

Factor Affecting the Wage Gap Between Women and Men (Gender Pay Gap) Among the Millennial Generation in West Nusa Tenggara: A Blinder Decomposition Approach – Oaxaca.

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ABSTRACT

This study aims to analyze the factors that influence the wage gap between female and male workers (gender pay gap) in the millennial generation in Mataram City, West Nusa Tenggara. The analysis is carried out both from the aspect of human capital, such as education and work experience, as well as discrimination and socio-cultural factors. This research method uses the Blinder-Oaxaca decomposition approach to distinguish the portion of the presentation caused by observable characteristics (explained) and the portion that cannot be explained (unexplained) which is often associated with discrimination. The results of the study are expected to provide an in-depth understanding of wage inequality in the local labor market, considering that West Nusa Tenggara Province recorded the highest Gender Inequality Index (IKG) value in Indonesia in 2023. The main conclusion of this study is directed at formulating targeted policies in an effort to create a fair wage system for the millennial generation.

INTRODUCTION

The gender wage gap is a key issue affecting Indonesia's economic development. Despite progress towards gender equality, the gender wage gap remains a significant issue. This gap not only reflects unequal income distribution but can also negatively impact economic growth and social welfare. In Indonesia, the gender wage gap remains quite significant, particularly in sectors such as agriculture and services. Working women earn less than men, even when they work in the same sector and have the same level of education (Simamora, 2022). (Kasus et al., 2022)

Changes in the demographic structure of the global and national workforce indicate the dominance of a new generation known as Generation Y or millennials. This generation consists of individuals born between 1980 and 1999 and currently occupies a strategic position in the modern labor market. Based on findings by Stanimir (2015), millennials are the most educated group and most familiar with information and communication technology, making them more adaptable to the dynamics of the global economy and digital work patterns. They grew up in the era of the internet, mobile phones, and social media, which has shaped the way they think, interact, and view work differently than previous generations. (Mcser, 2015)

The millennial generation has unique work characteristics: they value work-life balance, enjoy flexibility, and view work not only as a source of income but also as a means of self-development and achieving meaning in life. They prefer a work environment that provides continuous learning opportunities, rapid feedback, and rewards innovation. Stanimir (2015) also explains that this generation tends to multitask, is open to change, and has a tendency to work hard only when the work is considered meaningful. These values differ from previous generations, such as Baby Boomers and Generation X, which placed more emphasis on loyalty and job stability.

However, even though this generation is known to be progressive and aware of equality, the gender pay gap remains a significant issue. Globally and nationally, millennial women tend to receive lower compensation than men with similar qualifications and responsibilities. A study by Roche (2017) shows that despite increasing education and participation of women in the workforce, the structure of the labor market still leaves wage inequality stemming from social, cultural, and institutional factors.

Factors such as differences in job type, education level, work experience, gender stereotypes, and organizational policies contribute to this wage gap. While millennial men are more likely to pursue careers in the formal sector with clear promotion opportunities, millennial women are often concentrated in low-wage or part-time jobs due to domestic responsibilities and a lack of family-friendly policies in the workplace. Furthermore, unconscious bias against women's roles in the workforce reinforces this inequality. Although the global wage gap between men and women has narrowed significantly in recent decades, the gender wage gap remains a significant challenge for the millennial workforce. Historically, this narrowing gap has been driven by improvements in human capital, with millennial women today tending to have higher levels of education and more active participation in the workforce than previous generations. However, data shows that in developing countries like Colombia, female millennial workers still face significant income inequality, with on average they earn significantly lower wages than their male counterparts despite having equivalent or even superior academic qualifications. (Álvarez-franco et al., 2019).

This inequality is driven by a variety of complex, interrelated factors, ranging from individual characteristics to structural dynamics in the labor market. One crucial finding of this study is the existence of a "glass ceiling" phenomenon, where the wage gap widens among

workers with higher incomes and education levels. (“Ekon. Dan Keuang.,” 2020). Furthermore, occupational segregation remains highly prevalent, with millennial women predominantly occupying lower-paying administrative and sales positions, while men dominate managerial roles. Differences in tenure also play a role, with men tending to have more stable tenure than millennial women, who experience higher job turnover rates, often influenced by household responsibilities and family structure. As a result, despite having equal levels of education and qualifications, women still receive lower salaries.

