Employment Strategy Papers

On the evolution of employment structure in developing countries

By Nomaan Majid

Employment Analysis Unit
Employment Strategy Department

2005/18

ISBN 92-2-118044-1 (print)
ISBN 92-2-118045-X (web pdf)
ISSN 1811-1319

Preface

This paper explores the idea of "employment" from two related angles. First, it examines, for the non-transition developing world, trends in the structure of employment in terms of sectors where employment obtains, and sub-categories of types of employment. Second, it examines employment from an income perspective. The paper shows that the process of change in employment structure in the last decades of the twentieth century in the developing world has been varied. However, despite the regional variation, the expectation of an increased preponderance of wage labour over time is valid, and in particular in the commerce and manufacturing sectors. The decline in unpaid family work is also a significant phenomenon in the developing world, particularly with respect to agriculture, which is in accordance with broad expectations. On the other hand, it is also found that employment growth is not led by manufacturing but by commerce, a sector which shows parallel growth tendencies of both increased wage work and family labour. The illustrations of broad changes in income-employment, which are for only the last decade of the twentieth century, suggest that the developing world has seen only a modest decline in the both the absolute and relative measures of working poor, especially the worst off working poor; and it has importantly seen a much more significant gain in the absolute and relative size of the working non-poor.

Rizwanul Islam,
Director,
Employment Strategy Department

Acknowledgements

Specific thanks are due to Ajit Ghose who commented on some of the issues raised in this paper and gave ideas for improvements. Cinzia Alcidi provided patient and able statistical assistance. Duncan Campbell and Steve Kapsos read earlier versions and gave useful suggestions. The usual disclaimer applies.

Contents

Tables and figures

Annexes

1. Introduction

This paper concerns two aspects of employment in (non-transitional) developing countries. The first is concerned with the trends that are observed in the developing world on broadly classified forms of employment, and their sectoral shifts. In this context the paper describes what has happened to employment in the developing world during the period 1970-2000, using data that is available at the ILO. This descriptive exercise is broadly situated in terms of basic expectations on employment in the course of economic development. It therefore entails both sectoral classifications as well as ones pertaining to different types of employment. We establish trends at the all developing country level and examine their diversity on an income group basis, as well as by region. The second aspect of employment that is addressed in this paper concerns the pattern of changes in the income aspects of employment. Based on national poverty and employment data we construct basic categories of good employment and the working poor and examine the changes from the late 1980s to the late 1990s. The trends are examined for all developing countries, country income group classifications and regions. It is hoped that this broad overview may be useful as descriptive tool in outlining the transition from these two important aspects of employment in the developing world.

2. Employment patterns in developing countries

In discussing trends in patterns of employment in developing countries, the first point we need to make is that there are expectations on shifting patterns of employment in the development process. Given that increased economy wide data on some employment categeories is more easily available and accessible on developing countries than was the case even a decade ago, it may be useful to ask which features of the broad expectations on employment in the development process are empirically valid. Three broad expectations in this regard are summarily outlined below.

The first expectation pertains to the increasing preponderance of wage labour in a developing economy. This issue concerns the existence of the wage labour form as opposed to the expected returns to the worker in that form. Traditionally it has been argued that while wage labour is not the dominant form of labour in developing economies, but with the development of a private capitalist economy it would increase.

The second expectation concerns the declining function of the agricultural sector as a reserve for surplus labour in a typical developing economy. There is much that has been written on this topic. The shifts of employment out of agriculture can be coincident with the commercialisation of agriculture as well. One therefore not only expects a sectoral shift to other sectors which would show up as a decline in family labour in agriculture but over time one should also expect an increase in wage labour use in it.

The third expectation is on the increased importance of the manufacturing sector, as a provider of employment, as well as other sectors that support industrialisation. This

expectation is however not such a strong one as we sometimes find evidence of "jobless growth" in the manufacturing sector in developing economies.[1]

It needs to be pointed out at the outset that while expectations on changes in employment structure are based on a development process with an underlying dual-economy framework; our aim in this exercise is simply to establish whether broad expectations on change in employment structure in the course of economic development are empirically valid. The findings on trends in themselves do not tell us whether the growth process – influenced by technical change – is the mechanism which produces these changes in employment structure. The relationship between growth and changing forms of employment is a separate research issue.

A large amount of information exists on the sectoral employment categories in the ILO databases.[2] However much of this information is partial and incomplete, and constitutes an unbalanced panel of data. There are three ways in which to ascertain trends from such an information set. The first is to take periods over time and identify those countries that do have a relatively complete data set, and present country specific trends.[3] Secondly, one can take complete information for any country in any year which is available, and list country tables according to per capita gdp, so that some inferences on "transition" in employment can be made on the basis of the patterns observed in relation to national income.[4] Third, one can examine time trend coefficients by running *fixed effects* regressions on the data set controlling for *country effects*. The last procedure uses the data to maximum benefit in describing trends. We use the third procedure in this discussion, and all time trend coefficients that are reported in the tables are of this variety. The period covered is between 1970 and 2000, although over 75 per cent of the observations in the data set are for the 1980s and 1990s.

The breakdown of employment of the economically active population is a broad indicator of changing modes of employment in developing countries. The employment categories are Employees, Employers and Own Account Workers, Unpaid Family Workers and a category that is Unclassifiable[5]. Clearly there are assumptions needed for one to make inferences from the observed trends in these categories to the expectations on "employment", but that is what we have to work with. For example, one needs to assume for the "employees" category that it imperfectly corresponds to wage labour. Employers and own account workers (OAW), while covering "self employment" also have sectorally specific implications. For example, this group ought to signify self-cultivation in agriculture. In manufacturing the category must include owners of small and informal enterprises. Moreover an increase in this category of Employers/OAW, along with an increase in unpaid family workers, may well suggest increased informality. The "unclassified" category is also useful as its trend suggests the importance of more complex contractual arrangements that defy this very basic employment classificatory scheme. We have aggregated values for four broad sectors which

---

[1] Mazumdar, 2004.

[2] I am grateful to the ILO's statistical department for providing me with raw data on employment modes in developing countries.

[3] Despite the large data set we found that only 14 developing countries have a relatively continuous and complete data set over time for at least two periods in 1971, 1981 and 1991. Details of the countries are available on request.

[4] This is what Sen does when doing a similar exercise. See Sen, 1975. Chapter 3.

[5] The categories are from the International Classification by Status in Employment (ICSE-1993) which is based on what the United National Statistical Commission approved in 1958.

are agriculture, manufacturing, commerce and services.[6]

Tables 1, 2 and 3 give the signs and significance of coefficients on time trends.[7] We first comment on the trends in all developing countries, shown in column 2 of each table. Table 1 gives trends in shifts of employment in the economy in our four broadly defined sectors. The trends are as they ought to be in developing dual-economies. Agricultural employment shares in total employment are going down, while other sectors have increased their employment shares. What is however clear from the details given in Annex I is, that manufacturing is not the most important sector of employment growth. Commerce in particular is the dominant employment growth sector.[8] The second table, Table 2, examines trends in the employment category shares in total employment. It is also quite clear from the detailed tables in Annex I that the increase in "employees" is the more dominant trend, the decline in unpaid family work is the second one, and interestingly even the category self employment and own account workers tends to show a slight but statistically significant decline. The next table, Table 3, gives us trend coefficients for employment category shares but from within a sectoral perspective. What this table shows is that the only significant employment trend in agriculture is the decline in the share of unpaid family labour. On the other hand, employees show an increasing trend in manufacturing and commerce. Employers and own account workers are also on a declining trend in both manufacturing and commerce. There are no patterns in services. Some basic things are clear from these coefficients. In general the trends are not inconsistent with broad expectations from a development perspective. There is a decline in agricultural employment shares and an increase in manufacturing, service and commerce sector shares in total employment. We also find an increasing trend in "employees", and a decreasing one for unpaid family workers. Finally, this pattern of decreasing unpaid family workers is most relevant in agriculture, and that of increasing employees especially relevant for manufacturing and commerce sectors.

The patterns next examined in Tables 1 to 3 are with respect to "low-income" (column 3) and "middle-income" (column 4) country groups. In Table 1 for low-income countries we find a fall in agricultural employment shares and a rise in commerce and manufacturing employment shares. However, trends in employment category shares, in Table 2 are not clear. Trends in shares of different employment categories within sectors, in Table 3, do show some patterns. In agriculture, we find a decline in employees, as well as increases in employers or own account workers. This suggests an increased self-cultivation but not necessarily commercialisation. For manufacturing we find both an increase in employees and a decline in employers/OAW but interestingly an increase in the unclassifiable category as well. Thus manufacturing trends suggest the increased coexistence of different forms of labour. There are no employment category trends in either commerce or service sectors.

In contrast, middle-income country trends are more definite. These countries include both lower and upper middle-income countries. In Table 1, for the column on middle-income countries we do find declining shares of employment in agriculture, and rising shares in

---

[6] The sectoral aggregation is based on ISIC Rev. 2 classifications where: "Agriculture": corresponds to "Major division 1" of the ISIC Rev. 2 classification and includes agriculture, fishing, hunting and forestry; "Manufacturing": corresponds to "Major division 3" of the ISIC Rev. 2 classification; "Commerce": corresponds to "Major division 6" of the ISIC Rev 2 classification and includes Wholesale and retail trade and restaurant and hotels; and "Services": corresponds to "Major division 8" of the ISIC Rev. 2 classification and includes Financing, Insurance, Real Estate and Business services. The totals used in Annex 1, represent the addition of employment in all sectors, and therefore include sectors not explicitly demarcated in our four broad sector categories.

[7] For details see Annex I, Tables AI.1 to AI. 6.

[8] We are referring to the growth or trends in sectoral employment shares, and not levels of sectoral shares.

commerce, manufacturing and services. As far as shares of employment categories in the economy are concerned, in Table 2, we find that there is also a clear pattern with respect to employee shares increasing, and employers/OAW and unpaid family workers shares declining. Employment categories within sectors, in Table 3, show increasing trends for employees and declining trends in the unpaid family worker category in agriculture for middle-income countries. These are signs of commercialisation in agriculture. Trends for manufacturing show increasing employees, and declines in the employers/OAW category, which implies a decline in small family enterprises. The commerce sector shows increases in employees but also increases in unpaid family labour which suggests that this is where informalities may persist and coexist with wage labour. There is also a decline in employers/OAW category in this sector.

