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Gender Wage Differential In Nigeria: A Microeconomic Analysis Using Oaxaca-Blinder Decomposition

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Abstract

This study looked at gender wage differential in Nigeria with attention to how much of the pay gap can be linked with different workers characteristics and how much remains after these differences are considered. The work used a secondary microeconomic design. Nigeria-specific results from the nationally representative General Household Survey-Panel 2015/2016 were used. The sample covered non-farm employed men and women aged 25 to 55 years, with 2,285 observations in rural Nigeria and 1,515 observations in urban Nigeria. The wage measure was logged hourly pay, obtained from annual labour earnings divided by annual hours of work. Education, potential experience, sector of work, occupation and survey context were the main variables in the wage equations. The Oaxaca-Blinder method was used in the microdata analysis and the Nigeria estimates were reconstructed and interpreted in this study. Recent Nigeria Labour Force Survey statistics were also used to show the present labour-market setting, but they were not mixed with the older wage microdata. The results show a large male wage advantage. The mean log gender pay gap was 0.572 in rural Nigeria and 0.336 in urban Nigeria, which are about 77 percent and 40 percent when changed from log points to percentage form. Observable worker and job characteristics explained 0.399 log points, or 69.72 percent, of the rural gap and 0.272 log points, or 81.09 percent, of the urban gap. The structural part was 0.173 log points in rural Nigeria and 0.063 in urban Nigeria. Education increased the gap in both locations, while occupational sorting was especially important in rural Nigeria. The results also show why a small formal wage sector and very high informality matter for gender pay analysis in Nigeria. The study concludes that equal pay policy alone may not close the gap. Better female access to higher education, higher-paying occupations, formal wage jobs, care support and transparent pay practices are also needed.

Keywords: Gender Wage Gap, Oaxaca-Blinder Decomposition, Nigeria, Labour Market, Wage Inequality, Human Capital, Occupational Segregation

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1. INTRODUCTION

Gender wage difference is still one of the labour market problem found in many countries. Men and women can have different pay because they have different education, experience, occupations and sectors. But the pay difference can also remain when these things are controlled. That remaining part is often discussed as a structural part of the wage gap. It may contain discrimination, differences in bargaining, job quality, promotion, networks and other worker factors that the data did not measure well. Recent studies show that the size and source of the gap is not the same in all countries or in all parts of the wage distribution (Bennedsen et al., 2023; Hirsch & Lentge, 2022; Kaya, 2023). This makes microeconomic analysis useful because individual worker information can show what is happening behind the average wage figure.

The Nigerian labour market make this issue more difficult. A very large share of workers are self-employed or in informal work, while the wage-employment share is small. The National Bureau of Statistics reported that wage employment was 13.4 percent in Q4 2022 and 11.8 percent in Q1 2023. Own business and farming accounted for 73.1 percent and 75.4 percent in the same quarters. Informal employment was also above 92 percent. Women were among the groups more likely to work fewer than 40 hours in a week. These figures mean that analysis that look only at formal salaried workers may miss many workers and may make the gender problem look smaller than it really is. This point also agree with African studies showing that formal and informal labour markets can have different wage structures (Opoku et al., 2024; Van den Broeck et al., 2023).

Recent evidence for Nigeria has already shown that the wage gap does not disappear easily. Orji and Nwosu (2023) used household surveys for 2003/2004 and 2018/2019 and found a male wage advantage across the wage distribution. Their RIF decomposition showed that the gap was present from lower to upper quantiles. Van den Broeck et al. (2023) also used nationally representative household data and found a very large gender pay gap in Nigeria non-farm work, with rural Nigeria having a much bigger gap than urban Nigeria. These two studies are important because they show both a time dimension and a rural-urban dimension. They also show that the mean gap alone is not enough for understanding the labour market.

This study therefore examine the gender wage differential in Nigeria by reconstructing and interpreting Nigeria-specific Oaxaca-Blinder estimates from real nationally representative microdata results. The main focus is the mean gap in rural and urban non-farm employment for persons aged 25 to 55 years. Newer official labour-force statistics are added only to show how the Nigerian labour market presently look. They are not used to replace the microdata wage result. This approach make it possible to use real data without creating numbers that did not come from a survey. It also provides a simple Nigeria-only presentation of the explained and structural parts, something that can be useful for policy discussion and later replication with newer microdata when full wage files are available for direct estimation.

1.1 Objectives of the Study

The main objective is to examine gender wage differential in Nigeria using the Oaxaca-Blinder decomposition approach.

The specific objectives are to:

i. describe the labour-market setting in which the gender wage gap is observed;
ii. measure the mean gender pay gap in rural and urban Nigeria;
iii. separate the mean gap into explained/endowment and structural/unexplained parts;
iv. discuss the role of education, occupation and sector; and
v. draw policy points from the result and recent literature.

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2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Meaning and Measurement of Gender Wage Differential

Gender wage differential is the difference in pay received by male and female workers. It can be reported with monthly earnings, annual earnings or hourly wages. Hourly pay is more useful when men and women work different number of hours because it removes part of the hours difference from the pay measure. Still, hourly pay does not solve every problem. Workers can differ in occupation, employment status, sector, experience, education, firm size and job security. For this reason, a raw wage gap is only a first description. Studies now normally add regression controls or decomposition so that the observed gap can be separated into different sources (Petrongolo & Ronchi, 2020; Tyrowicz & van der Velde, 2021).

