling industrial base and they have enjoyed some success in recent years in penetrating new export markets – Kenya in horticultural products and Cambodia in garments. The success of these export sectors remains precarious and it is unclear that they will provide an adequate foundation, by themselves, for future industrialization.

Reliable long-run time series data on employment, derived from nationally representative surveys, is not available for Kenya and Cambodia. However, we can learn a good deal about the structure of employment by analyzing data from recent household surveys. Table 13 presents a profile of the structure of employment in Kenya. Agricultural employment accounts for 62 percent of total employment. Own-account workers and contributing family workers constitute the vast majority of agricultural employment – smallholders working on family plots and small farms. The formal, non-agricultural sector is quite small in Kenya – accounting for just about 11 percent of total employment, including public sector jobs.[17] Non-agricultural informal self-employment (including own-account workers, employers, and contributing family workers) constitutes an important set of economic activities outside of agriculture – both as a

[17] The definitions of informal employment used are based on the recommendations of the 17th International Conference of Labour Statisticians (ICLS), but have been adapted to reflect the variables available in the KIHBS survey. The formal sector is defined to include all registered enterprises. Informal wage employment is defined somewhat unusually and is based on the type of employer. Formal employers include the public sector, teachers, corporations, and formal businesses. Informal employers include individuals and those not identified as being formal institutions. Informal self-employment is defined to include all self-employed individuals working outside of the formal sector.

primary occupation and as a supplemental source of income. Service activities dominant non-agricultural informal self-employment, accounting for about 80 percent of all informal household enterprises (Pollin, Githinji, and Heintz, 2008).

Table 13. Structure of employment in Kenya. Distribution of employment by employment status, agricultural/non-agricultural sector, formality status, and sex, 2005.

	Male	Female	Total	M	F	TOT
Formal employment, non-agricultural						
Private employee	534,959	160,319	695,278	8.1%	2.6%	5.4%
Government employee	319,581	171,296	490,877	4.8%	2.8%	3.8%
Pub. Enterprise employee	43,578	16,240	59,818	0.7%	0.3%	0.5%
Employer	31,159	8,419	39,579	0.5%	0.1%	0.3%
Own-account worker	56,885	53,682	110,567	0.9%	0.9%	0.9%
Other self-employed	736.5	1071.3	1807.8	0.0%	0.0%	0.0%
Formal employment, agricultural						
Agricultural employee	166,950	83,545	250,495	2.5%	1.3%	1.9%
TOTAL FORMAL	*1,153,112*	*493,501*	*1,646,613*	*17%*	*8%*	*13%*
Informal employment, non-agricultural						
Informal employee	961,080	474,061	1,435,141	14.5%	7.6%	11.2%
Informal employer	84,382	39,280	123,662	1.3%	0.6%	1.0%
Informal own-account	683,929	640,658	1,324,587	10.3%	10.3%	10.3%
Contributing family worker	87,875	113,653	201,528	1.3%	1.8%	1.6%
Other self-employed	13,848	8,818	22,666	0.2%	0.1%	0.2%
TOTAL INFORMAL, NON-AGRIC.	*1,831,113*	*1,276,470*	*3,107,584*	*28%*	*21%*	*24%*
Informal employment, agricultural						
Employee	549,334	233,104	782,438	8.3%	3.7%	6.1%
Own-account	1,338,396	1,597,429	2,935,826	20.2%	25.7%	22.9%
Other self-employed	277,041	710,174	987,214	4.2%	11.4%	7.7%
Contributing family worker	1,384,734	1,664,953	3,049,687	20.9%	26.7%	23.7%
TOTAL INFORMAL, AGRICULTURAL	*3,549,504*	*4,205,660*	*7,755,164*	*54%*	*68%*	*60%*
TOTAL AGRICULTURAL	***3,716,455***	***4,289,205***	***8,005,659***	***56%***	***69%***	***62%***
Other/unclassified	88,543	247,510	336,054	1.3%	4.0%	2.6%
TOTAL	**6,623,009**	**6,224,213**	**12,847,222**	**100%**	**100%**	**100%**

Source: Author's calculations, based on data from the Kenya Integrated Household Budget Survey, 2005.

Only 9.2 percent of non-agricultural employment is in manufacturing activities and 6.4 percent in construction. Therefore, the vast majority of employment in Kenya is characterized by agricultural activities, on the one hand, and a service economy, with a high rate of informalization, on the other.

In many respects, the structure of employment in Cambodia is similar to that in Kenya. Table 14 presents one picture of the structure of employment. Estimates are based on the 2003/4 Cambodian Socio-Economic Survey which does not contain variables that allow us to define informal employment by applying the international

recommended definitions. Therefore, we restrict our attention to employment status categories and sectors. Agriculture accounts for 59 percent of total employment and, like Kenya, agricultural employment is comprised mostly of own-account and contributing family workers. Private wage employment comprises just 13 percent of all employment. Outside of agriculture, self-employment (as own-account and contributing family workers) is the largest category of employment.

Table 14. Structure of employment in Cambodia. Distribution of employment by employment status, agricultural/non-agricultural sector, and sex, 2003/4.

Non-agricultural employment						
Private employee	476,328	373,674	850,002	14.5%	11.3%	12.9%
Public employee	239,092	67,097	306,188	7.3%	2.0%	4.6%
Own account worker	441,030	454,373	895,403	13.5%	13.7%	13.6%
Employer	2,226	477	2,703	0.1%	0.0%	0.0%
Contributing family worker	181,853	342,387	524,240	5.5%	10.3%	7.9%
TOTAL NON-AGRICULTURAL	*1,340,529*	*1,238,008*	*2,578,536*	*41%*	*37%*	*39%*
Agricultural employment						
Employee	133,265	148,166	281,431	4.1%	4.5%	4.3%
Own account	1,055,806	628,617	1,684,423	32.2%	18.9%	25.5%
Employer	2,503	1,980	4,484	0.1%	0.1%	0.1%
Contributing family worker	693,203	1,228,410	1,921,614	21.1%	37.0%	29.1%
TOTAL AGRICULTURAL	*1,884,778*	*2,007,173*	*3,891,951*	*57%*	*60%*	*59%*
Other/unclassified	53,594	72,972	126,565	1.6%	2.2%	1.9%
TOTAL	**3,278,900**	**3,318,153**	**6,597,053**	**100%**	**100%**	**100%**

Source: Authors calculations, based on data from the Cambodia Socio-Economic Survey. 2003/4.

