

Moonlighting and Wage Differentials: A Case Study of the Public and Formal Private Sectors in Ghana

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MOONLIGHTING AND WAGE DIFFERENTIALS: A CASE STUDY OF THE PUBLIC AND FORMAL PRIVATE SECTORS IN GHANA

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Abstract:

Purpose: With widening wage gaps between Ghana's public and private sectors, many workers engage in secondary employment (moonlighting) to supplement income and sustain living standards. This paper examines the incidence and drivers of moonlighting, focusing on how sectoral wage differentials shape such decisions. While prior studies have explored general motives for multiple jobholding, few have empirically linked these behaviours to wage disparities. The study investigates whether public–private wage gaps influence moonlighting and identifies the main determinants of sectoral wage outcomes.

Design/methodology/approach: Drawing on nationally representative data from the Ghana Living Standards Survey (GLSS 7), the study applies Ordinary Least Squares (OLS) to estimate determinants of wages, Oaxaca–Blinder decomposition to quantify wage gaps, and probit models to assess the probability of moonlighting. Explanatory variables include personal (education, gender, marital status), household (size, rural/urban location), and labour market characteristics (experience, hours worked, job security).

Findings: Results show that education, location, and experience significantly affect wages in both sectors, while men consistently earn more than women. Oaxaca–Blinder decomposition reveals that most wage differences stem from variations in worker characteristics, though unexplained disparities point to structural inefficiencies. Moonlighting is more prevalent in the public sector, driven by lower wages and cost-of-living pressures. Lower earnings, larger households, and rural residence significantly increase the likelihood of secondary employment.

Originality/value: This study provides the first empirical evidence linking public–private wage disparities to moonlighting in Ghana, offering insights to guide wage policy, labour market reforms, and human resource strategies.

Keywords: Moonlighting, Wage Differentials, Labour Market, Oaxaca–Blinder Decomposition, Public–Private Sectors

Introduction and Background

Over the past two decades, Ghana's economy has experienced sustained growth and significant poverty reduction, yet income disparities remain a persistent feature of its labour market. Despite the poverty rate falling by more than half since the early 1990s, roughly half of the population still lives in poverty, even with a mean per-capita income of just \$950 (Fink et al., 2012). High living costs, particularly in urban areas, combined with stagnant wage growth, continue to place pressure on household incomes (Nunoo et al., 2018). These

structural realities have profound implications for employment decisions, prompting many workers to seek additional income sources to maintain their standard of living.

Ghana's labour market mirrors the broader challenges facing developing economies. The private sector remains the dominant employer, while the public sector, though offering greater job stability, often provides lower remuneration. Formal sector wages generally lag behind rising living costs, and income inequality has widened despite economic growth (World Bank, 2020). This divergence between earnings and living standards has intensified pressure on workers to diversify their income streams, often through secondary employment (Nunoo et al., 2018; Baah et al., 2011). While existing research has documented the prevalence and determinants of moonlighting, little attention has been paid to the role that sectoral wage differentials, particularly between the public and private formal sectors, play in shaping these decisions.

The literature identifies several factors influencing moonlighting decisions. At the individual level, demographic and human capital characteristics such as education, gender, marital status, and work experience shape the likelihood of taking on a second job (Polachek, 1975; Baah-Boateng et al., 2013; Asravor, 2020). Household size and rural residence also play a role, with larger households and lower-income environments increasing the pressure to diversify income sources (Owusu, 2001; Nunoo et al., 2018). Labour market conditions, including job security, hours worked, and wage levels, further influence secondary employment decisions (Krishnan, 1990; Averett, 2001).

Wage disparities between the public and private sectors are a critical component of this dynamic and are well established in labour economics literature. Human capital theory attributes wage differences to variations in education and skills (Gaag et al., 1989). Efficiency wage theory suggests that private employers pay higher wages to attract and retain more productive workers, while compensating wage differentials explain gaps as offsets for non-wage job characteristics, such as job security or benefits. Empirical evidence consistently shows that public sector workers often enjoy wage premiums at the lower end of the earnings distribution but face wage penalties at the upper end (Younger & Osei-Assibey, 2017; Ampofo & Tchatoka, 2019).

A growing body of literature also suggests that the decision to pursue additional work is not purely financial but often shaped by constraints on working hours in the primary job. The standard labour-leisure choice framework posits that individuals are likely to take on extra work when the wage offered exceeds the marginal value of leisure (Shishko & Rostker, 1976). Empirical evidence shows that employees in the public education sector often earn less than their private-sector counterparts and therefore exhibit higher rates of multiple jobholding (Owusu, 2005; Timothy & Nkwama, 2017). Other studies attribute these decisions to complementarities between jobs (Altonji & Paxson, 1992; Heineck, 2003) or find limited gender differences in multiple jobholding behaviour (Averett, 2001; Asravor, 2020). Financial insecurity, job stability, and household obligations remain among the most significant drivers of such employment strategies (Baah-Boateng et al., 2013; Kisumano & Wa-Mbaleka, 2017; Nunoo et al., 2018).

