Empowering Arab women through wage equality: A comprehensive analysis of wage disparities and strategies for promoting equal pay in the Arab region

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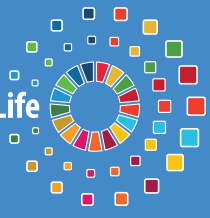

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Economic and Social Commission for Western Asia

A comprehensive analysis of wage disparities and strategies for promoting equal pay in the Arab region

Empowering Arab women through wage equality

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Key messages

Higher educational attainment strongly correlates with increased wage levels for women, emphasizing the crucial role of education in reducing gender wage disparities.

Work experience significantly boosts women's monthly wages, underscoring its importance in addressing wage disparities.

Job type and social characteristics significantly affect wages, emphasizing the need to address these factors to achieve pay equity.

Discrimination is a major factor in wage differences between men and women, underscoring its crucial role in perpetuating gender-based wage gaps.

Women earn, on average, **89 cents** for every dollar earned by men, and this amount decreases to **82 cents** per dollar after adjusting for various factors, highlighting the persistent gender wage gap.

Transparency in wage-setting, through salary information disclosure and the use of objective criteria, is vital for promoting fairer pay practices.

Implementing clear laws on equal pay for work of equal value is essential for addressing wage disparities based on skills and responsibilities, rather than job titles, in Arab countries.

Executive summary

The Arab region continues to experience persistent gender-based disparities despite global efforts towards inclusivity and gender equality. Sustainable Development Goals (SDGs) 5 and 8 focus on promoting women's economic empowerment and ensuring equal pay, but progress in the Arab region remains slow. Women in the Arab region face significant barriers to accessing quality jobs, skills training, and fair wages, resulting in high unemployment and low labour force participation. Gender wage gaps are widespread, with men consistently earning more than women across various sectors. Although many Arab countries have laws mandating equal pay, enforcement remains inconsistent. Cultural norms and occupational segregation further exacerbate these disparities.

This study investigates the gender wage gap and its determinants across seven Arab countries – Egypt, Iraq, Jordan, the State of Palestine, the Sudan, Tunisia and Yemen – using the Oaxaca-Blinder decomposition method to quantify the portion of the wage gap attributable to discrimination. Drawing on data from labour force surveys and labour market panel surveys, the study provides a cross-country analysis of wage disparities.

The findings reveal significant wage differences between men and women, driven by factors such as education, professional experience, job characteristics and systemic discrimination, with significant variations across countries. The study highlights a strong positive link between good education and higher wages for women, emphasizing the crucial role of education in improving women's economic outcomes. Similarly, professional experience boosts wages, with women benefiting more from each year of experience than men. However, a substantial portion of the wage gap remains unexplained, suggesting underlying biases and discrimination that continue to hinder women's economic potential and autonomy, and perpetuate wage inequalities.

Bridging the gender wage gap in the Arab region will require sustained efforts and comprehensive strategies. This study offers practical recommendations to address these disparities and advance gender equality in the workforce.

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01 INTRODUCTION

The 2030 Agenda for Sustainable Development strongly emphasizes inclusivity, particularly concerning gender equality and the empowerment of women and girls. Central to this commitment are Sustainable Development Goal (SDG) 5, which is aimed at achieving gender equality and empowering all women and girls, and SDG 8, which focuses on ensuring decent work opportunities, skills and training availability, and equal pay for women to achieve economic empowerment. Despite these global commitments, gender-based disparities persist in the Arab region, hindering progress towards achieving SDGs 5 and 8. Arab women face significant obstacles in accessing quality job opportunities, skills development and training, leading to unequal earnings and ongoing concerns about women's economic empowerment in the region. Additionally, challenges such as gender bias, wage gaps and underrepresentation of women in leadership roles persist, undermining inclusive and sustainable growth.

The 2023 Global Gender Gap Index, examining 13 Arab countries, reveals that the Arab region has the largest gender gap worldwide, scoring only 62.3 per cent in parity compared to the global average of 68.4 per cent. Full gender parity in the region is projected to take 145 years to achieve (World Economic Forum, 2023). A significant source of this inequality is the low representation of women in the labour market. In 2022, the labour market participation rate of Arab women was the lowest in the world, at 19.9 per cent (far below the global average of 46.6 per cent), with a female unemployment rate of 22.1 per cent, significantly higher than the global average of 6 per cent (ESCWA, 2022).

Several factors contribute to the low economic participation rate of Arab women, including social biases, cultural perceptions of female roles in society, a preference for public sector employment, and the burden of unpaid care work. Additionally, the gender wage gap acts as a deterrent by influencing women's perceptions of economic opportunities and perpetuating systemic inequalities.

The gender wage gap, an important measure of income discrimination against women, shows significant disparities across all sectors in nearly every Arab country (ESCWA, 2021). For instance, men in Lebanon earn 16 per cent more than women even after controlling for education, experience and job type (Dah and others, 2009). In Palestine, women earn a median daily wage of $21.20, just 76 per cent of men's daily median salary of $27.80 (International Labour Organization (ILO), 2016). Morocco and Tunisia also exhibit significant gender pay gaps, with Morocco reporting a gap of 49.5 per cent (Ziroili and Guennouni, 2023) and Tunisia showing a gap of 19 per cent (Jeddi and Malouche, 2015). The disparity between men's and women's wages varies significantly across different sectors. In Egypt, the gender wage gap is more pronounced in the private sector, with women earning 8.7 per cent

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less than men (Khairy, 2015). Similarly, in Jordan, men earn 7 per cent more than women in the private sector (ILO, 2019).

Women-dominated sectors often offer lower wages than male-dominated sectors, and this disparity is driven by gender inequality, occupational segregation, cultural norms, familial duties and the undervaluation of women's labour. Furthermore, women are disproportionately employed in vulnerable or informal sectors, resulting in lower pay and poorer job conditions (Chen and others, 2017). These factors collectively hinder women's economic advancement and autonomy, impeding their empowerment. Closing these gaps is essential for achieving gender equality, but progress in the Arab region has been slow, presenting challenges in securing decent work for Arab women.

Against this background, this research paper examines the gender pay gap in the Arab region with the aim of introducing policy options to close it. The paper draws on cross-country analyses to examine the factors contributing to the gender wage gap and highlights its impact on women's labour force participation and empowerment. Finally, it offers actionable recommendations, drawing insights from various policies and measures implemented globally to address this issue.

02 LITERATURE REVIEW

A. Estimating gender wage disparities

A substantial body of empirical research has examined the gender wage gap across various countries, sectors and occupations. These studies primarily assess the extent of wage inequality between men and women while exploring the factors contributing to this disparity. It is observed that women consistently earn less than men in both developed and developing countries, even after accounting for various individual characteristics. For instance, Piazzalunga (2018) found a 5.6 per cent raw gender gap in hourly wages among college graduates in Italy, while Jeddi and Malouche (2015) reported a 19 per cent wage gap in Tunisia. Haas (2007) conducted a comprehensive analysis of income disparities between genders across 121 countries, revealing that Switzerland had the smallest wage gap among the analysed countries, with men earning approximately 1.11 times as much as women. Conversely, Egypt exhibited the largest wage gap, where men's earnings were nearly four times higher than women's. In Morocco, Mounir and Hanchane (2023) identified a significant gender wage gap favouring men, which widened from 8 per cent in 2012 to 18 per cent in 2017, suggesting a concerning trend of increasing income disparities between genders. This surge in the gender wage gap could be attributed to changes in observable attributes or an increase in discrimination against women, demonstrated by the growth of the unexplained gap from 18 per cent in 2012 to 24 per cent in 2017. Hejase and others (2015) noted that such wage disparities were typically more pronounced in developing countries than in developed ones.

Labour economists use various methods to analyse gender wage disparities and understand what lies behind them, with the Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973) being the most popular approach. This method divides the mean wage differences between men and women engaged in paid employment into two parts: explained and unexplained. Observable factors such as education and experience explain the former, while the latter is considered an indicator of potential discrimination. Originally, this method focused on assessing the gender wage gap at the mean, obscuring variations in disparities across

> “Marital status and parental responsibilities affect gender wage disparities. Research suggests that married men often receive a “marriage premium”, earning more than their unmarried counterparts.”

different wage levels. Subsequently, several extensions of the Blinder-Oaxaca decomposition have emerged, with recent research (e.g. Machado and Mata, 2005; Albrecht and others, 2009; Melly, 2005) employing quantile regression techniques to analyse gender pay gaps across different wage levels in the hourly wage distribution.

B. Determinants of gender wage differentials

Gender wage disparities can arise from various different factors. These factors fall into three primary categories. First, human capital characteristics encompass education, experience and training. Second, job-related attributes include specific occupations and industries/sectors. Lastly, demographic and societal factors, such as marital status and parenthood, also play a significant role.

1. Human capital characteristics

Human capital factors are often key in explaining the gender wage gap. In labour economics, "human capital" refers to the mix of skills and characteristics that enhance an employee's productivity, as described by Acemoglu and Autor (2011). Empirical research highlights education's role in gender-based earnings disparities and labour market participation. Appleton and others (1990) identified three gender biases related to labour market discrimination. First, even with similar education, women are less likely than men to engage in wage work. Second, there is a tendency for parents to invest less in girls' education than in boys', indicating a son preference. Third, women's lower educational attainment often translates to less participation in the labour market.

Si and others (2021) found that women's generally lower educational levels contributed significantly to the gender pay gap in 12 developing countries. González and Miles (2001) argue that in Uruguay, the gender wage gap mainly stems from differing educational returns between men and women. Kabubo-Mariara (2003), who conducted a study in Kenya, confirms that education yields positive and significant returns, with a more pronounced impact on women's wages than on men's across various sectors. Daoud (2005), analysing data from the occupied Palestinian territories, found that even if their educational attainment levels were similar to those of men, women experienced substantially lower returns on their educational investments.

Job/work experience and training are essential tools for enhancing worker skills and productivity. However, they do not significantly influence earnings and gender wage differences. Si and others (2021) demonstrate that work experience has a substantial impact on hourly earnings in Sub-Saharan Africa, indicating that a one-month increase in experience results in a 1.49 per cent rise in male earnings and a 1.22 per cent increase in female earnings. Another study conducted by Yasin and others (2010) found that men received a higher return on each year of experience, with a rate of 5.02 per cent, than women, who experienced a return of 3.81 per cent. Biltagy (2014), on the other hand, notes that each additional year of experience translates into a 1.91 per cent increase in wages for men and a 3.56 per cent increase for women in Egypt.

Women often have less work experience as a result of their engagement with care responsibilities. Such dynamics frequently result in women taking breaks from their careers for childbearing and rearing, affecting their accumulation of work experience (Bertrand and others, 2010) and often resulting in missed training opportunities. As a result, women are more likely to opt for jobs where ongoing human capital investment is less critical, and skills devaluation during absences is minimized (Blau and Kahn, 2017). This occupational choice can contribute significantly to the wage gap between men and women.

2. Job characteristics

Job characteristics, such as the higher propensity of women to engage in part-time work and occupational and sectoral segregation, also contribute to gender pay gaps (Manning, 2006; Mumford and Smith, 2008). Often influenced by caregiving and domestic responsibilities, many women opt for part-time rather than full-time positions or choose not to work, adversely affecting their earnings and further widening the gender wage gap (Connolly and Gregory, 2008). Moreover, occupations and sectors dominated by women generally offer lower wages (Bayard and others, 2003; García-Aracil, 2007). One such example is the paid care industry, where women continue to dominate, especially in the public sector, aligning with global trends (UN-Women, 2020). However, these female-dominated sectors often suffer from undervaluation, resulting in lower wages, less comprehensive benefits, and lower societal status.

Over two-thirds of women in the Arab region work in sectors such as agriculture, education, health care, or public administration (Organisation for Economic Co-operation and Development (OECD) and others, 2020). In countries where agriculture is the primary income source, such as Egypt, the Sudan and Yemen, women predominantly work in agriculture and are underrepresented in non-agricultural sectors. Rural women often work as self-employed farmers, unpaid labourers on family farms, or in various roles in other agricultural businesses (Martínez Fernández and others, 2021). When employed for wages, they are more likely than men to hold seasonal, part-time, or low-paid positions. Conversely, women are more commonly found in the service and industrial sectors in Gulf Cooperation Council (GCC) countries, where agriculture is less significant.

Despite the high employment rates of women in these sectors, significant wage disparities persist. In agriculture-based economies such as the Sudan and Yemen, women comprise 59 per cent of the agricultural workforce but earn less than their male counterparts (ESCWA, 2021). These wage gaps extend into the industrial and service sectors. Similarly, in the GCC, where women predominantly work in service and industrial jobs, the gender pay gap favours men in these sectors, while it favours women in agriculture (ESCWA, 2021). These consistent wage gaps across different sectors highlight the ongoing challenges in achieving gender-based income equality and raise concerns about the valuation of work traditionally performed by women.

Employees performing equal work with comparable characteristics often receive different compensation in the public and private sectors owing to variations in promotion methods and wage-setting processes. The public sector attracts more women because of its flexible working hours, better maternity benefits and higher wages (Kabbani and Kamel, 2007). Ghignoni and Pastore's (2023) study in Egypt reveals prevalent gender wage disparities across the public and private sectors. Notably, the private sector is experiencing a growing gender wage gap, predominantly attributed to discrimination, including biases in hiring practices and disparities in entitlements. Similarly, Kabubo-Mariara (2003) finds that in Kenya, the wage gap in the private sector is more than double that in the public sector.

3. Demographic and societal characteristics

Marital status and parental responsibilities affect gender wage disparities. Research suggests that married men often receive a "marriage premium",

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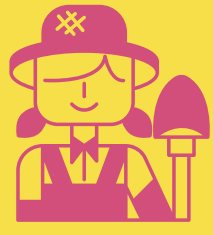

earning more than their unmarried counterparts. In contrast, married women may experience a "marriage penalty", earning less than their single counterparts. This disparity could be due to traditional gender roles, where married men are expected to be the primary breadwinners, while married women could face biases, including the assumption that they will prioritize family over work, leading to lower salary offers and fewer promotions. Winslow-Bowe (2009) argues that male married employees often benefit from higher salaries and have greater responsibilities, with a higher probability of being promoted, considering they have families to care for. On the other hand, married female employees end up being paid less because their wages are considered a secondary source of household income, and their spouses support them financially. Moreover, women face a "motherhood penalty", which refers to the negative economic consequences that affect women's earning potential and career progression when they become mothers. Budig and England (2001) report that having children typically reduces women's earnings by about 7 per cent.

A study conducted by Azcona and others (2020) in Western Asia and North Africa revealed that mothers with children under six years of age exhibited the lowest labour force participation rate, at 24.8 per cent, contrasting sharply with the 97 per cent rate observed for fathers in the same category. Similarly, Sado and Daher (2021) found that mothers in Lebanon with children under three years old had the lowest employment rates and faced the largest gender employment gap; more than that experienced by women without children and men with or without children.

