Gender Wage Discrimination and Occupational Crowding in Thailand's Labor Market

Suphawisit Boonla[1*]

[1]Graduate student, Faculty of Economics, Thammasat University.
[*]**Corresponding author, E-mail:** suphawisit.boo@st.econ.tu.ac.th

Abstract

This study examines gender wage discrimination and occupational crowding in Thailand's labor market, focusing on male-dominated and female-dominated industries such as construction and healthcare. Despite Thailand's advancements in addressing gender inequality, significant wage disparities persist due to occupational crowding, where one gender is concentrated in certain professions. Using data from the Thai Labor Force Surveys of 2018, 2020, and 2022, and employing the Bergmann Occupational Crowding Index and Oaxaca-Blinder Decomposition, this study shows that occupational crowding significantly impacts wage disparities. In construction, a 1-unit increase in male overcrowding reduces wages by 4.9%, while in healthcare, a 1-unit increase in female overcrowding decreases wages by 63.55%, highlighting the extreme undervaluation of female-dominated roles. The Oaxaca-Blinder Decomposition indicates that 80.41% of the wage gap in construction and 66.22% in healthcare is due to gender discrimination. The findings underscore the persistent societal biases and structural barriers that limit gender wage parity, necessitating targeted policies to address occupational segregation and wage inequality.

Keywords: Gender Wage Discrimination, Occupational Crowding, Wage Disparity, Labor Market, Oaxaca-Blinder Decomposition

Introduction

Thailand has made significant strides in promoting gender equality through government initiatives and international commitments, particularly under Sustainable Development Goal 5 (SDG 5). These efforts have led to notable progress in narrowing the gender gap across multiple sectors. However, persistent gender disparities continue to exist, particularly in industries that exhibit occupational crowding—a phenomenon where a particular gender is overrepresented in specific professions, leading to wage disparities and unequal career opportunities. This gender-based labor market segregation remains a critical barrier to achieving wage equality, particularly in male-dominated industries like construction and female-dominated sectors such as healthcare.

Thailand's Global Gender Gap Index (GGI) has gradually improved over recent years, rising from 0.694 in 2017 to 0.720 in 2024. However, despite this overall progress, wage disparities within male- and female-dominated industries have remained stagnant, suggesting that structural labor market barriers and societal biases continue to hinder gender pay equity. Political representation of women has contributed to Thailand's recent GGI ranking improvements—jumping from 73rd-79th place between 2017 and 2023 to 65th place in 2024—but economic participation and wage equality indicators have not shown consistent progress.

A key factor contributing to these wage disparities is occupational crowding, which refers to the concentration of men or women in specific professions, often leading to unequal pay scales and restricted career progression opportunities. In male-dominated sectors like construction, men overwhelmingly occupy higher-paying roles, often justified by physical job demands, skill-based hierarchies, and entrenched gender norms favoring male workers. Conversely, in female-dominated professions such as healthcare, women constitute many workers, yet they face lower wages and fewer leadership opportunities, reflecting the systemic undervaluation of traditionally female professions. These gendered labor patterns not only perpetuate wage disparities but also reinforce economic mobility restrictions, making it difficult for women to transition into high-paying, male-dominated fields and for men to enter traditionally female professions without stigma.

Empirical studies have long demonstrated a clear link between occupational segregation and gender wage disparities. Research shows that industries with a high concentration of female workers tend to offer lower wages than male-dominated fields (England, 1992; Cohen & Huffman, 2003). This wage gap is driven by multiple structural factors, including employer biases, the societal devaluation of feminized occupations, and systemic barriers limiting women's access to high-paying roles. In Thailand, while some industries have shown improvements in wage equality, construction and healthcare remain sectors where gender-based wage differentials persist, primarily due to occupational crowding (Kaewsria & Tongthong, 2013). Furthermore, labor force surveys reveal that while women in government jobs often earn equal or higher wages than men, women in the private sector continue to earn significantly less—highlighting persistent gender wage inequality in Thailand's labor market.

This study investigates gender wage discrimination through the lens of occupational crowding, using the construction and healthcare industries as case studies. Specifically, it examines how gender segregation within male- and female-dominated fields influences wage disparities and assesses the extent to which occupational crowding contributes to persistent gender inequality. By analyzing wage structures,

employment trends, and career progression barriers in these sectors, this study aims to provide evidence-based insights into the structural challenges that sustain gendered wage gaps. The findings will contribute to policy discussions on occupational segregation, wage equity, and strategies for fostering a more inclusive labor market in Thailand.

