Gender Wage Discrimination in Morocco: A Mean and Percentile-Based Analysis Using the Oaxaca-Blinder Method

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Abstract

The study concerns itself with the phenomenon of the gender wage gap among higher education graduates in Morocco using the Oaxaca-Blinder decomposition method at both the mean and at countless percentiles of the wage distribution. The primary interest is to quantify the extent of wage disparities and distinguish between components attributable to observable characteristics and those reflecting unexplained heterogeneity, which may indicate discrimination.

The empirical results show an overall wage gap of 48.3% in favor of men. Among this, 40.9% is accounted for by differences in education, experience, sector of employment, and social security, while the remaining 7.4% remains unexplained by these differences and indicates the presence of probably systemic gender discrimination or the influence of unobserved factors.

Decomposition based on percentiles attested strong differences at the lower end of the wage distribution with unexplained components dominating, while at higher wage levels (90th percentile), most of the differences can be attributed to observable factors. All of these show the heterogeneous nature of gender wage inequality in the overall distribution of earnings.

The findings emphasize that educational attainment only cannot fully fill the gender wage gaps, hence the need for policies that are integrated as response measures. These include changing gender norms, creating equitable access to labor markets, increasing pay transparency, and providing support specifically for women in high-skilled and underserved sectors.

Key words: **Gender Wage Gap; Discrimination; Oaxaca-Blinder Decomposition; Percentile Analysis; Higher Education Graduates; Morocco.**

I. INTRODUCTION

Gender wage inequities remain a contentious debate within labor economics and social policy. The deep-rooted inequalities between male and female economic outcomes find expression in gender pay gaps. The wage inequality scourge exists globally and is especially glaring in many countries of the Middle East and North Africa (MENA) region, of which Morocco is one. The question of why women are less likely to earn as much as men is a complex one that requires a lens looking into economics, social issues, and the dynamics of institutions.

Classical economic theories have all provided a basis for understanding the causes of pay differences across genders. For instance, in his theory of taste discrimination, Gary Becker states that "employers may simply have preferences or dislikes against giving women pay on par with men without regard to productivity effects". This symmetric explanation is that the work experiences women tend to undergo are often discontinuous because of family and caregiving responsibilities, resulting in a lower level of skill and experience compared to men. Labor market segmentation theory rounds out the dual structure, found in which men dominate in well-paid, stable "primary" sectors; women, by contrast, disproportionately occupy lower-paid, precarious "secondary" sectors. Employers

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then may use gender as a proxy for future productivity or turnover risk, and this disadvantages women by an unjust manner.

In contrast, the work done in empirical research has proven very strong quantitative methods for understanding and decomposing the gender wage gap. The Oaxaca-Blinder decomposition method isolates part of the wage differential attributed to measurable factors, such as education or experience, from an unexplained component that is often interpreted as indicative of discrimination or unobserved biases in institutions. New advancements in methodology, like quantile regression and recentered influence function (RIF) regression, are now paving the way to better understanding earnings discrepancies throughout the wage distribution, which shows, for example, that penalties often incur more severely at the higher end of earnings, reflecting "glass ceiling" effects.

This article builds on all those theoretical constructs and methodologies to empirically analyze gender wage differentials for university graduates in Morocco, a fast-changing world with enduring traditional gender roles. Using data from a national survey of employing graduates, the study applies advanced techniques in wage decomposition to measure the factors that explain wage differences alongside those that are unexplained. It finds very substantial contributions of sectoral and occupational segregation, lower educational returns, and unobserved discrimination in wage growth for women, especially at higher income levels, as well as informal employment and weak institutional enforcement of gender equality policies.

By putting the findings within the wider literature and socio-economic realities of Morocco, the study demonstrates that gender wage inequality is not uniquely manifested in one manner; it is multi-dimensional. It emphasizes that integrated policy approaches, including stronger legal enforcement and targeted social protections such as expanded parental leave and childcare support, as well as societal and workplace cultural shifts toward transforming gender norms, may be needed to eliminate wage gaps. This research is thus aimed at enhancing both academic understanding and policy efforts to create fair and inclusive labor markets in Morocco and similar contexts.