2.1.2 Human Capital, Education and Experience

Human capital means the knowledge and skill that workers carry into the labour market. Education and work experience are common measures. If education raise productivity and wages, a gender difference in schooling can produce a pay gap even where the same wage rule is used for both sexes. Oudanou et al. (2024), using data for 43 sub-Saharan African countries, found that secondary and tertiary education and gender parity in schooling improve female position in wage employment. Klasen et al. (2021) also show from comparable developing-country microdata that education is closely connected with female labour-force participation. The pay effect is not always simple because the return to the same level of education can be different for men and women.

2.1.3 Occupation, Sector and Employment Form

This matter is very important for Nigeria because most employment is outside standard wage jobs. Van den Broeck et al. (2023) found that Nigerian women in non-farm work were more concentrated in self-employment, while men were more present in medium- and high-skilled wage employment. Rural wage employment paid more than rural self-employment, so occupational sorting widened the rural gender gap. Ojo and Baiyegunhi (2023), although studying agricultural productivity rather than wages, also found that gender differences in resources and characteristics produced a measurable gap among rice farmers in south-western Nigeria. The two studies together show that gender inequality can be found both in labour earnings and in production outcomes.

2.1.4 Family Responsibility, Parenthood and Wage Outcomes

Family roles can affect labour supply, hours, occupation and promotion. Many women combine paid work with unpaid care and this can reduce continuous work experience or make flexible but lower-paying jobs more attractive. Cukrowska-Torzewska and Matysiak (2020) found in a meta-analysis that motherhood wage penalties are partly connected with career breaks and job choices. Yu and Hara (2021) found that parenthood changed earnings growth within and across firms in a gendered way. Vagni and Breen (2021) also reported large earnings losses after motherhood for many British women.

2.1.5 Explained and Structural Parts of the Gap

In decomposition analysis, the explained part measures the wage difference connected with different average characteristics of men and women. This is also called the endowment or composition effect. The structural or unexplained part measures the remaining difference connected with different coefficients or returns, plus effects of omitted factors. The name unexplained does not mean that every part is discrimination. If the data did not measure job quality, ability, bargaining or firm wage policy, those things can also enter the structural component. This is why careful wording is needed.

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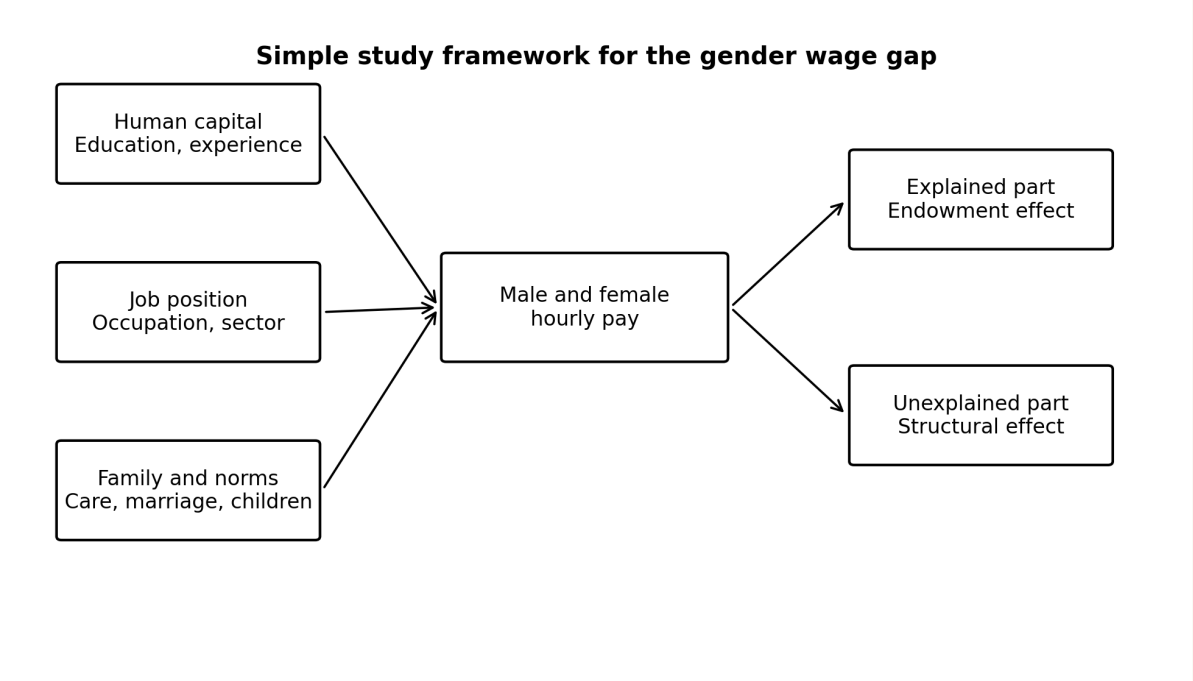


Figure 2.1. Conceptual framework of factors linked with the gender wage differential.