Women often bear a more significant burden in terms of childcare responsibilities, leading to interruptions in their careers, taking breaks, or working part-time to care for children, affecting their earning potential. In contrast, men tend not to face the same level of career interruptions or reduced work hours as a result of parental responsibilities (Harkness and Waldfogel, 2003; Polachek, 1975). Factors contributing to lower hourly wages for mothers include reduced work experience, decreased workplace productivity, and selecting job roles more suited to motherhood responsibilities (Si and others, 2021). Waldfogel (1998) makes similar findings, showing that a mother's wage is approximately 10 per cent lower than that of non-mothers, even after adjusting for age, education and experience.

4. Unexplained part of the gender wage gap

Even after accounting for all observable factors and differences in worker and job characteristics, women's wages tend to be lower than those of men, leaving a large and significant portion of the gender pay gap unexplained. This unexplained part is often interpreted as reflecting potential discrimination or other unobservable/unmeasured factors that lead to wage differences between men and women (Blau and Kahn, 2000).

Various scholars have used decomposition techniques to estimate the unexplained portion of the gender pay gap. Researchers such as Biltagy (2014), Jeddi and Malouche (2015), Ibrahim (2017), and Si and others (2021) argue that the gender pay gap is primarily unexplained, suggesting that discrimination is a significant factor. For example, Ibrahim (2017) found that explainable variables accounted for only 17.19 per cent of the earnings difference between men and women in the Syrian Arab Republic, implying that 82.81 per cent could be attributed to labour market discrimination. Another study by Biltagy (2014) examining the gender pay gap in Egypt concluded that the wage gap in that country was entirely due to the discrimination effect.

Additionally, there is a growing focus on exploring the influence of norms, psychological traits and non-cognitive skills on the gender wage gap (Blau and Kahn, 2017). Recent studies have examined differences in non-cognitive skills or personality traits between males and females that could affect their labour market performance. These studies

have shown that men tend to place a higher value on money, have higher self-esteem, display greater self-confidence and competitiveness, show less risk aversion, and believe more that they can control their destiny than do women (Mueller and Plug, 2006; Fortin, 2008; Reuben and others, 2019).

Existing research examining how variations in personality traits between genders contribute to explaining the gender wage gap originates predominantly from developed countries, revealing significant diversity in the impact of these traits on wage disparities. For example, Mueller and Plug (2006) found that personality traits explained around 3 per cent of the gender pay gap in the United States of America. Another study by Fortin (2008) on employees in the United States also found that differences in non-cognitive skills, such as the importance of family and money, explained around 8 per cent of the gender wage gap.

Semykina and Linz (2007) observed similar findings for Russia, while Braakmann (2009) found that non-cognitive skills had a relatively minor impact on the gender wage gap in Australia. These studies highlight the significant but varied influence of personality and non-cognitive skills on the gender wage gap across different contexts. Understanding these dynamics can help policymakers craft more effective strategies to address wage disparities by considering both economic and behavioural factors.

C. Equal pay for work of equal value

Extensive research on the gender pay gap underscores the importance of the principle of equal pay for work of equal value. This principle asserts that individuals, regardless of gender, religion, race or other characteristics, should receive equal compensation for performing work of equivalent value. It extends beyond identical job roles to encompass situations where men and women undertake tasks objectively assessed to hold equivalent value (Alkadry and Tower, 2006). Such assessments consider various factors, including required skills, working conditions, qualifications, responsibilities and the effort needed for the position. Despite many female-dominated and male-dominated sectors sharing similar job characteristics and values, men often dominate higher-paid sectors, while women often occupy lower-paid ones (Equal Pay International Coalition (EPIC), 2020). Adopting the principle of equal pay for work of equal value could therefore help to rectify the historical undervaluation of jobs primarily occupied by women.

Table 1. Efforts made towards achieving gender equality and pay equity in the Arab countries

Egypt	○ Gender-based discrimination in employment is prohibited by law. ○ Measures have been put in place to ensure equal pay for men and women. ○ There have been initiatives to increase women's participation in the labour market and empower them economically. These include the Women's Economic and Social Empowerment Programme, which was launched by USAID in 2022. This programme allocated $39 million to increase women's access to economic opportunities and remove barriers to their participation in the economy (USAID, 2022).
Jordan	○ Wage discrimination is clearly defined in law. Gender pay inequality is defined as inequality in pay between workers performing work of equal value. Business owners practising gender-based discrimination are subject to penalties.

	○ A multi-stakeholder committee on pay equity has been set up. Initiatives have been launched to raise awareness about pay disparities, in addition to advocacy and mobilizing campaigns such as the "Stand up with the Teacher" campaign, which encourages female teachers in private schools to assert their labour rights. Employers have been obliged to deposit teachers' salaries through electronic bank transfers. ○ Companies are encouraged to conduct gender pay audits. For example, the International Labour Organization (ILO) has partnered with Women on Boards of Jordan, a national non-governmental organization, to tackle the underrepresentation of women on boards of directors and in decision-making positions, by advocating for gender diversity and encouraging the private sector to adopt equality policies (ILO, 2022).
Morocco	○ Wage discrimination based on sex is forbidden by law. ○ Policies have been implemented to increase women's participation in the workforce. ○ Efforts have been made to ensure equal pay for equal work. ○ There have been initiatives to eliminate discrimination against women in hiring and promotion practices.
Tunisia	○ Amendments introduced to the Labour Code in 1993 clearly state that there is to be no distinction between men and women in the application of the law. However, there are no provisions on equal pay. ○ Initiatives have been implemented to empower women economically and increase their participation in the labour market. These include the National Strategy for the Economic and Social Empowerment of Women and Girls in Rural Areas for 2017-2020.[a]
United Arab Emirates	○ Discrimination based on gender is prohibited by law. Equal pay for equal work is also legally mandated. ○ Measures are in place to prevent discrimination in employment practices, including through trained inspection teams who are able to examine companies' records and assess the implementation of laws. ○ Initiatives are in place to empower women economically and increase their representation in leadership positions, such as the Gender Balance Council's efforts to promote gender balance and implement policies that enhance women's participation in the workforce and decision-making processes across various sectors (United Arab Emirates Gender Balance Council).

Source: ESCWA and partners, Gender Justice and the Law Initiative, and Equal Pay International Coalition (EPIC).
[a] https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/64/National-reviews/Tunisia_En.pdf.

Implementing the concept of equal pay for work of equal value as a legal standard can significantly diminish the gender pay gap, combat workplace discrimination, and empower women (Beniyama, 2020). The ILO has advocated for equal pay by endorsing the Equal Remuneration Convention, 1951, which stipulates that each country should promote and ensure, using appropriate methods, the application of equal remuneration for men and women workers performing work of equal value. Despite this global commitment, Beniyama (2020) notes a considerable disparity between the Convention's objectives and its practical implementation.

In numerous countries, the right to equal pay for equal work or work of equal value is enshrined, and the concept is clarified within their national laws, including in Canada, Italy, Sweden, and the United Kingdom of Great Britain and Northern Ireland. Legislation aimed at safeguarding this right can play a significant role in narrowing the gender pay gap by providing a clear framework for determining fair pay, irrespective of the employee's gender (OECD, 2021).

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In the Arab region, labour laws in several countries support women in the formal sector, specifically addressing pay equity and protection against discrimination. For example, in Algeria, the Labour Code enacted in 1990 explicitly forbids discrimination in employment, remuneration, or working conditions based on sex, marital status, or family relations (UNDP and others, 2018a). It mandates equal pay for male and female employees for work of equal value and grants women the right to 14 weeks of maternity leave at full pay. In Morocco, the Labour Code ensures equal pay for men and women for equivalent work and forbids discrimination in various aspects of employment, such as hiring, training, promotion, disciplinary actions and dismissal. It also considers dismissing a woman as a result of her taking pregnancy or maternity leave as unlawful, and criminalizes sex-based discrimination (ESCWA and others, 2023). Similarly, the approach applied by Libya, as defined by the country's Labour Relations Law of 2010, includes a prohibition on wage discrimination based on sex, affirming that men and women should receive equal wages for work of equal value, regardless of whether the roles are the same or different (UNDP and others, 2018c). Despite laws in many Arab countries that support women and mandate equal pay for similar work, enforcement is often inconsistent. In practice, these labour laws are usually inadequately enforced, leaving women with few practical options for recourse if they do not receive the benefits to which they are entitled (ESCWA, 2019).

Various regions worldwide have implemented effective practices to promote equal pay for work of equal value. For example, in the United Kingdom, legislation provides the right to equal pay across three categories: similar work, jobs deemed equivalent through an employer's job evaluation scheme, and jobs with equal value based on effort, skill, and decision-making criteria.[1] The Equality and Human Rights Commission (EHRC) provides comprehensive guidelines for implementing the equal value principle.[2] The EHRC also encourages employers to conduct voluntary pay audits, which involve comparing the salaries of protected groups performing equally valuable work, examining the reasons for any pay disparities based on gender, ethnicity, disability, or work patterns, and taking corrective measures to address unjustifiable pay differences.

Since 1997, the gender pay gap for full-time workers in the United Kingdom has been consistently narrowing. During this period, the pay gap for part-time workers has remained small or even reversed, with men sometimes earning less than women (Francis-Devine, 2024). Additionally, the percentage of full-time employees who are women rose from 36 per cent in 1997 to 41 per cent by 2023.

However, while the legislation effectively covers basic wages, it often overlooks additional compensation elements such as productivity pay and bonuses, which can reintroduce gender pay gaps (Fredman, 2013). These bonuses are frequently higher in male-dominated roles and are not always included in assessments for equal pay. Additionally, the valuation methods used can perpetuate historical biases that undervalue work typically performed by women. For example, jobs requiring heavy manual labour have traditionally been valued higher than those requiring precision skills, such as sewing.

In Canada, the Ontario Pay Equity Act requires employers to proactively implement a job evaluation scheme, emphasizing the crucial role of social partners and directly affected workers. It also requires job classes to be evaluated in a way which considers factors such as skill, effort,

responsibility and working conditions.[3] Since 1998, the hourly wage gap has decreased by six percentage points, narrowing to 13 per cent in 2022 based on average hourly wages.[4] Legislation like that of Ontario which proactively promotes pay equity shows significant potential for achieving systemic change. However, its effectiveness hinges on robust compliance mechanisms, including the establishment of a statutory equality body with the authority to enforce compliance through a balanced approach of incentives and penalties. These incentives could include measures tied to State procurement, public funding, or other financial benefits (Fredman, 2013).

Similarly, in the Republic of Korea, the Korean Equal Employment Act requires that work of equal value be assessed based on skills, efforts and responsibility required for the job, and working conditions. Employers must consult worker representatives in the Labour Management Council when establishing these criteria.[5] A significant court ruling further clarified these criteria, defining "skills" to include academic qualifications and practical experience, "efforts" to involve the intensity and the physical and mental exertion needed under deadlines, "responsibilities" to cover job scope, complexity and employer reliance on the employee, and "working conditions" to address environmental factors such as noise, hazards, segregation and temperature (Japan Institute for Labour Policy and Training (JILPT), 2008).

Despite these guidelines, the application of these principles has often favoured traditionally male-dominated job factors, potentially overlooking important aspects of jobs typically held by women, such as the psychological stress and multitasking required in these roles (Fredman, 2013). This oversight highlights the need for a broader understanding of what constitutes equal value in the workplace. Although legislation requiring the principle of equal pay for equal value to be observed came into force in the Republic of Korea in 2007, its practical application remains limited and underdeveloped, with scant literature supporting its effectiveness. The Republic of Korea has persistently had the largest gender wage gap among 33 OECD countries,[6] though this gap has been decreasing over the years.

These examples illustrate the importance of laws explicitly mentioning work of equal value and thoroughly explaining the concept. It should be clearly stated that work of equal value need not be identical but should be comparable in terms of skill level, responsibility, effort and working conditions (Fredman, 2013). Significant disparities persist, notably in wages for roles with comparable skill and responsibility levels, such as mechanics, nurses, security guards and childcare workers. These challenges underscore the urgency for sustainable advocacy efforts and legal reforms to attain true pay equity.

03 DATA SOURCES AND METHODOLOGY

A. Data sources

We examine the gender wage gap across seven Arab countries using two primary surveys: labour force surveys (LFS) and the labour market panel survey (LMPS) (table 2). The LFS is a comprehensive, cross-sectional dataset collected through face-to-face interviews. It covers various aspects of the labour market, including sociodemographic factors, employment status, industry, occupation, sector and wages. Similarly, the LMPS, administered through in-person interviews, is a nationally representative household survey collected by member States and harmonized by the Economic Research Forum (ERF) to understand labour market dynamics and socioeconomic processes.

Our study focuses on employed individuals, specifically analysing the wages of workers aged 15 to 64 to ensure a focus on the standard working-age population. We limited the sample to paid employees, providing a targeted analysis of wage disparities within the active labour force.[7]

Table 2. Overview of data sources

Country	Data source	Survey year	Sample size
Egypt	LFS	2021	313,433
Iraq	LFS	2021	99,616
Jordan	LFS	2021	259,950
State of Palestine	LFS	2021	94,632
Sudan	LMPS	2022	25,442
Tunisia	LMPS	2014	16,430
Yemen	LFS	2013-2014	85,850

B. Methodology

To analyse the gender wage gap and its determinants in the selected seven Arab countries, we first estimate separate wage equations for each gender using ordinary least squares. These equations for male (m) and female (f) workers in the sample are formulated as follows:

$$lnW_i^m = \beta_0^m + \sum_{i=1}^{n} \beta_i{}^m x_i^m + \varepsilon_i^m \quad (1)$$

$$lnW_i^f = \beta_0^f + \sum_{i=1}^{n} \beta_i{}^f x_i^f + \varepsilon_i^f \quad (2)$$

Here, $\ln(W_i)$ represents the natural logarithm of monthly or hourly wages, while $\mathbb{I}_i$ denotes a set of observable variables categorized into human capital characteristics, job characteristics, and societal characteristics. β_i is the vector of parameters to be estimated, and ε_i signifies the error terms. The dependent and independent variables used in the regressions are described below.

1. Dependent variable

We used both hourly and monthly wage data for our analysis.[8] For the LFS datasets, where monthly salaries were available, we derived hourly wages by dividing the total monthly wage by the number of hours worked. In the LMPS datasets, wages for three months were reported. We computed the monthly salary by dividing this variable by three, then calculated the hourly wage by dividing the monthly salary by the hours worked during that period. As a result, our dependent variable is continuous.

Additionally, the datasets report wages in each country's local currency. To standardize the wages across countries, we converted the figures into United States dollars. We applied the interquartile range (IQR) method to identify and eliminate outliers from the monthly wage data, ensuring data integrity and producing more accurate and representative analysis results (Vinutha and others, 2018).