Objectives

To study the effect of occupational crowding on wage disparity in male-dominated and female-dominated industries

Concept theory framework

To analyze occupational crowding and wage discrimination, we use the wage equation incorporating psychic wage discrimination.

$$W^* = W(1 - D_j)$$

Where W^*= Psychic wage (the perceived wage value considering discrimination)

W = Monetary wage (actual wage paid by the employer)

Dj = Discrimination coefficient for employee j

The discrimination coefficient Dj represents the level of wage discrimination experienced by an employee due to gender-based biases in the labor market. If $Dj > 0$, then the actual perceived wage W^* for the discriminated group is lower than the monetary wage.

Occupational crowding is a form of labor market segregation, where men and women are funneled into different industries or job roles, leading to wage suppression in female-dominated jobs. The occupational crowding hypothesis suggests that when a particular group (e.g., women) is concentrated in specific jobs, the excess supply of workers in that job depresses wages relative to male-dominated fields.

The wage impact of occupational crowding can be modeled as:

$$Wf = Wm(1 - Dj)$$

Where Wf = Wage for a worker in a female-dominated occupation

Wm = Wage for a worker in a male-dominated occupation

Dj = Discrimination coefficient (higher in female-dominated sectors). In male-dominated fields (low Dj), the wage gap is smaller or non-existent. In female-dominated fields (high Dj), wages are lower due to crowding and undervaluation of female labor. The equation captures the psychic wage gap caused by discrimination in the labor market. Occupational crowding reinforces wage suppression in female-dominated jobs, leading to systematic wage inequalities. Both employee-based and customer-based discrimination contribute to gender-based occupational segregation, which in turn creates lower wages in female-majority fields.

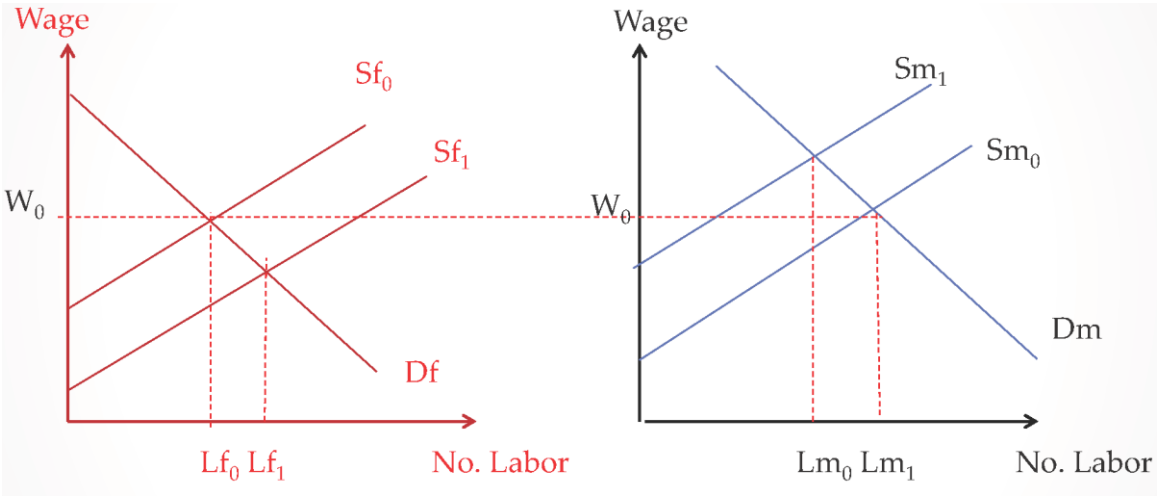

Figure 1: Taste of Discrimination and Occupational Crowing

This figure illustrates the concept of Taste of Discrimination in the labor market, showing how occupational segregation and wage disparities emerge between male- and female-dominated jobs. As more men enter female-dominated fields, increased labor supply suppresses wages, reinforcing gender-based pay disparities. Conversely, when men exit male-dominated jobs, reduced labor supply drives wages higher, widening the gender wage gap. Employers in male-dominated industries may raise wages to retain male workers, while female-dominated jobs remain lower-paying due to oversupply. These patterns reflect occupational crowding, where gender-based job segregation influences wage structures.