The main insights to be gained by the comparison of low and middle-income country groups are on transition. We find that sectoral changes in total employment are similar in both low and middle-income countries, but the employment category shifts are more definite in the middle-income country group. Moreover the changes in agriculture in low-income countries show declining wage work, more self cultivation and mixed contractual forms, while in middle-income countries the signs are of a fuller commercialisation process from an employment perspective as both unpaid family labour declines and employees increase. Manufacturing is not the dominant sector for employment growth in either low or middle-income countries. Manufacturing in low-income countries while displaying an increase in employees also shows an increase in the unclassified group, the picture is however clearer cut in middle-income countries where trends in unclassifiable contracts are not significant. The pattern in the commerce sector which is the main employment growth sector in both low and middle-income groups is worth noting. For starters it shows that the expectation on manufacturing leading employment growth is unwarranted in both stages of development. The commerce sector however does not show a significant pattern with respect to any employment categories in low-income countries. In middle-income countries it shows a rise in employees but also in unpaid family labour.

We now examine regional trends. To the extent they are dominated by an income group they may well reflect patterns for that group. In general we should expect a combination of patterns as countries at different income levels exist in a region. The first point to note in the Asian trends is that the employment shares of sectors, in Table 1, show a decline in agricultural employment, an increase in commerce, manufacturing and services. Moreover in Table 2 for the colum on Asia, we also find a dominant and significant increasing trend in employees, a declining trend in unpaid family workers and a decline in employers and own account workers There is however also an increase in the “unclassifiable” category. The column on Asia in Table 3 gives trend coefficients on employment category shares from within a sectoral perspective in Asia. What this shows is that while the significant employment trend in agriculture is the decline of unpaid family labour it is also the unclassified category that shows an increase. This suggests that the diversity of contractual arrangements in Asian agriculture may be on the increase. Employees show an increasing trend and employers or own account workers show a decline in both manufacturing and commerce; and trends in services are not significant. On the other hand while the employee category growth in manufacturing is high, the unclassifiable group is also increasing suggesting other hybrid forms of labour even in the manufacturing sector. The decline in employers and own account workers group in manufacturing nevertheless does suggest the decline of family firms and cottage industries. The commercial sector which is the main employment growth sector in Asia, as can be seen from detailed results in Annex I, also shows increases in the employee category and declines in the employers or own-account workers.

Sectoral employment shares in African countries, in the relevant column in Table 1, tend to show the general expected pattern of declines in agriculture, and an increasing trend in commerce, manufacturing and the service sectors. However, the only trend that is significant in any employment category, shown in the Africa column in Table 2, is for employees. There is no pattern in any other employment category or in sectoral employment category shares reported for Africa in Table 3. In a sense the employment transition profile in African countries is very basic and the only thing that can be said with some confidence is that there is a decline in agricultural employment and corresponding increases in other sectors, and that this shift is associated with rising shares of employees in the economy.

The Latin American situation, in Table 1, like other groups shows a decline in agricultural employment[9] and increases in other sectors. The economy wide employment category changes, whose signs are shown in the Latin America column in Table 2, have been small but reveal an increase in employees and a decline in unpaid workers. We also find that the within sectors trend for employment categories for the region shown in Table 3, suggest an increase in "employees" in agriculture. This is different from sectoral patterns found elsewhere and is probably due to the fact that a sizable amount of agriculture in Latin America is organised on a capital-intensive larger scale. Manufacturing on the other hand shows an increase in employees as well as unpaid family workers, thus implying some informalisation of employment. The commerce sector also shows an increase in both these categories also suggesting some tendency towards informality.

Clearly the process of change in the employment profile of the developing world has been varied. As is to be expected in low-income countries the trends are more rudimentary and generally more about economy wide sectoral employment shifts. The process of labour transfer does not show up in economy wide patterns in employment types. In the middle-income countries, however, there seem to be more definite trends with respect to employment categories not only within sectors but in an economy wide sense as well. The expectation of an increased preponderance of wage labour in a developing economy holds, particularly for manufacturing, despite the fact that for some classifications, we also find other contractual arrangements increasing as well as unpaid family labour persisting. The decline in unpaid family work is also a significant phenomenon particularly with respect to agriculture which is also in accordance with broad expectations. On the other hand, the sector which leads employment growth is not manufacturing but commerce, which within itself carries parallel employment growth tendencies of both wage work and family labour. In regional terms the Asian countries group suggests a more classical sectoral shift of employment forms even though other arrangements are also on the rise here. The African situation is only identifiable in terms of very broad sectoral trends of overall employment, and there are no sector specific patterns that are discernible for employment categories. The specificity of Latin American countries is in its generally weak trend coefficients, indications of tendencies towards informality in non-agrarian sectors and its clearer patterns on commercialisation in agriculture. In a sense we can say while broad expectations of change in employment patterns do hold, there is considerable regional diversity.

---

[9] However, the coefficients are generally much lower and the increase in manufacturing employment is much weaker here than in Asia, as can be seen from the detailed tables in Annex 1.

Table 1. Time trends in sectoral employment shares in total employment

	Developing countries	Low-income countries	Middle-income countries	Asia	Africa	Latin America
Agriculture	– ***	– ***	– ***	– ***	– ***	– ***
Manufacturing	+ ***	+ **	+ ***	+ ***	+ ***	+ ***
Commerce	+ ***	+ ***	+ ***	+ ***	+ ***	+ ***
Services	+ ***	+	+ ***	+ ***	+ ***	+ ***

Table 2. Time trends in employment category shares in total employment

	Developing countries	Low-income countries	Middle-income countries	Asia	Africa	Latin America
Employers/OAW in all sectors	– **		– **	– ***		
Employees in all sectors	+ ***		+ ***	+ ***	+ *	+ *
Unpaid families in all sectors	– ***		– ***	– ***		– *
Unclassifiable all in sectors		+ *		+ **		

Table 3. Time trends in employment category shares in total employment within sectors

	Developing countries	Low-income countries	Middle-income countries	Asia	Africa	Latin America
Agriculture						
Employers/OAW		+ *				
Employees		– **	+ **			+ **
Unpaid family workers	– **		– ***	– **		
Unclassifiable		+ *		+ **		
Manufacturing						
Employers/OAW	– ***	– ***	– ***	– ***		
Employees	+ ***	+ ***	+ ***	+ ***		+ **
Unpaid family workers						+ **
Unclassifiable		+ ***		+ ***		– *
Commerce						
Employers/OAW	– ***		– ***	– ***		– **
Employees	+ ***		+ ***	+ ***		+ *
Unpaid family workers	+ ***		+ ***			+ ***
Unclassifiable						
Services						
Employers/OAW			+ **			+ ***
Employees						
Unpaid family workers						
Unclassifiable		+ *				

Notes: Developing countries 73. Low-income countries: 27. Middle-income countries: 46. Asia: 16. Africa: 33. Latin America: 24. The *** is significant at < 1% , ** at < 5% and * at < than 10%. See Annex I, Tables AI.1 to AI.6 for details. Empty cells are not statistically significant.

3. The income dimension of employment in developing countries

The previous discussion has established broad patterns of employment that have obtained in the developing world. The impression we get from this assessment is that some important aspects of the changes in employment structure are in accordance with or at least consistent with expectations from a broad development perspective. The increase in wage labour, the decline in family labour, and the sectoral decline in agriculture are according to expectation. On the other hand, the employment growth sector not being manufacturing but commerce led is something that stands out. We find considerable regional diversity in this transition as well. The trends in patterns of employment in the developing world, however, do not tell us too much about returns to the different types of employed persons. In fact, the patterns in employment also do not tell us anything about the mechanism of change, which in the standard development framework is based on the growth in the modern sector. This brings us to the second part of our descriptive exercise. While it is difficult to say anything about returns to different types of employment and therefore about trends in well being associated with transitions in employment structure, it is possible to examine at a very general level, trends in good and bad employment respectively. This would allow us to say something about whether the changes in employment structure that were described in last section can be associated with a better employment situation in terms of income. It needs to be noted at the outset that these numbers on employment decomposition are based on national poverty and employment estimates, and therefore, as ratios, are similar to poverty rates[10].

4. The "working non-poor" and the "working poor"

The idea of a minimum acceptable reservation level in developing societies since it is not enforced can only notionally be taken to be a poverty line, which is a standard that *cannot* be met for all, in an absolutist sense. In order to empirically examine the issue of "income-employment"[11] at an aggregate level we may need to look at the category of those persons who work and who belong to households that enjoy a standard of living that is above and below the norm of what is minimally acceptable.[12] Most persons would be income-employed

---

[10] The first point to be made with regards to the "value added" in these numbers, as opposed to using poverty numbers directly, is that absolute figures of the income-employed are of some interest in themselves. The second point is that useful as it is as an illustration, it is possible to generate direct numbers for the income-employed that are not derivative of national estimates on poverty and employment. This can be done by directly examining surveys. It is a resource and time intensive aim, but still a feasible and preferable option. Thirdly, given the limitations, the present exercise does use a new panel data set on poverty.

[11] See Sen, 1975, for a detailed discussion on income aspects of employment. He also discusses the output aspect and the recognition aspect. Also see Annex II for more elaboration.

[12] Needless to say individual contractual arrangements may or may not be uniform in relation to what the households earns on a per capita basis.

in such economies, according to the survey definition of employment, although the fact of their employment would not tell us anything about what returns they enjoy. From the point of view of income-employment, it would still be interesting to know the standard of living of broad groups who are employed. One special employment category of interest from an income perspective in the developing world is that of the working poor. The working poor category should mostly capture those who work to eke out a living at a minimum level for themselves and their households. This category is assumed to exclude those who are captured as the unemployed, who in our view are likely to be *the non-working members* of the over $2 *households.* Clearly such a classification does not exclude those employed persons who are reasonably paid but who belong to extremely large households so as to render them as part of the working poor. By the same logic another employment category from an income point of view in developing countries which is of interest is that of the adequately paid, which would comprise of those persons who work and belong to households that earn more than a socially acceptable per capita income level. In relative terms of the society of which they are a part, such persons would be in "good employment" and may be called its "working non-poor". We would expect this group to increase with development. Again such a classification also does not exclude those persons who earn very low-incomes but belong to households that (due to high wages earners in them) on a per capita basis earn more than what is considered reasonably paid by the poverty norm. Ideally, if we had direct survey based information for a large number of countries, on a person's household income and expenditure as well as his employment status and that of members of his household, then it would be directly possible to count the number of workers in households classified by per capita returns.[13] One of the recommendations made in 2001 in an ILO paper when a similar developing country aggregation was made on a smaller dataset was in fact to conduct such surveys or more importantly access them in instances where such data existed.[14] It needs to be emphasized that while the illustration below constructs estimates that are based on existing information on poverty and employment on simplifying assumptions, more sophisticated estimates *are possible* to construct, since the surveys from which poverty estimates are produced often have employment characteristics, whether there be of the Living Standards Measurements Survey (LSMS) variety or full national surveys.[15]

---

[13] See Annex II, Table AII.1, for a comparison of participation rates for the poor and non-poor from selected surveys.

[14] See Majid, 2001.