Table 15 presents the distribution of employment in Cambodia by economic sector. Manufacturing employment is relatively small and one sector – the garment sector – is responsible for over half of all opportunities in manufacturing. Services account for roughly a quarter of all employment opportunities (or 61 percent of non-agricultural employment). Like Kenya, agriculture and services dominate the employment structure.

Table 15. Distribution of employment by economic sector and sex, Cambodia, 2003/4.

	Male	Female	Total	M	F	TOT
Agriculture	1,884,778	2,007,173	3,891,951	57.5%	60.5%	59.0%
Fishing	155,359	49,923	205,282	4.7%	1.5%	3.1%
Manufacturing (exc. Garments)	113,238	137,435	250,673	3.5%	4.1%	3.8%
Garment sector	51,066	229,050	280,116	1.6%	6.9%	4.2%
Construction	162,277	20,695	182,973	5.0%	0.6%	2.8%
Services	846,057	795,010	1,641,067	25.8%	24.0%	24.9%
Other/unknown	64,728	77,668	142,396	2.0%	2.3%	2.2%
Total	***3,277,504***	***3,316,954***	***6,594,458***	***100%***	***100%***	***100%***

Source: Authors calculations, based on data from the Cambodia Socio-Economic Survey. 2003/4.

In Kenya, the recent growth of the horticultural sector provides an interesting example of how export performance may be linked to employment creation and poverty reduction. The primary products of the horticultural sector are fresh fruits, vegetables, and cut flowers. The vast majority of horticultural production is sold on the European market, with the U.K. currently being the most important market for fresh fruits and vegetables (Jenkins, 2005). The growth of the horticultural sector in Kenya has been propelled by the expansion in European demand for fresh, high-quality produce that is available year-round. In addition, trade preferences improve Kenya's access to the European market.

The employment effects of the rapid expansion of horticultural production include the growth in production of smallholder farms and increases in the number of workers on large commercial operations. The forms of economic organization depends on the horticultural product in question – fresh vegetables and fruits are linked to smallholder production while the production of cut flowers is organized by larger commercial enterprises. In terms of wage employment, which is concentrated in cut flowers, the majority of the workers are women (between 60 and 70 percent) and most are young – half the workforce is 20 years old or younger. Employment in the horticultural sector does appear to reduce poverty and raise living standards among households, when compared to those households that do not participate in the sector. The effect is particularly strong in the rural areas. Despite these positive employment and poverty outcomes, it should be noted that many of the jobs generated are casual and seasonal, and employment income is volatile (Jenkins, 2005).

The horticultural sector in Kenya shows how poverty-reducing employment may be linked to greater global integration. However, it is important to recognize that the number of jobs generated by the sector in the near future is likely to be relatively small compared to the employment challenge Kenya currently faces.[18]

In Cambodia, the dynamic export sector is the garment sector. The emergence of garment production as Cambodia's premier industrial activity is a recent phenomenon. In 1994, garment production accounted for less than 1 percent of GDP. The garment industry had grown to account for 16-17 percent of GDP and nearly 80 percent of the country's total exports by 2006/7. The primary markets for Cambodian garment exports are the U.S. and the E.U. Cambodia negotiated a bilateral trade agreement with the United States in 1999 which grants Cambodia preferential access to U.S. markets if producers comply with a set of core labour standards in their factories. This agreement allows Cambodia to avoid import duties of 16 percent on exports to the U.S. – giving it an important competitive edge. Cambodian garment exports to the U.S. increased significantly after the agreement came into effect in 1999 (Rodgers, 2006).

According to analysis of the Cambodia Social and Economic Survey (CSES), women account for an estimated 81 percent of all wage employment in the garment sector. In contrast, women account for 50 percent of all employed individuals in Cambodia and only 42 percent of all wage employees. Similarly, 31 percent of all women who work as wage employees in Cambodia work in the garment sector. Within-country migration is an important factor determining the labour supplied to the garment industry. Individuals from provinces with higher-than-average incidences of poverty migrate to take up jobs in the garment sector (Ministry of Commerce, 2004). An

[18] For example, a 2004 study estimated that continued growth of the fresh vegetable sector and on-going development of local processing and packaging operations may generate between 10,000 and 20,000 jobs over 5 years (Humphrey *et al*., 2004).

estimated 71 percent of all garment workers send 30 percent or more of their earnings back to the households where they live in the form of remittances (Ministry of Commerce, 2004). This suggests that, although there is a regional concentration of households with garment workers in the south of Cambodia, the existence of sizeable labour migration and remittances mean that changes in garment employment and working conditions will have a much broader impact.

The vast majority of garment firms in Cambodia are foreign-owned (Yamagata, 2006; Kolben, 2004). The rapid growth of the garment industry has depended almost exclusively on foreign direct investment (FDI). In some cases, garment firms represent a joint venture with Cambodian investors, but most firms are entirely foreign-owned. This lack of domestic embeddedness makes production more footloose and sensitive to policy changes. This could create a bias towards short-term policy responses instead of a long-run development strategy. Along similar lines, there may at times be a conflict between the need to build domestic productive capacity and the priorities of foreign investors (who may simply see Cambodia as a source of inexpensive labour and easy access to the U.S. market). These dynamics may affect the extent to which the growth of the garment sector could lead to broader industrial development.