Furthermore, workplace discrimination statistics underestimate the situation due to employers' negative perceptions of the risks to women's productivity. This wage inequality not only impacts individual financial losses but also creates broader economic inefficiencies by reducing women's motivation, self-efficacy, and work commitment within organizations. Given that millennials place a high value on equality and integrity, a thorough understanding of the factors driving this inequality is crucial for companies to create a more equitable and competitive workplace environment in the future.

It should be emphasized that using wage differentials to measure the gender wage gap has limitations. Wage differentials, which are simple comparisons between men and women's wages, ignore important factors, such as differences in characteristics between men and women, as well as bias or discrimination in the labor market (Chamberlain, 2016). According to Jacobsen's (1974) research, wage gaps are caused by investments in human capital, such as education, training, and work experience, which are generally lower for women than for men. Furthermore, women's preferences in choosing jobs and determining working hours can also contribute to gender wage gaps. Women tend to choose comfortable and less risky jobs, such as nursing and teaching, and choose to work flexible hours to fulfill household responsibilities (Hennigusnia, 2014). Mardiana (2015) adds that employer stereotypes that consider women's productivity lower than men's are also responsible for causing gender wage gaps, which impact the national economy. (Jurnal et al., 2022).

The wage gap between men and women is believed to be caused not by a single factor, but rather the result of a complex interaction of various variables. Previous studies at the national level have identified several key factors such as differences in education level, work experience, number of working hours, and type of industry or job sector (sectoral segregation). Furthermore, non-economic factors rooted in socio-cultural constructions also play a significant role. The existence of gender stereotypes, an unequal division of domestic roles (women's double burden), and women's weak bargaining position in the labor market are strongly suspected of contributing to the widening of this income gap. In general, the factors causing the gender wage gap can be grouped into two components: explained and unexplained. The explained component is the portion of the gender wage gap explained by observable characteristics. The unexplained component is the portion of the gender wage gap that cannot be explained by observable characteristics. The link between the unexplained component and discrimination has become a consensus in the growing literature. Empirical research in Indonesia in the last 10 years found

that the contribution of unexplained components to the gender wage gap ranged from 51-93% (Hennigusnia, 2014; Sohn, 2015; Sukma & Kadir, 2019; Taniguchi & Tuwo, 2014). The results of this study indicate that discrimination is the main factor causing the gender wage gap in Indonesia.(Jawab et al., 2014).

The gender wage gap continues to persist in various regions of Indonesia, including West Nusa Tenggara Province. Based on employment data from the Central Statistics Agency (BPS) through the National Labor Force Survey (Sakernas), the Labor Force Participation Rate (TPAK) for women in West Nusa Tenggara tends to be lower than that for men, reaching approximately 84.64 percent and 63.38 percent for women in 2024. Based on the 2023 provincial Gender Inequality Index (GIK) graph, West Nusa Tenggara (NTB) Province recorded a GCI score of 0.650, the highest score among all provinces in Indonesia. With this achievement, NTB ranks first nationally in terms of gender inequality. This value is far above the national average indicated by Indonesia's GCI value of 0.447, thus indicating that gender inequality in NTB is relatively higher compared to national conditions. Women also receive lower wages than men, despite having relatively equal levels of education, working hours, and types of work. This condition indicates that increasing women's participation in the labor market and expanding access to education have not been fully followed by equality in the wage system.(Statistics et al., 2024)

Although various studies have been conducted on the gender wage gap in Indonesia, studies specifically analyzing the factors causing the wage gap in West Nusa Tenggara (NTB) are still limited. Yet, understanding the local context is crucial for formulating effective and targeted policies. Therefore, this study aims to analyze the factors influencing the wage gap between female and male workers in West Nusa Tenggara, both in terms of human capital (education and work experience) and discrimination and sociocultural factors.

