

POLITICAL ECONOMY RESEARCH INSTITUTE

PERI

University of Massachusetts Amherst

**POLITICAL ECONOMY
RESEARCH INSTITUTE**

Employment, Poverty, and Gender in Ghana

James Heintz

2005

10th floor Thompson Hall
University of Massachusetts
Amherst, MA, 01003-7510
Telephone: (413) 545-6355
Facsimile: (413) 545-2921
Email: peri@econs.umass.edu
Website:
<http://www.umass.edu/peri/>



WORKING PAPER SERIES

Number 92

Employment, Poverty and Gender in Ghana

April 2005

James Heintz*

jheintz@peri.umass.edu

Political Economy Research Institute
University of Massachusetts, Amherst

Abstract

This paper examines the connections among gender, employment, and poverty in Ghana using data from the fourth round of the Ghana Living Standards Survey. The relationships are explored through a series of tabulations that shed light on how labor force segmentation, different forms of employment, and gender dynamics influence poverty rates and earnings of individuals and households. The estimates suggest that substantial labor force segmentation is evident in Ghana. Women are disproportionately represented in more precarious forms of employment. In addition, poverty and earnings differ markedly from one employment status category to the next. These results have important implications for “pro-poor” employment policies in Ghana.

* This paper was prepared as a background report for UNIFEM’s 2005 *Progress of the World’s Women*. I would like to thank Martha Chen, Joann Vanek, and Elissa Braunstein for helpful comments and suggestions. I would also like to thank Ralf Hussmanns, Debbie Budlender, and Marie-Therese Dupre for guidance on categorizing and analyzing data on informal employment.

1. Introduction

In Ghana, the economy has not created a large number of decent employment opportunities for its working population, despite a record of sustained, moderate growth over the past two decades.¹ Instead, the majority of workers are engaged in low-income agricultural and informal activities.² Low productivity and uncertain earnings characterize the bulk of remunerative work available in Ghana. Underemployment is endemic, taking the form of either insufficient hours of work or long hours spent in extremely low-productivity activities. Despite an overall downward trend, poverty rates remain high in many regions and have actually increased among the many of the rural self-employed.³ Lack of decent employment worsens regional disparities and fuels rural-to-urban migration, intensifying social pressures in the country.

In general, employment links economic growth to poverty reduction. If growth generates a significantly large number of new employment opportunities, the benefits of expanded production will be broadly shared. However, not all employment is the same – employment status and relationships matter. Simply having access to employment is not sufficient to lift households out of poverty. Quality of employment varies along a number of dimensions – between formal and informal economies, between agricultural and non-agricultural activities, and among different forms of informal employment. Whether growth reduces poverty by improving employment opportunities depends to no small extent on the connections that exist between employment and poverty.

Gender segmentation of the labor force also influences the risks of poverty, particularly among women and children. Women's employment is frequently concentrated in activities for which earnings are low, the risks of poverty is high, and control over income precarious – for example, a disproportionate number of women often work as own-account workers or unpaid workers on family enterprises. In a country like Ghana, women's participation in income-generating employment is high, nearly equivalent to that of men, but poverty rates among working women remain above those of working men. There is a clear gendered pattern to the relationship between employment and poverty.

This paper examines the connections among gender, employment, and poverty in Ghana using data from the fourth round of the Ghana Living Standards Survey, which was administered in 1998/9. The approach used is straight-forward, but revealing. The relationships are explored through a series of tabulations that shed light on how labor force segmentation, different forms of employment, and gender dynamics influence the poverty rates and earnings of individuals and households engaged in remunerative work.

2. Employment and labor force segmentation

The vast majority of Ghanaians work to earn a living. According to Table 1, of the 10.2 million people aged 15 years or older in 2000, an estimated 9 million, or 88 percent, participated in the labor force (Table 1). Women represented over half of the economically active population

and the female labor force participation rate – 87.0 percent - was nearly identical to the male labor force participation rate – 89.6 percent.

Table 1. Overview of Labor Force, Ghana, 2000.
Number of persons in millions.

	Female	Male	All
Population, total	9.4	8.7	18.1
of which ...			
Non-working age population (under 15)	4.0	3.9	7.9
Working age population (15+)	5.4	4.8	10.2
of which ...			
Not in the labor force	0.7	0.5	1.2
In the labor force	4.7	4.3	9.0
of which ...			
Unemployed	0.4	0.3	0.7
Employed	4.3	4.0	8.3
of which ...			
Agricultural	2.1	2.4	4.5
Non-agricultural	2.2	1.6	3.8
of which ...			
Wage/salary worker	0.3	0.8	1.1
Self-employed	1.8	0.7	2.5
Unpaid family workers	0.1	0.05	0.15
Other (not specified)	0.0	0.05	0.05

Source: 2000 Population Census and GLSS 4, 1998/9.

Agricultural employment provides a critical source of income in Ghana. In 2000, 4.5 million people were employed in agriculture, representing approximately 54 percent of all employment in the country. Although 2.1 million women worked in agriculture, including unpaid family labor on small household farms, men accounted for a larger share of total agricultural employment. Agricultural activities comprised the majority of male employment, but this was not true for female employment.

In contrast, women accounted for the majority of all non-agricultural employment. An estimated 2.2 million women were engaged in non-agricultural employment compared to 1.6 million men. However, there is evidence of significant gender segmentation within non-agricultural employment. Most women working in non-agricultural activities were self-employed. Only about 300,000 women worked in non-agricultural wage employment compared to 800,000 men.

Before turning to a more detailed break-down of employment in Ghana, it is helpful to clarify the distinctions that will be used in this paper to separate formal jobs from informal jobs. For non-agricultural self-employment, employment is considered to be formal if the enterprise in question has been registered with a government authority. Similar information on registration was not available for agricultural self-employment. Therefore, all agricultural self-employment is considered to be informal. In the context of Ghana, this is a reasonable assumption to make and would introduce an extremely small degree of distortion in the analysis. For wage employment, social protection criteria are used to distinguish formality. Formal wage employees are defined as wage workers who receive both paid leave (either sick leave or holiday leave) and contributions

to a pension from their employer. All other wage workers are considered informal wage employees. Appendix B discusses these criteria in more detail and presents alternative estimates using a different distinction – the existence of an employment contract.

Table 2 provides the more detailed break-down of the total employed population in Ghana by sex and employment status. Formal employment accounts for a small fraction of total employment in Ghana. For example, formal wage employment in the private, public, and agricultural sectors combined amounted to an estimated 5.1 percent of all employment in the country – 3.8 percent for men and 1.3 percent for women. Formal self-employment accounted for an additional 3.6 percent of total employment. The importance of non-agricultural, informal self-employment among women in Ghana becomes evident from Table 2; such employment represented one-fifth of total employment in the country. Own-account workers comprised the vast majority of self-employment. In addition, women's unpaid work on family enterprises, including farms, amounted to over 11 percent of all employment, compared to an estimated 4.4 percent of total employment for men performing similar unpaid work.

Table 2. Percent of total employment in selected employment statuses by sex, 1998/9. Employed population, 15 year or older, Ghana.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	0.2	0.6	0.8
Formal public wage employees	1.1	3.0	4.1
Formal, self-employed	1.9	1.7	3.6
Formal employment, agricultural			
Formal wage employees	<0.1*	0.2	0.2
Informal employment, non-agricultural			
Informal, self-employed	20.0	7.4	27.4
... of which: own account workers	19.2	6.6	25.8
Informal wage workers	2.2	5.9	8.1
... of which: informal public wage workers	0.7	1.8	2.5
Unpaid family workers	1.3	0.6	1.9
Informal employment, agricultural			
Self-employed	16.3	22.2	38.5
Informal wage workers	0.2	1.0	1.2
Unpaid family workers	10.0	3.8	13.8
Other (unclassified)	0.1	0.3	0.4
TOTAL	53.3%	46.7%	100%

Source: GLSS 4, 1998/9.