These examples from Kenya and Cambodia underscore the difficulty of building a base of new, outward oriented economic activities in low-income economies dominated by agriculture. Both horticultural products and garments are labour intensive exports, subject to competitive pressures. External factors – such as the global economic crisis that is unfolding at the time of this writing – have a profound impact on the markets for these products and, ultimately, employment in these sectors. In addition, the scope for dynamic productivity improvements within these activities may be limited. Horticultural exports are a type of natural resource based export and, as discussed earlier, the expansion of this sector may not lead to sustained economic development. Labour-intensive assembly operations characterize Cambodian garment manufacturing, in which the scope for productivity improvements and value-addition is limited. Nevertheless, with the appropriate tools at their disposal, policymakers could adopt strategies that encourage the improvement of economic opportunities through employment-centred development. We will return to this theme later in the paper.

Employment, Poverty, and the Household: Earners and dependents

Up to this point, this paper has focused primarily on employment and labour markets. However, if we are to understand the links between employment and poverty, the analysis must be broadened. Two sets of institutions shape the employment-poverty connection: the labour market and the household. Employment status is typically defined and analyzed at the level of the individual or the job. Poverty – income poverty in particular – is most commonly defined and measured at the level of the household. Therefore, the structure of the household – in terms of the composition of dependents and earners – will directly influence how employment opportunities translate into changes in poverty outcomes. For example, the availability of even low quality and precarious employment may actually help a family stay out of poverty if the income from such jobs supplements more stable earnings of other members of the household. However, the identical job could keep a different type of family in poverty – a household with young children maintained by a single adult woman.

Labour markets and households are gendered institutions which are closely interrelated. Gender relations determine the ways in which market work and non-market

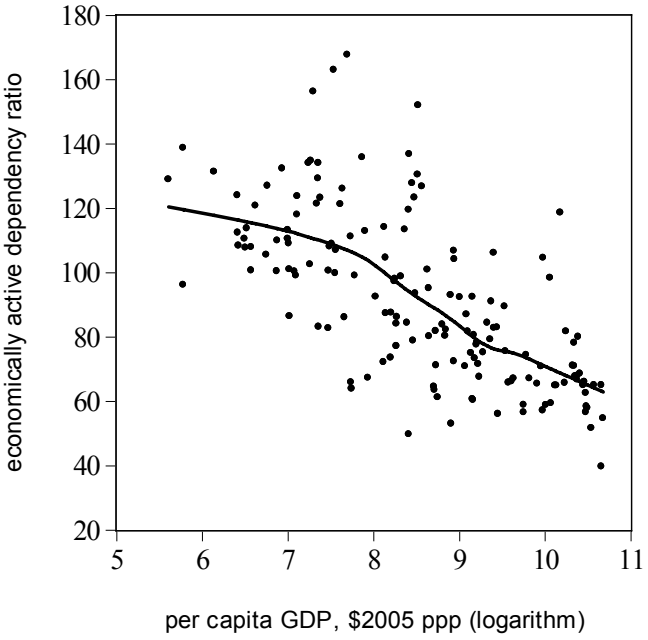
work are organized. Women often have primary responsibility for non-market (unpaid) housework and caring labour. This constrains their choices in terms of labour force participation and their access to paid employment, both formal and informal (Benería, 2003). In households with two or more potential earners, women's participation in paid employment can make a substantive difference in the household's total income, but it may involve trade-offs in terms of the unpaid, non-market work done at home.

Overall labour force participation is determined by prevailing economic conditions as well as gender norms. Households often respond to adverse economic shocks – including rising unemployment – by increasing their rate of labour force participation. For instance, studies of labour market dynamics in Latin America have shown that women's labour force participation has increased with economic crises and policies that trigger labour displacement, job instability, and higher rates of unemployment (Cerrutti, 2000; Arriagada, 1994). Note that the economic changes that cause women to enter the labour force would also be associated with a deterioration in the average quality of employment opportunities – i.e. increasing the household's reliance on informal or precarious forms of paid work. Households also may increase their labour force participation in response to long-run structural unemployment. For instance, research in South Africa has shown that women's labour force participation has responded to increases in household joblessness (Casale, 2003). Household poverty also raises the likelihood that children enter the paid labour force.

Therefore, the relationship between poverty and employment runs in both directions: poverty can increase total household employment, often in more marginal activities, particularly employment among women and children. However, it is also important to recognize that the additional employment income earned will be combined with other sources of household income and will ultimately influence the measurement of the depth and incidence of poverty.

The risk of income poverty will tend to rise as the number of dependents (those not engaged in paid employment) increases relative to the number of earners, all other factors being equal. Figure 10 presents a broad cross-country comparison of a modified dependency ratio, plotted against per capita GDP (expressed in natural logarithms). Typically, the dependency ratio is defined as the ratio of the non-working age population to the working age population. Since labour force participation rates vary so widely from country to country, we modify this basic concept and calculate a dependency ratio based on the number of dependents (aged 0 to 14 and 65 or older) and the economically active population (age 15 to 64).

Figure 10. Ratio of non-working age population (0-14 and 65+) to economically active population (age 15-64) and per capita GDP, 2006.

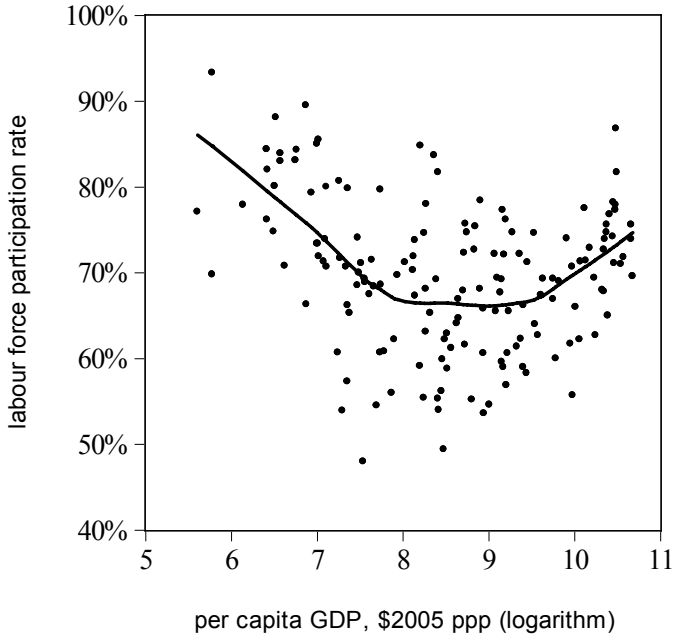


Source: World Development Indicators, 2008.
Note: Fitted line uses the nearest neighbor methodology (bandwidth=0.5).