Wages in economic theory are defined as payments for physical and mental services provided by workers to employers. Sukirno (1994), suggests that there are five factors that can influence wage differences, namely the nature of work, demand and supply of labor, namely when the supply of labor is high, it will lower the wage level, conversely, if the demand for labor is high, it will increase the wage level, labor mobility, non-financial considerations and finally differences in ability. Wages received by female and male workers are sometimes also different, there are two main factors that influence wages received by male and female workers, the first is the level of education, the higher the education taken, the higher the wages received. The second is working hours, the longer the working hours, the higher the wages received, but when working hours have exceeded 45 hours in one week, the wages received will decrease (Bainar, 1998).(Setyaningrum, 2020).

In social conception, gender theory emphasizes more on social, cultural, psychological, and several other social aspects that unconsciously have unfair effects. Types of injustice such as marginalization or the process of economic impoverishment, subordination or the belief that political decisions are unimportant, stereotypes and discrimination or negative defense, violence, division of labor and others. According to Özcan

(2003), there are two discriminations in the labor market, namely, discrimination caused by patriarchal culture (for example, parents who prioritize the education of boys over girls because women are considered more responsible for taking care of the household, while men are in charge of earning a living) and negative stereotypes (perceptions) from employers towards the productivity of a female worker. Both of these things cause women's wages to be lower than men's. (Lazear & Lazear, 2003).

Human Capital Factors In examining the gender wage gap, this study refers to human capital theory, occupational segregation theory, and discrimination theory. Human capital theory states that women tend to have lower investments in human capital (education, job training, and work experience) than men as a consequence of domestic responsibilities (Polachek, 1981). Then, related to occupational segregation theory, England (1992) explains that social ideas that emphasize domestic responsibilities on women lead to low estimates of women's ability to work. Consequently, job grouping occurs (occupational segregation) where women tend to be absorbed in job sectors and positions with lower wages than men. Meanwhile, according to Polachek (1981), the difference in women's and men's wages is because women tend to choose jobs with lower wages to be able to fulfill domestic responsibilities. Furthermore, discrimination theory initiated by Becker (1971) explains that minority workers such as women face prejudice originating from employers, coworkers, and consumers. Under certain conditions, this prejudice can lead to wage differences between women and men (Blau & Kahn, 2017) (Laurensia & Yuliana, 2021).

This research is based on human capital theory, which states that wage differences occur due to differences in labor productivity resulting from investments in education, experience, and skills (Becker, 1964). The higher a person's education and experience, the greater their chances of earning higher wages. However, among the millennial generation, increased education has not completely eliminated the gender-based wage gap due to structural and social factors in the labor market. In addition, this research refers to labor market segmentation theory, which explains that wage differences are also caused by the segregation of workers based on gender, age, and employment status (Doeringer & Piore, 1971). Millennial women are often concentrated in low-wage sectors and precarious jobs, which limits access to higher positions and wages.

This framework is reinforced by wage discrimination theory, which asserts that wage disparities stem not only from productivity factors but also from social and cultural biases that place women at a disadvantage (Blau & Kahn, 2017). Meanwhile, compensating wage differentials theory explains that wage variations are influenced by differences in working hours, job risks, and responsibilities (Rosen, 1986). (Ruslan & Sukma, 2025).

Thus, this theoretical framework asserts that wage differences between millennial men and women are influenced by a combination of individual factors (education, experience, age) and structural factors (employment status, working hours, and gender discrimination) that interact to shape wage inequality in the modern labor market.

Several studies have been conducted to identify concrete explanations for the gender

wage gap by applying the Blinder-Oaxaca decomposition method, one of which is the study conducted by Mardiana (2015). Mardiana (2015) found that the magnitude of the gender income gap that occurred in Indonesia in 2013 was 47.29 percent. Where only 12.47 percent was caused by endowment or explained factors (age, education level, residence, activity status, type of employment, field of business, and working hours), while the other 87.53 percent was caused by discrimination factors. In analyzing the gender wage gap, this study will enrich the independent variables so that it is hoped that results can be more in line with the truth.