* not significantly different from zero.

Table 3 presents the distribution of female and male employment across different employment statuses. This table reinforces the patterns already discussed. Non-agricultural, informal self-employment and unpaid labor on family enterprises represented a significantly higher share of women's employment compared to men. In contrast, a higher fraction of men were engaged in all forms of wage employment and all forms of agricultural employment, with the exception of unpaid labor on family agricultural enterprises.

These first three tables suggest that significant gender segmentation exists within the employed labor force in Ghana. Although formal employment represented only a small fraction

of total employment, most of these jobs were done by men. Women primarily had access to formal employment only through wage employment in the public sector or formal self-employment. A significant number of women were self-employed in agriculture, but agricultural self-employment accounted for a smaller share of women's employment relative to men. Instead, the majority of women engaged in remunerative activities were self-employed in non-agricultural, informal activities. Also significant was the large number of women performing unpaid labor on family enterprises.

Table 3. Distribution of employed population (15+) by sex in selected employment statuses, 1998/9, Ghana.

	Women	Men
Formal employment, non-agricultural		
Formal private wage employees	0.3	1.4
Formal public wage employees	2.0	6.5
Formal, self-employed	3.6	3.5
Formal employment, agricultural		
Formal wage employees	<0.1*	0.5
Informal employment, non-agricultural		
Informal, self-employed	37.5	15.8
... of which: own account workers	35.9	14.1
Informal wage workers	4.2	12.6
... of which: informal public wage workers	1.3	3.9
Unpaid family workers	2.5	1.2
Informal employment, agricultural		
Self-employed	30.5	47.5
Informal wage workers	0.3	2.3
Unpaid family workers	18.7	8.2
Other (unclassified)	0.4	0.5
TOTAL	100%	100%

Source: GLSS 4, 1998/9.

* not significantly different from zero.

3. The Working Poor in Ghana

Labor force segmentation, by itself, tells us little about the average quality of work or the incidence of poverty within various employment status categories. Therefore, Table 4 presents measurements of the risk of poverty for workers in different types of employment. The measurement used is the number of working poor as a percent of total employment by employment status and sex. Individuals are considered to be "working poor" if (1) they were employed and (2) they lived in households whose incomes place them below the poverty line.⁴ This definition of working poor represents one technique for connecting the characteristics of employment, measured at the *individual* level, to the risk of poverty, measured at the *household* level.

Table 4 reveals several important distinctions concerning the relative risk of poverty between men and women and among the different employment status categories. The largest differences in poverty risk occurred across employment categories. Poverty rates, using the "working poor" criterion, were lowest for formal, non-agricultural private wage workers and

highest for unpaid workers in family agricultural enterprises. Workers in non-agricultural wage employment – both formal and informal, public and private – had lower risks of poverty than workers engaged in non-agricultural self-employment. Workers in agriculture were at higher risk of poverty than other workers. Within agriculture, a similar hierarchy of risk was evident, with unpaid workers having the highest rates of poverty, self-employed individuals the next highest rates, and wage employees the lowest rates of poverty.

Table 4. Working poor as a percent of employment (15+) in selected employment statuses by sex, 1998/9, Ghana.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	---	26.5	25.8
Formal public wage employees	36.5	43.9	42.0
Formal, self-employed	52.0	45.8	49.2
Formal employment, agricultural			
Formal wage employees	---	---	65.6
Informal employment, non-agricultural			
Informal, self-employed	57.4	58.8	57.7
... of which: own account workers	57.4	58.5	57.7
Informal wage workers	40.3	43.8	42.8
... of which: informal public wage workers	39.4	46.2	44.4
Unpaid family workers	70.0	60.0	67.0
Informal employment, agricultural			
Self-employed	74.4	72.9	73.5
Informal wage workers	---	56.9	57.7
Unpaid family workers	87.8	80.7	85.8

--- = 20 observations or less.

Source: GLSS 4, 1998/9.

Differences in the poverty rates of male workers and female workers *within* a given employment status category were not nearly as pronounced as differences *across* employment categories. The small number of women engaged in formal wage employment outside of the public sector makes comparisons of formal private employment unreliable. However, differences in poverty rates among men and women within particular categories of informal employment were not large. The most sizeable differences between men and women were evident among unpaid workers in family enterprises.

Changes in “formality” – that is, the difference observed by moving from informal to formal employment – had a smaller impact on women’s risk of poverty relatively to men. For example, the poverty rate of women in informal self-employment was 57.4 percent, dropping to 52 percent for women in formal self-employment. The reduction in poverty rates was more pronounced for men, dropping from 58.8 percent to 45.8 percent for informal and formal self-employment respectively.

The interaction between gender segmentation of the labor force and differential poverty rates across employment categories means that women engaged in remunerative work in Ghana are at a higher risk of poverty on average than are men. This occurs because women are concentrated in types of employment for which the risk of poverty is high: unpaid workers on family enterprises and informal self-employment. Agriculture represents a partial exception to

this general pattern. The risk of poverty is highest among agricultural workers and men account for a larger share of all agricultural employment. Nevertheless, within agricultural, women are disproportionately represented in the more precarious forms of employment – as unpaid and self-employed workers.

The average “working poor” poverty rate for all employed women in Ghana was an estimated 67.1 percent, compared to 63.7 percent for men. For non-agricultural employment the rates for women and men were 54.8 percent and 49.3 percent, respectively.

4. Earnings and Hours of Work

Measurements of poverty risk – like those presented in Table 4 – provide one method of assessing the average quality of employment. However, it represents an indirect technique since it combines information on an individual’s employment status with a measurement of household well-being (i.e. poverty status). Information on individual earnings and hours of work provide additional insight into the quality of employment activities and the social relevance of labor force segmentation in Ghana.

Table 5a presents estimates of hourly earnings, expressed in cedis per hour, by sex and employment status category. These estimates are based on the total reported employment income and total hours worked across all employment activities in which an individual was engaged. Therefore, at the individual level, the estimate of hourly earnings reflects the average return to labor. However, an individual’s employment status is defined by only the primary occupation for people simultaneously engaged in two or more employment activities.

Table 5a. Average hourly earnings (cedis per hour) in selected employment statuses by sex, 1998/9, employed population (15+), Ghana.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	---	---	---
Formal public wage employees	920	1093	1052
Formal, self-employed	588	1077	812
Formal employment, agricultural			
Formal wage employees	---	---	---
Informal employment, non-agricultural			
Informal, self-employed	566	733	611
... of which: own-account workers	568	708	604
Informal wage workers	662	948	880
... of which: informal public wage workers	879	999	969
Unpaid family workers (imputed earnings)	472	293	409
Informal employment, agricultural			
Self-employed	336	517	442
Informal wage workers	---	---	450
Unpaid family workers (imputed earnings)	420	421	421
TOTAL	¢476	¢630	¢546

--- = less than 20 observations.

Source: GLSS 4, 1998/9.

The estimated hourly earnings reflect the same hierarchy across employment status categories observed in the previous table. Individuals primarily engaged in formal, non-agricultural wage employment had the highest average earnings per hour worked. Informal agricultural workers had the lowest average hourly earnings. Earnings from wage employment were superior to earnings from self-employment, with the exception of men engaged in formal self-employment. Formal private wage employees had lower estimated earnings than formal public wage employees, but limited observations in the sample make these comparisons unreliable and are not reported here.