Research on gender segregation and occupational crowding highlights how socio-cultural norms, education, workplace discrimination, and labor market structures shape occupational opportunities for men and women. While these factors manifest differently in developed and developing countries, they create similar barriers to gender equality in the workplace. In developing countries like Thailand, women are overrepresented in low-paying roles such as clerical work and caregiving, while men dominate technical fields like construction and engineering. These patterns arise from cultural norms and industrial strategies that reinforce gender-specific roles, such as the perceived suitability of women for export-oriented manufacturing jobs (Son, 2007; Tangchonlatip et al., 2008). Conversely, in developed countries, occupational segregation is particularly evident in STEM fields, where entrenched gender norms and workplace cultures continue to marginalize women, limiting career advancement and widening pay gaps (Kaewsria & Tongthong, 2013; Limani & Sodergren, 2023).

Across both contexts, occupational segregation results in unequal economic benefits and disadvantages. Male-dominated sectors tend to offer higher wages and leadership opportunities but may also have physically demanding conditions and workplace cultures that discourage female participation (Limani & Sodergren, 2023). In contrast, female-dominated industries like healthcare and education provide more stable employment but are often undervalued, characterized by lower wages, and limited career growth opportunities (Jitkaew, 2019). Gender norms further reinforce these disparities by devaluing women's work, perpetuating wage gaps and occupational segregation (Son, 2007). While developed countries have introduced policies such as anti-discrimination laws and STEM initiatives to address workplace gender inequality, structural barriers like the glass ceiling persist, limiting women's access to leadership positions (Hegewisch & Barsi, 2020; Fromea et al., 2006). In developing countries, efforts focus on reducing disparities in labor-intensive industries through improved access to education and work-life balance policies, yet deep-rooted cultural norms remain a significant barrier (Tangchonlatip et al., 2008; Kosaikanont, 2019).

Despite women's increasing educational attainment worldwide, occupational segregation and wage gaps persist, highlighting the need for structural reforms beyond education alone. Policies aimed at reducing workplace discrimination, promoting gender diversity in non-traditional careers, and addressing occupational crowding are crucial to bridging gender gaps in both developed and developing economies (Booth et al., 2002; Paweenawat & Liao, 2019).

Materials and Methods

The Bergmann Occupational Crowding Index is a widely used tool to measure occupational segregation by assessing the overrepresentation or underrepresentation of specific demographic groups in certain occupations. Occupational crowding occurs when workers from certain groups (e.g., gender, race) are disproportionately concentrated in specific jobs, which limits employment opportunities in other fields and often leads to wage suppression due to an oversupply of labor (Bergmann, 1974).

Originally developed to study racial discrimination in the U.S. labor market, the Bergmann Index has since been adapted for analyzing gender disparities in labor markets worldwide. The methodology compares the share of male or female workers in each occupation to their representation in the overall workforce, adjusting for educational attainment and skill requirements (Blau & Kahn, 2017).

The Bergmann Index is typically applied under two conditions: (1) Less segregated occupations – where the workforce is balanced in gender composition. (2) Highly segregated occupations – where one gender dominates the field, contributing to wage

disparities and career stagnation. By measuring occupational crowding, the index provides a quantitative assessment of how labor market segregation influences gender wage gaps, particularly in male-dominated (e.g., construction) and female-dominated (e.g., healthcare) sectors (England, 1992; Cohen & Huffman, 2003).

The Oaxaca-Blinder decomposition is a widely used econometric method for analyzing wage differentials between groups. It decomposes the gender wage gap into two components: (1) Endowment Effect (Explained Part) – Differences due to observable factors, such as education, experience, or industry choice. (2) Treatment Effect (Unexplained Part) – Differences that remain after controlling for observable factors, often attributed to wage discrimination (Oaxaca, 1973; Blinder, 1973).

To begin, the Mincer Earnings Function is estimated, which models wages based on education, experience, and other characteristics:

$$ln(wage_i) = \beta_0 + \beta_1 Education_i + \beta_2 Experience_i + \beta_3 Experience_i^2 + X_i\alpha + \epsilon_i$$

Where $ln(wage_i)$ = Natural logarithm of wages for individual ii.

$Education_i$ = Dummy variables for different education levels (reference: Less than Elementary).

$Experience_i$ = Potential work experience (age - years of schooling - 6).

X_i = Additional control variables, including regional dummies (e.g., Bangkok, Northern, Northeastern regions), Marital status (reference: Widowed, Divorced, or Separated), Establishment size, Log of Gross Provincial Product (GPP) per capita, and Survey year dummies (reference: 2018).