2.2 Theoretical Framework

2.2.1 Human Capital Theory

Human capital theory gives one simple reason why wages can differ. Workers invest in schooling, training and work experience, and these investments can raise productivity and pay. In gender wage analysis, the theory expects part of the gap to come from differences in education and labour-market experience. Recent studies still find these variables useful, but they do not explain everything. For example, Oudanou et al. (2024) show that schooling improves gender equality in wage employment in sub-Saharan Africa, while Van den Broeck et al. (2023) find that education contribute to the Nigeria pay gap together with occupation and sector. The theory is therefore useful for the endowment part of the decomposition. It is less able by itself to explain why men and women with similar measured characteristics can receive different returns.

2.2.2 Labour-Market Discrimination and Segmentation View

The discrimination and segmentation view says that workers with similar productive characteristics may still receive different pay or have different access to good jobs. This can come from employer behaviour, social norms, weak bargaining power, occupational segregation or firm wage rules. Agénor et al. (2021) show in a labour-market growth model that reducing gender bias can improve female outcomes and economic growth. Bennedsen et al. (2023) also show from a survey of pay-transparency reforms that greater wage transparency often reduces gender pay gaps. Hirsch and Lentge (2022) found that bonuses can add to the gap, especially in higher jobs. Risse (2025) found that female-concentrated occupations and industries can carry lower wage rates even after controls. These ideas support the structural component of the Oaxaca-Blinder result.

2.2.3 Relevance of the Combined Framework

This study combine the two views. Human capital theory helps to understand the explained part, mainly education and experience. Discrimination and segmentation help to understand why occupation, sector and returns can remain different even after individual characteristics are included. The combination is suitable for Nigeria because the labour market have both human-capital differences and strong segmentation between wage work, self-employment, formal jobs and informal activities. The model does not say that the

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unexplained component is all discrimination. It says the structural part needs attention because it is where unequal returns and unmeasured labour-market processes can appear.

2.3 Empirical Review

Table 2.1. Recent empirical studies related to gender wage differences

Author(s)/Year	Area/Data	Method	Main result
Cukrowska-Torzewska & Matysiak (2020)	Multi-country meta-analysis	Meta-analysis	Motherhood wage penalty averaged about 3.6–3.8%; career breaks and job choice mattered.
Petrongolo & Ronchi (2020)	High-income countries	Review/local labour markets	Care responsibility and job-location choices help explain remaining gender gaps.
Tyrowicz & van der Velde (2021)	Transition economies	Adjusted wage-gap analysis	Structural labour-market shocks changed adjusted gender wage inequality for new cohorts.
Batchuluun (2021)	Mongolia LFS	Distribution/decomposition	Sectoral segregation and work-family issues were linked with a wider gender wage gap.
Roberts & Schöer (2021)	South Africa labour-force data	Segregation analysis	Education and job segregation were strongly connected with male-dominated earnings advantage.
Danquah et al. (2021)	Ghana household data	IV-LASSO	Lower household gender wage difference improved women empowerment and welfare.
Paweenawat & Liao (2022)	Thailand LFS/SES	Wage-gap and parenthood analysis	Education, occupation and industry helped convergence; parenthood penalties remained.
Said et al. (2022)	Egypt	Quantile/RIF decomposition	Glass ceiling and sticky-floor patterns differed between public and private sectors.
Hirsch & Lentge (2022)	Germany administrative data	Wage decomposition	Lower bonuses for women explained about 10% of the mean gap and more among managers.
Van den Broeck et al. (2023)	Nigeria, Malawi, Tanzania	Kitagawa-Oaxaca-Blinder	Nigeria gap was about 77% rural and 40% urban; observed characteristics explained most.
Orji & Nwosu (2023)	Nigeria 2003/04, 2018/19	RIF decomposition	Men earned more across the 10th–90th quantiles in both survey periods.

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Das & Joubert (2023)	World Bank employees	Dynamic decomposition	Historical job-position pipeline accounted for much of the firm pay gap.
Leibing et al. (2023)	Germany school graduates	Oaxaca-Blinder	Expected full-time earnings already showed a gender gap before labour-market entry.
Oudanou et al. (2024)	43 SSA countries	2SLS panel	Secondary/tertiary education and education parity improved equality in wage employment.
Opoku et al. (2024)	Ghana GLSS 7	Selection-corrected wage models	Gender wage discrimination remained in formal and informal employment.
Posel et al. (2024)	South Africa	Sorted partial effects	Gender earnings gap was heterogeneous; marriage, children and geography mattered.
Yimer (2024)	Ghana manufacturing	Employer-employee decomposition	Sorting mattered strongly at low wages, while within-firm premiums also widened the gap.
Risse (2025)	Australia 2021	Oaxaca-Blinder	Female-concentrated jobs carried lower average hourly wage rates after controls.

2.4 Gap in Literature

Recent studies have improved knowledge on gender wage difference, but some gaps are still there. Orji and Nwosu (2023) show that the Nigerian gap exists across wage quantiles and over time, while Van den Broeck et al. (2023) show a strong rural-urban difference using non-farm wage and self-employment data. Yet the Nigeria result is often presented inside a multi-country study, so the specific Oaxaca-Blinder components and their policy meaning can be missed. Oudanou et al. (2024) explain the role of education at the sub-Saharan African level, while Opoku et al. (2024) show that formal and informal employment can produce different wage processes in Ghana. There is therefore need for a focused Nigeria presentation that joins the decomposition result with the present structure of the Nigerian labour market. This study fill that small gap by reconstructing the Nigeria-specific mean decomposition from real nationally representative microdata output and linking it with newer official labour-force statistics without inventing a new survey.