II. REVIEW OF THE LITERATURE ON PAY INEQUALITY

A. Theoretical Foundations and Classical Approaches to Gender Wage Inequality

Gender pay inequalities have been a subject of economic inquiry for a long time. Early studies laid the foundation to understand both economic mischief and social biases that egg on persistent wage differentials between men and women. A stellar entry in this arena is Gary Becker's The Economics of Discrimination, wherein he postulated that employers may hold a "taste for discrimination", paying women less simply due to a personal or societal bias, irrespective of productivity. This theory serves as a strong premise for prolonged explanations on why wage disparities cannot be eliminated, especially within a weakly enforced labor market [1].

The human capital model explains that wage gaps mainly arise from education, working experience, or time spent in the labor force. Women, as a result of societal expectations regarding family and caregiving, often suffer an interrupted career path whereby they acquire less human capital. The theory puts forward credibility to the rationale of the wage gap being mainly a product of economic decisions constrained down social arrangements [2].

Oaxaca-Blinder method has subsequently put an empirical analysis into two components of wage differentials:

- The first is the explained part, the difference due to certain characteristics such as education or experience.
- The second is the unexplained part, which is generally treated as assailed discrimination or returns to aforementioned characteristics.

Such decompositions have become a standard in empirical labor economics and are widely applied both alike in the global and Moroccan contexts [3][4].

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Some of the other classical models, such as dual labor market theory, make a distinction between a "primary" sector (with stable, well-paid jobs) and a secondary sector (low-paid, insecure employment), wherein women are often overrepresented. On the other hand, statistical discrimination models argue that employers use gender as a proxy for expected productivity or turnover. This ultimately works against women, even though some may be individually qualified [5][6][7].

These classical approaches laid the foundations of decades of empirical work, which invariably report a finding that women's wages do not catch up with men's, controlling for education, experience, and type of job. This reinforces the notion that discrimination, institutional factors, and cultural norms weigh heavily on wage outcomes, beyond individual merit.

B. The Present Empirical Evidence and Dimensions

The contemporary literature on gender pay inequality, particularly for Morocco and the MENA region, brings together historical theories with contemporary, multidimensional modes of analysis. While historical modes have been directed toward human capital and labor supply decisions relating to gender, the focus of recent modes is mostly on institutional structures, cultural norms, and occupational segregation.

In Morocco, new studies using recent survey data and state-of-the-art decomposition methodology (e.g., RIF regression, quantile decomposition) show strong evidence of a strikingly significant thus far "unexplained" portion of the wage gap for example, a recent research study using labor market integration surveys, reveals that most of wage inequalities caused by poor educational (and in many cases poorer) classes of women involves double discrimination-grounded both on gender and class of socio-economic background [8].

Institutional also remains significant. Despite Morocco's achievements in gender equality, including reforms into the Family Code (Mudawana) or with constitutional commitments for gender parity, their implementation remains limited. Reports of the High Commission for Planning and OECD affirm the existence of gaps between the legal framework and what actually pertains to people in the workplace, for instance, absence of structures forbidding any wage transparency, gender-sensitive HR policies, or effective advancements in anti-discrimination enforcement [9][10].

Spanish occupational segregation continues to be present: women dominate education and health industries while they are severely underrepresented in STEM, managerial, or decision positions. Studies have shown that women's fields of education at the university level condition heavily the labor market outcome for learned women. Nonetheless, even wage gaps referring to well-educated women exist due to lower economic returns associated with "feminized" sectors [11].

Aside from vertical,d segregation adds to the disadvantage as indeed, horizontal segregation operates towards disadvantageous positions: Cultural norms of gender roles associated with care giving held up by hierarchical assumptions that "women's work" are less valuable add to the gap. The ongoing "family gap," wherein women earn lesser due to motherhood and caregiving, is now increasingly understood as one of the main explanations for slow progress in gender wage equality, especially in upper-middle-income countries [12][13].