[15] The Living Standards Measurement Surveys (LSMS) done by the World Bank are one source for this work. Poor specific labour force participation rates can also be taken from national data. This essentially entails accessing and then using *common samples* from (i) *household income and expenditure surveys* (or their equivalents) which have reliable information on income *and* (ii) *labour force surveys* (or their equivalents) which have reliable information on labour.

5. Estimates of employment decomposition by income: An illustration

Figures in Box 1 give two decadal snapshots of the employment decomposition and the employment-population ratios for the non-transitional developing world, low and middle-income groups as well as regional classifications. A new set of poverty rates is used here (in contrast to the original 2001 working poor estimates).[16] The figures in the charts are adjusted to be a representative number for the regional or income group classification.

For the non-transitional developing world, the worst off working poor decline from 454 million in the late 1980s to 428 million in the 1990s; but there is no change for the intermediate working poor who remain around from 557 million.[17]. The working non-poor on the other hand increased from 450 to 733 million. The global picture of developing countries therefore suggests that the share of the worst employment is likely to have declined much less than good employment is likely to have increased. It is the middle group (i.e. of the intermediate working poor) who are likely to have been least affected in absolute magnitudes. As a ratio of the population the trends are one of some decline for the working poor groups and a significant increase for the working non-poor.

It is also worth noting that in low-income countries absolute numbers of the working poor have increased and not declined, and a discernible increase has really only been in evidence for the working non-poor. In other words, the employment transition process described in the previous section has largely left poor workers untouched in low-income countries. It is in middle-income countries that the absolute number of the working poor also declines and that of the working non-poor continue to increase.

Regional trends for Asia suggest that the worst off working poor declined from 359 million to 322 million. The intermediate category of the working poor also declined slightly from 481 to 478 million. The category of relatively prosperous workers significantly increased from 312 million to 560 million. Normalized to the population the same trends of declines in both working poor categories and a noteworthy increase in working non-poor groups can be seen. The Asian situation is one in which the working poor are declining in absolute numbers as well as in relative terms (relative to population) and the working non-poor are increasing in the same way. This is an unambiguous regional economy wide improvement. The improving situation is consistent with rising wage labour and declining own account workers in both commerce and manufacturing on the one hand and a shrinking agricultural share of total employment and a declining trend in its unpaid family workers on the other.

The situation in the African countries suggests that there was an increase in the numbers of the worst off working poor, a small decline in the intermediate working poor, and the small increase in numbers of the relatively prosperous. So the main trend is one of increasing absolute numbers of the worst off working poor. This is what drives the low-income group results. When we normalize the numbers to population we see declines in all categories, and a decline in the employment to population ratio itself. While the reasons for

---

[16] Karshenas, 2004.

[17] In our view the figures on poverty used here though far from perfect, and based on the World Bank numbers are an improvement over them. The interested reader must refer to the technical reasons for this claim in Karshenas, 2004.

the latter decline need more research, it would appear that the impact of civil conflict as well as the well known health specific dimensions in some countries of the continent may have impacted employment in this way. In a sense this worsening condition is consistent with no significant pattern obtaining with respect to *within* sector employment category shifts.

The experience of Latin American countries suggests a small decline in the numbers of the worst off workers from 27 million to 25 million: a slight increase in the numbers of the intermediate working poor from 23 million to 27 million. So the working poor as a whole have increased slightly or stagnated in Latin America. On the other hand we find a clear increase of the working non-poor from 58 million to 80 million. When we look at the trend in the population normalized figures we find the worst off workers are decreasing slightly, while the intermediate category is stagnant. However the relatively better off workers are increasing as a percentage of population as well. Latin America is therefore the in-between regional case, where the change/improvement for the working poor, if there is any, is far outweighed by gains for the working non-poor. This lack of a significant decline in the worst off workers is not surprising in the light of the changes in employment structure where it was suggested there were signs of increased informality in both commerce and manufacturing.

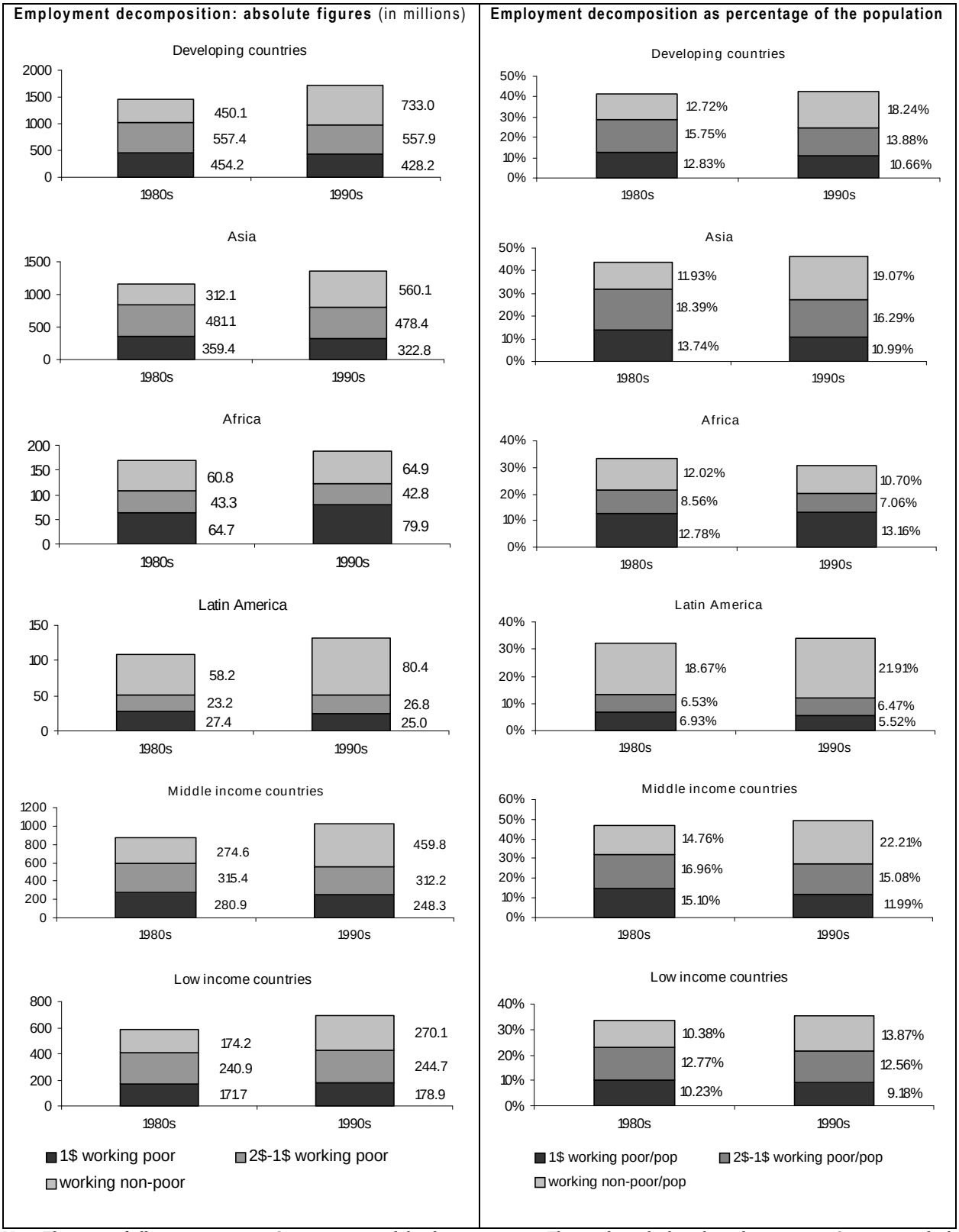
The charts in Box 1 are based on keeping countries constant across in the two periods and calculating period averages for which data exist. Our criteria for keeping a country in the list of aggregated countries was that at least one observation existed for each country in the 1980s and 1990s respectively. Then averages were taken for however many observations we had for each country in the two periods. Thus the trends are "broadly" indicative. One way to check the robustness of trends is to run fixed effects regressions with an independent variable on time controlling for country effects for all the data set. This is done in Table 4. What can be seen is that the decline in the < $1 working poor which is significant and negative in "all developing countries" is actually driven by Asia in the sense that it is in the Asian case that it is significant and negative. The increase in the working non-poor is driven by both Asia and Latin America; and the African trends are not significant.

Table 4: Sign and significance of the time coefficient in fixed effects regressions controlled for country effects for working poor I (<$1 WP), working poor II ($1-$2 WP) and the working non-poor(WNP>$2)

	<$1 WP	$1-$2 WP	WNP >$2
All non transitional developing countries (155)	- **		+ ***
Low-income countries (46)		- **	+ ***
Middle-income Countries (109)	- *		+ ***
Asia (32)	- ***	- ***	+ ***
Africa (42)			
Latin America (81)			+ ***

Note: The dependent variable is the working poor/non-poor category as a ratio of the population. The *** is significant at < 1% , ** at < 5% and * at < than 10%. Empty cells are not significant. See Annex II, Table AII.2 for details.

Box1. Employment decomposition: Absolute figures and as a ratio of population



Note: The group of all countries contains 92 non-transitional developing countries. The panel on which we have data contains 48 countries, which cover 90.7 per cent of the population of the non-transitional developing world. The population coverage is 93 per cent in Asia (8 countries); 90 per cent in Latin America (19 countries) and 80 per cent in Africa (21 countries). So the base figures are representative. The correction factor for adjustment is based on the population gaps between sample countries and the all the (non transition) countries in each group. Low-income countries are classified according the World Bank, WDI, classifications. Middle-income countries include both lower middle-income and upper middle-income countries, also on the World Bank definition. The procedure adopted for applying the adjustment was to first increase total employment in each region by same percentage as the population gap between the sample and all countries in the group and then distribute that change according to the existing distribution of employment between the three employment decomposition categories. The period figures are averages, so the 1980s are represented by 1987, 1990; and the 1990s by 1993, 1996, 1998.

Another issue that is worth illustrating in this context concerns the relationship between growth patterns and the generation of good employment. While individual country data have too few observations for a usable times series, this matter can be probed at the level of a region and income group classification. Regional elasticities of "good employment" or of the "working non-poor" with respect to gdp are given in Table 5. These coefficients are based on double logged fixed effects (controlled for country) regressions. What is quite clear here is that the greatest extent of good employment emerging with growth has been in Asia, and that the elasticity of good employment with respect to gdp is higher in low-income countries. On the other hand as far the reduction of the worst of bad employment is concerned; we find in Table 6, that while there are negative signs, the only significant one is for Asia. Thus growth has increased the working non-poor as well as reduced the working poor in Asia. On the other hand, gdp growth has only been significantly associated with increasing working non-poor without significantly affecting the working poor in Latin America and Africa.