3. METHODOLOGY

3.1 Research Design

The study used a quantitative secondary-data microeconomic design. It did not create assumed workers or assumed wages. The main estimates are Nigeria-specific results produced from the Nigeria General Household Survey-Panel 2015/2016 microdata and reported in the open supporting analysis of Van den Broeck et al. (2023). The present article carried out a Nigeria-only reconstruction of those published Oaxaca-Blinder values, converted log gaps to percentage form where useful, and arranged the explained and structural parts in new tables and graphs. Newer NBS labour-force results were used as labour-market context. The two data sources were kept separate because they cover different survey designs and periods.

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3.2 Data Source and Study Sample

The wage data came from the Nigeria General Household Survey-Panel 2015/2016, which is part of the Living Standards Measurement Study-Integrated Surveys on Agriculture programme. The survey is nationally representative and covers rural and urban locations. The decomposition sample was limited to men and women aged 25 to 55 years who were not in school and who had non-farm wage or self-employment. The Nigeria decomposition had 2,285 rural observations and 1,515 urban observations, making 3,800 non-farm workers. Survey weights and the stratified design were used in the source analysis. The NBS contextual data came from the revised Nigeria Labour Force Survey for Q4 2022, Q1–Q3 2023 and Q1 2024.

Table 3.1. Main data sources used in the study

Data source	Period	Unit/coverage	Use in this article
Nigeria GHS-Panel	2015/2016	Individuals aged 25–55 in rural/urban non-farm work	Main wage-gap and Oaxaca-Blinder estimates
Nigeria Labour Force Survey	Q4 2022–Q1 2024	Working-age population and employed persons	Current labour-market context only
PLOS supporting analysis	Published 2023	Nigeria decomposition output and methods	Verification of coefficients, standard errors and sample sizes

3.3 Measurement of Variables

Hourly pay was the outcome variable. Annual wage earnings were based on cash and in-kind payment, while self-employment earnings were based on reported net profit. Annual earnings were divided by annual hours. The natural logarithm of hourly pay was then used for the wage equations. The upper one percent of hourly pay was winsorised in the source study so that extreme values did not drive the mean result. The main explanatory variables were education, potential experience, experience squared, multiple-job status, industrial sector, occupation and survey-context controls.

Table 3.2. Variable definition and model role

Variable	Measurement	Role
ln hourly pay	Natural log of annual labour earnings divided by annual hours	Dependent variable
Education	Primary, secondary, tertiary; no degree as base	Human capital
Potential experience	Age minus six minus years of education; plus squared term	Human capital
Multiple jobs	Dummy for involvement in more than one job	Labour input
Sector	Mining, manufacturing, utilities, construction, commerce, transport/communication, finance/real estate, other services	Job/industry

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Occupation	Self-employment with/without household labour and low-, medium-, high-skilled wage jobs	Job position
Context controls	Region, interview month, enumerator and proxy response	Survey control

3.4 Model Specification

The starting point is a Mincer-type wage equation for men and women. The model is written as follows, with the technical terms kept in their normal form:

$$Male\ equation: \quad \ln ln\left(W_{mi}\right) = X_{mi}^{'}\beta_m + \varepsilon_{mi} \qquad (1)$$

$$Female\ equation: \quad \ln ln\left(W_{fi}\right) = X_{fi}^{'}\beta_f + \varepsilon_{fi} \qquad (2)$$

$$Pooled\ equation: \quad \ln ln\left(W_i\right) = X_i^{'}\beta^* + \delta Female_i + \varepsilon_i \qquad (3)$$

Here, W is hourly pay, X is the vector of worker and job characteristics, β is the estimated return to the characteristics, and ε is the error term. The pooled equation also contains a female dummy. The mean log wage difference is:

$$D = E\left[\ln ln\left(W_m\right)\right] - E\left[\ln ln\left(W_f\right)\right] \qquad (4)$$

Using pooled coefficients as the non-discriminatory reference, the twofold Oaxaca-Blinder form can be written as:

$$D = \left(\bar{X}_m - \bar{X}_f\right)^{'}\beta^* + \left[\bar{X}_m^{'}\left(\beta_m - \beta^*\right) + \bar{X}_f^{'}\left(\beta^* - \beta_f\right)\right] \qquad (5)$$

The first term is the explained or endowment effect. It asks what part of the gap come from different average characteristics of male and female workers. The term inside brackets is the structural part. It asks what part come from different returns to those characteristics and other unobserved factors. A positive component widens the male-female wage gap, while a negative component narrows it.

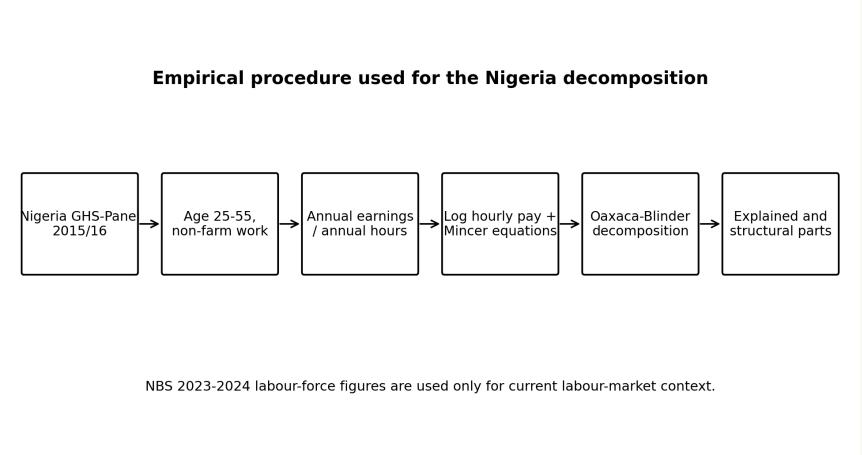


Figure 3.1. Flow of data and decomposition used for the Nigeria analysis.