Based on the theoretical description and related research on the gender wage gap, the following conceptual framework is obtained: individual wages are influenced by sociodemographic characteristics (residence, marital status, and household status), human capital characteristics (education, training, work experience), and job characteristics (working hours, activity status, trade union, field of work, and type of work). Differences in characteristics between women and men (explained) can contribute to creating the gender wage gap. In addition, the gender wage gap is thought to be caused by various other unexplained factors. Unexplained factors indicate discrimination against women in the labor market. (Laurensia & Yuliana, 2021) (Pertama et al., 2014)

Pendahuluan harus mencakup latar belakang mulai dari masalah umum hingga masalah khusus, alasan untuk objek yang dipilih, penelitian sebelumnya yang terkait dengan masalah yang akan dipelajari, solusi yang ditawarkan penulis, kontribusi seperti kesenjangan penelitian (kebaruan, pelopor, asli) yang diusulkan metode, dan tujuan yang diharapkan. Segala sesuatu yang dipilih penulis harus menjelaskan alasan tanpa meninggalkan pertanyaan untuk pembaca. Semua halaman harus penuh tanpa ruang kosong atau tersisa.

Sistem referensi yang digunakan adalah penggunaan *references citations & Bibliography*, alat yang tersedia untuk Microsoft Word. Namun, Mendeley atau Zetero juga bisa digunakan. Silakan kutip menggunakan parafrase karena kutipan langsung akan terdeteksi sebagai plagiarisme. Setiap kutipan harus memiliki sumber referensi yang valid dengan prioritas pada sumber jurnal ilmiah.

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METHODS

This study uses data from the 2023 West Nusa Tenggara National Labor Force Survey (Sakernas). The unit of analysis is workers/wage earners, namely those whose primary employment status is casual workers in the agricultural, non-agricultural, or laborer/employee sectors. To measure the magnitude of the wage gap, the Blinder-Oaxaca decomposition analysis

method is used. In theory, this analysis can divide wage differences into two types: differences caused by endowment (differences measured by explanatory factors such as education, work experience, training, and more) and differences caused by unexplained factors or unexplained factors.

ROBUST REGRESSION SCALE ESTIMATION

Regression analysis is a data analysis method that utilizes the relationship between two or more variables. These variables are the dependent and independent variables. A linear regression model can generally be expressed as:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \dots + \beta_k X_{ik} + e_i \quad i = 1, 2, 3, \dots, n \quad (1)$$

with Y_i is the dependent variable at observation i , X_{ik} is the independent variable in the i -th observation, and $\beta_0, \beta_1, \dots, \beta_k$ is a regression parameter whose value is unknown and whose estimated value will be sought, and e_i is a normally distributed error. Robust regression estimation S (Scale) is a regression method that has a high breakdown value of up to 50%, which allows it to overcome half of the outliers and affect observations. The scale estimate is obtained by minimizing the sum of the squared errors in equation (1). The scale estimate is defined:

$$\beta_s = \arg \min \sigma_s(e_1, e_2, \dots, e_n) \quad (2)$$

with β_s is the estimator of the regression coefficient, and $\sigma_s(e_1, e_2, \dots, e_n)$ is the remainder defined as the solution of:

$$\frac{1}{n} \sum_{i=1}^n \rho \left(\frac{e_i}{\hat{\sigma}_s} \right) = \sum_{i=1}^n \rho = \left(\frac{y_i - \sum_{j=0}^k x_{ij} \beta_j}{\hat{\sigma}_s} \right) = k, \quad j = 0, 1, 2, \dots, k \quad (3)$$

with K is a constant defined as $K = 0.199$, to reach the 50% breakdown point, ρ is an objective function, whereas $\hat{\sigma}_s$ is a robust scale estimator that can be obtained by:

$$\hat{\sigma}_s = \sqrt{\frac{1}{nK} \sum_{i=1}^n w_i e_i^2} \quad (4)$$

The calculation flow for robust regression with S-estimation is as follows:

- a. Calculating parameter estimates β with OLS (Outlier) so that we get \hat{y}_i .
- b. Calculating the value $e_i = Y_i - \hat{y}_i$
- c. Calculate the value of $K = 0.199$ then find the value,

$$\hat{\sigma}_{i=} \begin{cases} \frac{\text{median} [e_i - \text{median} (e_i)]}{0.6745} , \text{iterasi} = 1 \\ \sqrt{\frac{1}{nK} \sum_{i=1}^n w_i e_i^2} , \text{iterasi} > 1 \end{cases}$$

- d. Calculating the value $u_i = \frac{e_i}{\sigma_i}$
- e. Calculating the value of the weighting function w_i which has value $c = 1.547$
- f. $w(u_i) = \left(1 - \left(\frac{u_i}{c}\right)^2\right)^2, |u_i| \leq c; 0, |u_i| > c$
- g. Estimating value β using the Iteratively Reweighted Least Square (IRLS) method,
- h. Repeat steps b to f until the value β convergent.