2. Independent variables

We categorized our independent variables into three groups to assess their influence on the gender wage gap:

a. **Human capital characteristics:** This includes education and experience. Education is a categorical variable with options for no education, school education, and university education, with "no education" serving as the reference group. Experience is a continuous variable calculated as age minus years of schooling minus six years, following the methodology of Altonji and Pierret (1997) for Egypt, Jordan, the State of Palestine and Yemen. For the Sudan and Tunisia, years of experience were already included in the datasets.

b. **Job characteristics:** Working hours is a continuous variable representing monthly work hours. Occupations are grouped based on the International Standard Classification of Occupations (ISCO), with "Legislators, senior officials and managers" as the reference category. Industry groups are classified according to the International Standard Industrial Classification of All Economic Activities (ISIC), with "Agriculture, forestry and fishing" as the reference group. Other job-related variables are

"For the LFS datasets, where monthly salaries were available, we derived hourly wages by dividing the total monthly wage by the number of hours worked. In the LMPS datasets, wages for three months were reported."

treated as dummy variables and are represented as follows: public sector (equals 1 when the respondent is employed in the public sector, 0 when the respondent is employed in the private sector), full-time job status (equals 1 if the respondent is in full-time employment, 0 otherwise), and formal employment status (equals 1 if the respondent has a formal contract, 0 if they have an informal contract).

c. **Demographic and societal characteristics:** Marital status is a categorical variable with options for never married, married, or other (divorced, separated, or widowed), with "never married" as the reference group. Place of residency is represented as a binary variable, with 1 indicating rural residency and 0 indicating urban residency.

To analyse the gender pay gap, we employ the Oaxaca-Blinder decomposition method (Oaxaca, 1973; Blinder, 1973). This method quantifies the portion of the wage gap attributable to wage discrimination. The wage disparity between

$$ln\bar{W}_i^m - ln\bar{W}_i^f = \hat{\beta}_i^f \bar{x}_i^m - \hat{\beta}_i^f \bar{x}_i^f \quad (3)$$

Equation (3) represents the raw wage gap between males and females. It can be reformulated to include individual characteristics and discrimination elements. This is achieved by adding and subtracting $\hat{\beta}_i^m \bar{x}_i^f$ to the equation, as shown below:

$$ln\bar{W}_i^m - ln\bar{W}_i^f = \hat{\beta}_i^m(\bar{x}_i^m - \bar{x}_i^f) + \bar{x}_i^f(\hat{\beta}_i^m - \hat{\beta}_i^f) \quad (4)$$

Equation (4) allows the contributions of individual characteristics and discrimination to the wage gap to be estimated. The first component, $\hat{\beta}_i^m(\bar{x}_i^m - \bar{x}_i^f)$, corresponds to the gap explainable by differences in individual characteristics, known as the endowments effect. The second component, $\bar{x}_i^f(\hat{\beta}_i^m - \hat{\beta}_i^f)$ accounts for the wage differential stemming from discrimination.

To investigate wage disparities across different segments of wage distribution, we employ quantile regression. This method models the conditional quantiles of the dependent variable (logarithm of wages) as a linear combination of independent variables. We conduct separate quantile regressions for each gender at the 25th, 50th, and 75th percentiles.

$$Q^\theta[ln(W_i)|x_i] = \beta_{0,\theta} + \beta_{i,\theta}x_i + v_i$$

Where x_i is a vector of observable characteristics, $\beta_{0,\theta}$ is the regression intercept, $\beta_{i,\theta}$ are the coefficients estimated at the θ^{th} quantile, and v_i represents the error term.

Additionally, we use Melly's (2005, 2006) quantile decomposition method to assess the wage gap across deciles from the 10th to the 90th percentile. This approach allows us to examine wage differentials at various points of the wage distribution. Using the formula, we compute the wage gap at each decile (θ), denoted as $Q^\theta(lnW_i^m) - Q^\theta(lnW_i^f)$, with women as the reference group.[9]

04 GENDER DISPARITIES IN LABOUR FORCE PARTICIPATION IN THE ARAB REGION

Arab women face significant barriers to full participation in the labour force because of the unequal distribution of unpaid caregiving responsibilities and sociocultural norms, which predominantly place these duties on them. Arab women spend five times more time on unpaid care work than men, a figure that is significantly higher than the global average. According to Assaad and others (2020), women in countries such as Egypt, Jordan, Palestine and Tunisia dedicate an average of 24, 19, 34, and 17 hours per week, respectively, to unpaid care work. In contrast, men in these countries only spend a few hours per week on such tasks. This disparity limits women's access to employment opportunities and perpetuates occupational segregation, concentrating women in specific sectors that offer lower wages than male-dominated industries (Boeri and Ours, 2014). The combination of occupational segregation, limited industry choices available to women, and the burden of unpaid care duties significantly contributes to the gender pay gap, exacerbating economic disparities in the region.

Table 3 presents the labour force participation rates for men and women across selected countries, along with the distribution of female participation between the public and private sectors. The data highlight a general trend of lower labour force participation among women than among men, with the gap being especially pronounced in Egypt, Iraq, Yemen and Palestine, where female participation is notably lower. Furthermore, the table indicates a consistent pattern where the public sector employs a larger proportion of the workforce than the private sector in most of these countries, possibly suggesting better job security or benefits in public sector roles.

Additional details are provided in tables B.1 to B.7 in the annex, which outline the percentage of women in formal and informal employment, as well as labour force participation rates by marital status. These data tables reveal that, in most countries, women's participation in formal employment (as defined by having a formal contract) significantly exceeds their participation in informal employment (with no formal work contract), with the notable exception of the Sudan, where a substantial proportion of women are employed without formal contracts. This may reflect differences in the economic structure and opportunities for women across these regions. Additionally, the tables indicate that married women constitute the majority of the female workforce in all the countries studied, suggesting that marital status does not significantly hinder women's participation in the labour force.

“According to Assaad and others (2020), women in countries such as Egypt, Jordan, Palestine and Tunisia dedicate an average of 24, 19, 34, and 17 hours per week, respectively, to unpaid care work.”

Table 3. Labour force participation rate (Total and in the public and private sectors) (Percentage)

Country	Labour force participation rate		Labour force participation rate among women	
	Men	Women	Public sector	Private sector
Egypt	52.71	11.52	70.0	30.0
Iraq	66.94	9.95	70.5	29.5
Jordan	64.1	14.8	54.2	45.8
State of Palestine	56.92	14.76	42.9	57.1
Sudan	81.05	55.17	62.0	38.0
Tunisia	72.87	55.48	40.9	59.0
Yemen	72.87	13.07	72.2	27.7

Table 4 provides an overview of the distribution of male and female employees across various occupations and industrial sectors in different countries. While some countries report a higher proportion of female professionals,[10] others display different trends, reflecting variations in occupational opportunities for women throughout the region. The data also highlight that sectors such as education and healthcare employ a significant portion of women, with these sectors accounting for over 60 per cent of female employment in Yemen, Palestine, Egypt and Iraq. This suggests a gendered labour market where women are predominantly found in care and educational roles. Conversely, women's participation in heavy industries, such as construction and certain manufacturing sectors, remains notably low, with female representation in construction typically under 1 per cent in the analysed countries. In contrast, men are primarily employed in sectors such as agriculture, forestry, fishing, manufacturing, construction, and transportation and storage, where they significantly outnumber women, as shown in table 4.

An examination of the educational attainment of male and female employees in the region also provides insight. As figure 1 shows, in most countries, a higher percentage of women have university degrees. Consequently, the sample of female workers includes a larger proportion of individuals with higher education, which may partly explain why women in this sample earn higher hourly wages and are more concentrated in professional occupations, as is discussed further below. This disparity may suggest systemic discrimination: it may indicate that in these countries, women need to attain higher educational qualifications than men to enter the workforce or to secure comparable positions. Research, including a study by Moghadam (2013), suggests that in the Arab region, women with lower levels of education are significantly less likely to join the labour force than those with higher education.

The data also highlight that sectors such as **education and healthcare** employ a significant portion of women, with these sectors accounting for over

60%

of female employment

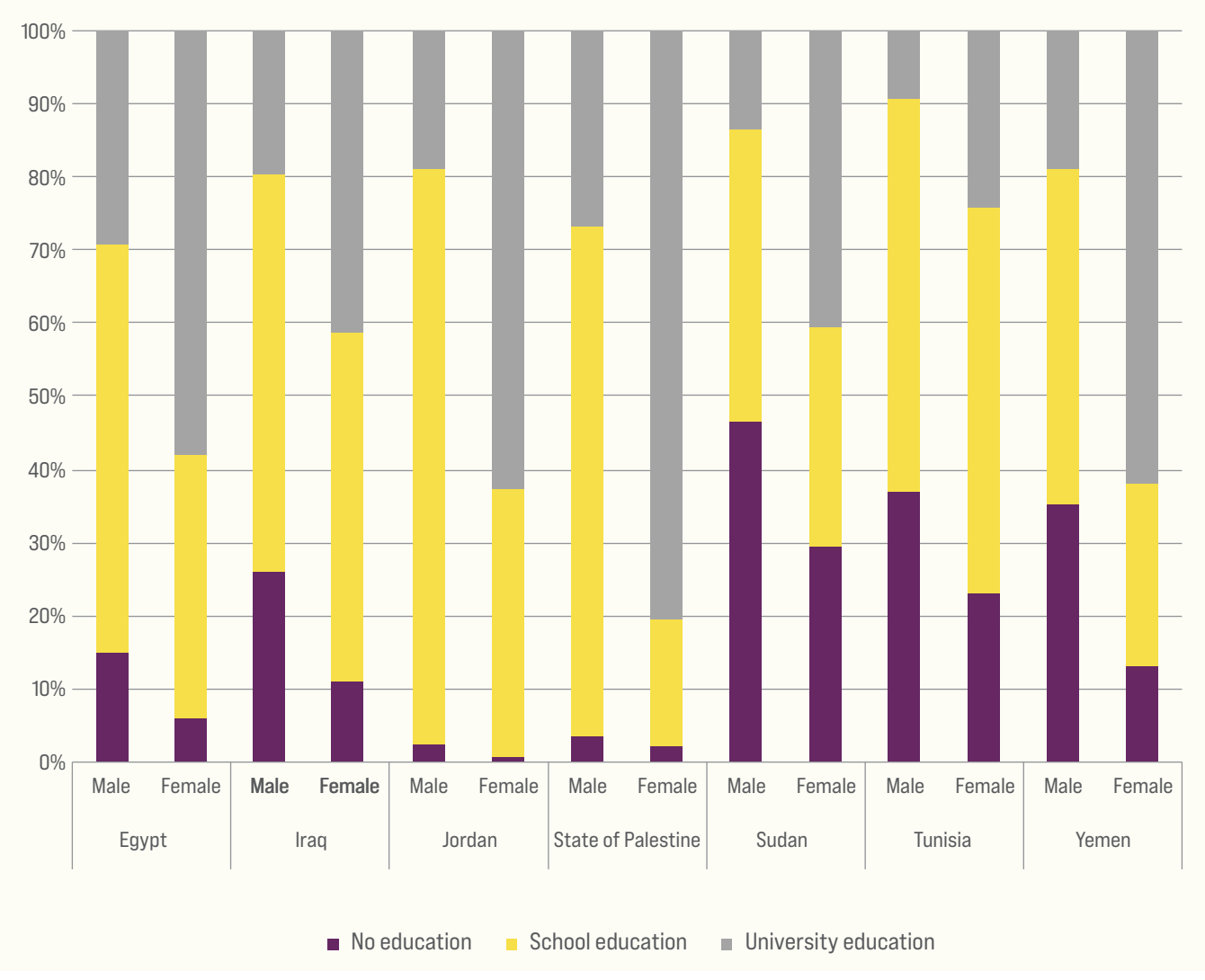
in Yemen, Palestine, Egypt and Iraq.

Table 4. Distribution of workers by gender across occupation and industry (Percentage)

	Egypt		Iraq		Jordan		State of Palestine		Sudan		Tunisia		Yemen	
Occupation	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Legislators, senior officials and managers	3.6	4.0	0.8	0.8	0.2	1.4	2.0	4.0	17.9	5.9	1.6	0.8	3.5	5.5
Professionals	10.2	20.9	11.8	56.7	15.0	59.1	12.4	60.5	9.3	43.9	8.4	19.6	12.5	54.8
Technicians and associate professionals	13.6	41.6	5.7	3.4	5.1	10.2	4.4	11.5	3.3	3.8	4.4	7.5	5.7	14.1
Clerks	7.3	15.2	1.3	4.2	4.5	7.6	1.3	5.0	1.2	5.1	3.0	8.8	10.7	5.9
Service workers and shop and market sales workers	16.3	5.3	27.5	5.8	37.8	7.8	14.0	7.8	20.4	9.7	23.4	9.2	20.3	5.5
Skilled agricultural and fishery workers	4.2	1.2	11.2	15.5	2.7	0.2	0.5	0.0	10.3	2.5	3.0	0.4	10.3	3.8
Craft and related trades workers	16.5	1.0	22.3	7.4	15.8	4.3	23.7	1.4	13.9	3.4	22.5	12.9	14.3	3.9
Plant and machine operators and assemblers	15.9	4.5	11.4	0.2	10.5	0.4	10.9	2.1	8.6	1.7	9.8	9.2	8.0	1.0
Elementary occupations	12.3	6.5	8.0	6.0	8.4	9.3	30.7	8.1	15.0	24.1	23.9	31.7	14.9	5.7

	Egypt		Iraq		Jordan		State of Palestine		Tunisia		Yemen	
Industry	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Agriculture, forestry and fishing	5	2	12	16	4	1	6	1	13	5	12	4
Mining and quarrying	0	0	1	0	1	0	1	0	3	0	0	0
Manufacturing	21	7	6	7	10	8	15	5	15	38	6	4
Electricity, gas, steam and air conditioning supply/ water supply, sewerage, waste management and remediation	3	1	3	1	1	0	1	0	0	0	0	0
Construction	7	1	19	1	7	1	26	0	14	0	13	0
Wholesale and retail trade; repair of motor vehicles and motorcycles	14	5	15	3	14	5	15	6	8	8	17	2
Transportation and storage	9	1	10	0	7	1	4	0	5	0	7	1
Accommodation and food service activities	5	1	2	0	4	0	4	1	6	2	3	1
Information and communication	1	1	0	0	1	2	1	2	0	0	1	
Financial and insurance activities	1	2	0	1	1	2	1	3	0	1	1	0
Real estate activities/ professional, scientific and technical activities/ administrative and support service activities	4	3	5	6	4	4	2	3	1	2	1	1
Public administration and defence; compulsory social security	10	13	14	6	32	15	10	11	18	6	24	21
Education	9	40	6	42	6	41	8	46	11	24	9	51
Human health and social work activities	3	21	3	14	3	16	4	16	3	7	2	10
Other service activities	5	3	3	2	6	5	3	6	2	5	4	5

Figure 1. Distribution of men and women workers by educational level



Source: ESCWA, derived from the LFS and LMPS surveys used in the study.