In addition, informality remains an important condition. Women are more exposed to informal markets in Morocco, where revenues are practically non-regulated and social protections are only minimal. This segment of the labor market is not just under-researched but is also the main area of hidden discrimination based on wages [14][9].

Finally, present-day research keeps advocating multi-actorism approaches:

- Requiring legal reforms with institutional mechanisms (e.g., pay audits, labor inspections) backed up.
- Social policies should widen coverage for both maternity/paternity leaves and child care infrastructure.
- Cultural change through education and media is also important to transform gender norms.

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Such evolving literature points towards gender wage inequality being an issue not derivable from a singular variable; indeed, it is embedded within an economic framework of structures, legal frameworks, and cultural traditions with significant power relations. Thus combating pay discrimination will require some comprehensive intersectoral response.

III. WAGE DECOMPOSITION MODELS

A. Overview and Methodological Foundations of Wage Decomposition

Oaxaca-Blinder method [9] is one of the wage decomposition models for measuring gender pay inequality. These models decompose the wage gap into two main components:

- Explained component that captures differences in observable characteristics such as education, work experience, occupation, and sector of activity. This reflects part of the wage gap induced by human capital and job-related factors [10], [11].
- Unexplained component which tends to be interpreted as discrimination or differential returns to characteristics. This reflects wage differences not accounted for with observable factors, which may stem from bias, institutional barriers, or unobserved variables [9], [12].

Wage differences can be separated as well as described between wage gaps due to the observable factors and the ones potentially caused by discrimination, and thus, the Oaxaca-Blinder decomposition approach had been applied in several contexts [9], [13]. The average wage analyses gives an overall idea of the gender pay gap at the mean level.

The newer advances that would allow decomposing across the wage distribution would involve quantile or RIF regression techniques [14], [15]. This allows disparities to be studied at differing levels, such as the 10th, 50th (median), and 90th percentiles, which reveals heterogeneous patterns of inequality. Such granularity shows whether the wage penalties disproportionately affect low-paid women or high earners [16].

B. Strengths, Limitations, and Need for Alternative Approaches to Complementary Approaches

However, wage decompositions come with limitations. The unexplained part does not necessarily relate to discrimination; motivations, skills, or job tenures unmeasured by common methods can be included [17], [18]. Besides, it is assumed that returns to characteristics are held constant across groups, which is not necessarily true. For instance, returns to education or experience for women are lower due to discrimination in the labor market [19].

Classic decomposition methods mostly use cross-sectional data and are limited in studying dynamic aspects such as career interruptions or cumulative discrimination over time [20]. They also have a tendency not to fully capture all intersectionalities, such as socio-economic status, ethnicity, or informal employment, which can exacerbate wage inequalities [21].

To overcome those shortcomings, scholars have recently been combining wage decomposition with other complementary methods, which include the following:

- Regression-RIF and quantile decomposition to study effects across the wage distribution beyond the mean [14] [22].
- Panel data analyses to study career paths and persistent inequalities at different time intervals [20].
- Qualitative and institutional studies supply meaning to quantitative findings within organizational and cultural contexts [23].
- Instrumental variables and structural modeling are used to provide corrections to possible endogeneity in explanatory variables such as education or labor force participation [24].

While wage decomposition models are indeed important for the measurement of gender pay gaps, a thorough analysis could demand that these instruments be Put together with sweeping economic,

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institutional, and socio-cultural approaches towards making wage discrimination better understood and practically reducible [25], [26], [27].

IV. EMPIRICAL RESULTS AND DISCUSSION

The database comes from surveys on the professional integration of graduates conducted annually since 2011 by Hassan 1er University in Settat in collaboration with the Instance Nationale d'Evaluation attached to the Conseil Supérieur de l'Education, de la Formation et de la Recherche Scientifique. The results were based on a sample of 2525 graduates from the university. (cf. appendix 1)