Table 5b. Average hourly earnings in selected employment statuses by sex, 1998/9, employed population (15+), Ghana. U.S. dollars at market exchange rates with purchasing power adjusted dollars in parentheses.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	---	---	---
Formal public wage employees	\$0.39 (\$1.74)	\$0.47 (\$2.07)	\$0.45 (\$1.99)
Formal, self-employed	\$0.25 (\$1.11)	\$0.46 (\$2.04)	\$0.35 (\$1.54)
Formal employment, agricultural			
Formal wage employees	---	---	---
Informal employment, non-agricultural			
Informal, self-employed	\$0.24 (\$1.07)	\$0.31 (\$1.39)	\$0.26 (\$1.16)
... of which: own-account workers	\$0.24 (\$1.08)	\$0.30 (\$1.34)	\$0.26 (\$1.14)
Informal wage workers	\$0.28 (\$1.25)	\$0.41 (\$1.79)	\$0.38 (\$1.67)
... of which: informal public wage workers	\$0.38 (\$1.66)	\$0.43 (\$1.89)	\$0.42 (\$1.83)
Unpaid family workers (imputed earnings)	\$0.20 (\$0.89)	\$0.13 (\$0.55)	\$0.18 (\$0.77)
Informal employment, agricultural			
Self-employed	\$0.14 (\$0.64)	\$0.22 (\$0.98)	\$0.19 (\$0.84)
Informal wage workers	---	---	\$0.19 (\$0.85)
Unpaid family workers (imputed earnings)	\$0.18 (\$0.80)	\$0.18 (\$0.80)	\$0.18 (\$0.80)
TOTAL	\$0.20 (\$0.90)	\$0.27 (\$1.19)	\$0.23 (\$1.03)

Source: GLSS 4, 1998/9, IMF International Financial Statistics Database, and World Bank World Development Indicators 2003 CD-ROM.

In contrast to the pattern observed in Table 4, there is evidence of a clear gender differential in earnings within a given employment category. Women's hourly earnings were almost everywhere lower than men's hourly earnings in the categories for which there were sufficient observations to make meaningful comparisons.⁵ The combined effects of lower average earnings and labor force segmentation meant that employed women earned 76 percent of what men earned – 476 cedis per hour compared to 630 cedis per hour.

In addition, we observe a gender gap in the benefits of formality for self-employed workers. Men earned a substantial premium in formal self-employment compared to informal self-employment. However, this premium was nearly non-existent for self-employed women.

Unpaid workers on family enterprises receive no income for their labor by definition. However, their labor does generate income for the household even if they have little or no control over the earnings. A failure to quantify the value of this type of unpaid labor will erase a very real contribution to the household's income-earning activities. Moreover, ignoring the contribution of unpaid family members will overstate the hourly earnings for the family member to which the income is attributed. This creates an upward bias in the estimated returns to self-employment. Therefore, Table 5a imputes a value for the hourly earnings of unpaid family workers based on the earnings of the family enterprise and the total hours worked in the household enterprise (i.e. the hours of work associated with self-employment plus unpaid family labor).

It is important to keep in mind that these individuals did not receive any earnings directly and their poverty rates were the highest among all categories of workers in Ghana. In addition, the actual average earnings received for all employed women should be lower than reported in Table 5a, since these estimates include the imputed value of unpaid family labor, the majority of which is performed by women.

Table 5b (above) presents that same data contained in Table 5a, but converts cedis to U.S. dollars, both at the average market exchange rate during the period in which the living standards survey was administered and using the World Bank's purchasing power adjustment for Ghana in 1999. The estimates adjusted for differences in purchasing power are reported in parentheses.

Estimated hourly earnings provide us with an indication of differences in a standardized measure of average returns to labor. However, they do not necessarily allow us to compare the incomes people in different types of employment generate on average. Therefore, Table 6 reports average weekly earnings by sex and employment status category, expressed in cedis. The same general pattern observed in previous tables is evident here. However, the differentials between weekly earnings in wage employment and non-agricultural self-employment were not as pronounced as the differentials observed for average hourly earnings. This was because individuals engaged in non-agricultural self-employment worked somewhat longer hours than those engaged in wage employment – both formal and informal.

In many cases the gender differential in weekly earnings was larger than that of hourly earnings, since women tended to work somewhat fewer hours on average per week compared to men. Women's average weekly earnings across all employment categories were 73 percent those of men.

Table 6. Average weekly earnings (cedis per week) in selected employment statuses by sex, 1998/9, employed population (15+), Ghana.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	---	---	---
Formal public wage employees	39,928	51,808	48,813
Formal, self-employed	34,045	66,236	48,314
Formal employment, agricultural			
Formal wage employees	---	---	---
Informal employment, non-agricultural			
Informal, self-employed	31,017	43,174	34,155
... of which: own account workers	31,013	41,701	33,643
Informal wage workers	35,020	52,898	48,400
... of which: informal public wage workers	37,885	50,749	47,190
Unpaid family workers (imputed)	---	---	15,378
Informal employment, agricultural			
Self-employed	12,432	21,249	17,415
Informal wage workers	---	---	22,725
Unpaid family workers (imputed)	9,534	12,041	9,936
TOTAL	¢22,039	¢30,177	¢25,717

--- = less than 20 observations.

Source: GLSS 4, 1998/9.

Table 7a provides detailed estimates of these differences in hours of work by sex and employment status category. As mentioned above, hours of work in non-agricultural informal employment generally exceeded hours of work in formal wage employment, excluding the case of unpaid workers on family enterprises. Non-agricultural self-employed workers – both formal and informal – generally worked longer hours than wage employees. One possible interpretation of the larger number of hours worked is that informal employment and self-employment tend to involve low-productivity activities with low hourly earnings. Therefore, a longer workweek is required in order to generate a basic income. In this case, the number of hours worked is not a good indicator of the existence of underemployment – productivity per hour worked would be better.

Across all employment categories, women tended to work fewer hours than men. These gender differentials were more pronounced within a given employment category than they were across all employment categories. Again – this was because of the existence of labor force segmentation. Although women worked fewer hours on average within a particular employment category, women were also concentrated in types of employment in which the workweek was longer.

Interestingly, individuals in agricultural self-employment worked fewer hours per week compared to many other categories of employment. This was also reflected in the hours worked by unpaid family members in agricultural enterprises. This is surprising since hourly earnings are lowest in agricultural employment.

However, the smaller number of hours worked in agricultural self-employment can be explained by constraints operating on the subsistence or small-scale agricultural sector in Ghana. Most of these household enterprises have very limited market access due to poor transportation

Table 7a. Average hours of work per week in selected employment statuses by sex, 1998/9, employed population (15+), Ghana.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	---	47.8	48.2
Formal public wage employees	43.4	47.4	46.4
Formal, self-employed	57.9	61.5	59.5
Formal employment, agricultural			
Formal wage employees	---	50.7	49.5
Informal employment, non-agricultural			
Informal, self-employed	54.8	58.9	55.9
... of which: own-account workers	54.6	58.9	55.7
Informal wage workers	52.9	55.8	55.0
... of which: informal public wage workers	43.1	50.8	48.7
Unpaid family workers	---	---	37.6
Informal employment, agricultural			
Self-employed	37.0	41.1	39.4
Informal wage workers	---	51.7	50.5
Unpaid family workers	22.7	28.6	23.6
TOTAL	46.3	47.9	47.1

--- = less than 20 observations.

Source: GLSS 4, 1998/9.

and storage infrastructure. Therefore, it is difficult, if not impossible, for many of these workers to sell surplus produce and realize additional income for the household. Hours of work are therefore constrained by demand-side restrictions. Agricultural wage workers – both formal and informal – exhibited higher average weekly hours than self-employed agricultural workers. Wage workers were most likely employed in larger agricultural enterprises for which the constraints to market access were not as binding. Therefore, they were able, and willing, to work longer hours.

Time spent in non-remunerative activities could account for some of the gender disparities observed in the average hours of work in income-generating activities. Table 7b contains estimates of average hours of work per week in non-remunerative household activities by employment status and sex. These non-remunerative activities are often referred to as “unpaid labor” and this shorthand is used in Table 7b. However, these estimates exclude unpaid labor in income-generating activities, such as work in family enterprises. Hours spent caring for children and total hours spent in unpaid household labor (including childcare) are reported separately.