Despite extensive work on the determinants of moonlighting and public–private wage differentials, a significant empirical gap remains: few studies explore how these wage disparities directly influence the decision to moonlight in Ghana. Prior research has examined secondary jobholding in relation to union activities (Baah, 2006), gender (Asravor, 2020), or the education sector (Owusu, 2005; Timothy & Nkwama, 2017), but none systematically assesses whether sectoral wage gaps drive multiple jobholding behaviour. Notably, Gaag et al. (1989) linked wage differentials to moonlighting decisions in Côte d’Ivoire and Peru, but similar evidence for Ghana is absent.

This study addresses that gap by examining how public–private sector wage differentials shape moonlighting behaviour in Ghana’s formal labour market. Specifically, it investigates three questions: (i) What are the key drivers of wage disparities between the public and private sectors? (ii) What individual, household, and labour-market characteristics shape secondary employment decisions? and (iii) To what extent do wage gaps influence the incidence of secondary employment? Using nationally representative data from the Ghana Living Standards Survey (GLSS 7) and applying ordinary least squares (OLS), Oaxaca–Blinder decomposition, and probit models, the study offers new empirical evidence on the structural linkages between wage dynamics and secondary employment behaviour.

Data and Methods

Data

This study uses data from the seventh round of the Ghana Living Standards Survey (GLSS7), conducted in 2016/17 by the Ghana Statistical Service. The survey sampled over 15,000 households across 1,000 enumeration areas (561 rural and 439 urban) using a two-stage stratified sampling design. It provides detailed individual and household-level information on socio-economic characteristics, employment, income, and secondary jobholding, as well as institutional features of jobs.

Theoretical Framework

The decision to engage in secondary employment can be understood within the standard labour–leisure trade-off model. Individuals allocate their finite time between leisure and work to maximise utility, subject to income and time constraints. When wages offered in a secondary job exceed the individual’s marginal rate of substitution between leisure and consumption, the utility gained from additional income outweighs the utility lost from reduced leisure time, making moonlighting a rational choice (Böheim & Taylor, 2004; Shishko & Rostker, 1976).

This framework also recognises hourly constraints: individuals may want to supply more labour at their primary job but are limited by contractual or institutional restrictions, prompting them to seek a second job. Moonlighting thus arises from both income motivations and hours constraints, shaped by wage offers, job characteristics, and household needs.

Empirical Model Specification

We employ three complementary estimation techniques, OLS, probit, and Blinder–Oaxaca decomposition, to examine wage determinants, moonlighting incidence, and the drivers of public–private sector wage differentials.

Ordinary Least Squares (OLS) Model

We estimate a standard Mincerian earnings function to identify the determinants of wages in the public and private sectors:

$$\ln W_i = \beta_0 + \beta_1 \text{Male}_i + \beta_2 \text{Exper}_i + \beta_3 \text{Exper}_i^2 + \beta_4 \text{Educ}_i + \beta_5 \text{Rur}_i + \varepsilon_i$$

where W_i is individual i 's wage, and explanatory variables capture demographic, human capital, and locational characteristics. The model assesses how these attributes explain wage differentials across sectors.

Probit Model

To analyse factors influencing the decision to hold a second job, we estimate a binary probit model:

$$P(Y_i = 1|X_i) = \Phi(\gamma_0 + \gamma X_i)$$

$Y_i = 1$ if the individual moonlights and 0 otherwise, and X_i includes personal, household, and labour market characteristics

The sector-specific model is expressed as:

$$Pr(Y_i = 1|X_i) = \gamma_0 + \gamma_1 \ln YP + \gamma_2 \text{Age} + \gamma_3 \text{Age}^2 + \gamma_4 \text{Male} + \gamma_5 \text{Security} + \gamma_6 \text{Educ} + \gamma_7 \text{Hrswrk} + \gamma_8 \text{Marriage} + \gamma_9 \text{Rur} + \gamma_{10} \text{HSize} + \varepsilon_i$$

Where $\ln YP$ is income from the primary job, Security captures job stability, Hrswrk denotes hours worked, Marriage marital status, and HSize household size. A sector dummy (public = 1, private = 0) tests whether public employees are more likely to moonlight due to wage gaps:

$$Pr(Y = 1|X_i) = \mu_0 + \mu_1 \ln YP + \mu_2 \text{Age} + \mu_3 \text{Age}^2 + \mu_4 \text{Male} + \mu_5 \text{Security} + \mu_6 \text{Educ} + \mu_7 \text{Hrswrk} + \mu_8 \text{Marriage} + \mu_9 \text{Rur} + \mu_{10} \text{HSize} + \mu_{11} \text{Sector} + \epsilon$$

We extend the model by incorporating public and private wage offers (PUW and PRW):

$$Pr(Y = 1|X_i) = \gamma_0 + \gamma_1 \ln YP + \dots + \gamma_{11} \text{PUW} + \gamma_{12} \text{PRW} + \varepsilon_1$$

A negative PUW coefficient suggests that higher primary-job wages reduce moonlighting, while a positive PRW implies that higher expected secondary wages increase it.