The Oaxaca-Blinder decomposition then estimates the gender wage gap:

$$\Delta = \overline{ln(wage_m)} - \overline{ln(wage_f)}$$

This difference (Δ) is split into:

1. Endowment Effect (Explained Part): Accounts for differences in education, experience, and other observed characteristics.

$$\Delta^E = (\bar{X}_m - \tilde{X}_f)'\beta_m$$

2.Treatment Effect (Unexplained Part): Represents differences in returns to characteristics, often linked to discrimination.

$$\Delta^T = \bar{X}_f'(\beta_m - \beta_f)$$ ○

By applying the Oaxaca-Blinder decomposition to construction and healthcare sectors, this study identifies gender-based wage discrimination and occupational crowding effects.

Using econometric methods, we analyze data from the Thai Labour Force Survey for the years 2016, 2018, 2020, and 2022. The Thai Labor Force Survey (LFS) consists of quarterly surveys capturing employment trends, wages, and workforce dynamics (National Statistical Office of Thailand, 2022). Quarter 3 (July - September) is widely used

in labor market studies due to seasonal workforce patterns, particularly in the agricultural sector. Key reasons for selecting Quarter 3 data include: (1) Reducing Bias from Seasonal Migration: Agricultural workers migrate seasonally between rural and urban areas. During the rainy season (Q3), rural workers return home, making it easier to classify labor into urban vs. rural categories. Using data from other quarters may misclassify temporary urban workers, distorting labor market analysis (Sussangkarn & Chalamwong, 1996). (2)Capturing Stable Workforce Trends: Q3 provides a more stable picture of permanent employment, minimizing distortions from short-term agricultural work. Many labor market studies in Thailand rely on Q3 data for analyzing long-term employment trends (Warunsiri & McNown, 2010). By using Q3 data, this study ensures greater accuracy in identifying structural labor market disparities, particularly gender wage gaps in construction and healthcare.

Results

This study analyzes Thailand's Labor Force Survey (LFS) data to examine gender wage disparities in the construction and healthcare sectors, two industries that exhibit contrasting gender compositions. By applying the Bergmann Occupational Crowding Index and Oaxaca-Blinder decomposition, this research quantifies the extent of occupational segregation and wage discrimination within these industries.

In the construction sector, which is traditionally male dominated, 80.41% of the wage gap can be attributed to gender discrimination, while educational differences account for the remaining disparity. Women's lower educational attainment contributes to this gap, particularly among those with general or academic upper secondary education, vocational or higher technical education, and lower secondary education, explaining 3.25%, 3.71%, and 4.36% of the wage differential, respectively. However, certain factors help mitigate this gap. Holding a bachelor's degree reduces the wage disparity by 13.18%, while living in regions with higher Gross Provincial Product (GPP) per capita narrows it by 6.41%. Despite these mitigating factors, the unexplained portion of the wage gap remains primarily linked to gender discrimination. These findings align with international studies on male-dominated industries, which highlight the significant wage suppression and career stagnation that women face in such fields (De Ruijter et al., 2003; Gibson et al., 2018).

Conversely, the healthcare sector, which is female dominated, still exhibits a wage gap, with 66.22% of it attributed to gender discrimination. Other influential factors include work experience, which contributes 3.39% to the wage gap, and higher educational attainment, particularly at the bachelor's degree level or above, which paradoxically increases the wage gap by 16.88%. This suggests that despite higher

qualifications, women in healthcare do not experience proportional wage increases, due to the undervaluation of female-dominated professions. On the other hand, vocational or higher technical education and general or academic upper secondary education help reduce the wage gap by 4.98% and 2.51%, respectively. Additionally, factors such as the squared value of work experience, which accounts for diminishing wage returns over time, and temporal changes, particularly in 2022, also contribute to narrowing the wage gap. These findings reflect global trends in female-dominated sectors, where despite elevated levels of female representation, wage disparities persist due to structural biases and barriers to career advancement. The glass ceiling effect remains prevalent, preventing women from reaching higher-paying leadership positions (Boonsom, 2013; Sheridan, 1997).

Regional differences further highlight the complexity of gender wage disparities. Studies in Poland's construction sector, for example, suggest that sector-specific policies and labor protections can influence wage discrimination, as Strawinski et al. (2018) found lower levels of wage inequality in this field. Similarly, while some studies indicate that men in female-dominated professions face wage penalties (Liao & Paweenawat, 2020), others argue that they can negotiate higher salaries due to their perceived leadership potential in feminized workplaces (Crothers et al., 2010).