Gender gaps in wages are apparent from the analysis of the wage distribution. Gender-based analysis is shown here for the whole spectrum of the salaries. In the kernel density plot (figure 1), log monthly wages (LnSAL) distribution curves for men and women appear. They are approximately normally distributed but quite different in the measure of central tendency. The majority of percentiles show that men's distribution is shifted to the right, indicating a systematically higher wage; conversely, women's distribution pervades the lower wage levels and exhibits a thinner tail as wage increases. This evidence visually corroborates the quantified findings from the Oaxaca-Blinder decomposition with an overall estimate of the wage gap of 0.44 log points in favor of men (Appendix 2: p = 0.004). The gap in mean and median wages is visually conspicuous and spreads throughout the wage profile. Nevertheless, it is more accentuated at higher percentiles (Appendix 5: 90th percentile gap = 0.038, p=0.006). The gap's size differs throughout the distribution: small in the lower end (likely due to wage floors), considerable around median income, and maximized at the 90th percentile, a pattern which maybe points to structural barriers that disproportionately restrict women's access to very high earnings, including glass ceilings at higher wage levels.

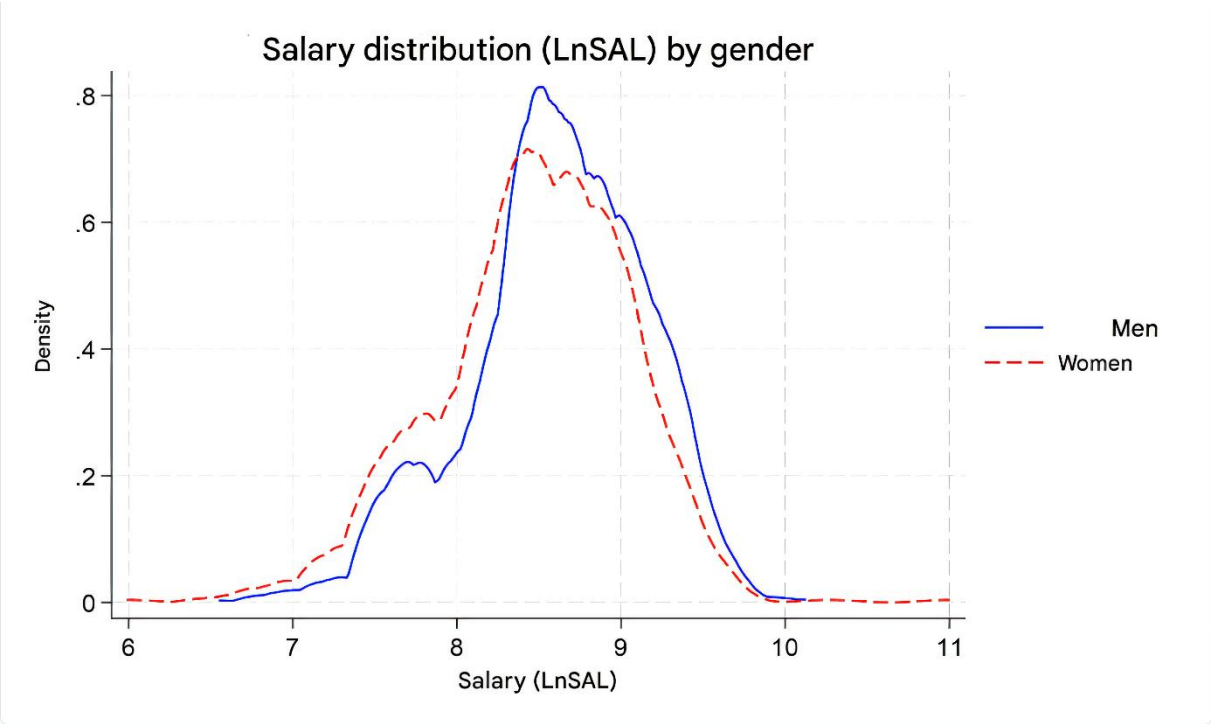

Fig 1. Densities of the logarithm of monthly wages for men and women separately, (“kernel densities”)

Source: Compiled by the authors

The decomposition analysis shows how the gap is formed; nearly half (48.9%) of the remaining gap can be attributed to the observable factors: namely, sectoral segregation and differences in education. Key factors emerge: men's overrepresentation in higher-paying sectors (SEC_1 coefficient = 0.17, p=0.093), together with their larger ability (EDC_predicted, marginal significance p=0.087) to capitalize on educational credentials. However, the explained portion remains large (51.1%), denoting

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more fundamental problems that may include discriminatory practices in hiring and promotions, or in bargaining power. This unexplained part might account for some biases against women regarding promotion and, importantly, occupations where they work, given the significant coefficients found for occupational segregation variables (STAT_1 coefficient = 0.058, p=0.029). These coefficients for contract type (CONTR_1) also hint toward bias in the way contracts are negotiated.