05 RESULTS AND FINDINGS

Figure 2 illustrates the trends in average monthly earnings for men and women across various countries.[11] Table 5 provides estimates of the monthly and hourly gender pay gaps before considering individual characteristics. In most countries, a significant monthly gender pay gap is evident, with the Sudan showing the largest disparity at 56.3 per cent. Notably, Tunisia, Egypt and the State of Palestine exhibit relatively smaller gender pay gaps. Although most countries display a negative hourly gender pay gap – indicating that women earn more per hour on average than men – this may be due to women working fewer hours rather than earning more per hour. Table 6 supports this, showing that women in the region generally work fewer hours, probably as a result of the disproportionate share of unpaid care work they perform. This suggests that women may be employed in higher-paid hourly positions or sectors with more competitive wages for the hours worked, or they may be more likely to hold part-time jobs. This hypothesis is further supported by occupational and industry data, which show a significant presence of women in professional roles and in the education and health sectors – fields known for potentially higher wages and more flexible or part-time employment options. These roles may help women balance work with personal and unpaid care responsibilities, but they may not provide enough hours to close the overall monthly pay gap. However, attributing the wage gaps solely to differences in hours worked does not fully capture the complexity of the issue. Other factors, such as occupational segregation – where women and men are concentrated in different roles with varying wage potentials – and societal norms that influence job choice and wage negotiation behaviours, also play critical roles.

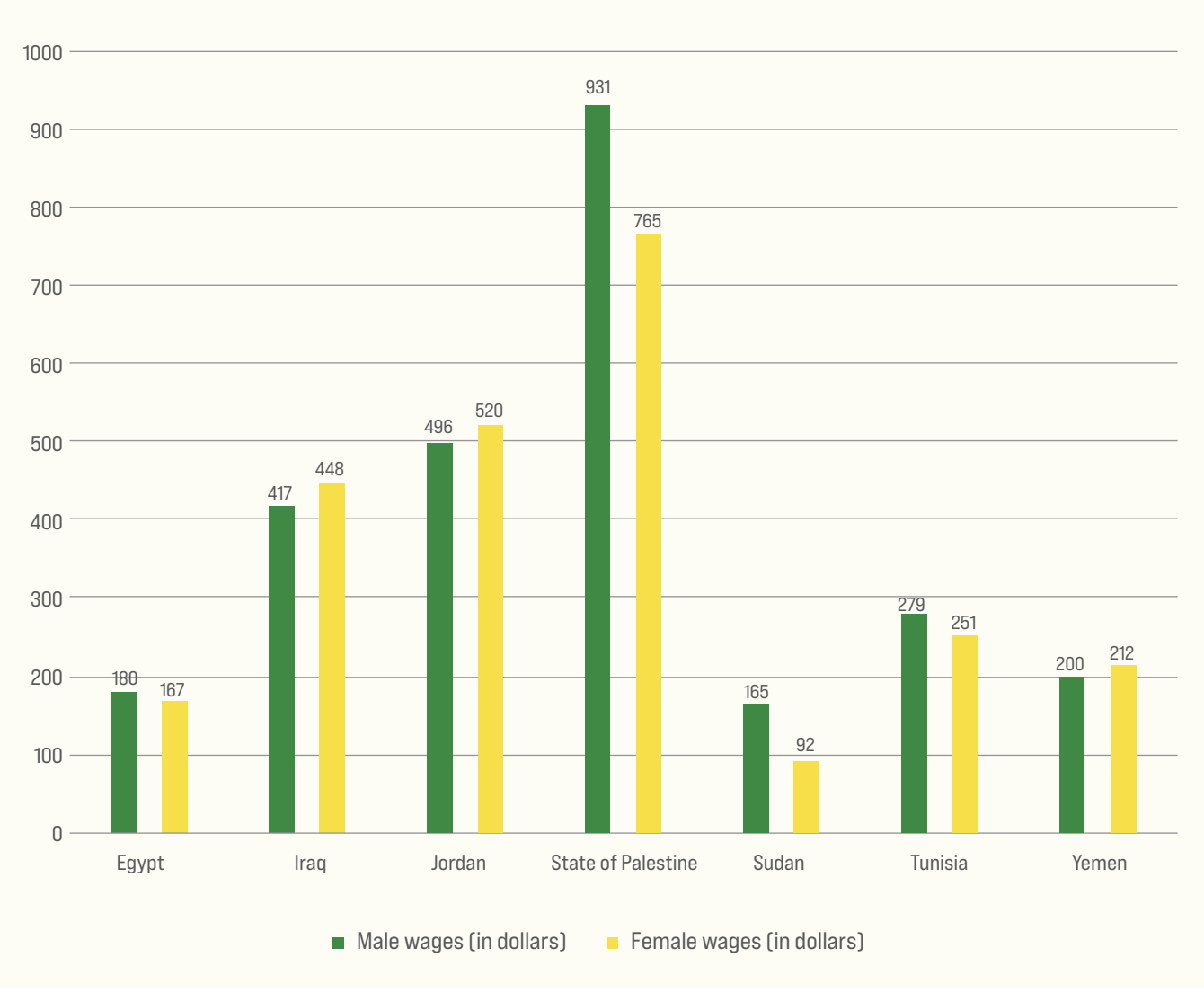
Table 5. Estimated gender pay gaps calculated on a monthly and hourly basis (Percentage)

Country	Percentage difference in monthly wages	Percentage difference in hourly wages
Egypt	11.5*** (0.005)	-5.6*** (0.007)
Iraq	-8.93*** (0.013)	-50.26*** (0.017)
Jordan	-4.8*** (0.005)	-15.2*** (0.005)

State of Palestine	7.8*** (0.017)	-7.4*** (0.017)
Sudan	56.3*** (0.090)	37.4*** (0.097)
Tunisia	15.1*** (0.050)	4.1 (0.064)
Yemen	-2.7 (0.034)	-24.8*** (0.036)

Note: Numbers in parentheses are robust standard errors. * p<0.100, ** p<0.050, *** p<0.010.

Figure 2. Gender disparities in average monthly wages across countries (Dollars)



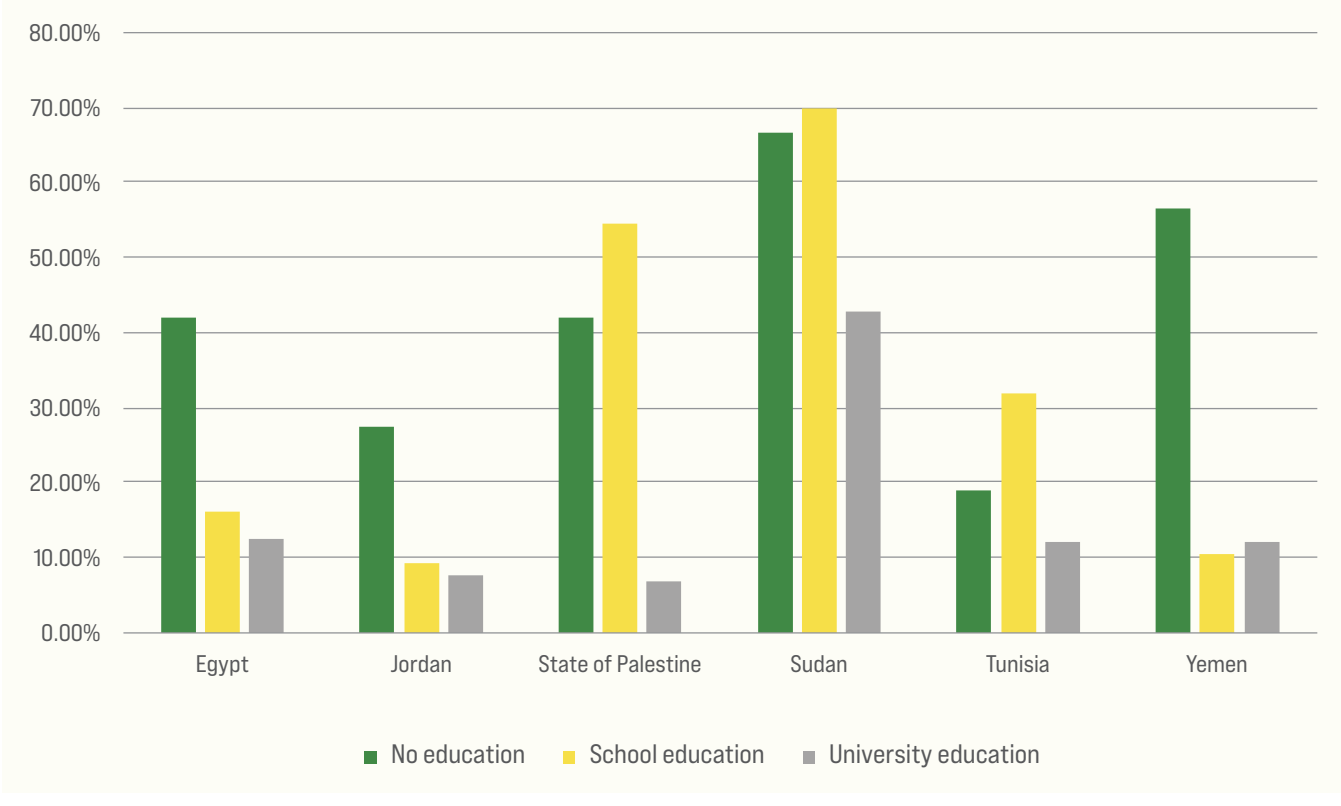
Source: ESCWA, estimated from the LFS and LMPS surveys used in the study.

Table 6. Average number of working hours per month

Country	Men	Women
Egypt	179.5	154.2
Iraq	181.3	116.7
Jordan	179.6	161.1
State of Palestine	164.6	139.6
Sudan	210.7	165.6
Tunisia	197.9	182.5
Yemen	168.4	132.4

Source: ESCWA, derived from the LFS and LMPS surveys used in the study.

Figure 3. Estimated gender pay gap across education levels

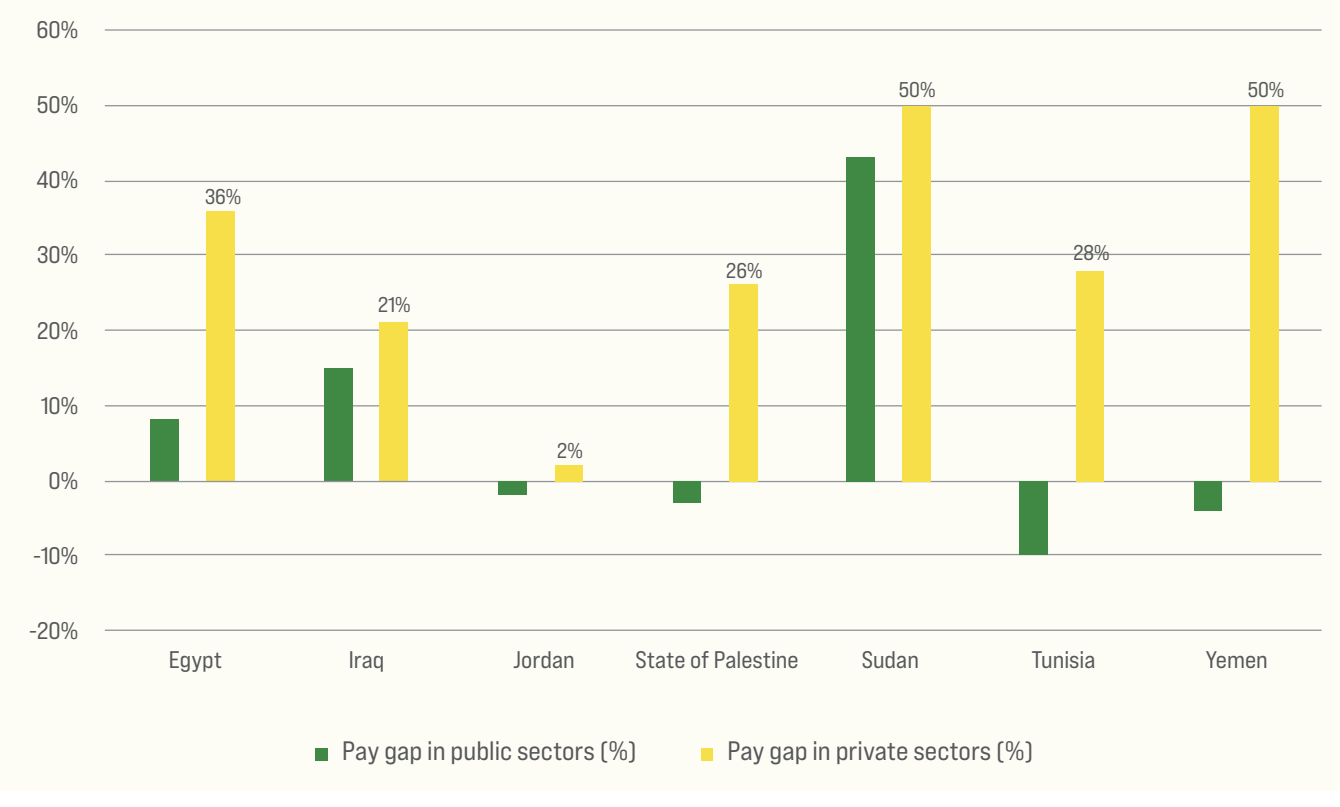


Source: ESCWA, estimated from the LFS and LMPS surveys used in the study.

Figure 3 highlights the gender pay gap based on educational attainment, revealing disparities across different education levels and emphasizing the issue's complexity. The data show a general trend where individuals with no formal education experience significantly larger gender pay gaps than those with higher education, particularly in countries such as Egypt, Iraq, Jordan and Yemen. In contrast, the gender pay gap tends to narrow among those with university degrees, though not uniformly, suggesting that higher education can help reduce the gap in some contexts. However, even at advanced educational levels, substantial gaps persist, indicating that education alone is insufficient to eliminate gender bias in earnings.