Discrimination remains a pervasive issue in Thailand's labor market, particularly in industries characterized by gender segregation. However, the findings of this study suggest that education and economic growth can help reduce wage gaps, though these factors alone are insufficient without targeted policy interventions. Increasing women's participation in higher-paying technical roles, addressing gender biases in salary negotiations and promotions, and strengthening legal frameworks to ensure wage equity across industries are necessary steps toward achieving gender wage parity. By integrating occupational crowding analysis with economic decomposition models, this study provides an empirical foundation for future labor market reforms aimed at reducing gender wage disparities in Thailand.

Table 1: Oaxaca-Blinder Decomposition of wage disparities in the construction sector

Model Construction

Model	Construction							
	Overall		Female-Overrepresented		Proportional		Male-Overrepresented	
	Log points	% of gap	Log points	% of gap	Log points	% of gap	Log points	% of gap
Male wage	3.8388***		3.9056***		3.7877***		4.0216***	
Female wage	3.7653***		4.0225***		3.6800***		4.2063***	
Difference	0.0735***	100.00%	-0.1168***	100.00%	0.1077***	100.00%	-0.1847***	100.00%
Explained	-0.0395***	-53.74%	-0.2701***	231.25%	0.0211*	19.59%	-0.4852***	262.70%
Unexplained	0.1130***	153.74%	0.1533***	-131.25%	0.0866***	80.41%	0.3005***	-162.70%
Explained Effect								
Primary Education	0.0005	0.68%	0.0024	-2.05%	-0.0001	-0.09%	0.0593*	-32.11%
Lower Secondary Education	0.0067***	9.12%	0.0113*	-9.67%	0.0047***	4.36%	0.0438	-23.71%
General/Academic Upper Secondary Education	0.0044***	5.99%	0.0054*	-4.62%	0.0035***	3.25%	-0.0636	34.43%
Vocational or Higher Technical Education	0.0036***	4.90%	0.0004	-0.34%	0.0040***	3.71%	0.0365**	-19.76%
Diploma	0.0012*	1.63%	-0.0057	4.88%	0.0019*	1.76%	0.0308	-16.68%
Bachelor's Degree and Above	-0.0400***	-54.42%	-0.0894***	76.54%	-0.0142***	-13.18%	-0.2801***	151.65%
Work Experience	-0.0171***	-23.27%	0.0513***	-43.92%	-0.0209***	-19.41%	0.0042	-2.27%
Work Experience Squared	0.0100***	13.61%	-0.0315***	26.97%	0.0116**	10.77%	-0.0065	3.52%
Central	0.0002	0.27%	0.0016	-1.37%	-0.0000	0.00%	-0.0007	0.38%
Northern	0.0063***	8.57%	-0.0066**	5.65%	0.0095***	8.82%	-0.0117	6.33%
Northeastern	-0.0047***	-6.39%	-0.0219**	18.75%	-0.0020*	-1.86%	-0.0306	16.57%
Southern	0.0002	0.27%	-0.0101**	8.65%	0.0032	2.97%	-0.0045	2.44%
Municipal Area Dummy Variable	-0.0004	-0.54%	0.0007	-0.60%	-0.0001	-0.09%	-0.0158	8.55%
Single	-0.0017	-2.31%	-0.0033	2.83%	0.0021	1.95%	-0.0252	13.64%
Married	0.0017	2.31%	0.0008	-0.68%	-0.0001	-0.09%	0.0014	-0.76%
5 - 9 Persons	0.0013**	1.77%	-0.0040	3.42%	0.0014**	1.30%	0.0917**	-49.65%
10 - 19 Persons	-0.0027***	-3.67%	-0.0002	0.17%	-0.0046***	-4.27%	-0.0128	6.93%
20 - 29 Persons	-0.0024***	-3.27%	-0.0008	0.68%	-0.0021***	-1.95%	-0.0021	1.14%
30 - 49 Persons	-0.0018*	-2.45%	0.0021	-1.80%	-0.0013*	-1.21%	-0.0429	23.23%
50 - 100 Persons	-0.0036***	-4.90%	-0.0021	1.80%	-0.0023***	-2.14%	-0.0280	15.16%
101 - 199 Persons	-0.0012**	-1.63%	0.0022	-1.88%	-0.0017**	-1.58%	0.0043	-2.33%
Over 200 Persons	-0.0002	-0.27%	0.0002	-0.17%	-0.0002	-0.19%	-0.0031	1.68%
Logarithm of Gross Provincial Product per Capita	-0.0129***	-17.55%	-0.0328***	28.08%	-0.0069***	-6.41%	0.0096	-5.20%
2020	0.0001	0.14%	0.0008	-0.68%	-0.0002	-0.19%	-0.0013	0.70%
2022	0.0004	0.54%	0.0001	-0.09%	0.0009*	0.84%	-0.0052	2.82%
Number of males	35,476		12,679		21,984		452	
Number of females	6,854		1,113		5,617		107	