BLINDER-OAXACA DECOMPOSITION

The Blinder-Oaxaca decomposition method was first introduced by Blinder and Oaxaca in 1973 and is popularly used to measure the magnitude of differences between genders based on explained differences and discrimination. The general form of wage or income estimation using regression form:

$$Y_i = \beta_0 + \sum_{i=1}^n \beta_i X_i + e_i \quad (5)$$

The estimated wages for each gender can be written in the form:

$$Y_i^L = \beta_0^L + \sum_{i=1}^n \beta_i^L X_i^L + e_i^L \quad (6)$$

$$Y_i^P = \beta_0^P + \sum_{i=1}^n \beta_i^P X_i^P + e_i^P \quad (7)$$

where L in equation (5) is male and P in equation (6) is female. To show the difference in average wages between men and women, it can be decomposed using the formula: =

$$\bar{Y}^L - \bar{Y}^P = (\beta_0^L - \beta_0^P) + \sum_{i=1}^n \bar{X}_i^P (\beta_i^L - \beta_i^P) + \sum_{i=1}^n \beta_i^L (\bar{X}_i^L - \bar{X}_i^P) \quad (8)$$

Based on equation (8) it can be decomposed as follows

$$\beta_0^P + \sum_{i=1}^n \beta_i^P \bar{X}_i^P - (\beta_0^L + \sum_{i=1}^n \beta_i^L \bar{X}_i^L) = U + E + C \quad (9)$$

With: E: Part of the differential caused by differences in characteristics

$$\sum_{i=1}^n \beta_i^L (\bar{X}_i^L - \bar{X}_i^P)$$

C: The part of the differential that is due to the difference in coefficients N

$$\sum_{i=1}^n \bar{X}_i^P (\beta_i^L - \beta_i^P)$$

U: Part of the differential that cannot be explained

$\beta_0^P - \beta_0^L$ To determine the gap caused by discrimination, you can use the formula:

$$U + C = (\beta_0^P - \beta_0^L + \sum_{i=1}^n \bar{X}_i^P (\beta_i^L - \beta_i^P))$$

RESULT AND DISCUSSION

This study uses data from the 2023 West Nusa Tenggara National Labor Force Survey (Sakernas). The unit of analysis is workers/wage earners, namely those whose primary employment status is casual workers in the formal and informal sectors, or laborers/employees. To measure the magnitude of the wage gap, the Blinder-Oaxaca decomposition analysis method is used. In theory, this analysis can divide wage differences into two types: differences caused by endowment (differences measured by explanatory factors such as education, work experience, age, and more) and differences caused by unexplained factors or unexplained factors.

Descriptive Analysis

Descriptive analysis of characteristics according to gender using a total and sample of 3,355 consisting of 1,987 men and 1,368 women. Female observations. Table 1 shows a description of the proportion of workers based on gender:

Table 1. Propotion of workes by gender

Charateristic		Male	Female
College(X1)	Never Attended College	1,584	403
	Ever Attended College	925	443
Employment Status (X4)	Formal	820	528
	Informal	1,167	786

Table 1 shows differences in the characteristics of male and female workers that potentially contribute to the gender pay gap. In terms of education, although women also have access to higher education, the number of male workers remains more dominant at all levels of education. According to human capital theory, education increases productivity and wages, but in practice, women often receive lower returns to education due to discrimination and limited access to high-paying positions. In terms of working hours, women tend to have fewer working hours than men. This condition is in line with gender role theory, which states that women face a double burden in domestic work, resulting in low income. Furthermore, in terms of employment status, women are relatively more likely to work in the informal sector, which is synonymous with lower wages and minimal job protection. Meanwhile, men are more dominant in the formal sector, which offers stability and higher wages. Based on labor market segmentation theory, this difference reinforces the wage gap structurally. Worker characteristic variables such as length of service, working hours, and age are not presented in categorical tables because all three are continuous variables. Continuous variables have varying values.