Table 7b reveals a strong gender bias in the hours spent in unpaid, household labor. Employed women spent, on average, over four times as many hours in unpaid household labor as did employed men and over five times as many hours caring for children. Hours worked in unpaid household labor also varied by employment status. Self-employed women spent significantly more time working in unpaid household activities than did women engaged in wage employment. Similar patterns could also be observed for men. In addition, women employed in

agriculture also spent more time in unpaid household activities than did women employed outside of agriculture. However, the same was not true for men employed in agriculture.

Table 7b. Average hours spent per week in non-remunerative household work by employment status and sex, employed population (15+), 1998/9, Ghana.

	<i>Women</i>		<i>Men</i>	
	<i>All unpaid</i>	<i>Childcare</i>	<i>All unpaid</i>	<i>Childcare</i>
Formal employment, non-agricultural				
Formal private wage employees	---	---	7.6	1.9
Formal public wage employees	30.0	7.1	8.8	2.9
Formal, self-employed	33.8	13.6	9.7	3.5
Formal employment, agricultural				
Formal wage employees	---	---	---	---
Informal employment, non-agricultural				
Informal, self-employed	40.2	15.7	11.6	3.8
... of which: own account workers	39.8	15.6	11.0	3.2
Informal wage workers	31.5	9.3	9.4	2.7
... of which: informal public wage workers	32.8	10.7	9.9	4.3
Unpaid family workers	33.7	8.8	17.9	2.6
Informal employment, agricultural				
Self-employed	46.7	15.8	9.2	2.4
Informal wage workers	---	---	9.7	3.1
Unpaid family workers	46.4	12.6	9.6	0.9
TOTAL	42.4	14.5	9.7	2.6

--- = less than 20 observations.

Source: GLSS 4, 1998/9.

Table 7c. Total hours worked per week in remunerative employment and non-remunerative household labor by sex and employment status, employed persons (15+), 1998/9, Ghana.

	<i>Women</i>	<i>Men</i>
Formal employment, non-agricultural		
Formal private wage employees	---	55.4
Formal public wage employees	73.4	56.2
Formal, self-employed	91.7	71.2
Formal employment, agricultural		
Formal wage employees	---	---
Informal employment, non-agricultural		
Informal, self-employed	95.0	70.5
... of which: own account workers	94.4	69.9
Informal wage workers	84.4	65.2
... of which: informal public wage workers	75.9	60.7
Unpaid family workers	---	---
Informal employment, agricultural		
Self-employed	83.7	50.3
Informal wage workers	---	61.4
Unpaid family workers	69.1	38.2
TOTAL	88.7	57.6

Source: GLSS 4, 1998/9.

The longer hours that women spent in unpaid household activities could explain why women work shorter hours on average than do men in remunerative employment. However, a puzzle remains. Self-employed women worked long hours in both unpaid household activities and remunerative employment. Labor supply constraints offer an explanation for this pattern. If self-employment provides women with the flexibility to combine unpaid and remunerative work more easily, this could help explain the significantly longer hours worked by self-employed women. Table 7c reports total hours of work in both remunerative and unpaid activities by summing the numbers contained in Tables 7a and 7b.

5. Industrial segmentation

Tables 8a and 8b expand on earlier tabulations that detail the distribution of the employed population by sex and employment status category and disaggregate these estimates by industrial sector. Table 8a shows the distribution across employment status categories of employment within an industrial sector. Table 8b shows the distribution across industrial sectors of employment within a particular employment status category. The tables reveal another layer of gender segmentation within the labor force. Women's employment was largely restricted to four sectors of the economy: agriculture, manufacturing, trading, and services. Within these sectors, women primarily were employed as own-account workers and, in the service sector, informal wage workers.

The interaction between employment status segmentation and industrial segmentation is important to take into account when analyzing the employment situation in Ghana from a gender standpoint. For example, the large number of women working in manufacturing might be taken as evidence of greater integration in a traditionally "male" sector. However, over 86 percent of women working in manufacturing were informally self-employed or unpaid family workers. Only about 6 percent were wage employees. Compare this with the situation of male workers in manufacturing activities. Approximately 25 percent of all male manufacturing workers were wage employees. As we have seen in earlier tabulations, wage employment was generally of a much higher quality than self-employment. In addition, formal self-employment in manufacturing was significantly more common among men than among women.

Similarly, previous tabulations showed that non-agricultural informal self-employment was perhaps the single most important source of employment for women. Table 8b shows that women's informal self-employment was primarily concentrated in two industrial sectors: agriculture and trading. Therefore, trading constituted the most important source of non-agricultural self-employment for women. This is important to know when discussing policies to raise the returns of women engaged in these activities. For example, the level of domestic demand will have a much stronger influence on the productivity of women – and therefore the earnings of women – engaged in trading relative to other factors that influence labor productivity in different sectors of the economy (e.g. access to machinery).

Table 8a. Percent distribution of employed population (15+) in selected employment statuses by sex and industry 1998/9, Ghana.

	Agric.	Mining	Manufact.	Utilities	Constr.	Trade	Trans.	Finance	Services
	All employed persons								
<i>Formal pvt wage employees</i>	<0.1*	3.6	2.3	---	1.6*	0.2	3.6	17.0	2.2
<i>Formal pub wage employees</i>	0.4	36.8	0.7	---	1.4*	0.4	11.6	26.0	31.8
<i>Formal, self-employed</i>	0.2	2.3	9.1	---	3.3	7.8	6.9	5.3	6.7
<i>Informal, self-employed</i>	71.5	8.5	71.9	---	51.0	80.1	20.2	4.2	26.3
<i>Informal wage workers</i>	2.3	48.8	10.2	---	41.6	5.4	53.1	46.5	31.6
<i>... of which: informal public wage workers</i>	0.2	17.9	0.7*	---	1.1*	0.5	11.3	9.2	18.5
<i>Unpaid family workers</i>	25.5	0.0	5.7	---	1.2*	5.9	3.8	0.0	0.9
TOTAL	100	100	100	---	100	100	100	100	100
	Women								
<i>Formal pvt wage employees</i>	0.0	---	0.4*	---	---	0.1*	---	---	1.2
<i>Formal pub wage employees</i>	<0.1*	---	0.0	---	---	0.2*	---	---	26.3
<i>Formal, self-employed</i>	0.2	---	7.2	---	---	6.4	---	---	9.3
<i>Informal, self-employed</i>	61.4	---	79.8	---	---	84.7	---	---	31.6
<i>Informal wage workers</i>	0.5	---	5.7	---	---	3.1	---	---	30.0
<i>... of which: informal pub wage workers</i>	0.1*	---	<0.1*	---	---	0.1*	---	---	17.1
<i>Unpaid family workers</i>	37.9	---	6.8	---	---	5.4	---	---	1.4
TOTAL	100	---	100	---	---	100	---	---	100
	Men								
<i>Formal pvt wage employees</i>	<0.1*	3.7*	5.9	---	1.7*	0.5*	2.7	16.2	2.8
<i>Formal pub wage employees</i>	0.7	38.0	1.8	---	1.4*	1.5	11.9	25.2	35.4
<i>Formal, self-employed</i>	0.1*	1.0*	12.6	---	2.9*	14.3	7.1	6.1	5.1
<i>Informal, self-employed</i>	81.1	7.0*	57.5	---	54.5	59.1	20.7	4.8	22.9
<i>Informal wage workers</i>	3.9	50.3	18.2	---	38.2	16.1	52.9	46.5	32.6
<i>... of which: informal pub wage workers</i>	0.3	18.5	1.7*	---	1.1*	2.0	11.6	9.5*	19.4
<i>Unpaid family workers</i>	13.8	0.0	3.7	---	1.3*	7.8	3.9	0.0	0.6*
TOTAL	100%	100%	100%	---	100%	100%	100%	100%	100%

* Not statistically significant (i.e. not significantly different from zero). --- = 20 observations or less.

Source: GLSS 4, 1998/9.