Blinder-Oaxaca Decomposition

To examine the public–private wage gap, we use the Blinder–Oaxaca decomposition, which separates mean wage differences into components explained by characteristics (endowments), differences in returns to those characteristics (coefficients), and their interaction (Hlavec, 2018). To explore heterogeneity across the wage distribution, we also implement the Chernozhukov et al. (2013) decomposition approach, combining quantile regression and counterfactual wage estimation. This provides insights into how wage disparities vary across different earnings levels. We also implement a twofold version, distinguishing explained and unexplained components. Finally, the Chernozhukov et al. (2013) approach combines quantile

regression with counterfactual estimation to assess how wage gaps vary across the earnings distribution.

Measurement of variables

Dependent Variables:

Moonlighting status is a binary variable coded 1 if an individual aged 15+ held two or more income-generating jobs (in cash or kind) in the seven days before the survey, and 0 otherwise.

Wage is measured as the natural log of monthly earnings, including salary and benefits. All non-monthly income measures (daily, weekly, quarterly, annual) were converted to monthly values. Using log-transformed wages ensures a more normally distributed dependent variable and reduces heteroskedasticity.

Independent variables:

Moonlighting determinants

For moonlighting determinants, the variables are classified into three based on the literature: personal characteristics, household characteristics, and labour market characteristics.

Table I. Independent variables used in the analysis of moonlighting determinants

Variable	Measurement	Justification
Age	Continuous, measured in years	Captures life-cycle effects on labour supply decisions; older individuals may have different economic pressures than younger ones.
Age ²	Continuous, squared term of age	Captures non-linear effects of age on moonlighting behaviour.
Gender	Dummy: 1 = male, 0 = female	Identifies gender-based differences in the likelihood of holding multiple jobs.
Marital status	Dummy: 1 = married, 0 = otherwise	Reflects household responsibilities and financial obligations, influencing additional work decisions.
Income from primary job	Continuous, monthly income (cash + in-kind)	Measures how earnings from the main job affect the incentive to seek additional employment.
Educational attainment	Categorical: 0 = no education; 1 = basic; 2 = secondary; 3 = vocational/technical; 4 = tertiary	Proxies for human capital; education can increase access to secondary work or reduce the need for it.
Household size	Continuous, total number of household members	Larger households increase financial pressure, raising the likelihood of moonlighting.
Location	Dummy: 1 = rural, 0 = urban	Reflects spatial differences in job opportunities and income levels; rural

		workers often diversify income sources.
Hours worked	Continuous, total weekly hours in primary job	Captures time constraints that may limit secondary jobholding.
Job security	Dummy: 1 = formal employment contract or social security benefits, 0 = otherwise	Workers with secure jobs may be less likely to moonlight, although security may also encourage diversification.

Table II. Independent variables used in the analysis of wage determinants

Variable	Measurement	Justification
Gender	Dummy: 1 = male, 0 = female	Captures gender wage gaps reflecting labour market discrimination or productivity differences.
Educational attainment	Categorical: 0 = no education; 1 = basic; 2 = secondary; 3 = vocational/technical; 4 = tertiary	Proxies for human capital: higher education levels are associated with higher wages.
Work experience	Continuous, measured in years	Indicates skill accumulation and productivity gains over time.
Work experience ²	Continuous, squared term of experience	Accounts for diminishing returns to experience on wage outcomes.
Location	Dummy: 1 = rural, 0 = urban	Controls for spatial variation in wages due to differing labour market conditions.

Results

Descriptive Statistics

Descriptive statistics (Tables III and IV) show that the average age is 37 years, with a mean household size of six. Monthly earnings average GHC 923.79, and private sector workers earn slightly more than public sector employees. Over half of the sample is female, most have basic education, and 63% live in rural areas. Moonlighting is more common in the public sector (11.08%) than in the private sector (6.44%).

Table III: Summary Statistics of Continuous Variables

Variable	Observation	Mean	Std. Deviation	Min	Max
Hours of work (main job)	6,109	40.84	54.213	0	120
Earnings	6,128	923.79	1209.24	4.167	1800
Public sector wage	1,547	1126.58	957.718	30	10000
Private formal sector wage	1,166	1206.84	1360.08	4.167	12000
Formal sector wage	2,713	1161.08	1148.51	4.167	12000
Age	36,653	36.864	17.783	15	99
Household size	52,386	6.053	3.544	1	28