As per capita income rises, the modified dependency ratio falls. This would imply that, at the aggregate level, poverty risk would tend to fall with economic development, not only because earnings from employment rise on average, but that each earner supports fewer dependents. The slope of the fitted line in Figure 10 becomes somewhat steeper for middle-income countries, and then flattens out slightly for high-income countries. The ratio of the non-working age population to the economically active population falls more slowly than does the standard dependency ratio (the ratio of the non-working age population to the working age population). This is because average rates of labour force participation vary with the level of development. Specifically, labour force participation rates decline with per capita income up to a point, and then begin to rise again.

Figure 11 shows the relationship between labour force participation rates and per capita GDP (again expressed as natural logarithms). As we have discussed earlier, there is a great deal of variation between countries – even at similar levels of development. However, the fitted line in Figure 11 suggests that labour force participation exhibits a "U" shape. For lower-income countries, labour force participation falls as per capita GDP rises. This relationship eventually reverses itself, with labour force rising with per capita GDP. Changes in women's labour force participation explain much of the "U" shape of Figure 11. Researchers have documented that women's labour force participation follows this pattern of first falling with increasing GDP per capita, and then rising with average income (e.g. see Goldin, 1994).

Figure 11. Labour force participation rates (men and women, aged 15 to 64) and per capita GDP, 2006.



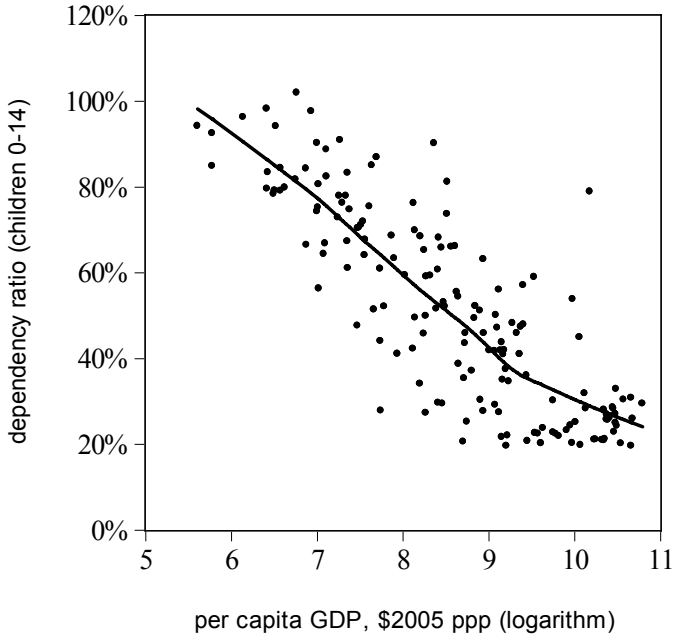
Source: World Development Indicators, 2008.
Note: Fitted line uses the nearest neighbor methodology (bandwidth=0.5).

At very low income levels, women's paid labour is needed for the household to make ends meet. As average incomes rise, women tend to withdraw from the labour market and specialize in unpaid, non-market activities. However, as per capita incomes continue to rise, women's potential earnings from paid work rise, encouraging more women to enter the labour force – to raise household incomes and to obtain greater independence. In contrast, men's labour force participation tends to decline with higher incomes as the age at which men enter the labour force increases, due in part to longer years of schooling. Men's labour force participation does not show the same pronounced "U" shape.

The composition of the dependent population (for the purposes of this general discussion defined as the non-working age population) also changes dramatically with the level of economic development. This has important implications for the relationship between employment and household poverty. We can separate dependent children (defined as children aged 0 to 14 for comparative purposes) from older adults (defined as adults 65 years old or older). Figure 12a charts the child dependency ratio (the children aged 0 to 14 to the working age population, 15 to 64) against per capita income. There is a clear downward trend – on average there are more working age individuals to take care of each child as per capita incomes rise. For low income countries, income from relatively low productivity employment, often with inadequate earnings, must support a larger number of children.[19]

[19] Dependency ratios give a useful, but limited basis for understanding the interrelationships between employment and households. For example, children may become economically active at younger ages in low income countries and, as a result, can contribute to household incomes. Children may also work in unpaid, non-market activities – supporting the household economy in this way.

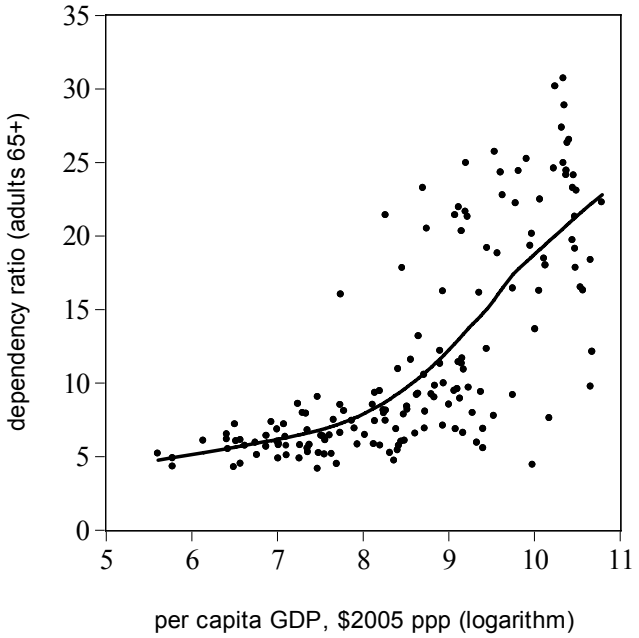
Figure 12a. Ratio of population aged 0 to 14 to the population aged 15 to 64 and per capita GDP, 2006 (ratio expressed as a percentage).



Source: World Development Indicators, 2008.
Note: Fitted line uses the nearest neighbor methodology (bandwidth=0.5).