Finally, figure 4 presents the estimated gender pay gap in the public and private sectors across the examined countries. The data reveal that the private sector has a larger gender pay gap than the public sector. In countries such as Jordan, Palestine and Tunisia, the public sector even shows a negative gender pay gap, meaning that women, on average, earn more than men. This may be due to specific employment policies or the nature of public sector jobs. The observed gap in favour of women in the public sector may be influenced by more transparent pay structures and policies aimed at promoting gender equality, such as equal pay for equal work initiatives. Public sector jobs often have standardized pay scales and benefits, reducing the impact of negotiation disparities that might disadvantage women. In contrast, in the private sector across all the examined countries, men consistently earn more than women. This could be explained by the fact that the private sector can exhibit more variability in pay, often linked to individual negotiation skills and market-driven wages, leading to a smaller, less favourable gap for women. This trend is consistent with findings in the literature, such as Kabubo-Mariara's (2003) study in Kenya, which found that the wage gap in the private sector was more than double that in the public sector. These findings underscore ongoing challenges in achieving gender pay equality in the private sector, while highlighting the relatively more equitable conditions within public employment.

Figure 4. Estimated gender pay gap in public and private sectors



Source: ESCWA, estimated from the LFS and LMPS surveys used in the study.

06 ANALYSIS: FACTORS CONTRIBUTING TO GENDER WAGE DIFFERENCES

This section outlines the factors influencing wages for women and men in the Arab region. The corresponding results are presented in tables A.2 and A.3 in the appendix. As discussed in section 3, we employed ordinary least squares regression to estimate the coefficients for monthly and hourly wages, using the logarithm of these wages as the dependent variables.

Our results highlight the crucial role that education plays in determining wage levels. Across all the countries we studied, there is a consistent and statistically significant positive correlation between educational attainment and wages. Individuals with school or university education earn significantly more than those with no formal education, the impact being even more pronounced for those with university degrees. This trend is evident in both hourly and monthly wage analyses.

Moreover, the effect of education on wages appears to be stronger for women than for men in most countries, as indicated by the more significant coefficients in both hourly and monthly wage regressions. This suggests that education tends to provide greater economic benefits to women, which may help reduce the wage gap at higher educational levels. Specifically, women with higher educational qualifications earn more than those with lower qualifications, and education seems to help narrow the wage gap between men and women. However, this does not imply that the wage gap is entirely eliminated at higher education levels; rather, it indicates that while the gap may narrow as education increases, some disparity may still persist.

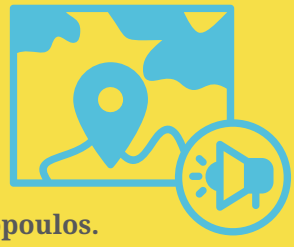
This finding is supported by numerous studies from various regions, including Tunisia (Jeddi and Malouche, 2015), and across 56 countries, as shown by Psacharopoulos (1985). Psacharopoulos' comprehensive review of returns to education revealed that women generally experienced a higher rate of return on their educational investments than men in both developed and developing nations. This suggests that women may need to achieve higher levels of education to earn wages comparable to those of men, pointing to a persistent gender bias in wage structures.

Our results also clearly indicate that professional experience significantly boosts monthly wages for women across all surveyed countries. However, this effect is not statistically significant for men in Tunisia and women in the Sudan. Similar to the

This finding is supported by **numerous studies from various regions**, including Tunisia and across

56 countries

as shown by Psacharopoulos.



These findings are consistent with previous studies, such as Biltagy (2014), which has found that an additional year of experience leads to a wage increase of 1.91 per cent for men and an even larger increase of 3.56 per cent for women.

trends observed with education, women generally reap higher returns from professional experience in terms of both monthly and hourly wages.[12] These findings are consistent with previous studies, such as Biltagy (2014), which has found that an additional year of experience leads to a wage increase of 1.91 per cent for men and an even larger increase of 3.56 per cent for women.

This observation, however, warrants deeper interpretation, particularly in the light of the unique challenges women face in accumulating work experience. Women's career trajectories are often interrupted by family responsibilities, such as childbirth and caregiving, which can hinder the continuous accumulation of work experience. As a result, each year of uninterrupted professional experience may be more valuable for women in terms of wage increases. Thus, while women may benefit more from each year of experience, the reality of their work-life balance makes it more challenging to consistently accumulate this experience (Mussida and Patimo, 2021).

Our findings show varied impacts of working in different occupations and industries on both monthly and hourly wages. Nevertheless, it is evident that in most examined countries, working in any occupation yields lower returns for both genders than for those employed in positions as legislators, senior officials and managers. These roles typically offer more competitive or skill-intensive opportunities, which command higher wages than other occupational groups.

Our analysis further shows that public sector employment generally correlates with higher wages compared to the private sector across most countries. This aligns with existing literature, such as Gornick and Jacobs (1998).[13] In most of the countries we studied, women in the public sector earn significantly higher wages than their counterparts in the private sector, this difference being more pronounced than among men.

Moreover, there is a clear and statistically significant positive correlation between the number of hours worked per month and higher monthly wages for both men and women in nearly all countries. Furthermore, individuals with formal contracts or full-time jobs earn more than those with informal or part-time employment.

The results suggest that marital status plays a significant role in determining wages for both women and men. In most countries, married individuals tend to earn higher wages compared to their single counterparts. Furthermore, the results show that residing in rural areas is associated with lower wages, both hourly and monthly, affecting both men and women in most countries. This finding aligns with previous research, such as the study by Jeddi and Malouche (2015). The lower wages in rural areas may be due to factors such as limited access to high-paying jobs, fewer employment opportunities in skilled or specialized fields, and a lower cost of living.

It is important to note here that the findings for the Sudan, Tunisia and Yemen lack statistical significance for most variables, suggesting that additional, unaccounted-for factors may significantly influence wages in these countries. Economic instability and conflict, particularly in the Sudan and Yemen, probably contribute to considerable variability in wage data. Additionally, the reduced significance in these three countries may stem from smaller sample sizes, which can weaken the statistical strength and reliability of the results. This highlights the importance of more detailed and context-sensitive analysis to uncover the underlying factors influencing wages in these countries.[14]

Breakdown of results

We broke down the gender wage gap for both monthly and hourly wages at the mean using the Oaxaca-Blinder decomposition method. Tables 7 and 8 present the results of this breakdown for both types of wages. This method breaks down wage disparities into components attributable to observable factors (such as education and experience) and unobservable characteristics, including the unexplained difference often associated with discrimination.

Table 7. Oaxaca-Blinder monthly wage breakdown results

	Egypt	Iraq	Jordan	State of Palestine	Sudan	Tunisia	Yemen
Total gender wage gap	0.115*** (0.005)	-0.089*** (0.013)	-0.048*** (0.005)	0.078*** (0.017)	0.563*** (0.090)	0.128** (0.050)	-0.027 (0.034)
Endowments effect (explained)	-0.030*** (0.003)	-0.220*** (0.011)	-0.156*** (0.004)	-0.061*** (0.014)	0.193*** (0.067)	-0.072* (0.041)	-0.171*** (0.017)
Discrimination effect (unexplained)	0.145*** (0.005)	0.131*** (0.012)	0.108*** (0.004)	0.139*** (0.016)	0.370*** (0.104)	0.201*** (0.044)	0.144*** (0.031)
Ratio (percentage)							
Explained	-26.09	384.44	325	-78.21	34.28	-41.06	633.33
Unexplained	126.09	-284.44	-225	178.21	65.72	141.06	-533.33

Notes: *** p<0.01, ** p<0.05, * p<0.10. The numbers in parentheses represent the standard errors. "Explained" refers to the portion of the gender wage gap that can be explained by differences in endowments. "Unexplained" refers to the portion of the wage gap that may be attributed to discrimination or other unmeasured factors.

Table 8. Oaxaca-Blinder hourly wage breakdown results

	Egypt	Iraq	Jordan	State of Palestine	Sudan	Tunisia	Yemen
Total gender wage gap	-0.056*** (0.007)	-0.503*** (0.017)	-0.152*** (0.005)	-0.074*** (0.017)	0.374*** (0.097)	0.018 (0.064)	-0.248*** (0.036)
Endowments effect (explained)	-0.201*** (0.005)	-0.534*** (0.019)	-0.260*** (0.005)	-0.291*** (0.012)	-0.002*** (0.072)	-0.170*** (0.056)	-0.408*** (0.023)
Discrimination effect (unexplained)	0.145*** (0.006)	0.031** (0.014)	0.108*** (0.004)	0.217*** (0.016)	0.376*** (0.109)	0.188*** (0.046)	0.160*** (0.031)
Ratio (percentage)							
Explained	358.93	105.96	325	393.24	-0.535	-392.68	165.51
Unexplained	-258.93	-5.96	-225	-293.24	100.53	492.68	-64.51

Notes: *** p<0.01, ** p<0.05, * p<0.10. The numbers in parentheses represent the standard errors. "Explained" refers to the portion of the gender wage gap that can be explained by differences in endowments. "Unexplained" refers to the portion of the wage gap that may be attributed to discrimination or other unmeasured factors.

The Oaxaca-Blinder decomposition analysis presented in table 7 reveals the monthly gender wage gap across the studied countries. The analysis indicates a substantial and statistically significant wage gap in Egypt, Palestine, the Sudan, and Tunisia, affecting women unfavourably. Among these countries, the Sudan exhibits the most pronounced disparity. In contrast, the gender wage gap in Iraq and Jordan appears to favour women, deviating from the patterns observed in other countries. The average total gender wage gap across all countries is 0.103, indicating a significant disparity in favour of men. This means that, on average, women earn 89 cents for every dollar that men earn.

This seemingly contradictory result can be better understood by examining the discrimination component. Despite the wage gap favouring women in Iraq and Jordan, the positive and significant discrimination coefficients across all countries, including these two, indicate the persistent presence of systemic biases and discrimination contributing to wage disparities between women and men. This suggests that even after accounting for observable characteristics that influence earnings, a wage gap remains, primarily driven by discrimination, such as gender biases in hiring, unequal entitlements and cultural norms.

The negative endowments effect observed in Iraq and Jordan, where the total gender pay gap is also negative, implies that job-related characteristics in these countries likely favour women, which may explain the overall negative wage gap. Nevertheless, the positive discrimination effects highlight that even in these contexts, women still face barriers that prevent full equity in pay.

It is important to note that in all analysed countries, the unexplained portion of the wage gap, which is probably attributable to discrimination, constitutes a substantial component of the overall gender pay disparity. This underscores the critical role that discrimination plays in maintaining wage inequality, despite observable characteristics that might otherwise suggest smaller or reversed gaps. Focusing on the adjusted wage gap, it appears that women earn 82 cents for every dollar that men earn.

The analysis of hourly wages, as described in table 8, also reveals some notable trends in countries such as Egypt, Jordan, Palestine, the Sudan and Yemen. In Egypt, Jordan, Palestine and Yemen, women, on average, earn more per hour than men, as demonstrated by the negative total gender pay gap (-0.056, -0.152, -0.074, and -0.248, respectively). However, this positive outcome is coupled with a concerning aspect: despite women earning more on average, there is still clear evidence of discrimination against them, shown by positive discrimination effects (0.145, 0.108, 0.149, and 0.160, respectively).

This suggests that even though women earn more per hour, they face unexplained disparities not in their favour. In other words, if discrimination was entirely absent and wages were solely based on measurable factors such as experience, qualifications and job type, women should be earning even more relative to men than the current figures indicate. Essentially, this shows that women are potentially underpaid relative to their qualifications or the roles they occupy, implying that discriminatory practices are still suppressing their wage potential.

The situation in the Sudan is different. There, men tend to earn more per hour than women, as indicated by the positive wage gap of 0.374. Additionally, a significant portion of this wage gap (0.376) cannot be explained by observable factors, strongly suggesting potential gender-based unfair treatment.

07 CONCLUSIONS AND POLICY RECOMMENDATIONS

This study highlights the urgent need to address wage inequality as a crucial step towards achieving gender equality and economic empowerment for women in the Arab region. Despite global commitments under SDG 5 and SDG 8, gender disparities persist, with Arab women continuing to face significant barriers in the labour market, including limited access to quality jobs, insufficient skills development and persistent wage gaps.

Through the lens of the principle of equal pay for work of equal value, our analysis examines gender wage gaps across seven Arab countries. The findings highlight that the socioeconomic landscape of the Arab region presents unique challenges to achieving wage equality.

Our analysis reveals significant disparities in wages between men and women, driven by a combination of educational attainment, professional experience, job characteristics and systemic discrimination. These wage disparities are not uniform, but vary significantly across different countries, with the Sudan displaying the most severe gaps, while Egypt, the State of Palestine and Tunisia exhibit relatively smaller disparities. However, even in countries with narrower wage gaps, women still face significant challenges, demonstrated by the lower total income they earn even though they sometimes achieve higher hourly wages than men. This discrepancy highlights the impact of reduced working hours, often due to unpaid care responsibilities, on women's overall earnings.

The study also reveals a strong positive link between higher educational attainment and increased wages for women, indicating that education is crucial in enhancing women's economic outcomes. Similarly, professional experience plays a vital role in wage determination, with women often benefiting more from each year of experience than their male counterparts. Yet despite these positive correlations, a significant portion of the wage gap remains unexplained, pointing to systemic biases and discrimination deeply rooted in gender norms and cultural expectations.

The persistence of these unexplained disparities calls for robust and targeted interventions. Discrimination continues to play a pivotal role in perpetuating wage inequalities, undermining women's potential in the workforce and restricting their economic autonomy. To address these issues effectively, policy responses must be both comprehensive and context-specific, taking into account the unique socioeconomic dynamics of each country within the region.

Discrimination
continues to play a pivotal role in
perpetuating wage inequalities.

Policy recommendations

1. Strengthen enforcement of equal pay legislation. Existing legal frameworks mandating equal pay for work of equal value should be enforced more rigorously. Countries should establish independent regulatory bodies to monitor compliance, conduct regular wage audits and impose penalties for violations. Additionally, public awareness campaigns should be implemented to educate employers and employees about their rights under these laws. Adopting global best practices is also essential for effective implementation.

2. Invest in education and targeted skill development. To further close the wage gap, it is essential to invest in education and gender-specific skill-development programmes, particularly in sectors where women are underrepresented. This includes vocational training, professional certifications, and continuous learning opportunities that empower women to access higher-paying jobs and leadership positions.

3. Promote work-life balance policies. Addressing the challenges women face in accumulating continuous work experience is crucial. Policies should be designed to support women in balancing family responsibilities with career development. This includes flexible working arrangements, enhanced parental leave and career re-entry programmes that ensure women do not lose out on professional growth opportunities as a result of breaks in employment.

4. Address gender stereotypes and combat occupational segregation. Targeted interventions are needed to challenge the cultural norms that lead to occupational segregation and discriminatory practices in the labour market and society at large. Public awareness campaigns, combined with educational programmes, should encourage women to enter and excel in higher-paying, traditionally male-dominated sectors. Partnerships with educational institutions and private sector leaders can create pathways for women into these fields, supported by scholarships, mentoring initiatives, diversity training and inclusive recruitment practices.

