

ERF Policy Brief

Occupational Segregation and the Gender Wage Gap in Egypt

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In a nutshell

- Egypt's chronically low female labor force participation and gender pay gaps can be partly attributed to the systematic downsizing of public sector employment and the channeling of women into lower-paying sectors and occupations.
- Labor market surveys from 1998 to 2023 reveal that women, despite overtaking men in educational attainment, are predominantly concentrated in narrow teaching, nursing and clerical roles. This occupational segregation contributes to gender wage gaps, especially at the lower end and middle of the wage distribution in the private sector, where women face greater wage penalties.
- Addressing this segregation and the gender pay gap requires empowering women to access equal opportunities in diverse sectors, firms, and occupations, thus ensuring that they can compete on equal terms with men.

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Background

Despite the advancements that Egyptian women have made over the past quarter century in various socio-economic spheres – like education and political representation – they continue to face substantial challenges in the labor market. Women’s economic participation rate remains dismally low by global standards and middling even by regional standards, while the gender pay gap remains substantial.

Explanations for these persistent inequalities can be found on both the demand and supply sides of the labor market. On the demand-side, declining employment in the public sector has limited women’s opportunities. The public sector had become increasingly feminized, as educated women appreciated its better job security, benefits, and work-life balance compared to the private sector. However, public sector downsizing driven by economic structural reforms has meant that the egalitarian policies have applied to ever fewer women. By contrast, the private sector exhibits unrelenting gender wage gaps of over 40%.

Additionally, gender segregation in the labor market is reinforced by workplace dynamics that create barriers to entry and advancement for women. Some male-dominated occupations exhibit self-perpetuating patterns of exclusion, where men may underestimate women’s capabilities, prefer to maintain the social power of their “boys’ club”, or exit occupations once a “tipping point” of the female share is reached. These dynamics further entrench occupational segregation, and glass ceilings for women (Biltagy 2019; Assaad et al. 2020; Said et al. 2022).

On the labor supply side, women’s unpaid care responsibilities, the ‘motherhood penalty’, and societal expectations create significant barriers for women, particularly those who are married or have young children, to enter and remain in private-sector employment characterized by long hours and demanding job requirements. These challenges reinforce women’s concentration in a small number of “female-friendly” occupations.

Occupational segregation, whether driven by supply or demand-side factors, significantly limits women’s opportunities in the labor market. By concentrating a large share of female workers in limited occupational categories – particularly those with lower wages – this segregation further depresses wages in those segments and lowers the wages of women broadly.

In the United States, for instance, about one-half the gender wage gap since 1980 was attributed to women working in different occupations and industries than men (Blau and Kahn 2017), because women were excluded from well-paying top- and middle-skills jobs in sectors like IT, logistics and advanced manufacturing.

In Egypt, women’s employment was traditionally concentrated in a few fields, primarily education, healthcare, and certain blue-collar sectors, and between 1988 and 1998 these few limited employment fields for women became further defeminized (Assaad and Arntz 2005). Increasing occupational segregation gradually rose in importance in gender pay differences during the early stages of privatization and public sector downsizing between 2000 and 2004, particularly for professional and blue-collar workers, while white-collar workers faced less severe pay discrimination (El-Hamidi and Said 2014).

Even beyond immediate incomes, occupational segregation may affect Egyptian women’s job quality, career mobility prospects, risks of poverty and unemployment, and social status. This is because segregation can occur not only horizontally (where men and women tend to concentrate in different industries, occupations, and businesses of different ownership and size) but also vertically across positions of various statuses, resulting in gender disparities in managerial roles, in contract types, and in prospects for career advancement.

In view of these stylized facts, the ensuing analysis based on AlAzzawi and Hlasny (2025) provides insights into the labor market conditions, gender composition of occupations and wage gaps in Egypt over a 25-year period characterized by far-reaching social, economic, and political changes.

Evidence from the labor market panel surveys 1998–2023

Women’s participation and occupational distribution over a quarter century

Labor force participation is a concern among both genders in Egypt. Men’s participation at 73% in 2023 is at its lowest level over the past 25 years, down from 74% in 1998 and 81% in 2012 (Figure 1). By contrast, women have seen a more stagnant trend with the vast majority of women remaining out of the labor force altogether.



There was a short-lived increase in female participation between 1998 and 2006, but this trend was reversed since then, reaching a rate of just 18% in 2023.

Among those engaged in wage employment, women make up less than 50% of workers in any 1-digit occupational category and across all years. At the high end, women make up 35%, 34% and 28% of the technicians and associate professionals, professional, and clerical support categories, respectively (Figure 2). For comparison, back in 1998, women made up 27%, 40% and 39% of workers in these categories.

Looking at the occupational distribution among all women in wage employment provides an alternative perspective on women's work opportunities. The largest share, 41–50% of all wage-employed women, have been in what are considered highly-skilled occupations requiring advanced education and experience, working as professionals and managers throughout the period under study. Clerical support occupations absorbed over one fifth of wage working women in 1998, but the share of women in that occupation has steadily declined over time to reach just 5% in 2023, reflecting the substantial decline in public sector employment. The proportion of women technicians and associate professionals has shown the opposite trend over time, almost doubling between 1998 and 2023.