Note: ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.
Source: Calculated by the author using data from the 3rd quarter Thai Labor Force Surveys of 2018, 2020, and 2022, conducted by the National Statistical Office

Table 2: Oaxaca-Blinder Decomposition of wage disparities in the health sector

Model	Human health and social work activities sector							
	Overall		Female-Overrepresented		Proportional		Male-Overrepresented	
	Log points	% of gap	Log points	% of gap	Log points	% of gap	Log points	% of gap
Male wage	4.4192***		4.1639***		4.8807***		4.4539***	
Female wage	4.2829***		4.0758***		4.3505***		4.5028***	
Difference	0.1363***	100.00%	0.0880**	100.00%	0.5302***	100.00%	-0.0490	100.00%
Explained	0.0316	23.18%	0.0953**	108.30%	0.1791***	33.78%	-0.0927	189.18%
Unexplained	0.1047***	76.82%	-0.0073	-8.30%	0.3511***	66.22%	0.0438	-89.39%
Explained Effect								
Primary Education	0.0001	0.07%	-0.0038	-4.32%	-0.0003	-0.06%	-0.0090	18.37%
Lower Secondary Education	0.0110*	8.07%	0.0171	19.43%	-0.0050	-0.94%	0.0047	-9.59%
General/Academic Upper Secondary Education	-0.0032	-2.35%	0.0233	26.48%	-0.0133	-2.51%	-0.0193	39.39%
Vocational or Higher Technical Education	-0.0050	-3.67%	-0.0075	-8.52%	-0.0264**	-4.98%	0.0233	-47.55%
Diploma	0.0098	7.19%	0.0072	8.18%	-0.0055	-1.04%	-0.0036	7.35%
Bachelor's Degree and Above	-0.0410*	-30.08%	-0.0782***	-88.86%	0.0895**	16.88%	-0.0906	184.90%
Work Experience	0.0385*	28.25%	-0.0016	-1.82%	0.0180	3.39%	0.0692	-141.22%
Work Experience Squared	-0.0159	-11.67%	0.0203	23.07%	-0.0097	-1.83%	-0.0222	45.31%
Central	0.0038	2.79%	0.0011	1.25%	0.0061	1.15%	-0.0012	2.45%
Northern	-0.0011	-0.81%	-0.0009	-1.02%	0.0026	0.49%	-0.0020	4.08%
Northeastern	0.0022	1.61%	0.0077	8.75%	0.0039	0.74%	-0.0038	7.76%
Southern	0.0042*	3.08%	0.0089	10.11%	0.0014	0.26%	0.0004	-0.82%
Municipal Area Dummy Variable	0.0033*	2.42%	0.0058	6.59%	0.0007	0.13%	-0.0064	13.06%
Single	0.0012	0.88%	0.0097	11.02%	0.0034	0.64%	-0.0068	13.88%
Married	0.0057*	4.18%	-0.0005	-0.57%	0.0021	0.40%	0.0036	-7.35%
5 - 9 Persons	-0.0149***	-10.93%	-0.0333***	-37.84%	-0.0019	-0.36%	0.0022	-4.49%
10 - 19 Persons	0.0001	0.07%	-0.0010	-1.14%	-0.0002	-0.04%	-0.0001	0.20%
20 - 29 Persons	0.0044	3.23%	0.0053	6.02%	0.0010	0.19%	0.0018	-3.67%
30 - 49 Persons	0.0007	0.51%	0.0091	10.34%	0.0057	1.08%	-0.0072	14.69%
50 - 100 Persons	0.0099*	7.26%	0.0184*	20.91%	0.0022	0.41%	-0.0014	2.86%
101 - 199 Persons	0.0309***	22.67%	0.0530***	60.23%	0.0103	1.94%	0.0031	-6.33%
Over 200 Persons	0.0036	2.64%	0.0148	16.82%	0.0002	0.04%	-0.0055	11.22%
Logarithm of Gross Provincial Product per Capita	0.0042	3.08%	0.0078	8.86%	0.0052	0.98%	-0.0077	15.71%
2020	-0.0030	-2.20%	-0.0048	-5.45%	-0.0039	-0.74%	0.0010	-2.04%