At the 10th percentile, gaps are minimal (0.021, p = 0.116), likely due to wage floor effects. The median (50th percentile) gap, which is statistically significant (0.086, p = 0.000) and attributed to establishment-type factors (ETAB_3/ETAB5), where men enjoy firm-specific premiums and selection bias as shown by the significant mills_inverse term (p = 0.002). The persistent gap at the 90th percentile (0.038, p = 0.006) is associated with men absorbing more from experience (AGE coefficient = 0.016, p = 0.005) and some other unexplained factors, reaffirming the glass ceiling effect.

These results should be placed within the broader theoretical and empirical context that the literature has established. The persistent gender wage gap, as observed, finds some close parallels in Becker's classical work on discrimination in general, dealing with employer's biases in the compensation decision despite the fact of equal productivity. Our findings in respect of considerable unexplained differential in wages furnish empirical evidence regarding Becker's proposition in the present milieu of the Moroccan labor market where enforcement against discrimination is notably weak. Parallely, the findings give some currency to human capital theory since education and experience account for nearly half of the explained part of the gap; however, the portion left unexplained suggests that these two factors could not fully account for the disparity.

The dual labor market theory becomes particularly relevant for sectoral patterns. The way women's concentration in lower-paying service sectors versus men's dominance in technical and managerial fields serves as structural barriers is what our quantification analysis by decomposition shows. This occupational segregation together with statistical discrimination—the perception that women's careers will be interrupted affects hiring and promotion decisions—helps to explain why even highly educated women face such heavy wage penalties. The glass ceiling effects occurring at the higher percentiles align with findings across the MENA region, where cultural norms about gender roles meet labor market structures to hinder women's advancement.

The variation in the wage gap along percentiles has revealed critical nuances. Minimal at the bottom end of the distribution (likely due to floor wage effects), the gap becomes statistically significant at the median and grows appreciably at the 90th percentile. This advance suggests that gender inequalities accumulate during a woman's working career, where men disproportionately accrue advantages from firms and growth in wages linked to prior experience. The persistent unexplained component at the extremely higher percentiles perhaps signals the need to implement targeted policies aimed at the glass ceiling effects. The among-glass ceiling and family gap delineated in more modern literature, where mother penalties and caregiving responsibilities influence workplace policies to restrain earnings growth.

V. CONCLUSION

Research explores the empirical terrain of gender wage inequality in Morocco. Most obviously unequal earnings are concentrated in the whole wage distribution, and these differences intensify at the upper percentiles. Such a pattern obviously suggests the existence of a "glass ceiling" effect which constantly denies women access to high-paying jobs and advancement opportunities.

In fact, nearly half of the wage gap can be attributed to the observable factors such as the presence of sectoral segregation and the differences in human capital caused by educational qualifications and work experience. All these would be more pronounced with respect to men, who dominate the industries that are better paying, as well as these men's superior capacity to translate educational qualifications into earnings. Still, the bigger part of the wage gap remains unexplained by any of these factors and thus points toward discrimination, institutional barriers, and deeply rooted socio-cultural norms that would otherwise restrict women's chances in the processes of hiring, promotion, and wage negotiation. These findings are consistent with standard economic theories of discrimination, yet they

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demonstrate the huge role that the structural and cultural dynamics of the labor market in Morocco play.

Continuous pay differences are also witnessed among highly educated women, which signifies that qualifications alone do not remove structural gatekeeping effects. The sequel by occupational segregation, together with motherhood and caregiving responsibilities, constrains the career paths and bargaining powers of women and deepens wage inequality. The gap at median and upper levels reflects cumulative disadvantages that women experience during their working lives. Therefore, gender wage inequality is not static; instead, it tends to grow worse over time.