In contrast, Figure 12b charts the dependency ratio for older adults (adults aged 65 and higher to the working age population) against per capita GDP. The relationship slopes upward. Life expectancy generally rises with per capita income and, as a result, older adults account for a growing share of the total population. In countries in which most jobs have adequate pension benefits, or public pension systems are well-developed, the income poverty risks of older adults who exit the labour force are significantly mitigated. However, in the context of an aging population, rising costs of medical treatment and other care services place pressures on income from pensions and lifetime savings. For countries in which savings and pensions are inadequate, the elderly must rely on their families and private inter-generational transfers. This can have an impact on household composition, if older adults live with their children.

Figure 12b. Ratio of population aged 65+ to the population aged 15 to 64 and per capita GDP, 2006 (ratio expressed as a percentage).



This macro-level discussion of dependency ratios can only go so far. The employment-poverty linkages depend critically on how the employed and the economically dependent population are organized into households. If the burden of supporting the dependent population is unequally distributed, the result will be higher risks of poverty for certain segments of the population. Not only would income from employment need to support a larger number of people in households with more dependents, choices in terms of employment would also be limited, due to the higher burdens of unpaid care work. To give a simple example: countries with a high number of both single-parent households and single-person households without children will exhibit very unequal patterns of poverty risk. Gender dynamics are important here: single-parent households frequently tend to be single-mother households, while single-person households without children are often men living by themselves.

In general, household size tends to decline as average incomes rise, both in cross-country comparisons, but also over time (UN, 2003; Kuznets, 1989).[20] Moreover, urban households tend to be smaller than rural households. Smaller households have fewer individuals to support, but may also have fewer potential earners to draw on in the face of unexpected employment shocks (e.g. the loss of a job or a significant drop in earnings). Again – the employment-poverty connection is mediated by the nature of the household. Just as the structure of employment changes with economic development and the policy environment, so does the structure of households. Both factors need to be taken into account if we are to understand these dynamics.

[20] UN (2003) provides regional surveys on trends in household size. According to the report's estimates based on existing data, household size has declined over time in Central and Easter Europe (p. 32, Table 5), East and Southeast Asia (p. 91, Figure XII), South America (p. 110, Table 6), and Central America and the Caribbean (p. 150, Table 17). The trend in less clear for South and Central Asian countries (p. 49, Table 7) – women's labour force participation in the countries of this region also tends to be low. The UN report does not have estimates of trends in household size for African countries.

Working poor poverty rates

One approach to examining the relationship between different types of employment and poverty outcomes is to measure the 'working poor' poverty rate. In this paper, we define the 'working poor' as those individuals who are (1) employed and (2) living in households whose income or consumption levels fall below a poverty threshold. The working poor poverty rate is simply the number of working poor in a particular employment category expressed as a percentage of the total number of people in the same employment category. This gives us one measure of poverty risk: a simple assessment of the likelihood that workers in particular types of employment will live in income or consumption poverty.

Table 16 presents working poor poverty rates for Brazil and Kenya – two of the countries we examined earlier in the paper. Some caution is warranted in interpreting the figures in Table 16. The poverty lines in Brazil and Kenya are not determined in the same way. Also – the poverty rates for Brazil are income poverty rates, based on whether a household's income falls below the poverty line. The Kenyan poverty rates are consumption poverty rates, based on total household consumption. Therefore, we can compare relative poverty risks within each of the two countries, but poverty rates should not be compared across countries.

Table 16. Working poor poverty rates by employment status, agricultural and non-agricultural sectors, informality status, and sex, Brazil and Kenya.

	Brazil (2007)			Kenya (2005)		
	Male	Female	Total	Male	Female	Total
Formal employment						
Paid employee, non-agricultural	12.0%	6.6%	9.8%	17.4%	9.9%	15.3%
… of which … Private	12.6%	6.8%	10.5%	16.9%	12.3%	15.8%
… of which … Public	9.1%	6.1%	7.4%	18.3%	7.9%	14.7%
Self-employed, non-agricultural	5.8%	7.2%	6.4%	11.0%	12.4%	11.6%
Formal agricultural	30.6%	17.2%	28.9%	31.5%	27.7%	30.2%
Informal, non-agricultural employment						
Paid employee	26.2%	24.8%	25.4%	35.3%	29.4%	33.3%
… of which … domestic workers	31.6%	31.0%	31.1%	39.0%	30.5%	32.3%
Own-account	23.2%	21.0%	22.4%	34.6%	36.9%	35.7%
Employer	5.5%	2.3%	4.6%	21.4%	24.1%	22.3%
Contributing family	34.8%	27.1%	29.8%	27.4%	33.3%	30.7%
Informal, agricultural employment						
Paid employee	56.2%	48.5%	55.4%	43.2%	51.9%	45.8%
Self-employed	44.0%	46.5%	44.3%	47.3%	46.6%	46.9%
Contributing family	63.1%	59.0%	60.7%	50.4%	47.2%	48.7%
Other employment						
Production for own-use	52.9%	50.3%	51.3%	---	---	---
ALL EMPLOYED	23.7%	20.3%	22.3%	38.9%	41.4%	40.1%

Source: Author's estimates based on PNAD, 2007 and KIHBS, 2005. The Brazilian poverty line is set at half the 2007 salário mínimo per capita (380 reais). Brazilian poverty rates are based on household

income. Kenyan poverty rates are based on household consumption – rural and urban poverty lines, based on the National Bureau of Statistics calculations were used.

In both countries, working poor poverty rates tend to be higher in agricultural employment relative to non-agricultural employment and informal employment relative to formal employment. Average poverty rates for the formal self-employed outside of agriculture are the lowest. In Brazil, poverty rates for informal employees are higher than those for informal own-account workers – self-employment in the informal sector has a lower poverty risk than informal wage employment. In Kenya, this same pattern holds true for men, but not for women. The highest risks of poverty are associated with agricultural employment. In Brazil, agricultural self-employment has lower poverty rates on average than agricultural wage employment. In Kenya, this pattern only holds true for women.