5. Introduce gender quotas in leadership and decision-making roles. Implement gender quotas or targets for leadership and decision-making positions in both public and private sectors. This can help address the underrepresentation of women in high-paying roles and contribute to narrowing the wage gap by ensuring that more women have access to leadership positions.

6. Increase wage transparency. Transparency in wage-setting practices is essential to reduce gender wage disparities. Governments should require organizations to disclose gender pay gaps and develop actionable plans to address them. Ensuring that wage criteria are transparent and based on objective factors will help mitigate biases in salary determination.

7. Improve legal support and access to justice. Set up specialized legal aid services to support women in wage discrimination cases. This could include setting up dedicated legal clinics or hotlines that offer free or low-cost legal advice to women who believe they have experienced wage discrimination.

> Our analysis reveals significant disparities in wages between men and women, driven by a combination of educational attainment, professional experience, job characteristics and systemic discrimination.

Additionally, establishing fast-track legal processes for gender wage disputes can help ensure timely resolutions.

8. Strengthen monitoring and evaluation mechanisms. Wage equality policies must be continuously monitored and evaluated to ensure their effectiveness. Establishing robust data collection frameworks and research efforts will allow for the tracking of progress, the identification of persistent challenges in various sectors and regions, and the adjustment of strategies as needed. Regular reporting on the status of gender wage disparities should be made publicly available to ensure transparency and accountability.

9. Foster multi-stakeholder collaboration. Addressing wage inequality requires coordinated effort across sectors. Governments, private enterprises, trade unions and civil society organizations must work together to promote pay equity and gender equality in the labour market. Multi-stakeholder task forces or councils can facilitate collaboration and ensure that diverse perspectives are considered in policymaking.

Annex

Table A1. Summary statistics of variables used in the regression

Variable	Egypt	Iraq	Jordan	State of Palestine	Sudan	Tunisia	Yemen
Dependent variable							
Monthly wage (in dollars)	177.087	420.632	499.973	903.027	147.401	270.904	201.072
Hourly wage (in dollars)	1.192	3.225	3.004	6.091	0.796	0.198	1.474
Sex							
Male	0.802	0.895	0.821	0.832	0.763	0.7	0.921
Human capital characteristics							
No education	0.132	0.245	0.021	0.033	0.426	0.137	0.335
School education	0.52	0.534	0.71	0.608	0.373	0.519	0.441
University education	0.348	0.221	0.269	0.358	0.201	0.134	0.224
Experience	21.365		18.002	17.420	12.511	16.374	18.531
Job characteristics							
Working hours (per month)	174.49	174.96	176.324	160.447	200.0789	193.349	165.573
Occupation							
Legislators, senior officials and managers	0.037	0.0078	0.004	0.023	0.150	0.013	0.036
Professionals	0.123	0.165	0.229	0.205	0.175	0.117	0.158
Technicians and associate professionals	0.192	0.054	0.060	0.566	0.034	0.053	0.064
Clerks	0.089	0.0160	0.050	0.019	0.021	0.046	0.103
Service workers and shop and market sales workers	0.141	0.252	0.324	0.130	0.179	0.191	0.191
Skilled agricultural and fishery workers	0.036	0.116	0.022	0.004	0.085	0.022	0.098
Craft and related trades workers	0.134	0.207	0.137	0.200	0.115	0.196	0.135
Plant and machine operators and assemblers	0.136	0.102	0.087	0.094	0.070	0.096	0.074
Elementary occupations	0.111	0.077	0.086	0.269	0.172	0.262	0.141
Industry							
Agriculture, forestry and fishing	0.045	0.123	0.030	0.054		0.106	0.115

Mining and quarrying	0.002	0.061	0.006	0.005		0.022	0.003
Manufacturing	0.183	0.019	0.098	0.131		0.222	0.060
Electricity, gas, steam and air conditioning supply/water supply, sewerage, waste management and remediation	0.030	0.012	0.010	0.008		0.003	0.004
Construction	0.060	0.170	0.059	0.221		0.098	0.120
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.123	0.135	0.121	0.135		0.077	0.161
Transportation and storage	0.077	0.093	0.058	0.033		0.037	0.061
Accommodation and food service activities	0.044	0.015	0.029	0.035		0.044	0.032
Information and communication	0.012	0.003	0.012	0.013		0.003	0.006
Financial and insurance activities	0.012	0.003	0.013	0.012		0.004	0.005
Real estate activities/ professional, scientific and technical activities/ administrative and support service activities	0.035	0.037	0.041	0.018		0.135	0.009
Public administration and defence; compulsory social security	0.108	0.185	0.290	0.101		0.145	0.239
Education	0.156	0.095	0.122	0.141		0.148	0.119
Human health and social work activities	0.067	0.034	0.051	0.060		0.039	0.027
Other service activities	0.045	0.026	0.058	0.034		0.032	0.037
Public sector	0.413	0.369	0.427	0.226	0.419	0.421	0.386
Full time	0.903	0.479		0.968			0.676
Formal	0.556	1	0.638	0.562	0.359		
Societal characteristics							
Never married	0.220	0.226	0.345	0.312	0.322	0.351	0.300
Married	0.738	0.759	0.638	0.671	0.485	0.622	0.684
Other	0.042	0.015		0.017	0.232	0.025	0.016
Rural	0.502	0.492		0.334	0.478	0.514	0.419
Number of observations	41,153	17,160	44,728	14,517	1,002	809	6,441

Table A2. Ordinary least squares estimates, monthly wage

	Egypt		Iraq		Jordan		State of Palestine		Sudan		Tunisia		Yemen	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Human capital characteristics														
School education	0.072***	0.162***	0.033***	0.023	0.097***	0.152**	0.302***	0.209**	0.138	-0.046	0.126**	0.062	0.175***	0.244
	(0.006)	(0.027)	(0.007)	(0.030)	(0.013)	(0.063)	(0.043)	(0.090)	(0.118)	(0.337)	(0.056)	(0.095)	(0.022)	(0.172)
University education	0.135***	0.262***	0.042***	0.014	0.230***	0.306***	0.376***	0.462***	0.415***	0.312	0.388***	0.524***	0.326***	0.491***
	(0.008)	(0.029)	(0.009)	(0.029)	(0.016)	(0.064)	(0.048)	(0.103)	(0.150)	(0.336)	(0.097)	(0.144)	(0.031)	(0.184)
Experience	0.003***	0.008***			0.003***	0.004***	0.012***	0.012***	0.007*	0.014	-0.001	0.015***	0.006***	0.016***
	(0.000)	(0.000)			(0.000)	(0.001)	(0.001)	(0.001)	(0.004)	(0.011)	(0.003)	(0.004)	(0.001)	(0.003)
Job characteristics														
Working hours	0.001***	0.001***	0.008***	0.004***	0.001***	0.002***	0.005***	0.006***	0.001**	-0.000	0.001*	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.002)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
Occupation														
Professionals	-0.051***	-0.034**	0.060	-0.305***	-0.128***	-0.145***	-0.168***	-0.173***	-0.224	0.099	0.078	0.329	-0.019	-0.094*
	(0.008)	(0.017)	(0.053)	(0.086)	(0.029)	(0.020)	(0.032)	(0.048)	(0.209)	(0.354)	(0.135)	(0.463)	(0.026)	(0.057)
Technicians and associate professionals	-0.108***	-0.098***	-0.035	-0.382***	-0.147***	-0.149***	-0.410***	-0.296***	-0.132	0.150	-0.058	0.008	-0.132***	-0.133*
	(0.008)	(0.017)	(0.055)	(0.102)	(0.031)	(0.025)	(0.038)	(0.059)	(0.211)	(0.431)	(0.127)	(0.486)	(0.032)	(0.077)
Clerks	-0.142***	-0.151***	-0.216***	-0.551***	-0.218***	-0.264***	-0.351***	-0.359***	-0.639	0.492	-0.525	-0.113	-0.291***	-0.301***
	(0.009)	(0.018)	(0.062)	(0.096)	(0.031)	(0.025)	(0.052)	(0.069)	(0.704)	(0.369)	(0.390)	(0.478)	(0.030)	(0.097)
Service workers and shop and market sales workers	-0.201***	-0.366***	-0.020	-0.478***	-0.305***	-0.328***	-0.610***	-0.436***	0.080	0.280	-0.333**	-0.234	-0.318***	-0.280**
	(0.009)	(0.035)	(0.054)	(0.107)	(0.031)	(0.028)	(0.039)	(0.082)	(0.212)	(0.437)	(0.133)	(0.494)	(0.035)	(0.128)
Skilled agricultural and fishery workers	-0.124***	0.032	-0.088	-0.495***	-0.426***	-0.619***	-0.435***		-0.004	0.029	-0.432**	-0.047	-0.414***	-1.050
	(0.019)	(0.061)	(0.058)	(0.107)	(0.037)	(0.108)	(0.108)		(0.245)	(0.511)	(0.188)	(0.504)	(0.067)	(0.781)
Craft and related trades workers	-0.125***	-0.260***	-0.129**	-0.805***	-0.335***	-0.557***	-0.272***	-0.600***	0.117	-0.141	-0.435***	-0.308	-0.195***	-0.871***
	(0.010)	(0.057)	(0.055)	(0.119)	(0.031)	(0.034)	(0.041)	(0.190)	(0.240)	(0.504)	(0.144)	(0.506)	(0.039)	(0.196)
Plant and machine operators and assemblers	-0.150***	-0.252***	-0.109*	-0.336	-0.359***		-0.341***	-0.274*	-0.141	-0.131	-0.137	-0.099	-0.140***	-0.870
	(0.010)	(0.037)	(0.057)	(0.261)	(0.031)		(0.043)	(0.159)	(0.296)	(0.466)	(0.142)	(0.492)	(0.050)	(0.803)
Elementary occupations	-0.282***	-0.356***	-0.249***	-0.761***	-0.407***	-0.475***	-0.456***	-0.485***	0.097	-0.155	-0.470***	-0.234	-0.264***	-0.345*
	(0.010)	(0.030)	(0.056)	(0.095)	(0.031)	(0.027)	(0.039)	(0.086)	(0.227)	(0.418)	(0.138)	(0.483)	(0.036)	(0.189)

Industry												
Mining and quarrying	0.222***	-0.299*	0.464***	0.121	0.413***	0.519***	0.251***		0.583***	0.759***	0.114	
	(0.028)	(0.176)	(0.038)	(0.146)	(0.025)	(0.097)	(0.093)		(0.102)	(0.207)	(0.141)	
Manufacturing	-0.044***	0.161***	0.146***	0.017	0.104***	0.067	0.337***	-0.643***	0.251***	0.309	-0.038	-0.725
	(0.015)	(0.045)	(0.025)	(0.093)	(0.019)	(0.067)	(0.043)	(0.194)	(0.084)	(0.200)	(0.065)	(0.775)
Electricity, gas, steam and air conditioning supply/ water supply, sewerage, waste management and remediation	0.013	0.127**	0.131***	0.020	0.209***	0.236***	-0.011	0.263	0.147	1.067***	-0.006	-0.822
	(0.017)	(0.052)	(0.035)	(0.131)	(0.024)	(0.078)	(0.078)	(0.175)	(0.120)	(0.225)	(0.113)	(0.784)
Construction	0.154***	0.150**	0.032	0.063	0.057***	0.085	0.776***	-0.190	0.198		0.061	
	(0.016)	(0.066)	(0.024)	(0.123)	(0.021)	(0.077)	(0.039)	(0.230)	(0.124)		(0.060)	
Wholesale and retail trade; repair of motor vehicles and motorcycles	-0.064***	0.152***	0.032	-0.127	-0.042**	-0.127*	0.091**	-0.614***	0.041	0.116	-0.067	-0.428
	(0.016)	(0.047)	(0.022)	(0.087)	(0.019)	(0.069)	(0.044)	(0.179)	(0.117)	(0.203)	(0.059)	(0.793)
Transportation and storage	0.094***	0.046	0.094***	0.017	0.077***	0.121*	-0.401***	-0.347	-0.013	0.828***	-0.062	0.000
	(0.016)	(0.051)	(0.028)	(0.163)	(0.020)	(0.073)	(0.063)	(0.354)	(0.174)	(0.208)	(0.075)	(.)
Accommodation and food service activities	0.025	0.232***	0.077**	-0.570***	0.047**	-0.175	0.393***	-0.048	0.221**	0.318	-0.051	-0.815
	(0.017)	(0.062)	(0.030)	(0.099)	(0.020)	(0.108)	(0.055)	(0.236)	(0.112)	(0.201)	(0.068)	(0.833)
Information and communication	0.024	0.158***	0.108*	0.234	0.155***	0.112	-0.040	-0.707***	-0.013	0.918***	-0.174*	
	(0.020)	(0.048)	(0.057)	(0.146)	(0.023)	(0.069)	(0.063)	(0.182)	(0.199)	(0.219)	(0.092)	
Financial and insurance activities	0.044**	0.140***	0.270***	0.094	0.243***	0.235***	0.070	-0.585***	0.306**	0.434*	0.088	-0.788
	(0.021)	(0.044)	(0.063)	(0.151)	(0.021)	(0.067)	(0.063)	(0.181)	(0.130)	(0.228)	(0.093)	(0.786)
Real estate activities, professional, scientific and technical activities, administrative and support service activities	-0.020	0.044	0.516***		0.066***	0.021	0.185***	-0.443**	0.161	0.177	-0.022	-0.378
	(0.017)	(0.046)	(0.109)		(0.020)	(0.067)	(0.068)	(0.196)	(0.137)	(0.286)	(0.089)	(0.775)
Public administration and defence; compulsory social security	0.000	-0.015	0.479***	-0.043	0.164***	-0.067	0.136***	-0.721***	0.029	0.479**	-0.103	-0.701
	(0.015)	(0.037)	(0.027)	(0.086)	(0.020)	(0.066)	(0.051)	(0.172)	(0.096)	(0.220)	(0.068)	(0.775)
Education	-0.115***	-0.102***	0.193***	0.048	0.054***	-0.118*	0.165***	-0.614***	0.147	0.326	-0.019	-0.770
	(0.015)	(0.037)	(0.030)	(0.078)	(0.021)	(0.066)	(0.049)	(0.170)	(0.102)	(0.198)	(0.070)	(0.778)