Policies that will eliminate the disparities will be a collective effort and, thus, will need to be coordinated. This should include strengthening legal and institutional frameworks for effective enforcement of anti-discrimination laws, introducing pay transparency measures, and having regular gender pay audits. Such efforts will be important in making accountable and reducing wage-setting mechanisms that discriminate. At the same time, affirmative action provisions and complementary workplace policies, such as flexible schedules and shared parental leave, would ensure equal access and participation in high-paying sectors and leadership positions. This would also serve to mitigate the effects of occupational segregation and motherhood penalties.

Equally failure would be the adding of more educational and training opportunities for women especially in non-traditional fields as well as lifelong learning and career development programs which could close skills gaps and experience interruptions. Cultural and social change initiatives are equally vital with public awareness campaigns challenging gender stereotypes and promoting women's leadership. Finally, efforts to formalize the informal employment sectors in which women are overrepresented and tailor social protections that fit their needs would ameliorate their vulnerabilities and wage gaps in those contexts.

In summary, gender wage inequality in Morocco is multidimensional, shaped partially by economic, institutional, and cultural factors. Therefore, effective mitigation would require an integrated approach in legislations enforcement, institutional reforms, social policy innovation, and cultural transformation. This consideration is imperative because reducing gender wage inequality is not only a fundamental human right but also a means to improving efficiency, productivity, and inclusive economic growth, propelled by the national objectives of development in Morocco.

Appendices

Appendix 1: Coding of Modalities for Variables Used

Variables	Variable Type	Abbreviation	Coding	Modalities
Education (number of years of study) - EDUC	Quantitative variable	EDUC	2 3 4 5 8	DUT, BTS (Licence Fondamentale, Licence professionnelle and Licence Sciences et Techniques) Master's degree FST (ENCG degree, Engineering degree, Research Master's degree and Specialized Masters) Doctorate
Professional experience (in years) - EXP	Quantitative variable	EXP	-	-
Gender - GEN	Indicator variable	GEN-H GEN-F	0 1	Male Female
Skills - COMP	Indicator variable	COMP-0 COMP-1 COMP-2 COMP-3 COMP-4 COMP-5 COMP-6	0 1 2 3 4 5 6	Analytical thinking Specific and general skills Communication skills Ability to innovate and deal with new things, computer hardware, etc. Ability to be “executive” at work Ability to work in a group Ability to master foreign languages and write reports

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				(with Weak modality, and Strong modality)
Marital status - STAT	Indicator variable	STAT-C STAT-M STAT-A	0 1 2	Single Married Other
Sector of activity - SEC	Indicator variable	SEC-P SEC-S SEC-T SEC-Q	0 1 2 3	Primary Secondary Tertiary Quaternary
Age (in years) - AGE	Quantitative variable	AGE	-	-
Establishment - ETAB	Indicator variable	ETAB- ENCG ETAB-ENSA ETAB-ESTB ETAB-FEG ETAB-FPK ETAB-FSJP ETAB-FST	0 1 2 3 4 5 6	ENCG ENSA ESTB FEG FPK FSJP FST
Type of contract - CONTR	Indicator variable	CONTR-F CONTR-CDI CONTR-CDD CONTR-I CONTR-ANAPEC CONTR-TP CONTR-A	0 1 2 3 4 5 6	Civil servant CDI CDD Temporary ANAPEC contract Part-time Other
Social security affiliation - AFF	Indicator variable	AFF-0 AFF-1	0 1	No Yes
Place of employment - LIEU	Indicator variable	LIEU-0 LIEU-1	0 1	Other regions Casablanca-Settat region
Legal sector - SECJ	Indicator variable	SECJ-P SECJ-PU	0 1	Private Public
Establishment size - TAILLE	Indicator variable	TAILLE-P TAILLE-M TAILLE-G	0 1 2	Small Medium Large
Parents' level of education (father - NIP, mother - NIM)	Instrumental variable	NIP-A NIP-P NIP-C NIP-L NIP-S	0 1 2 3 4	None Primary Middle school High school Higher education
Parents' socio-professional category (father - CSPP, mother - CSPM)	Instrumental variable	CSP-C CSP-E CSP-CO CSP-O	0 1 2 3	Executive Employee or civil servant Shopkeeper Worker and unemployed