Based on the working poor poverty rates presented in Table 16, we see that employed women often have a lower average poverty rate than employed men, particularly in specific categories of employment. For example, in Kenya, women working as formal (non-agricultural) wage employees have a lower poverty risk than men in the same category of employment. However, women employed as informal own-account workers have a higher poverty risk. Similarly, in Brazil, employed women often have a lower poverty rate than employed men within identical categories of employment.

Why might employed women – who are disadvantaged in terms of employment opportunities and earnings – actually have lower poverty than men in similar categories of employment? The answer has to do with the fact that poverty status is determined at the level of the household while analysis of labour market and employment dynamics focus on the individual. As has been discussed earlier, employed women frequently have lower poverty rates on average because their contribution to family income makes the difference as to whether the household is poor or not – even when women's employment is of very low quality. Of course, this would not be true for single-earner households.

Table 17 present working poor poverty rates, but this time focus on the sector of economic activity. Again – we see the same patterns as in Table 16: informal employment has higher poverty rates than formal employment and agricultural employment exhibits the highest risk of poverty. Outside of agriculture, construction has some of the highest working poor poverty rates – a sector dominated by men's employment.

Table 17. Working poor poverty rates by broad economic sector, formality status and sex, Brazil and Kenya.

	Brazil (2007)			Kenya (2005)		
	Male	Female	Total	Male	Female	Total
Formal employment						
Agriculture	30.7%	18.1%	29.1%	32.9%	31.1%	32.2%
Manufacturing	11.4%	8.2%	10.5%	16.8%	22.9%	18.0%
Construction	20.9%	8.6%	20.2%	20.9%	40.5%	24.9%
Services	10.9%	6.3%	8.7%	15.0%	9.4%	13.1%
Informal employment						
Agriculture	51.4%	52.8%	51.9%	48.2%	47.5%	47.8%
Manufacturing	24.6%	20.6%	22.6%	39.4%	51.9%	43.2%
Construction	31.0%	29.6%	31.0%	51.9%	74.3%	56.3%
Services	20.2%	23.4%	21.9%	32.3%	32.9%	32.6%

Source: See notes to Table 15.

The interesting comparison in Table 17 is between service employment and manufacturing employment. If we restrict our attention only to formal employment, employment in services is associated with a *lower* risk of poverty than employment in manufacturing – this holds true for men and women in both Brazil and Kenya. If we instead focus only on informal employment, the same pattern holds true (the one exception being for women in Brazil, in which informal manufacturing has slightly lower poverty rates than informal services – but this may be explained by the large number of domestic workers in Brazil). This suggests that employment in services cannot be neglected when devising poverty reduction strategies. Service employment, including informal employment in services, may play a critical role in reducing the risks of poverty, depending on the composition of households, the relative precariousness of service jobs, and the impact of service employment on total household resources.

Of course, creating more formal jobs and fewer informal jobs would also have a significant impact on average poverty rates. The rate of informalization is higher in services than in manufacturing. Therefore, poverty rates for a 'typical' manufacturing job may indeed be lower than poverty rates for a 'typical' service job, since the latter is more likely to be unregulated, precarious, or lacking basic protections. In our short case study of Korea, a similar pattern holds true for 'non-regular' employment. Much of the growth in non-regular work in Korea occurred in services and construction. Nevertheless, a real challenge is to improve the quality of service employment instead of just pursuing a single objective of increasing industrial employment.

Policy priorities: putting employment back on the agenda

As has been stressed previously in this paper, economic policies to promote growth and development will only reduce poverty and mitigate inequalities if the benefits of such growth are widely shared. The improvement of employment opportunities represents one channel through which the additional income associated with faster growth can be distributed throughout the population. Labour is the one factor of production which low-income households typically command in abundance. Therefore, policies which more fully employ labour resources and which raise the returns individuals can expect to earn from their paid work create a foundation for more egalitarian development.

There is a need to reintroduce employment more forcefully in policy formulation. Employment often receives scant attention and is simply considered a by-product of economic growth. Many times inadequate employment opportunities are seen as exclusively a labour market problem – with the most common prescription being increased flexibility achieved by rolling back regulations and social protections. Major categories of employment are sidelined or ignored altogether – specifically, employment in the informal economy. When these activities are recognized, policies often focus on promoting entrepreneurship, instead of addressing the conditions under which labour is exchanged.

In this final section, we outline the elements of a framework for incorporating employment more centrally in the formulation of economic and development policy. A natural starting place is the structure of employment which already exists in a particular country. Given the variance in the structures of employment evident around the world, we expect that employment policies would likewise have to be different from one country to the next. However, as we have stressed, the structure of employment is the outcome of a process of development and change. Therefore, we also need to consider what policies would enable the transformation of the structure of employment so as to create a stronger foundation for the universal provision of decent work opportunities.

Taking the structure of employment as given, we propose three dimensions along which employment opportunities can be improved. First, policies must address problems of insufficient labour demand. In many countries, problems of open unemployment and/or wide-spread underemployment are frequently endemic. However, both unemployment and underemployment have a common root cause: lack of sufficient labour demand, recognizing that demand for labour is frequently derived from the demand for other goods and services. Economic policies, including macroeconomic management, must maintain an adequate level of labour demand.

Second, the policy framework should support improvements in the quality of existing employment opportunities. Possibilities for raising the quality of employment opportunities are often constrained by low productivity and/or the inability of workers to capture the benefits of productivity improvements. Therefore, improving the quality of employment involves raising productivity and improving labour's terms of trade Third, workers must enjoy sufficient economic mobility to take advantage of new and better opportunities when they become available. Barriers to mobility, including labour market segmentation, limit the redistributive impact of an employment-centred development strategy. A range of interventions – for example, improving access to education and skills upgrading, providing basic financial services, and reducing the asymmetries in the burden of unpaid work – are instrumental for improving labour mobility.