Table 5. Fixed effects regressions with country controls on output elasticity of good employment (> $2 households)

	Dependent variable: ln_GDP total (constant 1995 US$)			
	Ln_GDP (total)	R-sq overall	R-sq within	Observations
All countries ln_goodwork (>$2)	***0.4112225	0.7844	0.4521	168
Asia ln_goodwork (>$2)	***0.8825306	0.7725	0.9355	33
Africa ln_goodwork	***0.2889767	0.8082	0.2107	48
Latin America ln_goodwork (>$2)	***0.2897407	0.8921	0.3637	87
Middle-income countries ln_goodwork (>$2)	***0.3888464	0.8224	0.4295	117
Low-income countries ln_goodwork (>$2)	***0.4962668	0.9719	0.5384	51

Note : The *** is significant at < 1%. The variables are in absolute numbers.

Table 6. Fixed effects regressions with country controls on output elasticity of bad employment (< $1 households)

	Dependent variable: ln_GDP total (constant 1995 US$)			
	Ln_GDP (total)	R-sq overall	R-sq within	Observations
All countries: ln $1- working poor (<$1)	-0.0778	0.2513	0.0194	168
Asia ln $1- working poor (<$1)	-0.46986***	0.6277	0.3781	33
Africa ln $1- working poor (<$1)	0.0901	0.0794	0.0150	48
Latin America ln $1- working poor (<$1)	0.0442	0.3959	0.0103	87
Middle-income ln $1- working poor (<$1)	-0.0565	0.5638	0.0116	117
Low-income ln $1- working poor (<$1)	-0.1967	0.5631	0.0740	51

Note : The *** is significant at < 1% . The variables are in absolute numbers

6. Conclusions

The aim of this paper has been a descriptive one. We have tried to examine trends in changing forms of employment in developing countries and to ascertain whether these patterns correspond to our broad expectation of changes in employment in the developing world. Secondly we have tried to get some idea about the income dimensions associated with these changes in "employment structure". In other words, we have tried to see whether the shifts in employment structure have accompanied improved material conditions of work.

It is clear to us that the process of change in the employment structure in the last decades of the twentieth century in the developing world has been varied. However despite the regional variation, the expectation of an increased preponderance of wage labour over time is also valid, and in particular for the commerce and manufacturing sectors. The decline in unpaid family work is also a significant phenomenon particularly with respect to agriculture which is also in accordance with broad expectations. On the other hand, we also find that the sector which leads employment growth is not manufacturing but commerce- a sector that shows parallel employment growth tendencies of both increased wage work and family labour. Some stylized and category specific conclusions may be in order.

The illustrations of broad changes in income-employment, which are for the last decade of the twentieth century suggest that the developing world has only seen a modest decline in both the absolute (and relative) measures of the < $1 working poor; and it has importantly seen a much more significant gain in the absolute (and relative) size of the >$2 working non-poor. In low-income countries this process has been asymmetrical – the working non-poor have increased and the worst off working poor have not declined. In the middle-income countries the process is more generalized, with both increasing working non-poor and declining worst-off working poor. However growth seems to increase good employment much more than reduce the worst of employment in both country income group classifications.

In regional terms the Asian countries group suggests a general sectoral shift of employment out of agriculture and expected shifts in employment categories even though other unclassifiable arrangements are also on the rise. This pattern is also accompanied by declining worst-off working poor and rising working non-poor. Moreover growth in Asia clearly and significantly increases good employment as well as reduces bad employment.

The African situation is only classifiable in terms of very rudimentary sectoral trends expected of changes in employment structure, and there are no sector specific patterns that are discernible for employment categories. The working poor have increased in Africa and the working non-poor have more or less stagnated. Growth it seems has not produced any reliable trend in either good or bad employment in Africa seen as region.

Latin American countries show low trend coefficients in general, rising informality as well wage employment in commerce and manufacturing, but reveal clearer patterns of commercialisation in agriculture. This change in employment structure is associated with stagnation in the working poor and increases in the working non-poor. Furthermore in Latin America while growth does increase good employment, it reduces the worst of employment little.

Selected Bibliography

International Labour Office Statistic website: http://laborsta.ilo.org/.

International Labour Office. 1969. *The World Employment Programme*. Report of the Director-General for the International Labour Conference. Geneva.

International Labour Office. 1970. *Towards full employment.* (A programme for Colombia). Geneva.

International Labour Office. 1971. *Matching Employment Opportunities and Expectations: A programme of Action for Ceylon*. Geneva.

International Labour Office. 1972. *Employment, incomes and inequality. A strategy for increasing productive employment in Kenya*. Geneva.

International Labour Office. 1973. *Employment and income policies for Iran*. Geneva.

Litchfield J, Caterina. A, Tabet. M, and L. Qureshy (2003), The Working Poor in Developing countries: Preliminary Analysis of Survey Data. PRU Sussex . (ILO Mimeo)

Kapsos, S. 2004. Estimating growth requirements for reducing working poverty: Can the world halve working poverty by 2015? Employment Strategy Paper 2004/14, International Labour Office, Geneva.

Karshenas, M. 2003. *Global poverty: National accounts-based estimates versus survey based estimates*, Employment Paper 2003/49, International Labour Office, Geneva.

Karshenas, M. 2004. *Global poverty estimates and the millennium goals : Towards a unified framework*, Employment Strategy Paper 2004/5, International Labour Office, Geneva.

Majid, N. 2001. The working poor in developing countries, *International Labour Review*, Vol. 140 (3), International Labour Office, Geneva.

Mazumdar, 2004, Employment Elasticity in Manufacturing, Background paper for World Employment Report 2004-05, International Labour Office, Geneva.

Sen, A. 1975. *Employment technology and development*, Oxford University Press.

World Bank, World Development Indicators, various years.

Annex I. Time trends in developing countries

The first set of figures (a) shows the distribution of employment categories across sectors. The second set (b) the distribution of sectors for a given employment category. Totals are totals of all sectors and not just the four sectors represented. The third set (c) represents employment category shares *within* sectors. The sectoral aggregations are based on ISIC Rev 2 classifications where: “Agriculture”: corresponds to "Major division 1" of the ISIC Rev 2 classification and includes agriculture, fishing, hunting and forestry; “Manufacturing”: corresponds to "Major division 3" of the ISIC Rev 2 classification; “Commerce”: corresponds to "Major division 6" of the ISIC Rev 2 classification and includes Wholesale and retail trade and restaurant and hotels; and “Services”: corresponds to "Major division 8" of the ISIC Rev 2 classification and includes Financing, Insurance, Real Estate and Business services. Some countries which had data but involved definitional changes were dropped.

Table AI.1a Developing countries: Time trends in sectoral employment shares over time

	Trend	Observations
Total agriculture relative to total employment	-0.84448***	506
Total manufacturing relative to total employment	0.10905***	491
Total commerce relative to total employment	0.3097***	508
Total services relative to total employment	0.08904***	474

Table AI.1b. Developing countries: Time trends in employment category shares within sectors

	Trend	Observations
Employers/OAW all sectors relative to total employment	-0.09007**	415
Employees all sectors relative to total employment	0.22863***	415
Unpaid families all sectors relative to total employment	-0.14536***	409
Unclassifiable all sectors relative to total employment	0.02635	396

Table AI.1c. Developing countries: Time trends in employment category shares over time

	Trend	Observations
Agriculture		
Employers/OAW relative to total employment in the sector	0.05187	370
Employees relative to total employment in the sector	0.07937	370
Unpaid families relative to total employment in the sector	-0.14631**	357
Unclassifiable relative to total employment in the sector	0.09140	167
Manufacturing		
Employers/OAW relative to total employment in the sector	-0.21203***	365
Employees relative to total employment in the sector	0.27895***	365
Unpaid families relative to total employment in the sector	-0.01911	341
Unclassifiable relative to total employment in the sector	-0.04680	154
Commerce		
Employers/OAW relative to total employment in the sector	-0.18853***	374
Employees relative to total employment in the sector	0.15341***	374
Unpaid families relative to total employment in the sector	0.09819***	367
Unclassifiable relative to total employment in the sector	-0.05857	154
Services		
Employers/OAW relative to total employment in the sector	0.05483	353
Employees relative to total employment in the sector	-0.02036	358
Unpaid families relative to total employment in the sector	0.02315	284
Unclassifiable relative to total employment in the sector	-0.03552	135

Notes: Number of countries: 73.
The *** is significant at < 1% , ** at < 5% and * at < than 10%.

Table AI.2a. Low-income countries: Time trends in sectoral employment shares over time

	Trend	Observations
Total agriculture relative to total employment	-0.44945***	112
Total manufacturing relative to total employment	0.05207**	112
Total commerce relative to total employment	0.15883***	112
Total services relative to total employment	0.00176	97

Table AI.2b. Low-income countries: Time trends in employment category shares within sectors

	Trend	Observations
Employers/OAW all sectors relative to total employment	-0.18374	86
Employees all sectors relative to total employment	0.02386	86
Unpaid families all sectors relative to total employment	0.03373	85
Unclassifiable all sectors relative to total employment	0.11518*	82

Table AI.2c. Low-income countries: Time trends in employment category shares over time

	Trend	Observations
Agriculture		
Employers/OAW relative to total employment in the sector	0.30362*	71
Employees relative to total employment in the sector	-0.40867**	71
Unpaid families relative to total employment in the sector	-0.02601	70
Unclassifiable relative to total employment in the sector	0.32541*	42
Manufacturing		
Employers/OAW relative to total employment in the sector	-0.62601***	71
Employees relative to total employment in the sector	0.65207***	71
Unpaid families relative to total employment in the sector	-0.16225	69
Unclassifiable relative to total employment in the sector	0.41178***	38
Commerce		
Employers/OAW relative to total employment in the sector	-0.01385	71
Employees relative to total employment in the sector	-0.07894	71
Unpaid families relative to total employment in the sector	0.08450	69
Unclassifiable relative to total employment in the sector	0.00960	38
Services		
Employers/OAW relative to total employment in the sector	-0.36810	69
Employees relative to total employment in the sector	0.37388	69
Unpaid families relative to total employment in the sector	-0.03386	61
Unclassifiable relative to total employment in the sector	0.06832*	30

Notes: Number of countries: 27.
The *** is significant at < 1% , ** at < 5% and * at < than 10%.