Source: Compiled by the authors

Appendix 2 : Analysis of the Average Wage Difference Between Men and Women Using the Oaxaca-Blinder Method

Overall Results

Variable	Coefficient	Std. Err.	z-value	p-value	[95% Conf. Interval]
Group 1 (GN-0)	5.43142	0.1124988	48.28	0.000	[5.219926, 5.651913]
Group 2 (GN-1)	4.948343	0.1239645	39.92	0.000	[4.765377, 5.131399]
Difference	0.4380763	0.1674013	2.89	0.004	[0.154974, 0.8111769]
Explained	0.4887678	0.159528	2.59	0.012	[0.888971, 0.7294625]

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Variable	Coefficient	Std. Err.	z-value	p-value	[95% Conf. Interval]
Unexplained	0.8793807	0.8397471	1.92	0.055	[0.0016256, 0.1392869]

Source: Compiled by the authors

Explained Components (Significant Variables)

Variable	Coefficient	Std. Err.	z-value	p-value	[95% Conf. Interval]
AF1_1	0.0908855	0.032523	2.79	0.005	[0.0271445, 0.1546235]
SEC_1	0.1707521	0.0573028	2.89	0.093	[0.0584407, 0.2389635]
EDP_2	0.029337	0.2217011	3.75	0.000	[0.4164086, 0.1224671]
EDC_predicted	0.0416527	0.0218441	1.71	0.087	[0.0049399, 0.0893962]

Source: Compiled by the authors

Other non-significant variables (p > 0.10) are omitted for clarity.

Unexplained Components (Key Variables)

Variable	Coefficient	Std. Err.	z-value	p-value	[95% Conf. Interval]
STAT_1	0.0576951	0.0253282	1.39	0.029	[0.0060477, 0.1092705]
LIBU_1	-0.1262768	0.0645974	1.04	0.632	[-0.2533699, 0.0012876]
AGE	-0.426808	0.3789796	1.18	0.531	[-0.1183186, 0.3010095]

Source: Compiled by the authors

Non-significant variables (p > 0.10) are omitted.

Appendix 3: Analysis of the Difference in Log Wages at the 10th Percentile Between Men and Women Using the Oaxaca-Blinder Method

Overall Group Comparisons

Category	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
Group 1 (GEN-0)	0.8069477	0.8078856	102.31	0.000	[0.7911411, 0.8220464]
Group 2 (GEN-1)	0.7856417	0.8107368	73.17	0.000	[0.764598, 0.8686544]

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Category	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
Difference	0.020953	0.0313293	1.57	0.116	[-0.8615453, 0.8470609]
Explained	0.0013825	0.0027421	0.25	0.086	[-0.0128177, 0.0136423]
Unexplained	0.0191179	0.0121406	1.54	0.123	[0.0052065, 0.0434423]

Source: Compiled by the authors

Explained Component (Significant Variables)

Variable	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
SEC_1	0.015664	0.0074083	2.10	0.905	[0.0010185, 0.0302937]
ETAB_6	0.0021261	0.0018584	1.36	0.174	[0.0008931, 0.0031732]
CONTR_4	-0.002956	0.004386	-1.81	0.078	[-0.0155545, 0.0065522]
AGE	-0.005061	0.002275	-1.82	0.089	[-0.0123811, 0.0004588]

Source: Compiled by the authors

Other variables were non-significant (p > 0.10).

Unexplained Component (Key Variables)

Variable	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
STAT_1	0.015658	0.007295	1.98	0.048	[0.0001454, 0.0310352]
LIEU_1	-0.0040847	0.0216453	-1.89	0.069	[-0.0325344, 0.0015613]
SEC_1	-0.0288275	0.0362964	-0.79	0.127	[-0.0099554, 0.0420803]

Source: Compiled by the authors

Non-significant variables omitted for brevity.