Source: Computed from the GLSS 7 data

Table IV: Summary Statistics of Categorical Variables

Variables	Frequency	Percentage (%)
Sex of Individual: Female	26,944	51.43
Male	25,442	48.57
Location of Household: Urban	22,549	36.99
Rural	38,406	63.01
Educational Level: No education	704	1.6
Basic education	33,604	76.55
Secondary education	5,8411	3.31
Vocational/Technical	1,647	3.75
Tertiary	2,100	4.78
Marital Status: Married	16,311	38.91
Consensual Union	2,590	6.18
Separated	848	2.02
Divorced	1,118	2.67
Widowed	2,849	6.80
Single (never married)	18,206	43.43
Job Security in Primary Job: Secure	1,300	25.77
Formal Sector: Public	1,623	72.98
Private	601	27.02
Moonlighting: Yes	3,548	12.02
No	25,969	87.98
Public Moonlighting: Yes	79	11.08
No	634	88.92
Private Formal Moonlighting: Yes	17	6.44
No	247	93.56

Source: Computed from the GLSS 7 data

OLS Estimates

Gender exerts a strong and positive influence on earnings across all models. OLS results (Table V) show that male workers earn 19.4% more than female workers in the public sector, 19.1% more in the private sector, and 20.2% more in the formal sector overall. Location is also significant: urban residents earn 18.6% more than their rural counterparts in the public sector and 10.6% more in the private sector.

Work experience significantly increases wages but at a diminishing rate, as indicated by the negative coefficient on the squared experience term. A one-year increase in experience raises earnings by 3.8% in the public sector, 6.9% in the private sector, and 5.2% overall. Education is a key driver of wage variation. Compared with workers without formal education, public sector employees with vocational training and tertiary qualifications earn 99.2% and 115.0% more, respectively. Comparable figures for the private sector are 67.7% and 106.2%.

Table V: OLS Estimates of Log-Wage Equations for Ghana, the Public and Private Formal Sectors

Variables	Public	Private formal	Ghana (Formal sector)
Male	0.194*** (0.0381)	0.191*** (0.0511)	0.202*** (0.0306)
Rural	-0.186*** (0.0379)	-0.106* (0.0519)	-0.154*** (0.0309)
Years of Experience	0.0383*** (0.00767)	0.0692*** (0.00535)	0.052*** (0.0041)
Years of Experience ²	-0.000533** (0.000182)	0.000990***	-0.0008*** (0.00009)
Basic	0.0709 (0.132)	(0.000059)	0.088 (0.0667)
Secondary	0.401* (0.163)		0.382*** (0.0819)
Vocational	0.992*** (0.158)	0.257*** (0.0679)	0.934*** (0.0823)
Tertiary	1.150*** (0.162)	0.677*** (0.0801)	1.143*** (0.0794)
Constant	5.442*** (0.131)	1.062*** (0.0657) 5.235*** (0.0928)	5.299*** (0.080)
Sample size (N)	1492	1136	2,628

Standard errors in parentheses. Note: * significant at 10%, ** significant at 5%, *** significant at 1%

Wage Decomposition

Results from the Blinder–Oaxaca decomposition (Table VI) show that average wages are slightly higher in the private formal sector (67.55%) than in the public sector (66.98%), with a wage gap of 6.07%. Approximately 5.31% of this gap is explained by differences in worker endowments such as education and experience, while 0.763% remains unexplained and may reflect labour market discrimination.

Table VI: Cross-Sector Evidence on Wage Gap Using the Blinder-Oaxaca Decomposition

Type of Sector		
<i>Overall</i>		
Private formal sector	6.759*** (0.0209)	
Public sector	6.698*** (0.0380)	
Difference	0.0607 (0.0433)	
Explained	0.0531* (0.0236)	
Unexplained	0.00763 (0.0379)	
<i>explained</i>		

Male		
Rural	-0.0117*	(0.00463)
Age	-0.0155**	(0.00475)
Age ²	0.0319	(0.0560)
Experience	0.0771	(0.0556)
Experience ²	0.00793	(0.0103)
Education	-0.0650*	(0.0327)
unexplained	0.0284*	(0.0142)
Male		
Rural	-0.0201	(0.0564)
Age	-0.0180	(0.0215)
Age ²	-0.757	(2.105)
Experience	0.874	(1.034)
Experience ²	-0.694	(0.588)
Education	-0.239	(0.164)
Constant	-0.187	(0.126)
	1.048	(0.730)