Model	Human health and social work activities sector							
	Overall		Female-Overrepresented		Proportional		Male-Overrepresented	
	Log points	% of gap	Log points	% of gap	Log points	% of gap	Log points	% of gap
2022	-0.0028	-2.05%	0.0020	2.27%	-0.0085	-1.60%	0.0017	-3.47%
Number of males	502		222		126		108	
Number of females	2,472		1,046		926		480	

Note: ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.
Source: Calculated by the author using data from the 3rd quarter Thai Labor Force Surveys of 2018, 2020, and 2022, conducted by the National Statistical Office

Conclusions and Discussion

The study highlights gender wage disparities in Thailand's construction and healthcare sectors, revealing how occupational segregation and discrimination contribute to economic inequality. In construction, where men overwhelmingly dominate, the wage gap remains stark, with 80.41% of the disparity attributed to discrimination. Women's lower educational attainment further exacerbates this gap, though factors such as a bachelor's degree or higher and residence in economically developed regions help mitigate wage differences. However, despite these compensatory factors, gender bias remains deeply entrenched, limiting women's access to higher-paying technical roles and leadership opportunities. In contrast, the healthcare sector, which is female-dominated, exhibits a wage gap where 66.22% is due to gender-based discrimination. Unlike construction, where education helps narrow wage differences, healthcare presents a paradox: higher educational attainment among women does not translate into proportional wage benefits. In fact, the wage gap increases by 16.88% for those with a bachelor's degree or higher, reflecting structural biases that continue to undervalue female-dominated professions. Conversely, vocational, and technical education has a mitigating effect, reducing the wage gap by 4.98%.

These findings align with global research on occupational crowding, where industries that are highly feminized tend to experience wage suppression due to the perceived lower value of women's work. Studies from developed and developing countries alike suggest that gender norms, societal expectations, and institutional biases perpetuate these inequalities. In Poland, for example, Strawinski et al. (2018) found lower levels of discrimination in the construction sector, indicating that industry-specific policies and legal frameworks can influence wage structures. Similarly, research on feminized professions suggests that while some men in female-dominated fields face wage penalties (Liao & Paweenawat, 2020), others may be able to negotiate higher salaries due to their perceived leadership potential (Crothers et al., 2010). Addressing

these wage disparities requires strategic policy interventions at multiple levels. At the individual level, increasing women's access to education in science, technology, engineering, and mathematics (STEM) fields is critical to breaking gender-based occupational segregation. Expanding vocational training programs for women in male-dominated industries, such as construction, could provide a pathway for greater participation in higher-paying roles. In corporate and institutional settings, policies promoting mentorship, leadership development, and gender-equitable salary structures are necessary to eliminate barriers to career progression in the healthcare sector.

On a broader policy scale, the government must implement sector-specific wage equity measures and reinforce anti-discrimination labor laws. Sweden, for example, has successfully reduced gender-based pay gaps by implementing transparent wage-setting policies and strong parental leave protections, which encourage gender equality in the workforce. Moldova's policies promoting women in leadership roles have also contributed to reducing occupational segregation. Thailand could adapt similar approaches by integrating gender-sensitive employment policies into labor market reforms, ensuring that wage disparities are not only acknowledged but systematically addressed.

Additionally, regional economic strategies play a crucial role in reducing gender-based wage gaps. Women in underdeveloped regions often face limited access to high-paying employment opportunities, exacerbating disparities. Encouraging regional investment in female-dominated industries, providing incentives for businesses to recruit women into higher-wage roles, and integrating gender-responsive budgeting into national development plans are all potential solutions.

In conclusion, while education and economic policies can alleviate some aspects of wage disparity, they are not sufficient to eradicate systemic discrimination. A multifaceted approach—encompassing legislative action, corporate accountability, and societal change—is necessary to foster an equitable labor market. By addressing discrimination at its root, dismantling occupational segregation, and promoting wage transparency, Thailand can take significant strides toward closing the gender wage gap and ensuring equal economic opportunities for all.

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