Table AI.3a. Middle-income countries: Time trends in sectoral employment shares over time

	Trend	Observations
Total agriculture relative to total employment	-0.93783***	394
Total manufacturing relative to total employment	0.12276***	379
Total commerce relative to total employment	0.34524***	396
Total services relative to total employment	0.10888***	377

Table AI.3b. Middle-income countries: Time trends in employment category shares within sectors

	Trend	Observations
Employers/OAW all sectors relative to total employment	-0.06765**	329
Employees all sectors relative to total employment	0.27763***	329
Unpaid families all sectors relative to total employment	-0.1886***	324
Unclassifiable all sectors relative to total employment	0.00644	314

Table AI.3c. Middle-income countries: Time trends in employment category shares over time

	Trend	Observations
Agriculture		
Employers/OAW relative to total employment in the sector	0.00227	299
Employees relative to total employment in the sector	0.1755**	299
Unpaid families relative to total employment in the sector	-0.17144***	287
Unclassifiable relative to total employment in the sector	0.05519	125
Manufacturing		
Employers/OAW relative to total employment in the sector	-0.13048***	294
Employees relative to total employment in the sector	0.20545***	294
Unpaid families relative to total employment in the sector	0.01316	272
Unclassifiable relative to total employment in the sector	-0.13183	116
Commerce		
Employers/OAW relative to total employment in the sector	-0.22266***	303
Employees relative to total employment in the sector	.19880***	303
Unpaid families relative to total employment in the sector	0.10094***	298
Unclassifiable relative to total employment in the sector	-0.07155	116
Services		
Employers/OAW relative to total employment in the sector	0.14241**	284
Employees relative to total employment in the sector	-0.10011	289
Unpaid families relative to total employment in the sector	0.03712	223
Unclassifiable relative to total employment in the sector	-0.05342	105

Notes: Number of countries: 46.
The *** is significant at < 1% , ** at < 5% and * at < than 10%.

Table AI.4a. Asia: Time trends in sectoral employment shares over time

	Trend	Observations
Total agriculture relative to total employment	-0.86777***	162
Total manufacturing relative to total employment	0.14131***	159
Total commerce relative to total employment	0.23864***	161
Total services relative to total employment	0.06586***	138

Table AI.4b. Asia: Time trends in employment category shares within sectors

	Trend	Observations
Employers/OAW all sectors relative to total employment	-0.19993***	139
Employees all sectors relative to total employment	0.41998***	139
Unpaid families all sectors relative to total employment	-0.30369***	138
Unclassifiable all sectors relative to total employment	0.08318**	128

Table AI.4c. Asia: Time trends in employment category shares over time

	Trend	Observations
Agriculture		
Employers/OAW relative to total employment in the sector	0.15698	125
Employees relative to total employment in the sector	-0.07428	125
Unpaid families relative to total employment in the sector	-0.17451**	124
Unclassifiable relative to total employment in the sector	0.64494**	42
Manufacturing		
Employers/OAW relative to total employment in the sector	-0.48525***	124
Employees relative to total employment in the sector	0.53136***	124
Unpaid families relative to total employment in the sector	-0.08713	123
Unclassifiable relative to total employment in the sector	0.37927***	35
Commerce		
Employers/OAW relative to total employment in the sector	-0.33719***	125
Employees relative to total employment in the sector	0.28585***	125
Unpaid families relative to total employment in the sector	0.05463	124
Unclassifiable relative to total employment in the sector	0.05675	36
Services		
Employers/OAW relative to total employment in the sector	-0.22458	115
Employees relative to total employment in the sector	0.13566	115
Unpaid families relative to total employment in the sector	0.04651	100
Unclassifiable relative to total employment in the sector	0.07844	32

Notes: Number of countries: 16
The *** is significant at < 1% , ** at < 5% and * at < than 10%.

Table AI.5a. Africa: Time trends in sectoral employment shares over time

	Trend	Observations
Total agriculture relative to total employment	-0.74743***	102
Total manufacturing relative to total employment	0.17151***	96
Total commerce relative to total employment	0.20546***	102
Total services relative to total employment	0.08001***	95

Table AI.5b. Africa: Time trends in employment category shares within sectors

	Trend	Observations
Employers/OAW all sectors relative to total employment	-0.2305757	73
Employees all sectors relative to total employment	0.26129*	73
Unpaid families all sectors relative to total employment	-0.0588548	68
Unclassifiable all sectors relative to total employment	0.23923	70

Table AI.5c. Africa: Time trends in employment category shares over time

	Trend	Observations
Agriculture		
Employers/OAW relative to total employment in the sector	0.32031	52
Employees relative to total employment in the sector	-0.01607	52
Unpaid families relative to total employment in the sector	-0.63325	48
Unclassifiable relative to total employment in the sector	-0.02811	35
Manufacturing		
Employers/OAW relative to total employment in the sector	-0.19177	53
Employees relative to total employment in the sector	0.28597	53
Unpaid families relative to total employment in the sector	-0.05408	46
Unclassifiable relative to total employment in the sector	-0.08258	36
Commerce		
Employers/OAW relative to total employment in the sector	-0.00468	53
Employees relative to total employment in the sector	-0.00396	53
Unpaid families relative to total employment in the sector	0.08626	47
Unclassifiable relative to total employment in the sector	-0.12432	36
Services		
Employers/OAW relative to total employment in the sector	0.24330	49
Employees relative to total employment in the sector	-0.20993	50
Unpaid families relative to total employment in the sector	0.00775	37
Unclassifiable relative to total employment in the sector	0.01343	26

Notes: Number of countries: 33.
The *** is significant at < 1% , ** at < 5% and * at < than 10%.

Table AI.6a. Latin America: Time trends in sectoral employment shares over time

	Trend	Observations
Total agriculture relative to total employment	-0.85815***	242
Total manufacturing relative to total employment	0.07026***	236
Total commerce relative to total employment	0.38653***	245
Total services relative to total employment	0.10573***	241

Table AI.6b. Latin America: Time trends in employment category shares within sectors

	Trend	Observations
Employers/OAW all sectors relative to total employment	0.01654	203
Employees all sectors relative to total employment	0.09563*	203
Unpaid families all sectors relative to total employment	-0.06311*	203
Unclassifiable all sectors relative to total employment	-0.06138	197

Table AI.6c. Latin America: Time trends in employment category shares over time

	Trend	Observations
Agriculture		
Employers/OAW relative to total employment in the sector	-0.05405	193
Employees relative to total employment in the sector	0.18832**	193
Unpaid families relative to total employment in the sector	-0.05881	185
Unclassifiable relative to total employment in the sector	0.00236	95
Manufacturing		
Employers/OAW relative to total employment in the sector	-0.04642	188
Employees relative to total employment in the sector	0.12171**	188
Unpaid families relative to total employment in the sector	0.03359**	172
Unclassifiable relative to total employment in the sector	-0.13609*	83
Commerce		
Employers/OAW relative to total employment in the sector	-0.12767**	196
Employees relative to total employment in the sector	0.09812*	196
Unpaid families relative to total employment in the sector	0.12615***	196
Unclassifiable relative to total employment in the sector	-0.07104	82
Services		
Employers/OAW relative to total employment in the sector	0.19734***	189
Employees relative to total employment in the sector	-0.08385	193
Unpaid families relative to total employment in the sector	0.00888	147
Unclassifiable relative to total employment in the sector	-0.07345	77

Notes: Number of countries: 24.
The *** is significant at < 1% , ** at < 5% and * at < than 10%.

Annex II. The income-decomposition of employment

Despite the large amount of literature that exists on employment and its measurement, and the fact that there has been extensive research on poverty in the last two decades, there still exist some categorical ambiguities with respect to the idea of "employment" (and unemployment) when applied to developing countries. One important dimension of this problem concerns the *link* between the concepts of employment and income. These questions were originally raised in the World Employment Programme (WEP) of the ILO, launched in 1969.[18] The WEP envisaged pilot country missions to study the causes of the employment problem in particular types of developing countries. The report of the Kenya mission (which was the most comprehensive and well known of the big missions) was the first to identify the category of the "working poor" in an urban context and recognized the importance of low-income jobs in assessing the employment situation. In general, much of this country research at least found the problem of low-income employment to be a serious one and separate from that of unemployment.[19] The WEP therefore did manage to bring to the fore the idea that the problem of employment in a situation of absent social insurance was also in part one of *inadequately paid* jobs. In retrospect, Amartya Sen's first work[20] done for the WEP provided a framework, which was not only cognizant of many "employment" concerns that had emerged in the context of the WEP country work, but also clarified some of the conceptual issues underlying these concerns. The short, the articulation of well and ill-being *within* the employment context of developing countries is not a new one. It began as early as in the 1970s and then got lost in the institutional context of the ILO for decades; in fact from the late 1970s to 2000. In 2000, the ILO began to address the same issue again, by attempting an estimate of the size of the working poor population in developing countries. Similar attempts using a larger database and with more elaborate techniques for generating missing values and forecasts have followed since.[21] Sen's aforementioned work done in 1975 for the WEP, identified three "simplified" aspects of employment pertaining to income, production, and recognition. We focus on the income dimension *only*. The "recognition" aspect, which is linked to matters of self-perception, and is in good measure psychological, is not discussed here.[22] The "output" aspect not only allows one to ask whether employment is productive in an individual as well as an economy-wide sense, but is importantly concerned with aggregate categories of employment and unemployment, and their function in understanding the analytics of the macro economy. This aspect of employment (i.e. "output-employment"), in itself a vast area, is also not addressed in this discussion[23] except as a contrast to "income-employment".

---

[18] *Report of the ILO Director-General to the International Labour Conference*, 1969, Part 1. First item on the agenda.

[19] The Kenya Mission was taken in ILO, 1972. It was led by Hans Singer. The ILO's Colombia mission (ILO, 1970) report, led by Dudley Seers, also focuses on the inadequacy of incomes as a central issue of the employment problem. The Ceylon Mission (ILO, 1971), as well as the Iran mission (ILO, 1973), also recognized low incomes as an issue pertaining to employment.

[20] Sen, 1975.

[21] Kapsos, 2004.

[22] See Sen, 1975, Chapter1, Section 1.2. Recognition is an important subjective (thus less subject to quantification) dimension of employment. It refers the individual's own view of his employment. That is of course not to say, that self-perceptions of one's work cannot not have social determinants. The idea of "recognition" is arguably related to Sen's subsequent (Aristotlean) notion of functionings – which is essentially about things a person may *value* doing –which the author developed along with the other organizing concepts (concepts of freedom, pluralism and incompleteness) for his capability approach (Sen, 1992, Chapter 3).

[23] The output aspect of employment needs to be looked at separately in the developing country context. In our view total employment from an output perspective, cannot be seen as an indicator of "productive" employment because it includes the disguised unemployed in an output sense. This is precisely the error that is committed when economy-wide "employment elasticities" of output are calculated for developing countries and inferences on "employment intensities" of growth are made. The focus of "output-employment" in the developing country context however not only has to be broad brush but also cannot be economy wide. It must be sector specific (e.g. for manufacturing or related modern sectors), where we have defensible expectations on overall sector productivity. There are issues of classification here too, since parts of the services sectors which do add to national income can only be quantified in terms of additional income as opposed to additional output. As far as unemployment from an output perspective is concerned, there are severe practical problems as well. Estimating the unemployed from the productive or output point of view – in the absence of a welfare system which could do some of the self selection for us – is very difficult because of the counterfactuals involved in survey questions to determine whether or not an income-employed person is in "disguised " (output) unemployment. We are therefore likely to pick up only the "revealed" income-unemployed in surveys.