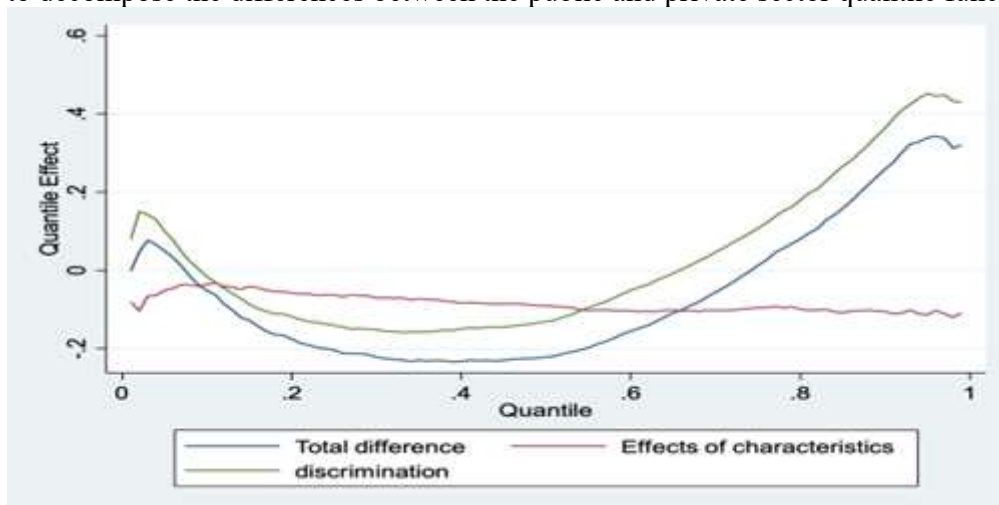
N

2050

Standard errors in parentheses. Note: * significant at 10%, ** significant at 5%, *** significant at 1%

The Chernozhukov et al. (2013) distributional decomposition (Figure I) further reveals that discrimination plays a minor role at the lower end of the wage distribution but becomes increasingly important beyond the 57th percentile, where the unexplained component widens. At the top of the wage distribution, the total public–private wage gap is approximately 38%, compared to 21% at the lowest quantile, suggesting that unexplained wage differentials intensify at higher earnings levels.

Figure 1: Graph showing sectoral differences (log of wages) using the counterfactual distribution to decompose the differences between the public and private sector quantile functions.



Source: Computed from the GLSS 7 data

Determinants of Moonlighting

The marginal effects from the probit models (Table VII) indicate that higher earnings and longer working hours significantly reduce the likelihood of moonlighting across all models. A one-unit increase in working hours reduces the probability of multiple jobholding by 7.8 percentage points in the public sector and 5.45 points in the private sector. Age exerts a positive but non-linear effect: moonlighting propensity increases with age but declines beyond approximately 65 years. Larger household size significantly increases the likelihood of moonlighting, reflecting higher income needs.

Job security is positively associated with moonlighting in the private sector (6.77 percentage points) and the overall formal sector (6.8 points). Male workers are significantly more likely to moonlight than females, with a 5.2% higher probability in the public sector and 5.3% in the private sector. Rural residence is also positively associated with moonlighting, increasing its likelihood by roughly 1.1 percentage points. Educational attainment and marital status are not significant predictors.

Table VII: Marginal Effect of *Probit Models* of the Determinants of Moonlighting for Formal Ghana, the Public Sector, and the Private Formal Sector.

Variables	Marginal effect for public	Marginal effect for private formal	Marginal effect for Total Sample (formal sector)
Earnings	-0.038** (0.014)	-0.030*** (0.006)	-0.0314*** (.0057)
Age	0.0244*** (0.0070)	0.0111*** (0.0026)	0.0126*** (0.0023)
Age ²	-0.0002** (0.00008)	-0.00011*** (0.000031)	-0.00012*** (0.00003)
Household size	0.0132*** (0.0033)	0.0045** (0.0018)	0.0050** (0.0016)
Job security	0.0334 (0.0321)	0.0677*** (0.0130)	0.068*** (0.0115)
Hours of work	-0.078*** (0.0054)	-0.0545*** (0.0027)	-0.0608*** (0.003)
Male	0.052** (0.019)	0.0532*** (0.0104)	0.051*** (0.0093)
Basic	-0.159 (0.139)	-0.044 (0.0926)	-0.0599 (0.0816)
Secondary	-0.157 (0.139)	-0.0689 (0.0932)	-0.078 (0.0822)
Vocational	-0.164 (0.1373)	-0.079 (0.0934)	-0.091 (0.0821)
Tertiary	-0.198 (0.1365)	-0.1056 (0.0928)	-0.124 (0.0816)
Marital Status	-0.0038 (0.022)	0.016 (0.0118)	0.012 (0.0106)

Rural	0.124*** (0.021)	0.113*** (0.0113)	0.113*** (0.0102)
<i>N</i>	1300	3835	4921
<i>Prob> chi2</i>	0.000	0.000	0.000

Standard errors in parentheses. Note: * significant at 10%, ** significant at 5%, *** significant at 1%

The results of the sectoral probit model (Table VIII) confirm that public sector workers are significantly more likely to hold secondary jobs than their private sector counterparts, with a 10.78% higher probability. Results from the wage-based probit model (Table IX) show a negative relationship between public sector wages and moonlighting. A 1% increase in public sector wages reduces the probability of moonlighting by 3.4%, supporting the hypothesis that wage gaps between sectors motivate secondary employment.

Table VIII: Determinant of Moonlighting by the Type of Sector of the Employee

Formal sector moonlight	marginal effect
Public sector (0.0190)	0.1078 ***.
<i>N</i>	2,222
<i>Prob>chi2</i>	0.000

* Significant at 10%, ** significant at 5%, *** significant at 1%. Standard errors in parentheses.

Note: The probit outcome was estimated using all the explanatory variables.