Table 8b. Industry share of employed population (15+) in selected employment statuses by sex 1998/9, Ghana

	Agric.	Mining	Manufact.	Utilities	Constr.	Trade	Trans.	Finance	Services	TOTAL
	All employed persons									
<i>Formal pvt wage employees</i>	2.6*	3.5*	31.2	0.0	3.2*	4.5	10.7	18.8	25.5	100%
<i>Formal pub wage employees</i>	4.8	6.8	1.7	0.9	0.5*	1.9	6.6	5.5	70.9	100%
<i>Formal, self-employed</i>	2.5	0.5*	28.3	1.0*	1.5	41.9	4.8	1.4	18.2	100%
<i>Informal, self-employed</i>	58.5	0.1*	12.1	<0.1*	1.3	23.2	0.8	<0.1	3.8	100%
<i>Informal wage workers</i>	13.1	4.2	12.1	0.9	7.5	11.0	13.9	4.6	32.7	100%
<i>... of which: informal public wage workers</i>	3.7	5.5	2.8*	1.6*	0.7*	3.4	10.6	3.2	68.5	100%
<i>Unpaid family workers</i>	87.6	0.0	4.0	0.0	0.1*	7.1	0.6	0.0	0.6	100%
	Women									
<i>Formal pvt wage employees</i>	---	---	---	---	---	---	---	---	---	100%
<i>Formal pub wage employees</i>	0.7*	0.0	0.0	1.1*	0.0	2.9*	0.0	3.3*	90.5	100%
<i>Formal, self-employed</i>	2.7	0.5*	16.4	0.0	0.5*	51.7	0.0	0.0	18.1	100%
<i>Informal, self-employed</i>	44.3	<0.1*	15.7	<0.1*	0.0	36.6	0.0	0.0	3.3	100%
<i>Informal wage workers</i>	5.8	0.0	17.3	0.3*	4.1	20.3	1.8*	2.3*	48.0	100%
<i>... of which: informal pub wage workers</i>	3.8*	0.0	0.8*	0.0	0.0	2.8*	0.0	1.1*	91.4	100%
<i>Unpaid family workers</i>	87.7	0.0	4.3	0.0	0.0	7.6	0.0	0.0	0.5	100%
	Men									
<i>Formal pvt wage employees</i>	3.2*	4.2*	33.9	0.0	3.9*	2.5*	9.5	18.8	24.0	100%
<i>Formal pub wage employees</i>	6.2	9.1	2.3	0.9*	0.7*	1.6	8.8	6.2	64.2	100%
<i>Formal, self-employed</i>	2.2*	0.5*	30.6	2.2*	2.8*	30.1	10.4	3.0*	18.3	100%
<i>Informal, self-employed</i>	75.9	0.2*	7.7	0.1	2.9	6.8	1.7	0.1	4.5	100%
<i>Informal wage workers</i>	15.6	5.6	10.4	1.1	8.6	7.9	18.1	5.3	27.4	100%
<i>... of which: informal pub wage workers</i>	3.7	7.5	3.5*	2.2*	0.9*	3.7	14.6	4.0*	59.9	100%
<i>Unpaid family workers</i>	87.3	0.0	3.4	0.0	0.5*	6.1	2.1	0.0	0.7*	100%

* Not statistically significant (i.e. not significantly different from zero). ---= 20 observations or fewer.

Source: GLSS 4, 1998/9.

Table 8c provides an overview of the gender segmentation of the Ghanaian labor force by industry. Women's employment represented only a small fraction of total employment in a number of sectors of the economy: mining, utilities, construction, transportation and communication, and financial services.

Table 8c. Gender division of employment (15+) by industry 1998/9, Ghana.

	Women	Men	Total
<i>Agriculture, forestry, fishing</i>	48.6	51.4	100%
<i>Mining</i>	3.0	97.0	100%
<i>Manufacturing</i>	64.5	35.5	100%
<i>Utilities (Electricity and Water)</i>	13.9	86.1	100%
<i>Construction</i>	6.6	93.4	100%
<i>Trade</i>	81.8	18.2	100%
<i>Transport and Communication</i>	2.7	97.3	100%
<i>Finance and Business Services</i>	12.9	87.1	100%
<i>Social, Personal, Community Services</i>	39.1	60.9	100%

Source: GLSS 4, 1998/9.

Industrial segmentation, by itself, does not necessarily imply a lower average quality of employment opportunities. However, in Ghana, this appears to be the case. Table 9 reports poverty rates – using the “working poor” approach outlined earlier – by sex, employment status category, and industry. Unfortunately, there were often too few observations to compile reliable estimates for many of the intersections of these various categories. However, enough reasonable estimates could be generated to suggest some general patterns.

The industrial sectors in which women's employment was concentrated were also the sectors with some of the highest overall poverty rates – agriculture, manufacturing, and trading. The one exception was the service industries. Women's poverty rates in the service industries tended to be lower on average when compared to other industries or to men's poverty rates in the service industries. These lower poverty rates can be explained, in part, because of women's access to public wage employment within the service industries. It is the one industrial sector in which women actually have significant access to wage employment (Tables 8a and 8b).

Comparisons of poverty rates between men and women by both industry and employment status is difficult because of the patchwork nature of the estimates that could be compiled. Table 9 fails to reveal clear evidence of systematically higher poverty rates among women within specific sub-categories. Again – working women's higher risk of poverty appears to be primarily driven by the dual segmentation of the Ghanaian labor force: segmentation by employment status and segmentation by industry.

Table 9. Working poor as a percent of employment in selected employment statuses by industry and sex, 1998/9, Ghana.

	Agric.	Mining	Manufact.	Utilities	Constr.	Trade	Trans.	Finance	Services
	All employed persons								
<i>Formal pvt wage employees</i>	---	---	35.5	---	---	---	---	---	---
<i>Formal pub wage employees</i>	---	---	---	---	---	---	---	---	47.8
<i>Formal, self-employed</i>	---	---	59.2	---	---	51.2	---	--	35.6
<i>Informal, self-employed</i>	73.5		62.4		71.5	56.6	29.2		50.2
<i>Informal wage workers</i>	57.7	21.2	49.5	---	49.0	36.3	43.8	28.1	45.4
<i>... of which: informal public wage workers</i>	---	---	---	---	---	---	23.3	---	48.6
<i>Unpaid family workers</i>	85.8	---	69.0	---	---	65.9	---	---	---
<i>All workers</i>	76.4	25.3	60.2		59.7	55.6	40.0	20.4	46.8
	Women								
<i>Formal pvt wage employees</i>	---	---	---	---	---	---	---	---	---
<i>Formal pub wage employees</i>	---	---	---	---	---	---	---	---	36.8
<i>Formal, self-employed</i>	74.6	---	73.9	---	---	48.9	---	---	29.5
<i>Informal, self-employed</i>			62.7			57.3			32.2
<i>Informal wage workers</i>	---	---	40.0	---	---	40.8	---	---	40.2
<i>... of which: informal pub wage workers</i>	---	---	---	---	---	---	---	---	41.4
<i>Unpaid family workers</i>	87.9	---	71.2	---	---	70.4	---	---	---
	Men								
<i>Formal pvt wage employees</i>	---	---	34.1	---	---	---	---	---	---
<i>Formal pub wage employees</i>	---	---	---	---	---	---	---	---	53.1
<i>Formal, self-employed</i>	---	---	44.0	---	---	56.0	---	---	42.8
<i>Informal, self-employed</i>	72.7		61.7		71.5	52.3	29.2		66.2
<i>Informal wage workers</i>	56.9	21.2	54.9	---	44.8	32.3	45.3	32.2	48.5
<i>... of which: informal pub wage workers</i>	---	---	---	---	---	---	23.3	---	52.7
<i>Unpaid family workers</i>	80.6	---	---	---	---	---	---	---	---

* Not statistically significant (i.e. not significantly different from zero). --- = 20 observations or less (inadequate for meaningful estimates).