Our starting point is to state that poor persons work and they are a part of the labour force, which is income-employed. What we do not know is the extent to which they participate in the labour market, and definitions notwithstanding, the extent to which they are employed.[24] Ideally in order to estimate the working poor we would need to use national surveys that give us information not only on household income and expenditure (the basis for poverty estimates) but also employment characteristics of household members (the basis of labour force surveys. While such information may be available from Living Standards Measurement Surveys, as well as common samples between household income and expenditure surveys and labour force surveys from National bureaus of statistics, this would entail country specific effort in data base building.

The main problem with most working poor estimates built from combining existing data on employment and poverty is that these require "guesswork" on parameters necessary for the proper calculation for the category. Such a calculation of the working poor is based on manipulating an identity, which includes some known and quantified variables. Let us use the following notation:

$P_{r\$1}'$ = Poverty head count rate of person at or below $1 poverty line.

$P_{<\$1}$= Total population of the $1 or below poor;

P_t = Total population

$P_{r\$1}' = P_{<\$1} / P_t$

Lp = Labour force of poor;
Ep = Employed in the poor;
Up = Unemployed in the poor;

Lt = Total labour force;
Et = All Employed ;
Ut = All Unemployed ;

Then by definition we have

Lt = Et + Ut
Lp = Ep+ Up

We assume that Up → 0

If one is making the assumption of negligible unemployment amongst the poor then it makes sense to assume that the ratio of the *poor employed* to *total employed* is same as that of the poor population to the total population.[25] That is:

$Ep/ Et = P_{<\$1} / P_t$

Then we can simply write Ep or the working poor :

$WP_{<\$1} = Ep = Et * (P_{<\$1} / P_t) = P_{r\$1}' * Et$

---

[24] See Table A1 below.

[25]For the initial estimates of the working poor in 2001, we worked on the convenient assumption that the ratio of the *poor labour force* to the *total labour force* was equal to the ratio of the poor population to the total population. In other words the share of poor persons in the labour force is equal to the headcount ratio. We assumed that pure unemployment was likely to be largely a non-poor phenomenon. The measure of working poor, which results from this formulation, can be seen as an upper estimate. This is something that was not so obvious when this estimate was made in 2000-2001, in Majid, 2001. The reason is the following. The numerator of the poverty rate (i.e. the poor) is based on a population of those persons who by assumption do not include the pure unemployed. To multiply this figure by the total labour force, which *includes the unemployed*, means, reducing the *all* labour force by a percentage based on the poverty rate. The calculation may therefore entail an adjustment bias.

This is a lower bound of the working poor as it consistently entails the assumption that pure unemployment in the poor is negligible. This of course leaves the unemployed as a floating category of persons who are not working. The other advantage of this number is that, it is possible to do an income based decomposition of employment based on it.

With assumptions made thus far, it is straightforward to extend this reasoning to split employment in to further income groups. We can assume cut off *income lines* that include what we can define as the "intermediate working poor" and the "working non-poor" respectively in a country, and to adjust the figure of the employed population by these ratios. Thus if:

$P_{r<\$2}' = P_{<\$2} / P_t$ = Poverty headcount rate for the $2 household population
$P_{r\$2>}' = P_{>\$2} / P_t$ = which is $(1- P_{r<\$2}')$ = Prosperity headcount rate for the over $2 household population
$P_{<\$2}$= Total population of the $2 or below
$P_{>\$2}$= Total population of the $2 or greater

Then for the less than the $2 line, we can estimate the population of the working poor belonging to households at $2 or less per capita:

$$WP_{<\$2} = P_{r\$2}' * E$$

The numbers of employed persons in between the $2 and $1 groups, the intermediary poor, would be those earners who belong to households whose per capita income falls between $1 and $2 lines:

$$WP_{\$2-\$1} = (WP_{<\$2} - WP_{<\$1}) * E$$

Finally for the greater than $2 line, working non-poor:

$$WP_{\$2>} = P_{r\$2>}' * E$$

Therefore we have the employment identity:

$$E = WP_{\$2>} + WP_{\$2-\$1} + WP_{<\$1}$$

The unemployed by our assumption are mostly likely to be dependents in the households to which the above $2 employed belong.

In general for each group within the income cut off lines, we can calculate:

$$\mathbf{3}WPz_{i}\,;\quad {}_{i}=1^{n}$$

Here z is the income line or range chosen and $_i$ are the countries from 1 to n.

Work has been done, also by the ILO, on the producing a larger panel of poverty rates. Poverty data have clearly improved over time and increased in sophistication with respect to earlier estimates. Moreover we also have a higher number of surveys and thus estimates of poverty to draw upon than those available in 2000-2001. There is however serious debate on the poverty estimates. However we hold that that there are improvements in one of the base numbers (poverty rate)[26] used for the present calculation as compared to the 2001 estimates.[27]

The problem of the lack of independent poor specific estimates of labour force participation remains central, although there has been some preliminary work done to examine the participation characteristics of the working poor.[28] If such estimates were accessible on scale we would have direct ways of assessing population of the working poor. There have been some attempts at looking at participation rates of the poor. The findings on differences between participation rates of the poor and non-poor from primary surveys are not too conclusive.

---

[26] Karshenas, 2004.
[27] Majid, 2001.
[28] Litchfield et al., 2003.

We have found that the poor are likely to have *different* LFPRs than the non-poor. The reasons for this are numerous: for example it is known that the poor are likely to have lower levels of human capital (both health and education), weaker access to markets (for labour, inputs and goods), thus their participation in at least the formal sector labour force may be constrained. On the other hand the absence of unemployment insurance, pensions and other forms of income support in many developing countries suggest that the poor are less likely to choose long term unemployment, they will on this account exhibit higher labour force participation rates than the non-poor. The Table below shows the labour force participation rates of the poor and non-poor in each of the surveys (LSMS surveys and NSS for India). Countries that have high LFPRS of the non-poor population are likely to also have relatively high LFPRs among the poor. But the evidence from this small sub-sample of 14 country data sets that on whether the poor LFPRs are systematically different or higher than those of the non-poor is mixed. Hence although it can be concluded that countries with higher LFPRs of the non-poor have relatively high (compared to other countries in the analysis) LFPRs of the poor, there is no strong evidence to suggest that the poor and non-poor have equal LFPRS or that LFPRs are higher or lower among the poor. There seems to be no significant correlation between the labour force poverty headcounts and either of the LFPRs. The correlation coefficients between the labour force poverty headcount and the poor LFPR and the non-poor LFPR are 0.1249 and –0.0271, neither of which are statistically significant different from zero. There is some correlation between the LFPRs of the poor and non-poor is 0.6349, which is statistically significant with a prob value of 0.0147.[29] Our attempts at predicting participation rates for the poor were therefore unsuccessful.

Table AII. 1. Survey-based direct estimates: Labour force participation rates among the poor and non-poor for selected countries

Country	Year	Poverty Headcount in Survey (%)	LFPR (Total)	LFPR of Poor	LFPR of Non-Poor
Ecuador	1994	31.47	0.662	0.640	0.672
Ecuador	1995	31.67	0.678	0.681	0.674
Nicaragua	1993	53.03	0.511	0.499	0.521
Nicaragua	1998	42.83	0.57	0.552	0.584
Panama	1997	31.44	0.594	0.549	0.616
Peru	1994	52.89	0.592	0.618	0.566
Ghana	1992	66.95	0.676	0.685	0.661
Ghana	1998	33.15	0.683	0.604	0.719
South Africa	1993	42.33	0.628	0.525	0.703
Zambia	1998	77.23	0.576	0.583	0.561
India	1993/4	33.72	0.539	0.561	0.526
Pakistan	1991	27.75	0.487	0.552	0.462
Vietnam	1992/3	56.70	0.769	0.799	0.734
Vietnam	1997/8	36.83	0.732	0.785	0.704

Notes: Poverty Headcount in this table is proportion of labour force that is poor.
Source: Litchfield et al (2003)- (mimeo)

[29] That is the correlation coefficient is statistically significantly different from zero at the 5 per cent level.

Data used in the estimates in this paper is the following. The poverty rates have been generated by Karshenas (Karshenas, 2003 and 2004); in work done for the poverty programme in the Employment Strategy Department of the ILO[30]. The population estimates are from United Nations. The data for employment is based on ILO's LABOURSTA data for employment, unemployment and labour force. For the purposes of the charts presented in the text, the data has been periodized as averages for the late 1980s and 1990s. This has been done by taking averages for values that were available in each decade. Clearly the 1980s average is for the late 1980s, and the one for the 1990s is for the whole decade. Time trends in our data set for the income employment decomposition are given below. The sign and significance of the coefficients has been reported in Table 3 in the text.

Table AII.2: Time coefficient on fixed effects regressions controlled for country effects for working poor I (<$1 WP), working poor II ($1-$2 WP) and the working non-poor (WNP >$2)

	All non transitional developing countries			Asia		
	<$1 WP	$1-$2 WP	WNP >$2	<$1 WP	$1-$2 WP	WNP >$2
Time	-0.2099	-0.1348	1.3522	-0.9580	-0.8562	2.6710
	0.10281**	-0.0926	0.19638***	0.16799***	0.19937***	0.33114***
Number of observations	155	155	155	32	32	32
Prob> F	0.0435	0.1481	0.0000	0.0000	0.0002	0.0000
R-squared within	0.0341	0.0176	0.2866	0.5754	0.4345	0.7305
	Africa			Latin America		
	<$1 WP	$1-$2 WP	WNP >$2	<$1 WP	$1-$2 WP	WNP >$2
Time	0.1563	-0.2020	-0.1491	-0.0401	0.1721	1.3446
	0.2370	0.1779	0.3264	0.1289	0.1102	0.2628***
Number of observations	42	42	42	81	81	81
Prob> F	0.5148	0.2654	0.6513	0.7566	0.1231	0.0000
R-squared within	0.2370	0.0426	0.0071	0.0015	0.0373	0.2935
	Low-income Countries			Middle-income Countries		
	<$1 WP	$1-$2 WP	WNP >$2	<$1 WP	$1-$2 WP	WNP >$2
Time	-0.2093	-0.4081	1.0077	-0.2101	-0.0397	1.4721
	0.2184	0.195217**	0.28623***	0.116173*	0.1029	0.2473032***
Number of observations	46	46	46	109	109	109
Prob> F	0.3448	0.0443	0.0013	0.0741	0.7010	0.0000
R-squared within	0.0271	0.1170	0.2730	0.0375	0.0018	0.2967

Note: The dependent variable is the working poor/non-poor category as a ratio of the population. The figures below the Time coefficient are robust standard errors. The *** is significant at < 1% , ** at < 5% and * at < than 10%.