Overall, these differences in characteristics indicate that the gender pay gap is not only influenced by individual factors, but also by the structure of the labor market and social norms that limit women's positions and employment opportunities.

Gender Wage Gap

The Blinder–Oaxaca analysis shows that the average \ln income for men is 14.4466, while the \ln income for women is 13.8846, a statistically significant difference of 0.5620. This finding indicates that men's income is approximately 56 percent higher than women's, thus confirming the existence of a gender income gap.

The decomposition results show that the endowments and interaction components are insignificant, indicating that differences in individual characteristics, such as education, working hours, and age, are not the main cause of the income gap. In contrast, the significant coefficient component with a value of 0.5310 indicates that almost the entire gender income gap stems from differences in labor market returns to the same characteristics between men and women. In addition, the age and age² variables are insignificant in both the endowments and

coefficient components, confirming that gender income inequality is not caused by differences in age structure, but by different wage-determining mechanisms based on gender.

Regression Analysis

Table 2. Summary of Classical Assumption Tests

Assumption	Hypothesis	Male	Female	Decision
Normality	H ₀ : Data is normally distributed H ₁ : Data is not normally distributed	P-Value = 0.0000	P-Value = 0.0000	H ₀ rejected
Heteroskedasticity	H ₀ : No heteroskedasticity H ₁ : Heteroskedasticity exists	P-Value = 0.0000	P-Value = 0.0000	H ₀ rejected
Multicollinearity	H ₀ : No multicollinearity H ₁ : Multicollinearity exists	All variables VIF < 10	All variables VIF < 10	H ₀ accepted

Based on the classical assumption test in table 2, the normality test and heteroscedasticity test for gender wage equality were not met or H₀ was rejected. The failure to meet some of the classical assumption tests in this study is due to the characteristics of the employment survey data with a large number of observations, the presence of dummy variables, and the distribution of numeric variables that are naturally asymmetric and contain outliers. To address the problem of outlier data, robust regression with scale estimation was applied. The following are the results of robust regression with scale estimation for each gender:

Table 3. Robust regression results of scale estimation for male gender.

Linear Regression		Number of obs	=	1.987		
		F(6, 1980)	=	41.99		
		Prob > F	=	0.0000		
		R-squared	=	0.1351		
		Root MSE	=	0.7949		
Robust						
In_Revenue	Coefisient	Std.err	t	p> t 	[95% conf.	interval
PT	0.2362489	0.0508313	4.65	0.000	0.1365604	0.3359373
Length of work	-0.0133404	0.0030162	-4.42	0.000	-0.0192557	-0.0074251
Working hours	0.029768	0.0030751	9.68	0.000.	0.0237372	0.0357987
Employment Status	-0.027276	0.0360972	-0.76	0.450	-0.0980685	0.0435166
Age	-0.0374933	0.0647064	-0.58	0.562	-0.1643931	0.0894065
Age²	0.0008196	0.0009339	0.88	0.380	-0.0010119	0.002651
_cons	14.04556	1.106685	12.69	0.000	11.87517	16.21595

Table 4. Robust regression results of the scale estimation of female gender

Linear Regression		Number of obs	=	1.368		
		F(6, 1980)	=	50.22		
		Prob > F	=	0.0000		
		R-square	=	0.1758		
		Root MSE	=	0.90516		
Robust						
In_Revenue	Coefisient	Std.err	t	p> t 	[95% conf	interval
PT	0.4543614	0.0654219	6.95	0.000	0.3260228	0.5827
Length of work	-0.0090779	0.0035353	-2.57	0.010	-0.0160132	- 0.0021427
Workong Hours	0.029869	0.0036165	8.26	0.000	0.0227745	0.0369636
Employment Status	0.1122165	0.0571893	1.96	0.050	0.0000277	0.2244053
Age	-0.1679922	0.087266	-1.93	0.054	-0.3391826	0.0031981
Age²	0.0026274	0.0012587	2.09	0.037	0.0001582	0.0050966
_cons	15.50061	1.500197	10.33	0.000	12.55766	18.44355