Source: GLSS 4, 1998/9.

6. Household poverty and employment income

Tables 10a through 10c analyze the connections among employment, gender, and poverty at the household level. Up to this point, the analysis of these interconnections has been made at the level of the individual. Since poverty is measured at the household level, it is important to see if there are measurable differences in household poverty rates that can be linked to employment.

Tables 10a through 10c classify households into various types using four criteria:

- (1) number of earners in the household (earners are defined so as to exclude unpaid family workers),
- (2) the sex of the head of household as reported in the Ghana Living Standards Survey,
- (3) the sex of the primary earner as measured by total individual employment income, and
- (4) whether the household receives the majority of its employment income from formal or informal employment.

Table 10a reports household poverty rates for each household type, Table 10b reports the average number of household members, and Table 10c reports the average ratio of non-earners to earners.

Table 10a. Poverty rates by household type, 1998/9, Ghana.

	Head of Household (identified in survey)		Primary Earner (largest share of earnings)		All households
	Female-Headed	Male-Headed	Female	Male	
	Majority of earned income from informal employment				
One earner (age 15+)	67.4	67.1	67.7	66.7	67.2
Two earners (age 15+)	70.4	64.3	65.2	65.3	65.3
More than two earners	75.7	61.8	59.8	66.1	64.2
	Majority of earned income from formal employment				
One earner (age 15+)	43.3	47.1	45.9	46.0	45.9
Two earners (age 15+)	45.6	45.4	53.6	43.3	45.4
More than two earners	---	30.1	---	32.4	34.6

--- = 20 observations or less

Source: GLSS 4, 1998/9.

Table 10a shows that households that derived most of their employment income from formal employment had significantly lower poverty rates than households that derived most of their income from informal employment. As Tables 10b and 10c reveal,

this difference in poverty rates cannot be explained by differences in household size or number of earners relative to non-earners. The quality of employment opportunities is the most likely explanation.

Table 10b. Household size by household type, 1998/9, Ghana.

	Head of Household (identified in survey)		Primary Earner (largest share of earnings)		All households
	Female-Headed	Male-Headed	Female	Male	
	Majority of earned income from informal employment				
One earner (age 15+)	3.4	3.6	3.6	3.4	3.5
Two earners (age 15+)	5.0	5.2	5.2	5.2	5.2
More than two earners	6.8	7.6	7.1	7.7	7.5
	Majority of earned income from formal employment				
One earner (age 15+)	3.2	3.7	3.3	3.7	3.5
Two earners (age 15+)	4.5	5.2	4.8	5.2	5.1
More than two earners	---	7.7	---	7.4	7.5

--- = 20 observations or less

Source: GLSS 4, 1998/9.

Table 10a shows some interesting patterns with respect to gender, source of employment income, and poverty rates. Nevertheless, these patterns are not systematic. For example, female-headed households that depended on informal employment had consistently higher poverty rates than male-headed households that depended on informal employment. However, this pattern was reversed for households that received most of their income from formal employment. If we compare households whose primary earner was female to households whose primary earner was male, no clear gendered pattern of poverty rates is discernable.

In male-headed households, poverty rates declined as the number of earners in a household increased. This reduction in poverty rates occurred despite the fact that household size also increased with the number of earners, as Table 10b makes clear. The reason for the decline in poverty rates becomes evident in Table 10c. Despite the increase in household size, the ratio of non-earners to earners fell as the number of earners increase.

There was an exception to the general trend of poverty rates falling as the number of earners increases. For female-headed households, the opposite held true: poverty rates rose with the number of earners. This was also true for households with a majority of income from formal sources and whose primary earner was female. This could represent the combination of two effects. First, labor supply could increase with the risk of poverty as more household members must work in order to try to meet the family's basic needs.

Second, women's more precarious position in the Ghanaian labor force could mean that, for female-headed households, the additional supply of labor was not sufficient to significantly reduce the risk of poverty – including women engaged in formal employment.

Table 10c. Ratio of non-earners to earners (15+) by household type, 1998/9, Ghana.

	Head of Household (identified in survey)		Primary Earner (largest share of earnings)		<i>All households</i>
	<i>Female-Headed</i>	<i>Male-Headed</i>	<i>Female</i>	<i>Male</i>	
	Majority of earned income from informal employment				
<i>One earner (age 15+)</i>	2.4	2.6	2.6	2.4	2.5
<i>Two earners (age 15+)</i>	1.5	1.6	1.6	1.6	1.6
<i>More than two earners</i>	1.0	1.3	1.2	1.3	1.3
Majority of earned income from formal employment					
<i>One earner (age 15+)</i>	2.2	2.7	2.3	2.7	2.5
<i>Two earners (age 15+)</i>	1.2	1.6	1.4	1.6	1.6
<i>More than two earners</i>	---	1.4	---	1.4	1.4

--- = 20 observations or less

Source: GLSS 4, 1998/9.

7. Conclusions

The estimates presented in this paper suggest that substantial labor force segmentation exists in Ghana. Women are disproportionately represented in more precarious employment status categories – in particular, as informal, non-agricultural own-account workers and unpaid workers on family enterprises. Women have limited access to formal wage employment and, where such access exists, it is usually realized through public sector employment.

Poverty rates – as measured by the working poor as a percent of total employment – and earnings differ markedly from one employment status category to the next. Formal employment is associated with lower poverty rates and earnings relative to informal employment as is non-agricultural employment compared to agricultural employment. A hierarchy in the quality of employment is also evident within the broad category of informal employment. Informal wage employment is superior to informal self-employment which, in turn, is of higher quality than unpaid work on family enterprises.

The gender segmentation of the labor force increases women workers' risk of poverty in Ghana more than gender differentials within a particular employment category. This occurs because women are concentrated in forms of employment characterized by higher rates of poverty. Although gender differentials in poverty rates

within an employment status category are ambiguous, there is a clear pattern with respect to earnings. In all employment categories, women systematically earn less than men.

The tabulations compiled in this paper provide an overview of the employment patterns and poverty linkages in Ghana. However, they do not shed much light on the factors behind the type of labor force segmentation – both formal and informal – observed. Many factors could explain the overall patterns portrayed here: different human capital endowments, variations in asset holdings, market imperfections (including credit markets), social and patriarchal norms, formal institutions, and the need to perform unpaid work in the household sector. Additional research is necessary to clarify these issues and develop concrete policy recommendations.

Further research is also need to understand the factors that might raise the returns to labor in the different employment categories discussed here. If growth is to reduce poverty on a sustainable basis, then a significant portion of the benefits of growth must be captured as higher returns to labor – and hence, higher average standards of living among working people. However, the constraints to raising returns to labor will differ across employment status categories and industrial sectors. A better understanding of what these limiting factors are is necessary to make growth more employment oriented, and employment creation “pro-poor”.

Appendix A – Notes to the Tables

Unless otherwise noted, all estimates reported in the tables contained in this report were calculated using the data from the fourth round of the Ghana Living Standards Survey (GLSS 4), 1998/9. Access to the data was provided by the Ghana Statistical Service. Estimates reported in the table represent sample means calculated using the sample weights reported for the 1998/9 GLSS. Estimates for which there were only 20 or fewer observations were not reported in the tables.

Table 1. Population figures are based on the 2000 population census and the estimated distribution of the population among the various labor force categories is based on the GLSS 4, 1998/9. Therefore, the estimates in the table reflect the population in 2000, but based on shares computed from 1998/9 data. The assumption is that economic activity rates, employment rates, and the distribution of employment did not change significantly over this short period.

Indicators of labor force participation and employment are based on the respondents' status during the 7 days prior to the interview. Employment status over a longer duration – e.g. over the past year – was not used because of inaccuracies of recall and ambiguities around a given respondent's labor force participation.

Agricultural employment is defined as including those working in an agricultural industry (including fisheries and forestry) and those who report farming as their occupation.