A first step towards creating appropriate policy responses is to identify the most significant constraints to improving employment opportunities. This requires an understanding of the structure of employment and the associated economic and institutional context. Constraints will vary widely from one country to the next and one size will not fit all. Consider the country case studies presented in this report – each of the four types of economies exhibit distinct characteristics and therefore will have different policy priorities. For example, the countries which are characterized by relatively high levels of agricultural self-employment, such as Kenya and Cambodia, will face different constraints to improving these jobs than those with a large, urbanized workforce in wage employment. Policies may also be targeted to improve conditions for

the poorest workers, and this requires knowledge of the employment arrangements in which individuals from low-income households work.

Macroeconomic policy will be essential for addressing certain constraints to improving employment. For example, restrictive monetary policies that target low inflation rates operate by reducing the growth of domestic demand. One outcome of such policies is frequently high real interest rates. In some countries, high real interest rates have attracted short-term capital inflows, leading to an over-appreciated exchange rate and a heightened risk of volatile outflows. Therefore, an alternative monetary framework may be essential for expanding domestic markets, maintaining a competitive exchange rate, and improving access to credit on affordable terms – barriers that would limit the scope for improving employment. Similarly, fiscal policies may need to be re-oriented to support greater public investment. Such investment is often essential for improving private productivity and insuring market access (e.g. through new roads and better transportation).

However, macroeconomic management represents only part of the policy toolkit. Targeted policies and institutional reforms will also be necessary. For example, limited access to credit may be primarily a result of the institutional structure of the financial sector. A more relaxed monetary stance may not make a significant difference in the absence of reforms that channel credit to activities that are currently shut out of formal financial institutions. As noted above, improved productivity may depend on very specific categories of infrastructure investment (e.g. electrification schemes for residential areas will enhance the productivity of home-based workers). Given growing urbanization, innovative urban policies will be essential to support the livelihoods of low-income workers.

Up to this point, we have framed the discussion in terms of improving employment opportunities if we take the existing structure of employment as given. However, this is clearly inadequate. The process of economic development involves the transformation of the structure of employment – not simply improving opportunities in existing activities. The long-run challenge is to move human resources into higher value-added activities and raise the average level of labour productivity. As we have reviewed at some length, the traditional Kaldorian trajectory involved the growth of industrial employment and a movement out of agriculture, facilitated by improvements in agricultural productivity. In an open economy setting with a high degree of global integration, this pathway may not be the only option. Nevertheless, the basic tenets remain valid: reallocating labour to more productive activities will contribute to economic growth and development.

A similar argument applies to unpaid labour. Women's entry into the paid labour force may support economic growth and development. However, we must be cautious when evaluating non-market work in terms of 'productivity' or 'value-added.' Such activities are undervalued and excluded from most commonly used economic indicators. Under these conditions, a movement of labour away from unpaid care and household work will almost certainly be measured as an improvement in resource allocation, at least on efficiency grounds. However, such improvements may be fictitious if the value of unpaid work is ignored or underestimated.

In addition, as discussed previously, women may also enter the labour force when household incomes come under pressure – and may be concentrated in precarious and low-productivity activities. A 'distress' reallocation of labour will not necessarily

represent a positive long-run welfare gain. Therefore, the impact of the reallocation of women's labour will depend on whether women's full productive potentially is realized in the type of paid employment available and whether policies and institutions are able to adjust to the reduction in the time dedicated to unpaid care work and other non-market activities.

In terms of transforming the structure of paid employment, the macroeconomic environment plays a crucial supporting role. New investment is needed for the transformation of productive activities. Macroeconomic policies can facilitate raising the general rate of real productive investment by maintaining a favourable investment climate (Akyüz, 2006). The elements of a favourable investment climate would include the maintenance of low and positive real interest rates, strong growth in demand (which may include a competitive real exchange rate), and low levels of volatility (e.g. managing the destabilizing effects of short-term capital flows). Controls on the international mobility of financial capital may need to be put in place to realize these policy objectives (Epstein, 2007).

A high dependence on natural resource based exports poses additional challenges to economic management to avoid 'Dutch disease' effects that would hinder the improvement of employment opportunities and the process of economic development. Revenues from natural resource endowments should be used to relax core constraints to economic development – they should not serve as a barrier to institutional development. Government revenues should not rely too heavily on exports of these commodities, limiting the developing of a diversified tax base. If other sources of revenues are cultivated, commodity exports can be used to address other constraints – such as limited foreign exchange – or to smooth out the volatility associated with commodity markets (Humphreys, Sachs, and Stiglitz, 2007).

In addition, if the resources from commodity exports are used to fund strategic investment, instead of general consumption, the bias against tradable sectors can be minimized. For example, appropriate infrastructure investments will improve competitiveness and productivity, and can help ensure that productive resources are allocated to activities with the potential to create decent employment opportunities (Sachs, 2007). Managed exchange rates, instead of market-determined ones, can also help counter the problem of real exchange rate appreciation during commodity booms. In short, the appropriate policy framework can transform a resource curse into a resource opportunity that supports sustained improvements in employment outcomes.

Most of the developed countries of Western Europe and North America and the newly industrialized countries of East Asia used targeted policies to facilitate the structural transformations associated with their varied processes of industrialization. The precise policy mix differs from one case study to the next, but they shared a number of common areas of intervention – government-directed investment in infrastructure, development finance to channel credit to specific productive activities, targeted industrial policies such as subsidies and tax credits, financial institutions that extended long-run credit for productive investment, and the pursuit of dynamic competitive advantage by nurturing the development of strategic industries and activities. A full discussion of these kinds of productive sector policies (often called industrial policies) is beyond the scope of this paper. Nevertheless, similar kinds of interventions can be used to transform the structure of employment and encourage the development, in the longer term, of a solid foundation of decent work opportunities.

What is important to note here is that these policies are incompatible with the neoliberal development strategies adopted by most countries around the world in recent decades. They cannot be pursued through a purely market-based development policy. Significant market failures are associated with each of these policy areas and relying on markets alone will not be enough to achieve the core objective of achieving an employment centred development path.

The market failures associated with these productive sector policies are diverse:

Externalities – many of the interventions discussed here have external benefits that are not fully captured by market prices or private profits. For example, investment in industrial clusters that increase the density of domestic economic linkages generates benefits that extend beyond the private benefits that the investors in a particular sector would capture.