The robust regression equation for the estimated scale for each gender is as follows:

$$\hat{Y}^L = 14.04556 + 0.2362489(X1) - 0.0133404(X2) + 0.029768(X3) - 0.027276(X4) - 0.0374933(X5) + 0.0026274(X6)$$

$$\hat{Y}^P = 15.50061 + 0.4543614(X1) - 0.0090779(X2) + 0.029869(X3) + 0.1122165(X4) - 0.1679922(X5) + 0.0026274(X6)$$

1. Higher Education (X1)

Higher education has a positive and significant effect on income for both men and women. The coefficient for men is 0.236, while for women it is 0.454, and both are significant at the 1% level. This indicates that individuals with higher education earn higher incomes than those without. The impact of education on women is significantly greater than on men, indicating that education plays a very strong role in improving women's economic position. This finding aligns with human capital theory, which emphasizes the importance of educational investment in increasing productivity and labor market value.

2. Years of work experience (X2)

Years of work experience has a negative and significant effect on both genders. The coefficient for men is -0.013, while for women it is -0.009. This means that additional length of service does not always increase income. This negative relationship suggests potential career stagnation or limited opportunities for wage advancement, for both men and women. The effect is stronger for men, indicating that work experience does not always lead to greater economic mobility.

3. Working Hours (X3)

Working hours showed a positive and highly significant effect on both groups. The coefficient for men was 0.0298 and for women 0.0299, demonstrating strong significance. Each additional hour worked increased income by nearly the same proportion for both genders. These results confirm that work intensity is a direct determinant of income levels.

4. Employment Status (X4)

Employment status was insignificant for men, with a coefficient of -0.027, indicating that differences in employment sector had no clear impact on men's income after controlling for other variables. Conversely, for women, the coefficient was 0.112 and significant at the 5% confidence level. This suggests that employment sector plays a more significant role in determining women's income. The structure of the labor market appears to create more pronounced differences in economic opportunities for women.

5. Age (X5)

Age was insignificant for men, with a coefficient of -0.037. For women, age approached significance with a coefficient of -0.168, indicating that age changes are more strongly related to women's income dynamics than to men's. This suggests that women's career paths are more sensitive to age.

6. Age² (X6)

The squared age variable was insignificant for men, with a coefficient of 0.0008, but significant for women, with a coefficient of 0.0026. These results indicate a nonlinear relationship between age and women's income. Women's income tends to increase at certain productive ages before slowing down at higher ages, reflecting a career cycle throughout the working life cycle.

Hasil Uji F

The results of the simultaneous significance test indicate that the regression model is statistically significant, meaning that all independent variables collectively influence individual income. Therefore, the model used is deemed appropriate and relevant to explain the determinants of income in this study.

Furthermore, estimations were conducted using robust standard errors, so the regression results correct for potential heteroscedasticity issues. This makes the resulting coefficients more reliable and the interpretation of each variable's influence on income more accurate. The use of robust regression in this study was conducted as an essential step to ensure the validity and reliability of the model estimation results. Although the Ordinary Least Squares (OLS) method is a commonly used estimation technique, its accuracy highly depends on the fulfillment of classical assumptions, particularly regarding normal distribution and homogeneity of variance. Based on the results of the classical assumption tests performed on the wage data of millennial workers in West Nusa Tenggara, indications of violations were found that could distort the OLS estimation results.

One of the primary reasons for implementing robust regression is to address the issue of outliers, which are frequently encountered in microeconomic data such as wages. These outliers can exert a disproportionate influence on the OLS regression line, thereby producing biased coefficients. Robust regression works by assigning lower weights to observations with large residuals, ensuring that the model remains accurate without having to remove original data that contains important information regarding labor market dynamics.

Furthermore, robust regression is effective in handling heteroscedasticity issues that often arise in cross-sectional data. By applying this method, the standard errors of each independent variable—such as education, working hours, and work experience—become more efficient and provide more credible significance test results (t-tests). This is crucial before

proceeding to the Blinder-Oaxaca decomposition analysis phase, as accurate parameter estimation in the Mincer wage function serves as the foundation for precisely separating the explained component (observed characteristics) and the unexplained component (discrimination)."