Table IX: Marginal Effect of Probit Model of the Determinants of Moonlighting by sector wages

Variable	Marginal Effect
Public Wage	-0.034* (0.0111)
Age	0.022*** (0.0049)
Age ²	-0.0002** (0.000057)
Household size	0.0103*** (0.0025)
Job security	0.0418 (0.0218)
Hours of work (main job)	-0.083*** (0.0031)
Male	0.051** (0.0142)
Basic	-0.146 (0.0991)
Secondary	-0.121 (0.1018)
Vocational	-0.172 (0.1009)
Tertiary	-0.202 (0.1002)
Married	-0.009 (0.016)
Rural	0.118*** (0.0152)

N	1372
Prob > chi2	0.0000

Note: * significant at 10%, ** significant at 5%, *** significant at 1%. Standard errors in parentheses.

Diagnostics Tests

To verify the robustness of the OLS results, we tested for heteroskedasticity and normality. Regressing squared residuals on explanatory variables rejected the null of homoskedasticity at the 5% level, confirming heteroskedastic errors and justifying the use of robust standard errors. Results are reported in Table X.

Table X: Test for Heteroskedasticity

H ₀ : Constant Variance i.e., $\sigma(i)^2 = \sigma^2$ for all i (Homoskedasticity)		
H ₁ : Variance is not Constant i.e., $\sigma(i)^2 \neq \sigma^2$ for all i (Heteroskedasticity)		
F (11, 5511)	=	8.86
Prob > F	=	0.0000

Source: Computed from the GLSS 7 data

Additionally, we performed normality tests to examine whether the models exhibit normal distribution. We tested the normality of the OLS models using graphical approaches. We compared the histograms of the sample data to a normal probability curve to test the normality of the distribution. The graphs show a bell-shaped empirical distribution (histogram) that resembles the normal distribution, indicating that, for all three models (public sector, private formal sector, and formal Ghana), the residuals are normally distributed. Figures II(a), II(b), and II(c) show the graphical results of the normality test.