There are 48 countries presented in Table AII.3 below. 12 countries of these 48 countries required us to generate employment data for particular years. These 12 countries are Botswana, Dominican Republic, Kenya, Lesotho, Mali, Mexico, Nepal, Niger, Tanzania, Uganda, Zambia and Zimbabwe and are shaded in the Table. For 6 countries employment data are totally missing. These are Gambia, Jordan, Mauritania, Mozambique, Rwanda, and Sierra Leone and are therefore omitted.

[30] Poverty estimation is a complex area of research, and the aforementioned work's main aim was in estimating poverty rates that use World Bank LSMS surveys but adjust them to resolve some consistency issues between means derived from these surveys and national income accounts data. Improving existing estimates of poverty rates are an on-going exercise being pursued by various researchers and institutions. We have used the panel on poverty rates produced for the aforementioned work for the following six years 1987, 1990, 1993, 1996, 1998.

Table AII.3. The three classifications of the income-employed

Country	Year	All employed	Working poor I < $	Working poor II $2 < $1	Working non-poor > $2
Algeria	1987				
Algeria	1990	5762000	189943.1	858644.7	4713412
Algeria	1993	5909139	141274.7	931222.2	4836642
Algeria	1996				
Algeria	1998				
Bangladesh	1987				
Bangladesh	1990	4.54E+07	8263473	2.23E+07	1.49E+07
Bangladesh	1993				
Bangladesh	1996	4.89E+07	9215579	1.99E+07	1.98E+07
Bangladesh	1998				
Bolivia	1987	1950860	388323.9	618034.6	944501.4
Bolivia	1990	2129240	428952	676709.3	1023579
Bolivia	1993	1090950	210216.3	342543	538190.9
Bolivia	1996	1295540	242252.6	403303	649984.3
Bolivia	1998				
Botswana	1987	267352.3	96688.14	69146.13	101518
Botswana	1990	267352.3	43719.13	56421.2	167212
Botswana	1993	383273	73091.66	85917.77	224263.6
Botswana	1996	383273	81743.55	89340.13	212189.3
Botswana	1998	383273	45083.64	69598.39	268591
Brazil	1987	5.45E+07	1.54E+07	1.14E+07	2.78E+07
Brazil	1990	5.91E+07	1.79E+07	1.23E+07	2.89E+07
Brazil	1993	6.28E+07	1.63E+07	1.31E+07	3.34E+07
Brazil	1996	6.50E+07	1.24E+07	1.26E+07	3.99E+07
Brazil	1998	6.71E+07	1.34E+07	1.33E+07	4.05E+07
Burkina Faso	1987	3538080	1900292	939394.6	698393.1
Burkina Faso	1990	3988020	2200172	1040787	747060.9
Burkina Faso	1993	3974047	2112550	1061654	799843.4
Burkina Faso	1996	4691297	2526664	1243478	921154.5
Burkina Faso	1998	4923936	2561700	1331354	1030882
Central African Republic	1987	1329498	777152.4	262824.3	289521.3
Central African Republic	1990	1312160	780310.4	256064.9	275784.7
Central African Republic	1993	1404813	861665.5	267154.2	275993.3
Central African Republic	1996				
Central African Republic	1998				
Chile	1987	3993804	903632.6	898685.9	2191486
Chile	1990	4458801	843596.1	950690.3	2664514
Chile	1993	4985740	672005.4	926740.3	3386994
Chile	1996	5298691	491824.6	837465.8	3969400
Chile	1998	5432350	427380	783848.1	4221122
China	1987	5.61E+08	2.14E+08	2.33E+08	1.14E+08
China	1990	6.43E+08	2.39E+08	2.69E+08	1.35E+08
China	1993	6.67E+08	2.36E+08	2.28E+08	2.03E+08
China	1996	7.19E+08	1.83E+08	2.56E+08	2.81E+08
China	1998	7.34E+08	1.84E+08	2.57E+08	2.93E+08
Colombia	1987	3497250	623408.6	786366.4	2087475
Colombia	1990	4295670	646708	946876.6	2702086
Colombia	1993	4769500	934616.4	996978.1	2837906
Colombia	1996	5417670	993012.8	1110732	3313926
Colombia	1998	5620380	1056761	1163887	3399732

Country	Year	All employed	Working poor I < $	Working poor II $2 < $1	Working non-poor > $2
Costa Rica	1987	898350	31467.8	182574.2	684307.9
Costa Rica	1990	992459.9	111715.9	227912.7	652831.4
Costa Rica	1993	1072100	110583.1	231791.4	729725.5
Costa Rica	1996	1120040	131061.4	250310.2	738668.4
Costa Rica	1998	1272160	141439.1	277717.8	853002.9
Dominican Republic	1987				
Dominican Republic	1990	2251700	542430.3	597357.3	1111912
Dominican Republic	1993	1871080	401556.1	480592.2	988931.9
Dominican Republic	1996	2434330	399630.5	597608.3	1437091
Dominican Republic	1998	2992970	423574.7	692206.3	1877189
Ecuador	1987	2496556	341256.2	658235	1497065
Ecuador	1990	2656170	365152.2	701902.1	1589116
Ecuador	1993	2650810	408439.2	675842.5	1566528
Ecuador	1996	2834860	357344	727449.7	1750066
Ecuador	1998	3082530	387138	789800.3	1905592
Egypt, Arab Rep.	1987				
Egypt, Arab Rep.	1990	1.46E+07	126743.8	1580718	1.29E+07
Egypt, Arab Rep.	1993	1.47E+07	93889.55	1324550	1.33E+07
Egypt, Arab Rep.	1996				
Egypt, Arab Rep.	1998	1.66E+07	82900.99	1243515	1.53E+07
El Salvador	1987				
El Salvador	1990	856250	166686.5	221841.3	467722.2
El Salvador	1993	1684600	241851.3	379203.8	1063545
El Salvador	1996	1969030	281004.6	413348.8	1274677
El Salvador	1998	2141200	306901.6	450347.7	1383951
Ethiopia	1987	1.13E+07	6490959	3858665	998035.9
Ethiopia	1990	1.89E+07	1.15E+07	5241815	2111720
Ethiopia	1993	1.96E+07	1.15E+07	5681017	2441699
Ethiopia	1996	2.16E+07	1.26E+07	6281231	2719649
Ethiopia	1998	2.27E+07	1.35E+07	6499361	2743033
Ghana	1987				
Ghana	1990	6715760	2254880	2672834	1788046
Ghana	1993	7332074	2424963	2921554	1985558
Ghana	1996				
Ghana	1998				
Guatemala	1987	2543100	675859.1	574097.9	1293143
Guatemala	1990	2933400	841203.5	654142.9	1438054
Guatemala	1993	3195935	872171.3	704465.6	1619298
Guatemala	1996				
Guatemala	1998	3761952	952357.3	812782.5	1996812
Honduras	1987	391350	176212.6	89349.11	125788.3
Honduras	1990	1552300	680313.8	371443.7	500542.5
Honduras	1993	1660995	680740.2	424900.9	555353.9
Honduras	1996	1887260	754395.3	491901.8	640963
Honduras	1998	2034760	792894	531237.1	710628.8
India	1987	2.47E+08	7.95E+07	1.06E+08	6.08E+07
India	1990	3.11E+08	7.78E+07	1.42E+08	9.12E+07
India	1993	2.78E+08	7.02E+07	1.16E+08	9.17E+07
India	1996	3.57E+08	6.64E+07	1.49E+08	1.41E+08
India	1998	3.68E+08	9.03E+07	1.38E+08	1.40E+08

Country	Year	All employed	Working poor I < $	Working poor II $2 < $1	Working non-poor > $2
Indonesia	1987	6.68E+07	9746008	2.61E+07	3.10E+07
Indonesia	1990	7.01E+07	4686328	2.53E+07	4.01E+07
Indonesia	1993	7.76E+07	4226176	2.24E+07	5.09E+07
Indonesia	1996	8.46E+07	4028421	1.82E+07	6.23E+07
Indonesia	1998	8.77E+07	1998818	1.68E+07	6.89E+07
Jamaica	1987	570028.6	79793.75	155337.8	334897.1
Jamaica	1990	893500	77900.37	208030.4	607569.2
Jamaica	1993	905817.9	52908.75	202340.1	650569.1
Jamaica	1996	1087080	45910.71	220290.1	820879.3
Jamaica	1998	953699.9	90377.49	282293.4	581029
Kenya	1987	4420657	2337412	995610.6	1087634
Kenya	1990	4420657	2287075	1005736	1127845
Kenya	1993	9086000	4970077	2009962	2105962
Kenya	1996	9086000	3803347	2856677	2425976
Kenya	1998	9086000	3654301	2878049	2553650
Lesotho	1987	577240	187464	142387.8	247388.2
Lesotho	1990	577240	194533.5	142948.5	239758.1
Lesotho	1993	353160	146870.3	84092.09	122197.6
Lesotho	1996	353160	169774	81797.11	101588.9
Lesotho	1998	353160	177326	80603.42	95230.52
Madagascar	1987	4749035	2304220	1363104	1081711
Madagascar	1990	5314170	2716610	1592562	1004998
Madagascar	1993	5735595	3036552	1683895	1015149
Madagascar	1996				
Madagascar	1998				
Mali	1987	2596781	1187529	948352.3	460899.2
Mali	1990	2596781	1151076	960460.1	485244.7
Mali	1993	3056400	1714434	756013.6	585952.6
Mali	1996	3056400	1664721	880637.3	511041.3
Mali	1998	3056400	1640313	889497.9	526589.4
Mexico	1987	2.93E+07	3494491	5221827	2.06E+07
Mexico	1990	2.92E+07	2700741	4561733	2.20E+07
Mexico	1993	3.13E+07	2383671	4580756	2.44E+07
Mexico	1996	3.41E+07	2975536	5379708	2.58E+07
Mexico	1998	3.72E+07	2830403	5438255	2.89E+07
Morocco	1987				
Morocco	1990	3203210	295994.8	440488.8	2466727
Morocco	1993	3348516	254678.7	551333.4	2542504
Morocco	1996	4074603	355222	382708.9	3336672
Morocco	1998	4099080	311895.3	396440.9	3390744
Nepal	1987				
Nepal	1990	6925830	2994035	2457133	1474663
Nepal	1993				
Nepal	1996				
Nepal	1998	9541430	3524530	3505193	2511707
Nicaragua	1987	978571.1	372735.6	275098.1	330737.4
Nicaragua	1990	1101520	429211.1	309194.3	363114.5
Nicaragua	1993	1264000	406578.1	354114.3	503307.6
Nicaragua	1996	1216240	424251	342324.3	449664.7
Nicaragua	1998	1306203	416834.3	365673.8	523694.9