3.5 Estimation and Robustness

The source estimates used survey weights and adjusted for the survey design. Standard errors were reported for the total gap and the two main components. The source study also tested selection into

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non-farm employment by using Heckman selection models and carried out a median decomposition. These checks matter because wages are seen only for people who participate in the studied type of work. In rural Nigeria, the selection-corrected percentage gap was smaller than the main raw percentage gap, which show that selection can affect the size of the estimate. The basic sign and the main message of a gender pay disadvantage for women remained.

3.6 Research Integrity and Data Handling

No new respondent was interviewed for this article. No personal identifier was used. The main microdata were anonymised public survey data in the source study, and the supporting dataset and do-files are openly linked by the publisher. This article does not claim that a fresh raw-data regression was run inside this writing environment. It reports, reconstructs and interprets the verified Nigeria coefficients from the public analysis. This distinction is important because assumed regression numbers can look real even when they are not real. The study avoided that problem.

4. RESULTS

4.1 Current Labour-Market Setting in Nigeria

The recent labour-force figures show a labour market where standard wage employment is small. Table 4.1 gives the Q4 2022 and Q1 2023 employment status. Wage employment fell from 13.4 percent to 11.8 percent, while own business and farming rose from 73.1 percent to 75.4 percent. The unpaid family-helper share stayed above ten percent. This structure is important for gender wage analysis because women can be outside formal wage jobs even when they are working. A wage study that keeps only formal employees can therefore leave out a large group.

Table 4.1. Employment status in Nigeria, Q4 2022 and Q1 2023 (%)

Employment status	Q4 2022	Q1 2023
Wage employment	13.4	11.8
Own business/farming	73.1	75.4
Unpaid household-business helper	10.7	10.6
Apprentice/intern	2.6	2.2

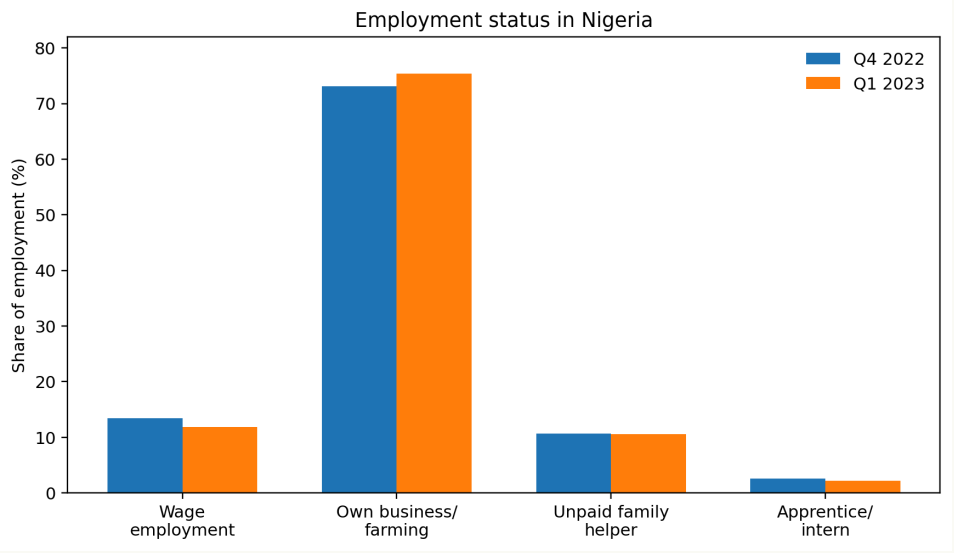


Figure 4.1. Employment status shares in Nigeria, Q4 2022 and Q1 2023. Source: NBS Nigeria Labour Force Survey.

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The wider NLFS indicators also show that informal employment was 93.5 percent in Q4 2022, 92.6 percent in Q1 2023, 92.7 percent in Q2 2023, 92.3 percent in Q3 2023 and 92.7 percent in Q1 2024. Self-employment was also 84 percent or more in the listed quarters. The result means that gender wage policy cannot be designed only around large formal firms. It also need to think about self-employed women, small enterprises, apprentices and workers that have weak social protection.

4.2 Size of the Gender Pay Gap

Table 4.2 gives the Nigeria mean gender pay gap for the GHS-Panel non-farm sample. The rural mean log gap was 0.572 with standard error of 0.073. The urban mean log gap was 0.336 with standard error of 0.084. Both were statistically different from zero. When the log gaps are changed into percentage form by exp(D) minus one, the rural gap is about 77 percent and the urban gap about 40 percent. This means women earned much less than men on average in the studied non-farm activities, with the difference being much stronger in rural Nigeria.