Figure 2(a): Public sector OLS model normality test

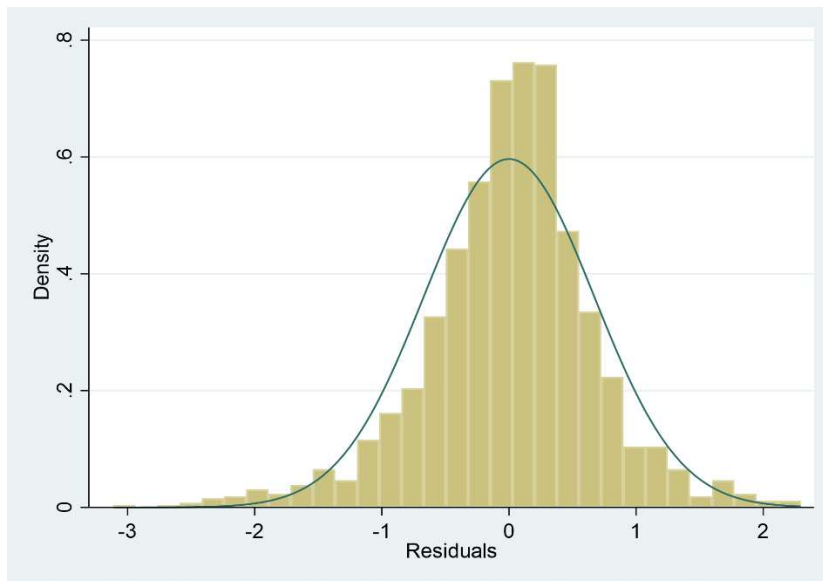


Figure 2(b): Private formal sector

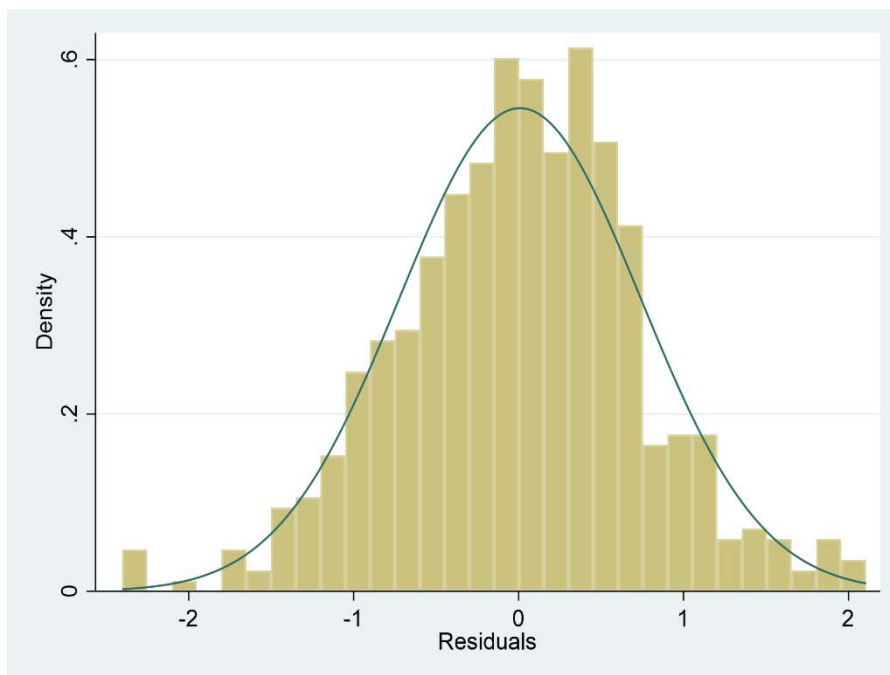
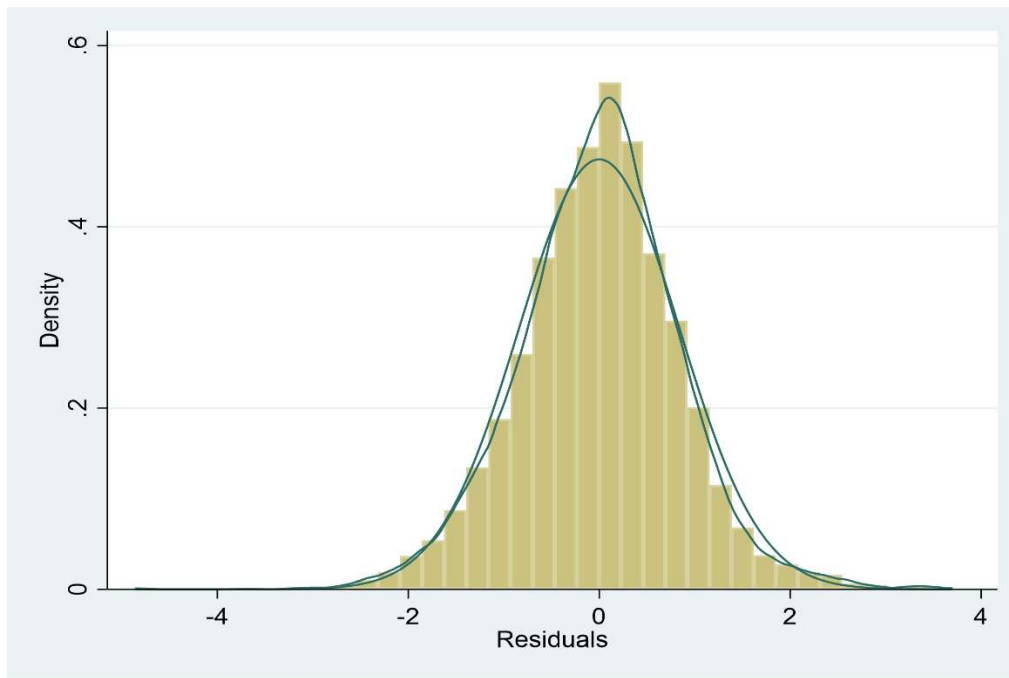


Figure 2(c): Ghana (Overall) OLS model normality test



Discussion

The wage regressions confirm a persistent gender premium in favour of men across the public and private formal sectors, consistent with broad evidence of gendered earnings gaps in developing and advanced economies. While Gaag et al. (1989) reported female wage advantages in Côte d'Ivoire, our findings align more closely with evidence that men capture higher returns even after controlling for human capital and location. The public–private comparison suggests that gender gaps are structural rather than sector-specific, reflecting differential returns to observable characteristics and unobserved job attributes that favour men. Comparative studies show that gender wage gaps vary by context: in Latvia, Lithuania, and Estonia, they are larger for women, reflecting private-sector disadvantages or progressive public pay policies (Christofides & Michael, 2013), while in other settings, men face wider disparities (Giordano et al., 2015). Evidence from Nordic and Western European economies further shows that public employment can be more attractive to women in certain contexts (Anghel et al., 2021), illustrating how institutional pay structures shape gender dynamics.

Wage differences between urban and rural workers are also evident, with rural employees consistently earning less. This reflects higher living costs and stronger labour demand in urban areas, which drive wage premia. Experience significantly influences earnings, with wages increasing over time but at a diminishing rate. This contrasts with Gaag et al. (1989) for Côte d'Ivoire, where experience had a negative effect, but aligns with findings for Peru and with evidence from European countries where experience is positively associated with wages (Anghel et al., 2021). The negative coefficient on the squared term suggests diminishing returns at higher tenure, possibly due to pay-structure rigidities or reduced productivity growth. In the public sector, weaker late-career returns may also result from policies prioritising youth employment over wage growth for incumbents.

Educational attainment exerts a strong positive effect on earnings, consistent with Duodu (2019) and Marconi (2004) for Ghana and Brazil. Education signals productivity through accumulated skills, leading to higher wages. However, Christofides and Michael (2013) note that in many countries, less-educated public employees earn more than their private-sector counterparts, suggesting that efficiency wage considerations also shape wage structures.