Country	Year	All employed	Working poor I < $	Working poor II $2 < $1	Working non-poor > $2
Niger	1987	3031274	1334648	1134330	562295.7
Niger	1990	3286060	1511446	1207736	566877.4
Niger	1993	3385290	1700240	1188247	496803.6
Niger	1996	3385290	2073273	776650.4	535366.4
Niger	1998	3385290	2051412	784645.4	549232.3
Nigeria	1987	3.12E+07	1.44E+07	1.09E+07	6006846
Nigeria	1990	3.52E+07	1.56E+07	1.24E+07	7187767
Nigeria	1993	2.87E+07	1.72E+07	6721196	4766008
Nigeria	1996				
Nigeria	1998				
Pakistan	1987	2.54E+07	6144011	1.08E+07	8411046
Pakistan	1990	2.86E+07	6107158	1.21E+07	1.04E+07
Pakistan	1993	3.01E+07	5997016	1.22E+07	1.20E+07
Pakistan	1996	3.03E+07	3774326	1.22E+07	1.44E+07
Pakistan	1998	3.38E+07	4124046	1.35E+07	1.62E+07
Panama	1987	678310	174419.1	157886.5	346004.4
Panama	1990	692220	188189.3	162420.8	341609.9
Panama	1993	815589.9	177987.8	178589.6	459012.5
Panama	1996	879115.9	199407.7	198550.1	481158.2
Panama	1998	901900	172407.3	182443.6	547049.1
Paraguay	1987	1127499	305344.2	250712.7	571442.1
Paraguay	1990	475150	99649.6	97641.85	277858.5
Paraguay	1993	556120	121551.5	115962.6	318605.9
Paraguay	1996	1226420	264693.8	254611.9	707114.2
Paraguay	1998	2030590	452079	426096.6	1152415
Peru	1987	2038010	111738.4	302263.1	1624008
Peru	1990	2249480	245273.8	487447.7	1516759
Peru	1993	2444280	213716	516453	1714111
Peru	1996	6039270	390238.9	1092857	4556175
Peru	1998	6857820	444066.4	1242377	5171377
Philippines	1987	2.08E+07	2484300	5778620	1.25E+07
Philippines	1990	2.25E+07	3044393	5929764	1.36E+07
Philippines	1993	2.44E+07	3089033	6451473	1.49E+07
Philippines	1996	2.74E+07	2719129	5842993	1.89E+07
Philippines	1998	2.83E+07	2398556	5575954	2.03E+07
Senegal	1987	2815587	1165877	725275.1	924435.1
Senegal	1990	1917960	818365.7	492062.7	607531.6
Senegal	1993	2056299	914364.3	523648.3	618286.6
Senegal	1996				
Senegal	1998				
Sierra Leone	1998				
South Africa	1987				
South Africa	1990	1.42E+07	2239365	2585690	9385266
South Africa	1993	1.16E+07	1814490	2103575	7681116
South Africa	1996	1.62E+07	2564686	2957192	1.07E+07
South Africa	1998	9486560	1501105	1729351	6256105
Tanzania	1987	9440270	6581275	1600725	1258271
Tanzania	1990	9440270	6553881	1611193	1275197
Tanzania	1993	1.34E+07	9388517	2251050	1753409
Tanzania	1996	1.34E+07	9359268	2262358	1771351
Tanzania	1998	1.34E+07	9409358	2242955	1740664

Country	Year	All employed	Working poor I < $	Working poor II $2 < $1	Working non-poor > $2
Thailand	1987	2.67E+07	4662843	7704481	1.43E+07
Thailand	1990	3.01E+07	3472934	6867682	1.98E+07
Thailand	1993	3.15E+07	2679967	6214543	2.26E+07
Thailand	1996	3.22E+07	984638	4348835	2.69E+07
Thailand	1998	3.20E+07	1328671	5154144	2.55E+07
Trinidad and Tobago	1987	372270	6149.35	32520.01	333600.6
Trinidad and Tobago	1990	374000	3573.626	22821.55	347604.8
Trinidad and Tobago	1993	404400	2506.835	20898.78	380994.4
Trinidad and Tobago	1996	444300	4728.161	32834.58	406737.3
Trinidad and Tobago	1998	479300	4951.754	34745.77	439602.5
Tunisia	1987	2242607	85087.8	314808.7	1842711
Tunisia	1990	2714850	60808.82	320659.9	2333381
Tunisia	1993	2900263	60229.91	327187.2	2512846
Tunisia	1996	3220415	61933.44	346612.6	2811869
Tunisia	1998	2738788	54169.07	299894	2384725
Uganda	1987	7225718	4359759	1878327	987632.1
Uganda	1990	7225718	4216150	1938590	1070979
Uganda	1993	8034495	4343553	2526799	1164144
Uganda	1996				
Uganda	1998				
Uruguay	1987	1073528	30032.7	131762.5	911732.9
Uruguay	1990	1121340	38007.24	154269.1	929063.8
Uruguay	1993	1156100	20292.7	106319.3	1029488
Uruguay	1996				
Uruguay	1998	1115400	9957.086	65927.25	1039516
Venezuela, RB	1987	5746300	662521.9	1055654	4028124
Venezuela, RB	1990	6502430	833898.3	1387174	4281358
Venezuela, RB	1993	7042770	524216.8	1678572	4839981
Venezuela, RB	1996	7981710	774173	1546391	5661146
Venezuela, RB	1998	8814640	843396.7	1696168	6275075
Zambia	1987				
Zambia	1990	2503690	1454491	627810	421389
Zambia	1993	3368000	1910393	894706.2	562901.2
Zambia	1996	3368000	1927616	831657.9	608725.8
Zambia	1998	3368000	1930714	830636.2	606650.1
Zimbabwe	1987	3026000	1054563	738812.7	1232625
Zimbabwe	1990				
Zimbabwe	1993	3438395	1221016	840495.1	1376884
Zimbabwe	1996	3438395	979999.6	815633.4	1642762
Zimbabwe	1998	4665450	1304067	1102108	2259275

EMPLOYMENT STRATEGY PAPERS

2004/1 Macroeconomic reforms and a labour policy framework for India
Jayati Ghosh

2004/2 Macroeconomic reforms, labour markets and labour policies: Chile, 1973-2000
Guillermo Campero

2004/3 Employment and labour market effects of globalization: Selected issues for policy management
Haroon Bhorat & Paul Lundall

2004/4 Successful employment and labour market policies in Europe and Asia and the Pacific
Claire Harasty (ed.)

2004/5 Global poverty estimates and the millennium goals: Towards a unified framework
Massoud Karshenas

2004/6 The labour market effects of US FDI in developing countries
Robert E. Lipsey

2004/7 Industrial relations, social dialogue and employment in Argentina, Brazil and Mexico
Adaberto Cardoso

2004/8 Global employment trends for women, 2004
Sara Elder & Dorothea Schmidt

2004/9 Agricultural productivity growth, employment and poverty in developing countries, 1970-2000
D.S. Prasada Rao, Timothy J. Coelli & Mohammad Alauddin

2004/10 Efectos de la apertura comercial en el empleo y el mercado laboral de México y sus diferencias con Argentina y Brasil (1990-2003)
Enrique Dussel Peters

2004/11 Capital inflows and investment in developing countries
Ajit K. Ghose

2004/12 Reaching Millennium Goals: How well does agricultural productivity growth reduce poverty?,
Nomaan Majid

2004/13 Labour market policies and regulations in Argentina, Brazil and Mexico: Programmes and impacts
Adriana Marshall

2004/14 Estimating growth requirements for reducing working poverty: Can the world halve working poverty by 2015?
Steven Kapsos

2004/15 Insights into the tenure-productivity-employment relationship
Peter Auer, Janine Berg & Ibrahima Coulibaly

2004/16 Imputation, estimation and prediction using the Key Indicators of the Labour Market (KILM) dataset
Gustavo Crespi Tarantino

2004/17 Employment, productivity and output growth
Oliver Landman

2004/18 What is the effect of trade openness on wages?
Nomaan Majid

2004/19 School-to-work transition of youth in Sri Lanka
S.T. Hettige, M. Mayer & M. Salih (eds.)

2005/1 Protected mobility for employment and decent work: Labour market security in a globalised world
Peter Auer

2005/2 Mercado de trabajo juvenil: Argentina, Brasil y México
Maria Cristina Cacciamali

2005/3 Productivity growth and poverty reduction in developing countries
Andrew Sharpe

2005/4 Towards a national action plan for youth employment in the Azerbaijan Republic
Martin Godfrey

2005/5 Caractéristiques et déterminants de l'emploi des jeunes au Cameroun
G.B Njike Njikam, R.M. Lontchi Tchoffo & V. Fotzeu Mwaffo

2005/6 Chômage et employabilité des jeunes au Maroc
Noureddine El Aoufi & Mohammed Bensaïd

2005/7 Characteristics and determinants of youth unemployment, underemployment and inadequate employment situations in Ethiopia
Berhanu Denu, Abraham Tekeste, Hannah van der Deijl

2005/8 Chômage et conditions d'emploi des jeunes au Mali
Fousseini Traoré

2005/9 Youth employment in Vietnam: Characteristics, determinants and policy responses
Dang Nguyen Anh, Le Bach Duong & Nguyen Hai Van

2005/10 Towards a new balance between labour market flexibility and employment security for Egypt
Maria Sabrina De Gobbi & Alena Nesporova

2005/11 Macroeconomic policies for higher employment in the era of globalization
Amit Bhaduri

2005/12 The employment intensity of growth: Trends and macroeconomic determinants
Steven Kapsos

2005/13 The dynamics of the labour market and employment in Bangladesh: A focus on gender dimensions
Rushidan Islam Rahman with assistance of Naoko Otobe

2005/14 Employment in China: recent trends and future challenges
Ajit K. Ghose

2005/15 Trade liberalization, export orientation and employment in Argentina, Brazil and Mexico
Christoph Ernst

2005/16 The End of the Multi-Fibre Agreement and its Implications for Trade and Employment
Christoph Ernst, Alfons Hernandez Ferrer & Daan Zult

2005/17 The FDI - employment link in a globalizing world: The case of Argentina, Brazil and Mexico
Christoph Ernst

2005/18 What do the measures of employment represent in developing countries?
Nomaan Majid

2005/19 L'intermédiation sur le marché du travail en Tunisie
Mohamed Salah Redjeb & Miloudi Ghobentini

These papers are downloadable from our website at www.ilo.org/public/english/employment/strat/researchpap.htm