Therefore, the conclusions drawn from this regression model can be relied upon as a basis for further analysis.

To determine good regression results between OLS parameters and robust estimation-s regression, it can be seen through the adjusted R-square value. The comparison of adjusted R-square values between OLS estimation values and Robust Estimation scale is presented in the following table:

Table 5. Comparison of adjusted R-square values between OLS and Robust S-Estimates

Statistical Methods	Gender Type	<i>Adjust R-Square</i>
<i>OLS</i>	Man	0.1325
	Woman	0.1721
<i>Robust Estimation - Scale</i>	Man	0.1351
	Woman	0.1758

Based on Table 5, the Adjusted R-Square values in the table show that the regression model is able to explain 13.25% of the income variation for male workers and 17.21% for female workers using the OLS method. After robust estimation, these values slightly increased to 13.51% for men and 17.58% for women. This increase indicates that the robust method provides more stable results against the influence of outliers without significantly changing the pattern of relationships between variables.

The relatively small Adjusted R-Square value indicates that most of the variation in income is influenced by factors other than the variables included in the model. This condition aligns with labor market segmentation theory, which states that income is determined not only by individual characteristics such as education, working hours, and experience, but also by structural factors such as job type, sector, and labor bargaining power.

The slightly higher adjusted R-squared value for women indicates that the characteristics in the model are more capable of explaining variation in women's earnings than in men's. However, the limited model power supports the wage discrimination theory, which posits that social and structural factors, not fully measurable, contribute to gender earnings differences.

Gender Wage Gap

The results of the Blinder – Oaxaca decomposition in the province of West Nusa Tenggara in 2023 amounted to Rp0.5620, dividing the gender wage gap into three parts, namely the explained (explainable/characteristic), unexplained (unexplainable) and interaction or a combination of both as shown in table 5 as follows:

Table 6.Blinder-Oaxaca Decomposition Results

Decomposition	Coefficient	Proportion
Total Wage Gap (R)	0.562	100%
Explained	0.0252	4.48%
Unexplained	0.531	94.48%
Combination of Both	0.0058	1.04%

Based on Table 6, the Blinder–Oaxaca decomposition results show that the total wage gap between men and women is 0.562. Of this amount, only 4.48% can be explained by differences in productive characteristics such as education, work experience, and working hours, while 94.48% comes from unexplained components. This indicates that differences in human capital are not the main cause of the wage gap, but rather differences in labor market returns to the same characteristics. This finding is in line with Becker's wage discrimination theory, which states that income gaps can arise due to bias and unequal treatment in the labor market. Even though women have relatively equal characteristics to men, they still receive lower wages. This condition also supports the theory of labor market segmentation and the concept of the glass ceiling, which explains the existence of structural barriers that limit women's access to higher positions and wages. Thus, the gender wage gap in NTB is more structural and institutional in nature than due to differences in individual productivity.

CONCLUSION AND RECOMMENDATION

This study demonstrates that the wage gap between male and female millennial workers in West Nusa Tenggara Province remains significant. Men's average income is higher than women's, despite both having relatively similar education, work experience, age, and working hours. Regression results indicate that higher education and working hours increase income for both genders, but these increases have not been enough to eliminate the wage gap. Women continue to receive lower returns than men for the same productive characteristics.

The Blinder–Oaxaca decomposition results show that only a small portion of the wage gap can be explained by differences in individual characteristics (explained), while the majority comes from unexplained components. The dominance of unexplained components indicates that the wage gap is caused more by structural factors and discrimination in the labor market than by differences in productivity. This condition indicates that labor market mechanisms are not yet fully gender-neutral and are still influenced by social norms, stereotypes, and women's limited access to formal employment and high-paying positions.

Overall, this study confirms that the gender pay gap in NTB is not simply a human capital issue, but a structural one related to labor market segmentation and discriminatory practices. Therefore, efforts to reduce the wage gap cannot be achieved solely through improving women's education; they also require policies that promote equal employment opportunities, protect female workers, and reform the wage system to make it fairer and more inclusive.

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