Table 4.2. Nigeria mean gender pay gap and sample size

Location	Observations	Mean log gap	Std. error	Approx. % gap
Rural Nigeria	2,285	0.572***	0.073	77.2
Urban Nigeria	1,515	0.336***	0.084	40.0

Note: *** p < .01. Percentage form is 100[exp(log gap) − 1]. Published source estimates: Van den Broeck et al. (2023).

4.3 Oaxaca-Blinder Decomposition

The decomposition shows that most of the mean gap were connected with differences in observed characteristics. In rural Nigeria, the endowment part was 0.399 log points and represented 69.72 percent of the mean gap. The structural part was 0.173 log points, or 30.28 percent. Both components were statistically important in the rural result. In urban Nigeria, the explained part was 0.272 log points and represented 81.09 percent of the mean gap. The structural part was only 0.063 log points, or 18.91 percent, and it was not statistically different from zero at normal levels. This is a major result because it show that job and worker sorting explain a large part of the mean Nigerian gap, especially in urban areas.

Table 4.3. Oaxaca-Blinder decomposition of the Nigeria mean gender pay gap

Location	Total gap	Explained/endowment	Explained share	Structural part	Structural share
Rural	0.572*** (0.073)	0.399*** (0.054)	69.72%	0.173** (0.071)	30.28%
Urban	0.336*** (0.084)	0.272*** (0.059)	81.09%	0.063 (0.071)	18.91%

Note: Standard errors are in parentheses. *** p < .01; ** p < .05. Values are log points. Source: Nigeria columns of the published decomposition in Van den Broeck et al. (2023).

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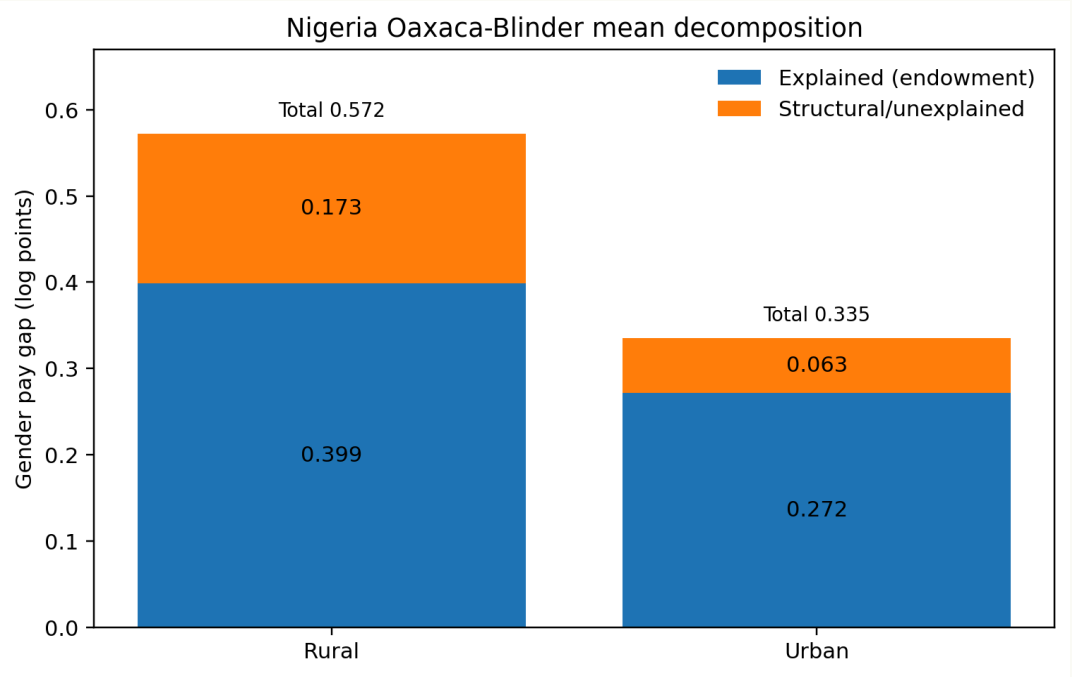


Figure 4.2. Nigeria Oaxaca-Blinder mean gap separated into explained and structural components.