Public goods – investments in infrastructure often involve the provision of goods and services that are "non-excludable" and "non-rival". Individuals or firms cannot be excluded from the benefits provided and the use of the good by one individual does not reduce the benefits that others receive. Under these conditions, markets will tend to under-supply such goods.

Economies of scale – many of the economic activities deemed essential for long-run economic development are characterized by economies of scale, in which marginal costs fall to low levels relative to average costs.[21] In this situation, markets may not be able to price such goods and services in order to insure an adequate supply in the long-run.

Coordination failures – credit may be rationed in financial markets when lenders and borrowers have different objectives, contracts are not costlessly enforceable, and information is not shared. Financial resources for investment in socially desirable activities will be inadequate.

Dynamic inefficiencies – short-run and long-run incentives may contradict each other. Firms may act based on short-run returns – particularly in the face of economic uncertainty – but the decisions they make may be undesirable in the long-run. Markets that respond exclusively to short-run signals will misallocate resources.

State-led interventions and non-state/non-market institutions are instrumental in solving these allocation and coordination failures of markets (Chang, 2003, 1994). This does not imply that markets have no role in the transformation of the structure of employment. On the contrary, markets provide critical information about global consumption patterns and trends, the relative scarcity of inputs, and the distribution of productive resources. Such information is necessary, but not sufficient, to determine the optimal policy mix and allocation of labour to support long-run sustained growth. Therefore, a combination of non-market interventions and the use of market-generated information is necessary to achieve an employment-friendly growth path.

Much of the work on the transformation of the structure of production or employment in the course of economic development focuses on the process of

[21] In some cases, the marginal cost may be close to zero. This can be true of 'knowledge-producing' industries: the initial cost of acquiring knowledge can be substantial, but the cost of sharing existing knowledge with a multitude of actors may be quite small in comparison.

industrialization. The reason for this is straight-forward: the countries which have achieved relatively high average living standards today have all undergone some process of industrialization in the past. With the focus on industrial production, the role of services is often overlooked. However, we have argued that a policy framework concerned with improving employment opportunities cannot ignore the service sector. For countries that are at the apex of their own process of industrialization, we expect that a maximum of 30 to 40 percent of employment will be industrial employment. An equivalent, or larger share, will be service employment. We have also seen, using Brazil and Kenya as examples, that service employment, including informal services, may be associated with lower risks of poverty than other forms of employment. Services are also an important source of paid employment for women.

It may be true that decent employment in services requires a certain level of industrialization – due to the rapid increases in average productivity associated with expanding industrial production. We do not currently have a good example of a country with a sizeable population that has achieved high per capita incomes through the growth of service employment alone. However, with increasingly open economies, new development pathways may be emerging in which services play a more fundamental role. For example, the growth of trade in services raises the possibility that industrialization elsewhere may support demand for high value-added services at home. At this point in time, these possibilities remain largely speculative. Nevertheless, the more general point – that targeted policies should also include the development of service employment as an objective – remains valid.

Despite these arguments for more emphasis on the role of service employment, some caution is warranted before pursuing a 'service-led' strategy. As we saw in the case of Korea, service jobs appear to have a greater propensity to be part-time, of short duration, or more precarious along a number of dimensions.[22] In the case of Kenya, services dominated informal employment. If service-led development simply means an expansion of these forms of employment, it will not lead to sustained improvements in living standards. In addition, lumping all services together obscures important differences. The service-led discourse in India has focused on information and telecommunications employment, but these jobs represent only a small fraction of service employment in the country. The challenge is to better understand the role of services in supporting economic development which leads to higher quality, and more stable, livelihoods over time. This represents an important area for future research.

The structure of employment is not only defined by the distribution of employment across different sectors of economic activity. The structure of employment is also defined by the employment arrangement and the degree of regulation or social protection. Often, employment and labour market policies presume a particular employment arrangement (e.g. wage employment) and predicate the formulation of policies on this one form of employment. For example, it is commonplace to find that labour law only applies to wage employment and not to the self-employed. As we have seen, informal employment is associated with lower earnings, lower productivity, and higher risks of poverty – and yet these activities are excluded, by definition, from formal social protections. Social policies and the legal framework often lag behind the emergence of innovative employment arrangements which transfer a greater share of

[22] Since many services do not exhibit the same economies of scale and do not require the same fixed capital costs as industrial employment, jobs can be more easily fragmented and broken down into part-time or short-term employment contracts. Of course, part-time and short-term labor contracts also exist in manufacturing sectors, but service sector jobs seem to be much more prone to fragmentation.

economic risk to workers (e.g. nonstandard/non-regular employment and hybrid forms that sit between wage employment and self-employment).

Therefore, part of the transformation of the structure of employment involves the extension of labour law, social protections, and regulations to make these institutions inclusive of all forms of employment. In some cases, these institutional changes may be as important as the redistribution of labour across economic sectors in improving the average quality of employment and managing risk in a way that safeguards the economic welfare of individuals who depend on employment income.

Finally, despite the potential for an employment-centred development policy to reduce poverty and support human development, it is not enough. Employment policies are not truly universal, since not all segments of the population can, or necessarily should, participate in paid employment – the disabled, the sick, children, and the elderly. As has been stressed repeatedly, unpaid labour in non-market activities is essential for human well-being, but it does not constitute employment as we have used the term in this paper. Paid employment generates income which is a means to various ends – welfare improvements, human development, and the extension of capabilities – but is not an end unto itself. These caveats do not diminish the importance of employment as a foundation for shared economic development, but complementary social policies will almost certainly be necessary.

As this concluding discussion makes clear, re-orienting policies to focus on employment as a means to reducing poverty, improving human development, and creating a foundation for more egalitarian growth requires fundamental changes in a wide range of policy areas: from macroeconomics to labour law, and from financial sector reform to the care economy. The policy details will differ from country to country. In some respects, the biggest challenge is not to flesh out the details of an employment-oriented approach to economic development. The larger challenge is marshalling the political will to realize a fundamental change in the direction of economic policy.

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