Table 2. An individual's employment status is, in all cases, based on the reported primary occupation. For example, if a person's primary source of employment was a formal government job, but he/she was also self-employed in a secondary occupation, he/she would be classified as a formal public wage employee.

The distinction between formal and informal wage employees is based on social protection criteria. Formal wage employees are those who report having paid leave (either sick leave or holiday leave) and employer contributions to a pension. For a more in-depth discussion of the formal/informal distinction for wage employees, including alternative indicators of formality, see Appendix B.

Formal non-agricultural self-employment is distinguished from informal non-agricultural self-employment on the basis of whether the household enterprise was registered with a government authority. The equivalent information is not available for family agricultural enterprises. Therefore, all agricultural self-employment is treated as informal employment for the purposes of this study. Given the nature of agricultural self-employment in Ghana, this is a reasonable assumption.

Public employees are defined as those who work for a branch of government or for a parastatal (i.e. state-owned enterprise or statutory organization). As in the previous

table, agricultural employment is defined as including those working in an agricultural industry (including fisheries and forestry) and those who report farming as their occupation.

Own-account workers are defined as self-employed workers in an enterprise without employees apart from unpaid family workers. In these tabulations, unpaid family workers are reported separately from self-employed workers.

Table 3. See notes for Table 2.

Table 4. An individual is classified as “working poor” if that person is (1) employed and (2) living in a household whose total income falls below the poverty line. Income poverty, not consumption poverty, is used to construct these estimates. As with most income and expenditure surveys, the households in the GLSS have a tendency to underreport income relative to consumption. This means that income poverty rates will be higher than those poverty rates based on consumption. Nevertheless, since the emphasis throughout this report is on remunerative employment and therefore the income generated through such employment, income poverty rates are used. The methodology for computing the poverty line and equivalency scales used for these estimates is identical to that reported in the Ghana Statistical Service publication “Poverty Trends in Ghana in the 1990s” which accompanied the GSS report summarizing the results from the GLSS 4.

A longer discussion of the distinction between income and consumption poverty measures can be found in Appendix C.

Total household income is used to compute an individual’s poverty status. Total income includes employment income, remittances, and income from other sources. Employment income includes estimates of gross self-employment income. The data from the GLSS 4 allows for multiple estimates of self-employment income. According the GSS report, “Ghana Living Standards Survey: Report of the Fourth Round”, income estimated from reported gross revenues less operating expenses is deemed unreliable. For these estimates, direct reported net earnings from a given self-employment activity is used instead. The market value of goods produced through self-employment activities but consumed at home is imputed and added to self-employment income. Similarly, the monetary value of in-kind payments is included in estimates of employment earnings.

For notes on the employment status categories, see the notes to Table 2.

Table 5a. Average hourly earnings are calculated by dividing total individual employment income by total hours worked. The GLSS 4 includes data on up to four occupations. Total employment income and hours of work include all occupations. Therefore, the estimates contained in Table 5a represent the average individual returns to remunerative labor. However, an individual’s employment status is based on the primary occupation only. See the notes to Table 2 for more details on employment status.

Individuals who report working more than 140 hours a week are dropped from the sample. For details on the computation of hours of work per week, see the notes to Table 7.

As with the poverty status estimates in Table 4, total employment income includes estimates of self-employment income. GLSS 4 allows for multiple estimates of self-employment income. However, the reliability of income estimates derived from reported gross revenues less operating expenses are questionable. Instead, direct reported net earnings from a given self-employment activity is used. The market value of goods produced through self-employment activities but consumed at home is imputed and added to self-employment income. In addition, the monetary value of in-kind payments is included in estimates of employment earnings.

Self-employment earnings for family enterprises with unpaid family labor present a particular challenge for compiling these estimates. Frequently, all earnings from the family enterprise were attributed to a single individual, although other family members worked in the enterprise. Using the earnings and hours work as they are reported would overstate the hourly earnings (i.e. the average return to labor) of the individual to which all earnings were attributed. The contribution of unpaid family workers would be erased.

In order to estimate average hourly earnings, the self-employment income for individuals working on family enterprises is redistributed among family members reporting that they were self-employed or were unpaid family workers. Total self-employment income from the family enterprise is divided by total hours worked on the enterprise – including the hours worked by unpaid family members. This average hourly rate is then multiplied by each individual's working hours to re-estimate each individual's self-employment income. This technique imputes earnings to unpaid family workers – an estimate of the unpaid worker's contribution to employment income. It is important to remember that these individuals do not actually control this income within the household. In addition, the technique used assumes that the productivity of all household members working on a family enterprise is identical. Without more precise information on productivity differentials, this is the most reasonable assumption possible.

Table 5b. See notes to Table 5a. This table presents the same data contained in Table 5a, but converts values from cedis to U.S. dollars. Average market exchange rates from April 1998 to March 1999, the period over which the GLSS 4 interviews were conducted, are used to make the direct conversion. Data on market exchange rates is taken from the IMF International Financial Statistics database. For the purchasing power parity (PPP) adjustments, the World Bank's 1999 PPP index for Ghana is used. Purchasing power parity adjustments attempt to take into account differences in price levels for a standard basket of goods in addition to market exchange rates.

Table 6. See notes to Table 5a and Table 7.

Table 7. Average weekly hours of work are calculated from estimates of total individual hours of work for all employment activities. For each individual and for each

employment activity, hours of work are converted to a weekly basis. Employment status is determined by an individual's primary occupation (see notes to Table 2).

Usual hours worked in each employment activity are used to compute total weekly hours. In addition, information on actual hours worked over the week prior to the interview is available. However, the usual hours worked more closely correspond to estimates of annualized employment earnings. Therefore, usual hours – instead of actual hours for the prior week – are used for these estimates.

For individual's reporting average hours worked per day, an assumption had to be made on whether the individual worked a 5-day or a 7-day week. To estimate the length of the work week, actual hours worked over the previous week are used as a guide (instead of usual hours worked). If actual hours worked the previous week exceed 5.4 times the usual daily hours, a seven day work week is assumed. If actual hours worked are less than 5.4 times the usual daily hours, a five day work week is assumed. These calculations only apply to a relatively small number of respondents who reported usual hours worked on a daily basis.

It should be noted that hours worked by unpaid family workers were often not recorded. Therefore, the estimates reported here are based on those unpaid family workers for which data were available.

Tables 8a-c. Industry and employment status classifications are both based on the primary occupation only. In these tables, "agriculture" represents a purely industrial classification. In other tables, "agricultural employment" also includes individuals who reported farming as their occupation. This accounts for some small discrepancies between Tables 8a-c and some of the previous tabulations.

For details on employment status classifications, see the notes to Table 2.

Table 9. See notes to Table 2, Table 4, and Tables 8a-c.

Tables 10a-c. For a description of the household poverty measures, see the notes to Table 4.

In these tables, "earners" are defined as household members who are (1) employed and (2) report a positive income. Therefore, unpaid family workers are not counted as "earners".

Income from informal employment includes income from all self-employment and informal wage employment. Income from formal employment includes income from formal wage employment. Social protection criteria are used to distinguish between formal and informal wage employment (see notes to Table 2 and Appendix B).

Heads of household are defined by the respondents themselves. The primary earner is determined by comparing total employment income for all employed members

of the household. The individual with the largest total employment income is the primary earner. In the few cases in which the largest household incomes are equal and men and women have identical incomes, the sex of the primary earner is assumed to be identical to that of the reported head of household.

Appendix B – Definition of informal wage workers

The tabulations contained in this report use social protection indicators to distinguish formal wage employees from informal wage employees. Formal wage employees are defined as wage workers who receive both paid leave (either sick leave or holiday leave) and contributions to a pension from their employer. All other wage workers are considered informal wage employees. This particular set of social protection indicators was available and easy to apply when using the GLSS 4 dataset.