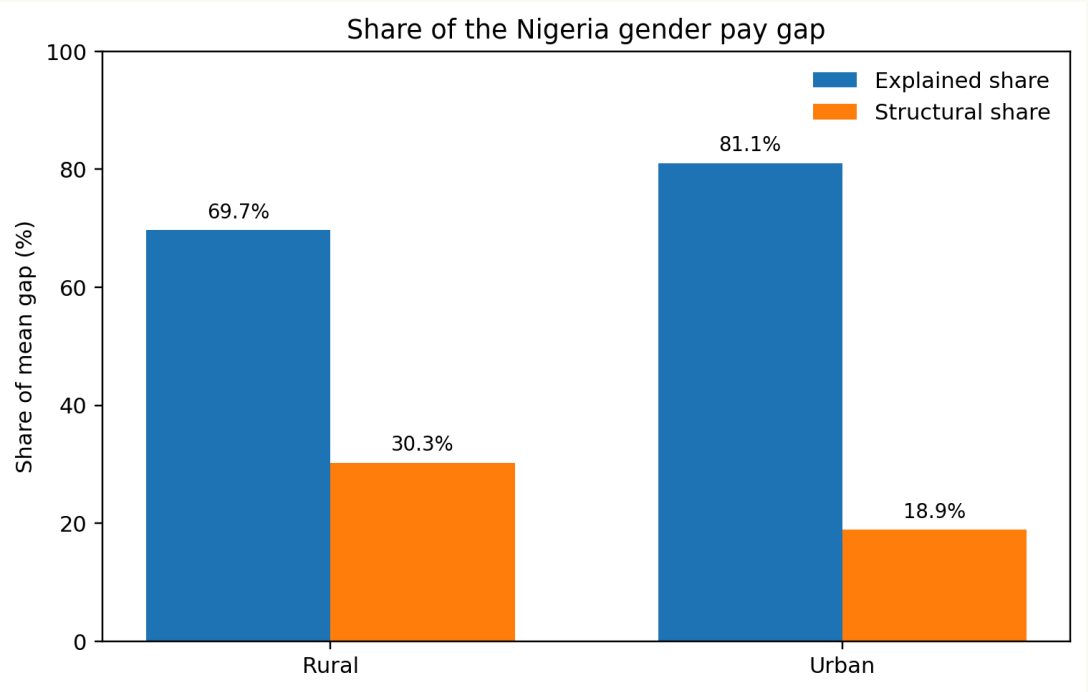


Figure 4.3. Percentage share of the explained and structural components in Nigeria.

4.4 Contribution of Education, Occupation and Sector

The detailed decomposition gives more information about what is inside the explained component. Education widened the gap in both Nigeria locations. The education contribution was about 0.109 log points in rural Nigeria and 0.123 log points in urban Nigeria in the published detailed table. Occupation was the strongest observed factor widening the gap in rural Nigeria. In urban Nigeria, occupation and sector were both important. Experience did not show a clear contribution to the gap. This pattern means that the problem was not simply that women had fewer years in the labour market. It was more connected with where women were located in education, sectors and occupations and with the pay attached to these positions.

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Table 4.4. Direction and relative importance of selected observed drivers

Factor	Rural Nigeria	Urban Nigeria	Meaning
Education	Widens gap; about 0.109 log point	Widens gap; about 0.123 log point	Unequal education profile contributes to male advantage
Occupation	Largest observed widening factor	Important widening factor	Women more concentrated in lower-paid self-employment/occupations
Sector	Widening factor	Important; similar relevance with occupation	Men more present in some higher-paying sectors
Experience	No clear contribution	No clear contribution	Experience difference was not a major source in detailed result

4.5 Sensitivity to Employment Selection

A wage gap can be affected by who entered non-farm employment. The source study therefore used a Heckman selection check. For rural Nigeria, the selection-corrected percentage pay gap was about 43 percent, compared with about 77 percent in the main result. The change was linked with negative selection bias for men in the rural sample. This show that the exact size of a wage gap depends on the employment-selection process. But the correction did not turn the result into wage equality. A sizeable gender difference was still there. The robustness exercise therefore support careful interpretation instead of treating one estimate as a fixed number for every Nigerian worker.

5. DISCUSSION OF FINDINGS

5.1 Large Rural and Urban Wage Gaps

The first finding is that male non-farm workers had higher mean hourly pay than female workers in both rural and urban Nigeria. The rural gap was much larger. This agree with Van den Broeck et al. (2023), because the Nigeria values are taken from their nationally representative microdata result. It also agree with the later Nigeria evidence of Orji and Nwosu (2023), who found male wage advantage throughout most of the wage distribution in both 2003/2004 and 2018/2019. The two studies used different waves and methods, but the direction is the same. Gender wage inequality in Nigeria is therefore not only a problem at one point of the wage distribution or in one type of location.

5.2 Why the Explained Component is Large

The explained share was 69.72 percent in rural Nigeria and 81.09 percent in urban Nigeria. This means the male and female workers in the sample did not have the same average profile. Education, occupation and sector were especially important. The finding is close to Oudanou et al. (2024), who found that better secondary and tertiary education and gender parity in schooling improve women's wage-employment position in sub-Saharan Africa. It also fit Roberts and Schöer (2021), where gendered education choices were connected with gendered jobs in South Africa. Education matters because it opens entry into occupations, and occupation matter because jobs pay differently.

5.3 Meaning of the Structural Part

The rural structural component was about 30 percent of the mean gap and was statistically significant. The

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urban structural share was about 19 percent and was not statistically significant in the mean decomposition. The structural component can include discrimination, but it can also include unobserved skills, bargaining, firm characteristics, work intensity and measurement error. This is why it is safer to call it structural or unexplained part instead of calling the whole value discrimination.

5.4 Family Roles and the Nigeria Wage Gap

The main Nigeria decomposition did not directly separate a motherhood penalty, but family roles can still enter the result through experience, occupation, hours and self-employment. International research show that children can change female earnings more than male earnings. Yu and Hara (2021) found motherhood penalties and fatherhood premiums in earnings growth. Andresen and Nix (2022) found that gender norms and discrimination remain important explanations after comparing different types of couples. Vagni and Breen (2021) found large earnings losses for many mothers, while Mari and Cutuli (2021) show that leave policy can change the size of the wage penalty.

5.5 Labour-Market Informality and Policy Meaning

Nigeria's very high informality changes the kind of policy that can work. Pay-transparency rules are easier to enforce in registered firms with payroll records. They are harder to apply to own-account work, household enterprises and casual work. This does not mean transparency is useless. It means the policy need two sides. Formal employers can be required to use clearer wage bands and promotion rules, while women in informal work need better access to credit, markets, skills, childcare and pathways into higher-return sectors. Danquah et al. (2021) show that reducing gender wage differences can improve women empowerment and welfare, so the benefit is wider than labour-market fairness only.