Human health and social work activities	-0.118***	-0.055	0.224***	0.048	0.105***	-0.070	0.123**	-0.668***			0.128	0.596***	-0.252***	-0.831
	(0.017)	(0.038)	(0.031)	(0.079)	(0.021)	(0.066)	(0.053)	(0.171)			(0.130)	(0.187)	(0.088)	(0.779)
Other service activities	-0.155***	0.141***	-0.022	-0.209	-0.092***	-0.132*	-0.090	-0.879***			-0.139	-0.050	-0.194***	-0.907
	(0.017)	(0.052)	(0.076)	(0.292)	(0.020)	(0.069)	(0.057)	(0.175)			(0.209)	(0.202)	(0.070)	(0.771)
Public sector	0.013*	0.118***	0.291***	0.450***	0.225***	0.365***	-0.045	0.167***	-0.308*	-0.520***	0.155**	0.032	0.160***	0.430***
	(0.007)	(0.016)	(0.015)	(0.052)	(0.009)	(0.011)	(0.028)	(0.026)	(0.169)	(0.196)	(0.070)	(0.182)	(0.041)	(0.080)
Full time	0.049***	0.240***	-0.198***	-0.143***			0.676***	0.415***					0.177***	0.329***
	(0.007)	(0.025)	(0.019)	(0.028)			(0.047)	(0.137)					(0.023)	(0.098)
Formal work	0.108***	0.329***	0.000	0.000			0.617***	0.811***	-0.098	-0.012				
	(0.005)	(0.018)	(.)	(.)			(0.016)	(0.051)	(0.141)	(0.174)				
Societal characteristics														
Married	0.096***	0.004	0.157***	0.083***	0.064***	0.002	0.079***	0.115***	-0.036	-0.214	0.152*	0.309***	0.093***	0.058
	(0.005)	(0.013)	(0.008)	(0.022)	(0.004)	(0.008)	(0.021)	(0.028)	(0.102)	(0.166)	(0.078)	(0.074)	(0.021)	(0.049)
Other	0.070***	0.013	0.134***	0.183***	0.015	-0.028	0.004	0.085*	0.156	-0.457*	-0.043	0.157	0.038	-0.130
	(0.014)	(0.016)	(0.033)	(0.035)	(0.017)	(0.019)	(0.074)	(0.050)	(0.223)	(0.233)	(0.118)	(0.159)	(0.084)	(0.087)
Rural	-0.034***	-0.048***	-0.013**	-0.106***			0.205***	-0.062***	0.010	0.191	-0.105*	0.018	0.025	-0.184
	(0.004)	(0.008)	(0.006)	(0.023)			(0.014)	(0.023)	(0.096)	(0.161)	(0.060)	(0.066)	(0.016)	(0.159)
Constant	4.850***	4.134***	5.569***	6.034***	5.850***	5.625***	4.187***	4.719***	4.465***	4.397***	5.254***	4.337***	4.655***	4.655***
	(0.022)	(0.061)	(0.062)	(0.112)	(0.040)	(0.096)	(0.078)	(0.231)	(0.280)	(0.434)	(0.207)	(0.550)	(0.070)	(0.802)
Number of observations	32992	8161	17160	1822	36711	8017	12081	2436	765	237	582	249	5939	511

Notes: Numbers in parentheses are the robust standard errors. * p<0.100, ** p<0.050, *** p<0.010. The reference group for the education variable is "No education". For the occupation variable, the reference group is "Legislators, senior officials and managers". For the industry variable, the reference group is "Agriculture, forestry and fishing". The reference group for the marital status variable is "Never married".

Table A3. Ordinary least squares estimates, hourly wage

	Egypt		Iraq		Jordan		State of Palestine		Sudan		Tunisia		Yemen	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Human capital characteristics														
School education	0.069***	0.150***	0.044***	-0.012	0.090***	0.117*	0.304***	0.215**	0.150	-0.211	0.130**	0.072	0.159***	0.196
	(0.007)	(0.029)	(0.008)	(0.037)	(0.014)	(0.063)	(0.042)	(0.091)	(0.120)	(0.382)	(0.057)	(0.098)	(0.022)	(0.189)
University education	0.133***	0.244***	0.040***	-0.029	0.223***	0.269***	0.370***	0.470***	0.450***	0.110	0.439***	0.551***	0.316***	0.453**
	(0.009)	(0.032)			(0.016)	(0.064)	(0.047)	(0.105)	(0.155)	(0.369)	(0.102)	(0.146)	(0.032)	(0.204)
Experience	0.003***	0.008***			0.003***	0.004***	0.012***	0.011***	0.008*	0.014	-0.001	0.015***	0.006***	0.017***
	(0.000)	(0.001)			(0.000)	(0.001)	(0.001)	(0.001)	(0.004)	(0.012)	(0.003)	(0.004)	(0.001)	(0.003)

Job characteristics														
Working hours	-0.006***	-0.008***	0.022***	0.017***	-0.005***	-0.005***	-0.003***	-0.004***	-0.003***	-0.005***	-0.004***	-0.004***	-0.005***	-0.006***
	(0.000)	(0.000)	(0.005)	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
Occupation														
Professionals	-0.058***	-0.030	0.034	-0.205***	-0.153***	-0.143***	-0.182***	-0.202***	-0.177	0.298	0.265*	0.213	0.009	-0.100*
	(0.010)	(0.020)	(0.040)	(0.054)	(0.033)	(0.020)	(0.032)	(0.053)	(0.216)	(0.383)	(0.138)	(0.307)	(0.028)	(0.056)
Technicians and associate professionals	-0.105***	-0.091***	-0.037	-0.316***	-0.174***	-0.151***	-0.402***	-0.307***	-0.199	0.425	-0.022	-0.223	-0.120***	-0.111
	(0.010)	(0.019)	(0.045)	(0.078)	(0.034)	(0.025)	(0.038)	(0.062)	(0.223)	(0.445)	(0.125)	(0.341)	(0.033)	(0.079)
Clerks	-0.148***	-0.163***	-0.174***	-0.458***	-0.242***	-0.268***	-0.362***	-0.375***	-0.705	0.709*	-0.493	-0.305	-0.259***	-0.295***
	(0.010)	(0.020)	(0.054)	(0.078)	(0.034)	(0.026)	(0.052)	(0.073)	(0.757)	(0.395)	(0.390)	(0.332)	(0.030)	(0.110)
Service workers and shop and market sales workers	-0.194***	-0.360***	-0.088**	-0.456***	-0.314***	-0.325***	-0.600***	-0.423***	0.084	0.309	-0.276**	-0.453	-0.283***	-0.319**
	(0.011)	(0.041)	(0.044)	(0.125)	(0.034)	(0.028)	(0.038)	(0.084)	(0.219)	(0.471)	(0.133)	(0.352)	(0.036)	(0.139)
Skilled agricultural and fishery workers	-0.122***	0.001	0.001	-0.016	-0.431***	-0.544***	-0.423***		0.102	-0.065	-0.333*	-0.189	-0.412***	-0.932
	(0.021)	(0.075)	(0.050)	(0.091)	(0.040)	(0.105)	(0.104)		(0.251)	(0.580)	(0.191)	(0.360)	(0.066)	(0.773)
Craft and related trades workers	-0.126***	-0.279***	-0.111**	-0.527***	-0.351***	-0.539***	-0.287***	-0.602***	0.113	-0.152	-0.386***	-0.515	-0.157***	-1.125***
	(0.011)	(0.059)	(0.049)	(0.142)	(0.034)	(0.034)	(0.040)	(0.194)	(0.247)	(0.524)	(0.143)	(0.368)	(0.039)	(0.232)
Plant and machine operators and assemblers	-0.149***	-0.248***	-0.117**	-0.654***	-0.374***		-0.354***	-0.254	-0.134	0.038	-0.067	-0.285	-0.122**	-0.838
	(0.011)	(0.040)	(0.051)	(0.230)	(0.034)		(0.042)	(0.160)	(0.302)	(0.501)	(0.141)	(0.350)	(0.051)	(0.796)
Elementary Occupations	-0.275***	-0.356***	-0.227***	-0.548***	-0.426***	-0.443***	-0.477***	-0.487***	0.117	-0.156	-0.426***	-0.407	-0.247***	-0.365*
	(0.011)	(0.034)	(0.053)	(0.071)	(0.034)	(0.027)	(0.038)	(0.091)	(0.233)	(0.461)	(0.138)	(0.338)	(0.037)	(0.190)
Industry														
Mining and quarrying	0.216***	-0.303*	0.253***	0.222	0.385***	0.526***	0.193**				0.571***	0.785***	0.100	
	(0.029)	(0.169)	(0.038)	(0.152)	(0.025)	(0.093)	(0.086)				(0.103)	(0.207)	(0.143)	
Manufacturing	-0.047***	0.167***	0.034	0.313**	0.089***	0.097	0.254***	-0.624***			0.272***	0.337*	-0.087	-0.311
	(0.016)	(0.060)	(0.026)	(0.138)	(0.019)	(0.063)	(0.041)	(0.198)			(0.086)	(0.195)	(0.064)	(0.776)
Electricity, gas, steam, and air conditioning supply/ water supply, sewerage, waste management and remediation	0.011	0.081	0.022	0.124	0.189***	0.257***	-0.108	0.251			0.197	1.101***	-0.041	-0.204
	(0.018)	(0.066)	(0.033)	(0.128)	(0.025)	(0.075)	(0.077)	(0.180)			(0.131)	(0.217)	(0.114)	(0.779)
Construction	0.150***	0.162*	0.012	0.090	0.059***	0.120	0.687***	-0.162			0.197		0.023	
	(0.017)	(0.083)	(0.026)	(0.149)	(0.021)	(0.075)	(0.038)	(0.243)			(0.126)		(0.060)	

Wholesale and retail trade; repair of motor vehicles and motorcycles	-0.068***	0.163**	-0.051**	-0.016	-0.048**	-0.070	0.025	-0.518***			0.084	0.140	-0.094	-0.179
	(0.017)	(0.065)	(0.026)	(0.139)	(0.019)	(0.066)	(0.042)	(0.184)			(0.117)	(0.197)	(0.059)	(0.789)
Transportation and storage	0.096***	0.005	0.041	0.108	0.081***	0.153**	-0.467***	-0.316			0.002	0.852***	-0.107	0.000
	(0.017)	(0.065)	(0.027)	(0.160)	(0.021)	(0.070)	(0.062)	(0.374)			(0.171)	(0.199)	(0.075)	(.)
Accommodation and food service activities	0.019	0.232***	-0.072**	0.137	0.036*	-0.095	0.332***	0.143			0.207*	0.250	-0.049	-0.434
	(0.018)	(0.078)	(0.034)	(0.232)	(0.020)	(0.088)	(0.053)	(0.205)			(0.118)	(0.208)	(0.069)	(0.856)
Information and communication	0.020	0.136**	0.103*	0.343**	0.138***	0.148**	-0.142**	-0.634***			-0.081	0.934***	-0.213**	
	(0.021)	(0.063)	(0.057)	(0.161)	(0.023)	(0.066)	(0.061)	(0.189)			(0.160)	(0.209)	(0.089)	
Financial and insurance activities	0.035	0.106*	0.073	0.110	0.215***	0.248***	-0.043	-0.556***			0.298**	0.497**	0.013	-0.605
	(0.022)	(0.060)	(0.060)	(0.137)	(0.022)	(0.064)	(0.062)	(0.186)			(0.135)	(0.230)	(0.091)	(0.783)
Real estate activities, professional, scientific and technical activities, administrative and support service activities	-0.021	0.009	0.286***		0.058***	0.049	0.136**	-0.404**			0.264**	0.198	-0.050	-0.317
	(0.018)	(0.062)	(0.101)		(0.020)	(0.064)	(0.067)	(0.200)			(0.115)	(0.281)	(0.088)	(0.781)
Public administration and defence; compulsory social security	0.003	-0.067	0.169***	0.135	0.147***	-0.039	0.026	-0.735***			0.073	0.521**	-0.156**	-0.569
	(0.016)	(0.054)	(0.034)	(0.110)	(0.021)	(0.063)	(0.049)	(0.178)			(0.098)	(0.222)	(0.068)	(0.768)
Education	-0.088***	-0.136**	0.052*	0.177*	0.045**	-0.102	0.079*	-0.642***			0.189*	0.449**	-0.056	-0.635
	(0.016)	(0.055)	(0.029)	(0.100)	(0.021)	(0.063)	(0.047)	(0.175)			(0.103)	(0.184)	(0.071)	(0.772)
Human health and social work activities	-0.129***	-0.082	0.239***	0.055	0.094***	-0.036	0.024	-0.670***			0.144	0.634***	-0.311***	-0.659
	(0.018)	(0.055)	(0.028)	(0.099)	(0.021)	(0.063)	(0.051)	(0.177)			(0.130)	(0.180)	(0.087)	(0.772)
Other service activities	-0.144***	0.121*	0.108***	0.217**	-0.074***	-0.026	-0.169***	-0.860***			-0.114	0.003	-0.203***	-0.694
	(0.018)	(0.067)	(0.032)	(0.098)	(0.020)	(0.066)	(0.055)	(0.179)			(0.206)	(0.193)	(0.070)	(0.761)
Public sector	-0.006	0.124***	0.241***	0.191***	0.200***	0.345***	-0.046	0.167***	-0.276	-0.559**	0.147**	0.030	0.138***	0.410***
	(0.007)	(0.017)	(0.016)	(0.069)	(0.009)	(0.011)	(0.028)	(0.027)	(0.173)	(0.221)	(0.070)	(0.183)	(0.041)	(0.081)
Full time	0.049***	0.249***	0.426***	0.423***			0.511***	0.297**					0.153***	0.271***
	(0.008)	(0.027)	(0.039)	(0.041)			(0.046)	(0.144)					(0.023)	(0.104)
Formal work	0.099***	0.320***	0.000	0.000			0.582***	0.791***	-0.093	0.008				
	(0.006)	(0.019)	(.)	(.)			(0.016)	(0.052)	(0.146)	(0.190)				

Societal characteristics														
Married	0.105***	0.009	0.120***	0.078***	0.067***	0.006	0.070***	0.098***	-0.055	-0.221	0.164**	0.315***	0.090***	0.089*
	(0.006)	(0.014)	(0.012)	(0.022)	(0.004)	(0.008)	(0.020)	(0.029)	(0.103)	(0.173)	(0.080)	(0.078)	(0.021)	(0.051)
Other	0.071***	0.020	0.084**	0.093***	0.019	-0.019	-0.029	0.107**	0.001	-0.439*	-0.028	0.131	-0.000	-0.109
	(0.014)	(0.018)	(0.034)	(0.035)	(0.017)	(0.020)	(0.072)	(0.051)	(0.168)	(0.262)	(0.117)	(0.165)	(0.083)	(0.092)
Rural	-0.046***	-0.069***	-0.017**	-0.041*			0.187***	-0.061***	-0.004	0.130	-0.095	-0.001	0.019	-0.169
	(0.004)	(0.009)	(0.007)	(0.024)			(0.014)	(0.023)	(0.098)	(0.176)	(0.061)	(0.068)	(0.017)	(0.159)
Constant	0.916***	0.480***	0.228***	0.576***	1.858***	1.716***	0.638***	1.329***	-0.142	0.103	0.811***	0.283	0.743***	0.857
	(0.025)	(0.079)	(0.068)	(0.111)	(0.043)	(0.093)	(0.075)	(0.242)	(0.286)	(0.480)	(0.217)	(0.438)	(0.072)	(0.796)
Number of observations	32992	8161	17160	1822	36711	8017	12081	2436	765	237	582	249	5930	511

Notes: Numbers in parentheses are the robust standard errors. * p<0.100, ** p<0.050, *** p<0.010. The reference group for the education variable is "No education". For the occupation variable, the reference group is "Legislators, senior officials and managers". For the industry variable, the reference group is "Agriculture, forestry and fishing." For the marital status variable, the reference group is "Never married".