There are other criteria that could be used to distinguish formal and informal wage workers. Other social protection variables directly related to employment could be incorporated into the definition. Another commonly used indicator is the existence of an employment contract. Measuring informality is not an exact science. Different informal jobs will exhibit varying degrees of “informality”. Some might have a contract, but no formal social protections. Others might offer some social benefits, but no contract. Conceptually, it is useful to think in terms of a continuum of informality. However, for the tabulations presented in this report, it was necessary to be able to classify wage employees as either formal or informal in order to maintain a simple presentation of the estimates.

Table 3b. Distribution of employed population (15+) by sex in selected employment statuses, 1998/9, Ghana.

	Women	Men
Formal employment, non-agricultural		
Formal private wage employees	0.9	3.3
Formal public wage employees	2.8	8.6
Formal, self-employed	3.6	3.5
Formal employment, agricultural		
Formal wage employees	<0.1	0.6
Informal employment, non-agricultural		
Informal, self-employed	37.5	15.8
... of which: own account workers	35.9	14.1
Informal wage workers	2.8	8.6
... of which: informal public wage workers	0.5	1.8
Unpaid family workers	2.5	1.2
Informal employment, agricultural		
Self-employed	30.5	47.5
Informal wage workers	0.2	2.2
Unpaid family workers	18.7	8.2
Other (unclassified)	0.5	0.5
TOTAL	100%	100%

Does the use of other indicators of informality alter the results significantly? Table 3b replicates the estimated distribution of employed persons by sex and employment status category contained in Table 3 (main text), but uses the existence of an employment contract to distinguish formal from informal wage employees.

A comparison of the two tables (Table 3 and 3b) shows that, by using the employment contract criterion to distinguish formal from informal wage employment, the fraction of both men and women in formal wage employment is higher and the fraction of men and women in informal wage employment is lower compared to the tabulations that use the social protection criteria.

Table 4b. Working poor as a percent of employment (15+) in selected employment statuses by sex, 1998/9, Ghana.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	24.0	22.0	22.5
Formal public wage employees	36.1	44.1	41.9
Formal, self-employed	52.0	45.8	49.2
Formal employment, agricultural			
Formal wage employees	---	55.0	50.7
Informal employment, non-agricultural			
Informal, self-employed	57.4	58.8	57.7
... of which: own account workers	57.4	58.5	57.7
Informal wage workers	45.0	49.2	48.1
... of which: informal public wage workers	46.3	48.1	47.7
Unpaid family workers	70.0	60.0	67.0
Informal employment, agricultural			
Self-employed	74.4	72.9	73.5
Informal wage workers	---	60.1	61.5
Unpaid family workers	87.8	80.7	85.8

Table 4b reproduces the estimates contained in Table 4 (main text) using the employment contract criterion instead of the social protection indicators. Interestingly, poverty rates, using the “working poor” approach, among formal wage workers is lower using the employment contract criterion compared to the social protection indicators. Similarly, poverty rates among informal wage workers are lower using the social protection indicators compared to the employment contract criterion. This suggests that wage employees with a contract are better off than wage employees with no contract, even if they do not meet the social protection standards for formality. There appears to be a continuum of informality in the Ghanaian labor force with the social protection indicators and employment contract criterion capturing different aspects of informal wage employment.

From these alternative tabulations, we can see that the definition of informality does affect the estimates presented in this report. However, the slight changes in the estimated numbers do not alter the overall story in terms of labor force segmentation, gender differentials, informal employment, and risk of poverty.

Appendix C - Income poverty and consumption poverty

The poverty status of households as reported in Tables 4, 9, and 10a-c was based on a measurement of income poverty. That is, total household income was compared to a standardized poverty line. The methodology for computing the poverty line and equivalency scales used for these estimates was identical to that reported in the Ghana Statistical Service publication “Poverty Trends in Ghana in the 1990s” which accompanied the GSS report summarizing the results from the GLSS 4. If household income fell below this threshold, the household was considered poor. Employed members of such households were considered to be “working poor”.

An income poverty measurement was used because of the report’s focus on income-generating employment. However, this measurement might not provide the most accurate assessment of deprivation of basic needs within households. This is because, in living standards surveys, households tend to underreport total income from all sources. Therefore, expenditures on consumption, not income, often provides a more accurate assessment of household-level living standards. If the goal of a study is to provide an accurate picture of how many families fall below a basic needs threshold of consumption, then a consumption poverty measurement, not an income poverty measurement, would be most appropriate.

However, measuring the prevalence of consumption poverty was not the goal of this study. Instead, the emphasis was on income-generating activities. In addition, the report stressed the comparison of relative income poverty rates across employment categories, not the absolute prevalence of poverty in Ghana. For these purposes, the income poverty measure was preferred.

Nevertheless, the Government of Ghana and Ghana Statistical Service use a consumption-based measurement to assess poverty trends. Therefore, the income poverty rates reported in the main text of this report will seem high to those familiar with the consumption poverty rates produced for Ghana. Table 4c below recreates the “working poor” poverty rates by sex across employment categories presented earlier in Table 4, but uses household expenditures, not income, for determining a household’s poverty status. The same methodology for determining total household expenditure, as described in “Poverty Trends in Ghana in the 1990s”, was used for these calculations.

Most of the relative comparisons between the different categories of employment remain valid for the consumption poverty estimates. Poverty rates are lower for wage employment relative to self-employment; poverty rates are higher for nearly all agricultural workers; and there is little significant gender variation in poverty rates within a given employment category. However, the consumption poverty measure did produce some puzzling results. For example, poverty rates among formal public wage workers are particularly high. Indeed, informal wage workers have significantly lower poverty rates than formal public wage workers. For women, the lowest poverty rates occur among informal public wage employees. These surprising results were not reflected in the estimates of poverty rates that used the income poverty measurement.

Table 4c. Working poor as a percent of employment (15+) in selected employment statuses by sex, 1998/9, Ghana.

	Women	Men	Total
Formal employment, non-agricultural			
Formal private wage employees	---	12.8	10.6
Formal public wage employees	15.1	21.9	20.2
Formal, self-employed	16.6	17.2	16.9
Formalemployment, agricultural			
Formal wage employees	---	---	8.6
Informal employment, non-agricultural			
Informal, self-employed	26.7	29.5	27.4
... of which: own account workers	26.7	29.9	27.5
Informal wage workers	8.5	15.1	13.3
... of which: informal public wage workers	6.5	18.5	15.3
Unpaid family workers	22.8	44.1	29.2
Informal employment, agricultural			
Self-employed	51.0	53.1	52.2
Informal wage workers	---	31.6	30.9
Unpaid family workers	69.2	66.8	68.5

--- = less than 20 observations.

Source: GLSS 4, 1998/9.

Notes

¹ See Fine, Ben and Boateng, Kwabia (2000), "Labour and employment under structural adjustment," in Aryeetey, E., Harrigan, J., and Nissanke, M., eds. *Economic Reforms in Ghana: the Miracle and the Mirage*, Trenton, NJ: Africa World Press, pp. 227-45 and Baah-Boateng, William (2004), "Employment policies for sustainable development: the experience of Ghana," (mimeo.), Department of Economics, University of Ghana, presented at the National Workshop on an Employment Framework for Ghana's Poverty Reduction Strategy, Government of Ghana/UNDP/ILO, May 7th 2004, Accra.

² See Heintz, James (2004), "Elements of an employment framework for poverty reduction in Ghana: report of a joint ILO/UNDP mission", UNDP, New York, <http://www.undp.org/poverty/docs/employment-gprs-mission-report-july04.pdf>.

³ Ghana Statistical Services, GSS, (2000b), "Poverty Trends in Ghana in the 1990s," Accra.

⁴ The poverty rates presented in Table 4 represent income poverty estimates, not consumption or expenditure-based measurements of poverty. For a discussion of the differences in these two measurements, see Appendix C.

⁵ The exception is unpaid labor in non-agricultural family enterprises. However, earnings for unpaid family workers are imputed. They do not represent actual income received by the individual in question.