The Blinder–Oaxaca decomposition distinguishes explained and unexplained components of wage gaps. Unlike Anghel et al. (2021), who reported a positive public–private wage gap in Portugal, Spain, Greece, and Ireland driven largely by worker characteristics, our findings indicate that most of the differential in Ghana is explained by observable factors. The Chernozhukov et al. (2013) decomposition further shows variation across the wage distribution. Consistent with Duodu (2019) and Osei-Assibey and Younger (2017), the Single Spine Pay Policy (SSPP) has helped narrow gaps, particularly beyond the lower quantiles, though disparities persist at the top. Earlier GLSS rounds revealed minimal explained gaps, suggesting that wage differentials were historically driven by discrimination (Osei-Assibey & Younger, 2017; Duodu, 2019).

The probit results highlight earnings as a key determinant of secondary employment. Higher primary-job income significantly reduces moonlighting, confirming the role of financial constraints (Baah-Boateng et al., 2013; Krishnan, 1990; Averett, 2001; Sakyi & Agomor, 2020). Longer working hours similarly reduce multiple jobholding, consistent with the labour–leisure choice model and evidence of hourly constraints in Ghana (Averett, 2001; Baah-Boateng et al., 2013). Age has a positive but non-linear effect: moonlighting rises mid-career but declines after about 65, reflecting shifting priorities, declining capacity, and life-cycle considerations such as reduced work intensity and retirement (Betts, 2006; Adebisi, 2019).

Household structure is another key driver. Larger households significantly increase the likelihood of moonlighting due to higher dependency ratios (Owusu, 2001), though Asravor (2020) reports the opposite effect. Job security raises the probability of moonlighting, particularly in the private and overall formal sectors (Nunoo et al., 2018; Abdukadir, 1992), likely because stable employment reduces risk and facilitates access to secondary work opportunities. Men are also more likely to moonlight than women, consistent with Baah-Boateng et al. (2013) and Stelcner et al. (1989), although Adebisi (2019) found the reverse in some public-sector contexts. Rural workers are more likely to hold multiple jobs, likely due to unstable income streams and limited employment options, a pattern noted by Baah-Boateng et al. (2013). Rural underemployment and the need to sustain consumption encourage income diversification.

Marital status is generally insignificant but shows sectoral variation: it is positively associated with moonlighting in the private sector, likely reflecting increased financial responsibilities, but negatively associated in the public sector. Education is similarly insignificant and negatively correlated with moonlighting, suggesting that higher-skilled workers rely less on secondary employment, consistent with Asravor (2020) but contrasting with Aminu (2011), Averett (2001), and Sakyi and Agomor (2020).

Finally, moonlighting is significantly more common in the public sector than the private sector, consistent with Adebisi (2019) and Gaag et al. (1989) for Nigeria and Côte d’Ivoire. This reflects lower wages and institutional features such as stronger job security and weaker supervision, which lower the risks of secondary employment. Higher public-sector wages reduce the likelihood of moonlighting, supporting the income constraint hypothesis. This aligns with Gaag et al. (1989), who found that a 1% wage increase reduces moonlighting by 2.2 percentage points in Côte d’Ivoire and 14.1 points in Peru. Due to limited data, we could not estimate the effect of private-sector wages.

Conclusion & Policy Recommendations

We examined wage determinants in Ghana's public and private formal sectors, the drivers of moonlighting, and how sectoral wage disparities shape dual jobholding. Using GLSS 7 data and OLS, Oaxaca–Blinder decomposition, and probit models, three key findings emerge.

First, wage gaps between the public and private sectors remain significant. While individual and labour-market characteristics explain much of the variation, persistent unexplained differences point to structural inefficiencies. Second, moonlighting is strongly driven by financial constraints and time availability: lower income and longer working hours increase the likelihood of holding multiple jobs. Public sector employees are more prone to moonlighting, particularly where wage growth lags behind living costs. Finally, dual employment is not purely a coping strategy but is also influenced by job security, education, and spatial disparities in employment opportunities.

The wage gap's influence on moonlighting highlights the need for targeted labour-market reforms. While equalising public- and private-sector pay may be fiscally unrealistic, measures such as performance-based pay and productivity-linked incentives can improve equity. Enhancing wage progression, especially for highly educated workers, could also mitigate incentives to seek secondary employment.

Moonlighting regulations should be formalised in public and private HR policies. Instead of blanket prohibitions, adaptive frameworks should differentiate between productive secondary work and conflicts of interest, with clear rules on confidentiality and external employment. Raising base pay for entry-level and early-career workers, particularly youth, could reduce reliance on second jobs. Moreover, since job security alone does not deter moonlighting, employment guarantees should be paired with performance monitoring and productivity benchmarks to limit shirking.

We acknowledge that the use of cross-sectional GLSS data limits its ability to capture temporal dynamics, and the small subsample of sector-specific wage earners may constrain generalisability. Future research should employ panel data to analyse long-term patterns and examine how labour unions shape wage structures and disparities across sectors.

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