Table A4. Female labour force participation rate in Egypt in 2021

Variable	Percentage
Institutional sector (private/public) of economic activities	
Public	70.0
Private	30.0
Informal/formal employment	
Informal employment	10.82
Formal employment	89.18
Marital status	
Single	18.40
Married	67.85
Separated/divorced	5.83
Widowed	7.92

Table A5. Female labour force participation rate in Iraq in 2021

Variable	Percentage
Institutional sector (private/public) of economic activities	
Public	70.48

Private	29.52
Informal/formal employment	
Informal employment	27.20
Formal employment	72.69
Households	0.11
Marital status	
Single	22.28
Married	69.04
Separated	0.66
Divorced	2.10
Widowed	5.91

Table A6. Female labour force participation rate in Jordan in 2021

Variable	Percentage
Institutional sector (private/public) of economic activities	
Public	54.18
Private	45.82
Marital status	
Single	34.16
Married	53.99
Separated	0.05
Divorced	1.95
Widowed	9.85

Table A7. Female labour force participation rate in Palestine in 2021

Variable	Percentage
Institutional sector (private/public) of economic activities	
Public	42.92
Private	57.08
Informal/formal employment	
Informal employment	20.73
Formal employment	79.27
Marital status	
Single	33.70
Married	59.36
Separated/divorced	6.68
Widowed	0.08

Table A8. Female labour force participation rate in the Sudan in 2022

Variable	Percentage
Institutional sector (private/public) of economic activities	
Public	62
Private	38
Informal/formal employment	
Informal employment	46.23
Formal employment	53.77
Marital status	
Single	20.86
Married	59.27
Separated/divorced	10.60
Widowed	9.27

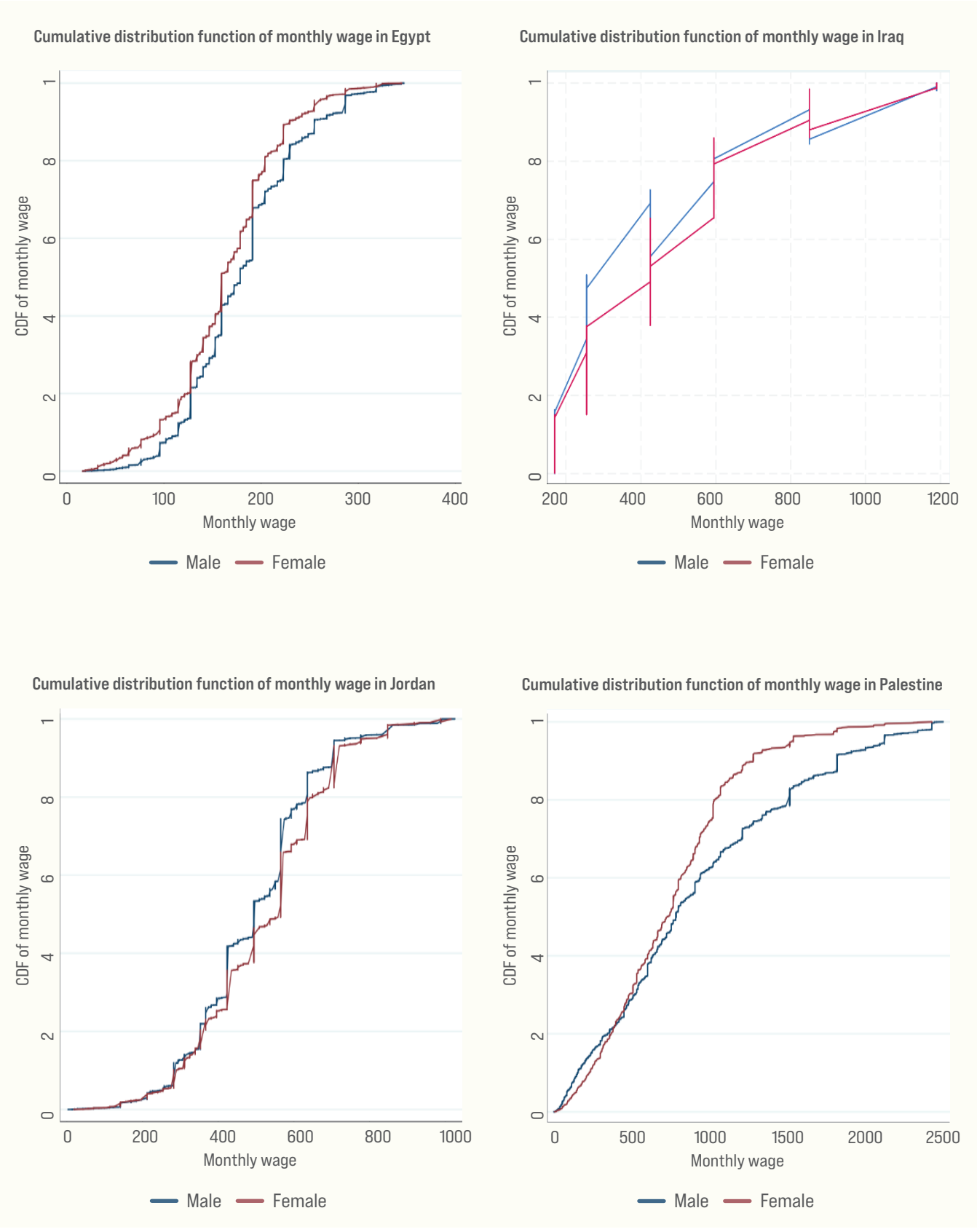
Table A9. Female labour force participation rate in Tunisia in 2014

Variable	Percentage
Institutional sector (private/public) of economic activities	
Public	40.96
Private	59.03
Marital status	
Single	49.80
Married	43.37
Separated/divorced	1.61
Widowed	5.22

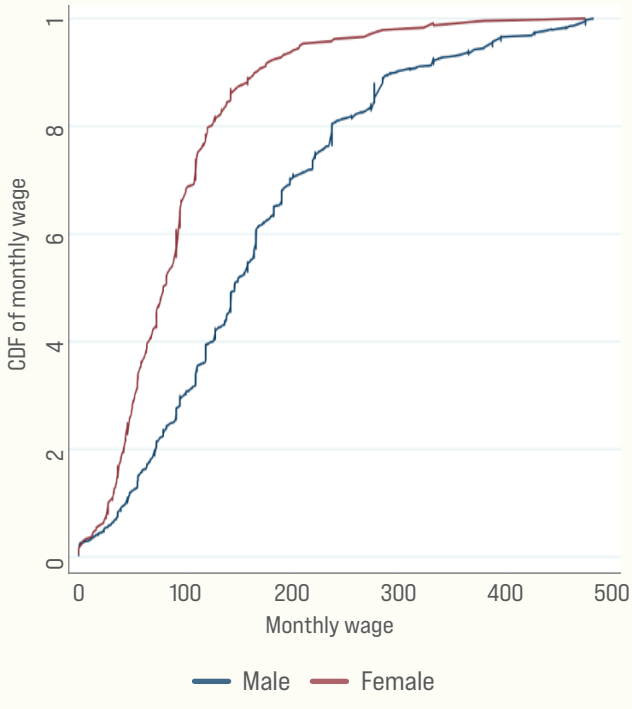
Table A10. Female labour force participation rate in Yemen in 2013-2014

Variable	Percentage
Institutional sector (private/public) of economic activities	
Public	72.23
Private	27.77
Marital status	
Single	38.09
Married	53.47
Divorced	4.69
Widowed	3.75

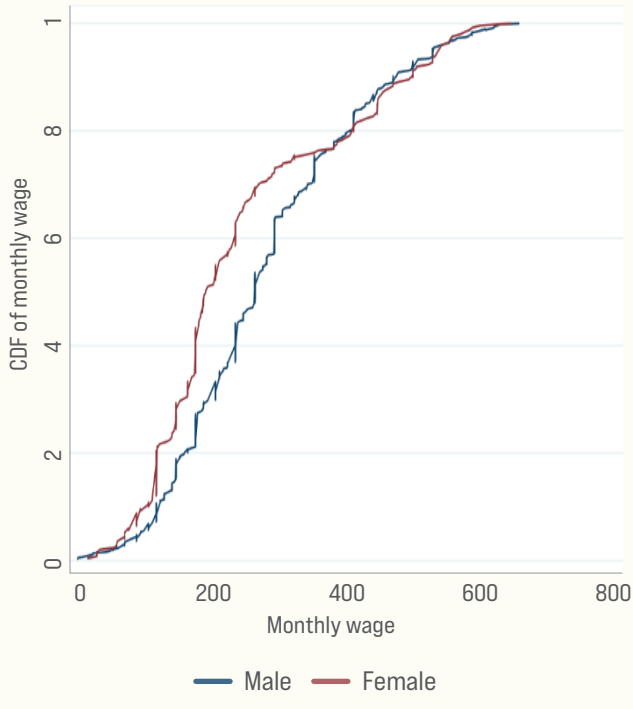
Figure A. Cumulative distribution functions



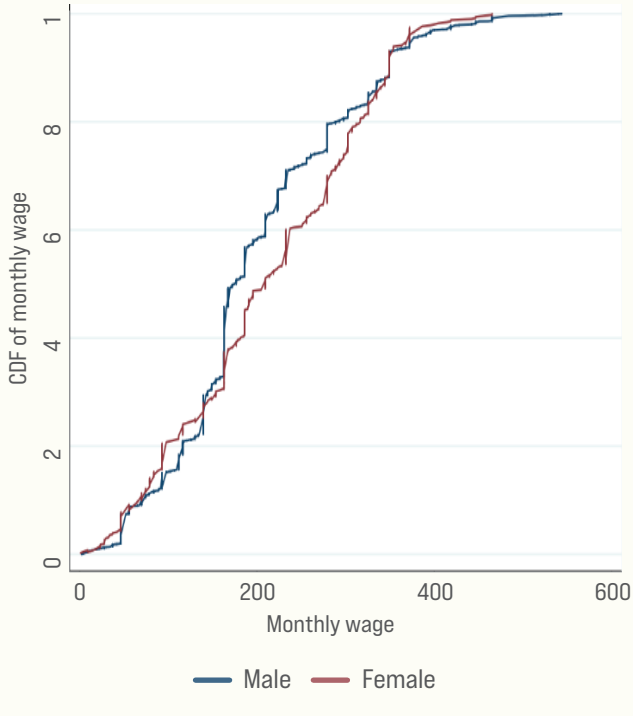
Cumulative distribution function of monthly wage in the Sudan



Cumulative distribution function of monthly wage in Tunisia



Cumulative distribution function of monthly wage in Yemen



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Endnotes

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7 To ensure a robust sample size, we included individuals aged 15–24 in our study, while acknowledging that some of these individuals may still be in formal education.

8 We focused on primary jobs in our analysis due to the substantial amount of missing data for secondary jobs.

9 Further details and statistical properties of this method are elaborated in Melly (2006). This method is a specific application of the technique introduced by Machado and Mata (2005) for estimating counterfactual wage distributions, distinguished by its use of the entire dataset for sampling. Melly (2006) demonstrates that as the number of simulations in the Machado and Mata (2005) approach increases indefinitely, this method converges numerically to Machado and Mata's technique for estimating counterfactual wage distributions.

10 In ISCO, "professionals" are defined as individuals who enhance existing knowledge, apply scientific or artistic theories, and systematically impart this knowledge through teaching. The role requires a high level of expertise, necessitating advanced education and training. Professionals engage in diverse activities including research, development of new theories, practical application of complex knowledge across various fields such as engineering, life sciences, and humanities, and teaching at various educational levels. They also contribute to artistic creation and provide business, legal, and social services, occasionally involving supervisory responsibilities.

11 Figure A in the appendix shows the cumulative distribution of monthly wages in each country, revealing similar wage patterns for both genders. The steeper rise for women indicates a higher proportion of women earning lower wages than men. These findings highlight the need for comprehensive policies to address gender disparities in the Arab labour market, considering the various factors contributing to the gender pay gap.

12 For Egypt, Jordan, the State of Palestine and Yemen, the estimation of years of experience is calculated as age minus years of schooling minus six. It is important to recognize that this calculation does not account for potential career interruptions that women may experience, which could introduce subtle discrepancies into the results for these countries. Conversely, in the Sudan and Tunisia, the data on experience is directly obtained from workers' answers, offering a more accurate reflection of their actual work experience.

13 In their study, Gornick and Jacobs (1998) analysed the influence of government employment on the gender gap in earnings across seven countries, as reported in the Luxembourg Income Study. They examined whether government jobs were higher-paying than the private sector, and whether public employment benefits, especially among low-paid workers, differed significantly. Their results indicated variations across different welfare State models, but highlighted that public sector workers generally earned more than their private sector counterparts, with significant advantages concentrated at the lower end of the earnings spectrum. However, they also noted that the overall impact of public employment on the gender wage gap was limited in most of the examined countries.

14 We also conducted quantile regression for Egypt, Jordan, the State of Palestine, the Sudan, Tunisia, and Yemen to validate the ordinary least squares results. In line with our benchmark findings, the analysis reveals consistent trends in wage determinants for both men and women across various wage quantiles. Education positively affects wages, especially for women and at higher education levels, although the magnitude varies by quantile. Experience also consistently contributes to wage increases across all countries and quantiles. The regression outputs have not been included in the study but are available on request.

The study explores wage disparities in the Arab region, highlighting significant gender-based differences in earnings. Analysing data from seven Arab countries – Egypt, Iraq, Jordan, the State of Palestine, the Sudan, Tunisia and Yemen – the study uses the Oaxaca-Blinder decomposition method to quantify the wage gap attributable to discrimination. The results indicate that while education and professional experience significantly improve women's earnings, systemic discrimination remains a persistent barrier to wage equality. On average, Arab women earn 89 cents for every dollar earned by men, a figure that decreases to 82 cents after adjusting for factors such as education, job type and experience. The study also identifies cultural norms, occupational segregation and inconsistent enforcement of equal pay laws as factors exacerbating the gender wage gap in the region. To address these challenges, the study contains various targeted policy recommendations, including enhancing wage transparency, investing in education, enforcing equal pay legislation, and increasing women's representation in leadership roles. These strategies are essential for promoting gender wage parity, ensuring decent work for Arab women, and advancing their economic empowerment.

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