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Appendix 4: Analysis of the Difference in Log Wages at the 50th Percentile Between Men and Women Using the Oaxaca-Blinder Method

Overall Group Comparisons

Category	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
Group 1	0.5409651	0.0152659	35.44	0.000	[0.5110445, 0.5708857]
Group 2	0.4548459	0.0172536	26.36	0.000	[0.4210294, 0.4886624]
Difference	0.0861192	0.0231977	3.74	0.000	[0.0409661, 0.1312723]
Explained	0.0377675	0.0144458	2.58	0.010	[0.0099542, 0.0658897]
Unexplained	0.0488577	0.0204472	3.29	0.017	[0.0088776, 0.0882275]

Source: Compiled by the authors

Explained Component (Significant Variables)

Variable	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
ETAB_3	0.0111698	0.0048319	2.31	0.021	[0.0016904, 0.0266401]
ETAB_5	-0.0086716	0.0051226	-1.60	0.000	[-0.0187116, 0.0013685]
mills_inverse	0.0240945	0.0070843	3.09	0.002	[0.0087983, 0.0393907]

Source: Compiled by the authors

Other variables were non-significant (p > 0.05).

Unexplained Component (Key Variables)

Variable	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
STAT_1	0.0059043	0.0145631	0.36	0.716	[-0.0222389, 0.0338475]
SEC_2	-0.0156059	0.0133121	-1.13	0.238	[-0.0415165, 0.0120741]

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Variable	Coefficient	Std. Error	z-value	p-value	[95% Conf. Interval]
LIEU_1	0.0173847	0.038976	0.46	0.643	[-0.0572423, 0.0520124]

Source: Compiled by the authors

Non-significant variables omitted for brevity.

Appendix 5: Analysis of the Difference in Log Wages at the 90th Percentile Between Men and Women Using the Oaxaca-Blinder Method

Overall Group Comparisons

Category	Coefficient	Robust Std. Error	z-value	p-value	[95% Conf. Interval]
Group 1 (GEN=0)	0.1942189	0.0183031	18.85	0.000	[0.1748252, 0.2144125]
Group 2 (GEN=1)	0.1566436	0.0091703	17.08	0.000	[0.1386702, 0.174617]
Difference	0.0375753	0.013793	2.72	0.006	[0.0105414, 0.0646091]
Explained	0.027142	0.0071507	3.80	0.000	[0.0131268, 0.0417573]
Unexplained	0.0184323	0.0120455	0.81	0.420	[-0.0149356, 0.035802]

Source: Compiled by the authors

Explained Component (Key Variables)

Variable	Coefficient	Robust Std. Error	z-value	p-value	[95% Conf. Interval]
SEC_1	-0.0181811	0.0089114	-2.04	0.041	[-0.0356472, -0.000715]
AGE	0.0163566	0.0097607	2.82	0.005	[0.0049954,

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Variable	Coefficient	Robust Std. Error	z-value	p-value	[95% Conf. Interval]
					0.0277179]
EDUC_predd-c-d	0.0104975	0.0058411	1.80	0.072	[-0.0009569, 0.0219458]
CONTR_1	0.0197689	0.0085688	1.27	0.206	[-0.0959088, 0.0274293]

Source: Compiled by the authors

Other variables were non-significant (p > 0.10).

Unexplained Component (Notable Variables)

Variable	Coefficient	Robust Std. Error	z-value	p-value	[95% Conf. Interval]
STAT_1	0.0158105	0.0104694	1.51	0.131	[-0.0047001, 0.0365394]
CONTR_1	-0.1068772	0.0806564	-1.32	0.186	[-0.2627847, 0.0510304]
EXP	0.587797	0.0666313	-0.89	0.373	[-0.1188358, 0.7198993]
AGE	-0.2244143	0.1506019	-1.50	0.135	[-0.5185801, 0.0697605]

Source: Compiled by the authors

Non-significant variables omitted for clarity.

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