6. CONCLUSION AND POLICY IMPLICATIONS

6.1 Conclusion

This study examined gender wage differential in Nigeria through a Nigeria-only reconstruction of real Oaxaca-Blinder estimates from nationally representative GHS-Panel microdata. The result show a clear male pay advantage in non-farm work. The mean log gap was 0.572 in rural Nigeria and 0.336 in urban Nigeria, which are about 77 percent and 40 percent in percentage form. Most of the gap was explained by different observed worker and job characteristics. The explained share was 69.72 percent in rural Nigeria and 81.09 percent in urban Nigeria. The structural part was 30.28 percent in rural Nigeria and 18.91 percent in urban Nigeria. Education widened the gap in both places, occupation was especially important in rural Nigeria, and occupation together with sector were important in urban Nigeria. These result show that gender wage inequality in Nigeria is connected strongly with unequal placement in education, sectors and occupations, not only with a simple difference in pay for the same observed worker.

6.2 Policy Recommendations

First, access to secondary and tertiary education for girls and women should continue, but policy should also connect education with the type of course and the labour-market return. Training in technical, professional and male-dominated fields can help to reduce occupational sorting. The education result in the decomposition show that schooling inequality still add to the wage gap.

Second, movement of women into higher-return wage occupations and sectors should be supported. This include apprenticeships, technical certification, business networks, safe transport and targeted information about vacancies. Rural women need special attention because occupation was the strongest observed factor in the rural gap.

Third, formal employers should use clear wage bands, documented promotion criteria and periodic gender

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pay review. Bennedsen et al. (2023) show that pay transparency can reduce wage gaps. The policy is more possible in formal firms, but it can also create a standard that public institutions and larger private employers can follow.

Fourth, care support should be treated as a labour-market policy. Affordable childcare, flexible work that does not carry a wage penalty, and parental policies that do not push only mothers out of career tracks can help women maintain experience and promotion. The recent motherhood-penalty literature show that this issue can continue even after schooling gaps become smaller.

Fifth, the high level of informality means that policy should not stop at equal-pay regulation. Women in self-employment need access to finance, markets, technology, business premises and social protection. Better formalisation pathways can also help workers enter wage employment where pay rules are easier to monitor.

6.3 Contribution and Caution in Interpretation

The study help by putting the Nigeria rural and urban Oaxaca-Blinder result together and explaining what the explained and structural parts mean for policy. It also connect the older wage microdata with newer labour-force condition without mixing the two datasets. The result should still be read with care. The decomposition is not a direct test of discrimination, and the wage data are from 2015/2016. New public microdata with full earnings and hours can be used later to see if the size of the gap have changed.

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Appendix

Appendix A. Data Provenance and Reproduction Trail

Table A1. Verification map for the main empirical numbers

Item	Verified value	Source trail
Nigeria rural sample	2,285	Published Figure 1/Table 4 analysis, GHS-Panel 2015/16
Nigeria urban sample	1,515	Published Figure 1/Table 4 analysis, GHS-Panel 2015/16
Rural mean log gap	0.572 (SE 0.073)	Nigeria column, Oaxaca-Blinder Table 4
Urban mean log gap	0.336 (SE 0.084)	Nigeria column, Oaxaca-Blinder Table 4
Rural explained	0.399 (SE 0.054); 69.72%	Nigeria column, Oaxaca-Blinder Table 4
Urban explained	0.272 (SE 0.059); 81.09%	Nigeria column, Oaxaca-Blinder Table 4
Rural structural	0.173 (SE 0.071); 30.28%	Nigeria column, Oaxaca-Blinder Table 4
Urban structural	0.063 (SE 0.071); 18.91%	Nigeria column, Oaxaca-Blinder Table 4

Appendix B. Arithmetic Used to Express Log Gaps as Percentages

The published decomposition is in log points. For easier reading, this article also reports the equivalent percentage gap. The conversion is: Percentage gap = 100 × [exp(D) − 1]. For rural Nigeria, 100 × [exp(0.572) − 1] = about 77.2 percent. For urban Nigeria, 100 × [exp(0.336) − 1] = about 40.0 percent. The Oaxaca component shares are not recalculated from rounded percentage gaps. They use the published log-point components, so rounding error is kept small.

Appendix C. Selected Nigeria Labour Force Indicators

Table A2. Selected Nigeria labour-market indicators by quarter (%)

Indicator	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q1 2024
Labour-force participation rate	77.8	79.9	80.4	79.5	77.3
Employment-to-population ratio	73.6	76.6	77.1	75.6	73.2

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Self-employment share	84.0	86.0	88.0	87.3	84.0
Time-related underemployment	13.7	12.2	11.8	12.3	10.6
Unemployment rate	5.3	4.1	4.2	5.0	5.3
Youth unemployment rate	8.3	6.9	7.2	8.6	8.4
Urban unemployment rate	6.3	5.4	5.9	6.0	6.0
Rural unemployment rate	4.0	2.9	2.5	4.0	4.3
Informal employment	93.5	92.6	92.7	92.3	92.7

Source: National Bureau of Statistics (2023, 2024). Values are official labour-force indicators and are not the wage decomposition sample.

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