Zooming in on the finer 3-digit occupational categories, the 20 most prevalent categories for women accounted for 74% to 87% of all women's employment in all years. For men, by contrast, the top occupational categories accounted for lower proportions of their employment, ranging from 53% to 74%. This reflects the persistently high degree of concentration of women in a handful of narrow occupational categories, while men's occupational distribution is more diverse and has become increasingly more so over time. Women are primarily employed as primary school teachers, administrative associates or secretaries, as nursing and midwifery associate professionals, as well as other types of school and nursery teachers (Figure 3).

The scope of segregation between women and men across occupational categories, relative to their respective overall employment distributions, can be expressed using the widely used Duncan Index of Dissimilarity. The value of the index gives the percentage of one group (e.g., women) that would need to be relocated across occupations to achieve an equal distribution as the other group (men). At detailed occupational levels this is informative regarding the nuanced patterns of gender segregation that may be

obscured at more aggregated levels, allowing us to identify specific occupations or sectors where gender imbalances are most pronounced.

For the 1-digit occupational categories, occupational segregation stagnated between 1998 and 2023, with a spike up only in 2012. In 2023, 44% of women would have to move sectors to offset their segregation vis-à-vis men. A more fine-grained occupational disaggregation gives rise to higher estimated levels of dissimilarity, reflecting the separation of men and women at finer occupational categories. For example, using the 4-digit occupational categories, two-thirds of women (66%) would have to move occupations in 2023 to eliminate their segregation vis-à-vis men, implying a much higher degree of segregation at this level of detail.

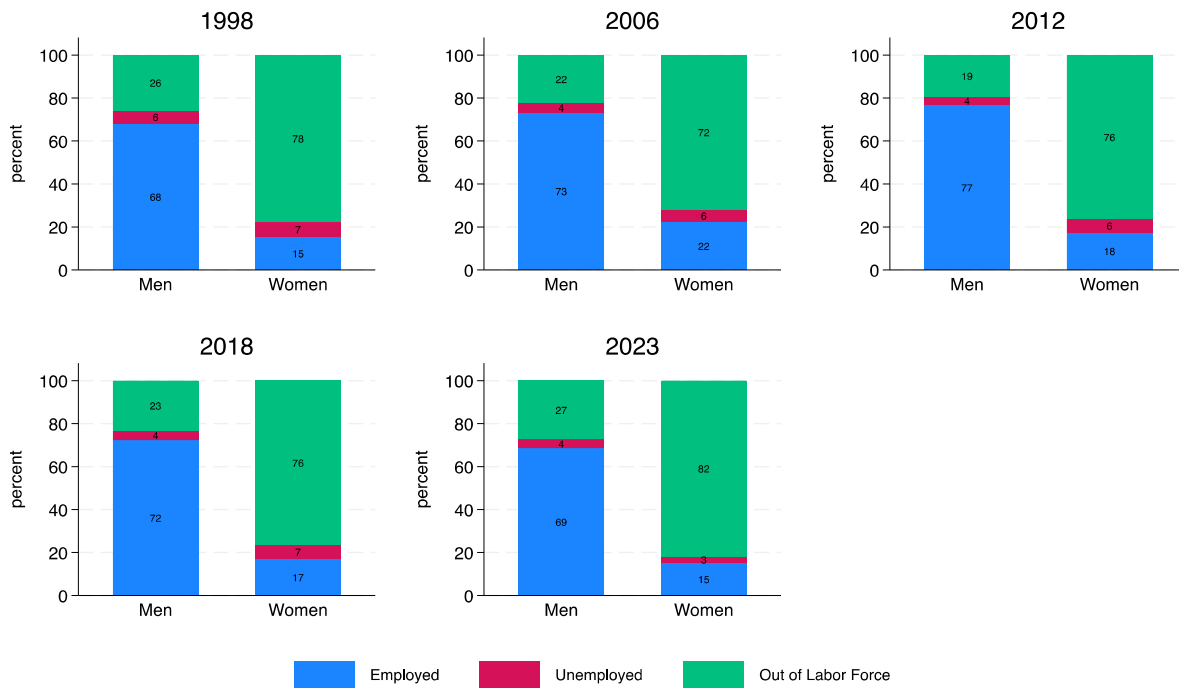
Occupational segregation is consistently higher in the private sector and in informal employment, than in the public sector and in formal employment. The proportion of women in public and formal employment in what can be considered highly skilled "white collar" jobs (managers, professionals, and technicians and associate professionals) has been declining steadily over this period, reflecting the fading opportunities for women in these higher skilled job categories.

In all years, the resource extraction and basic production sector (agriculture, forestry, fishing and mining) is the most integrated, according to the analysis of both 1- and 3-digit occupational groups. The industrial sector (manufacturing, industrial production, and infrastructure-related activities, including electricity supply, water management, and construction) is the most segregated sector by the analysis of narrow occupational categories, reflecting the high degree of separation between men and women in major economic activities such as construction. The services sector – covering a broad range of economic activities such as trade, transportation, financial services, education, healthcare, and public administration – exhibits an intermediate degree of segregation.

Across worker types, segregation is lowest for those with university and above education, and highest for those with secondary or vocational education. In most years it is also low among those who are illiterate or can only read and write, likely reflecting a somewhat higher degree of integration in the lowest skill occupations. Segregation trends also vary across other demographic demarcations, being higher in rural areas, and among the youngest and oldest age cohorts.

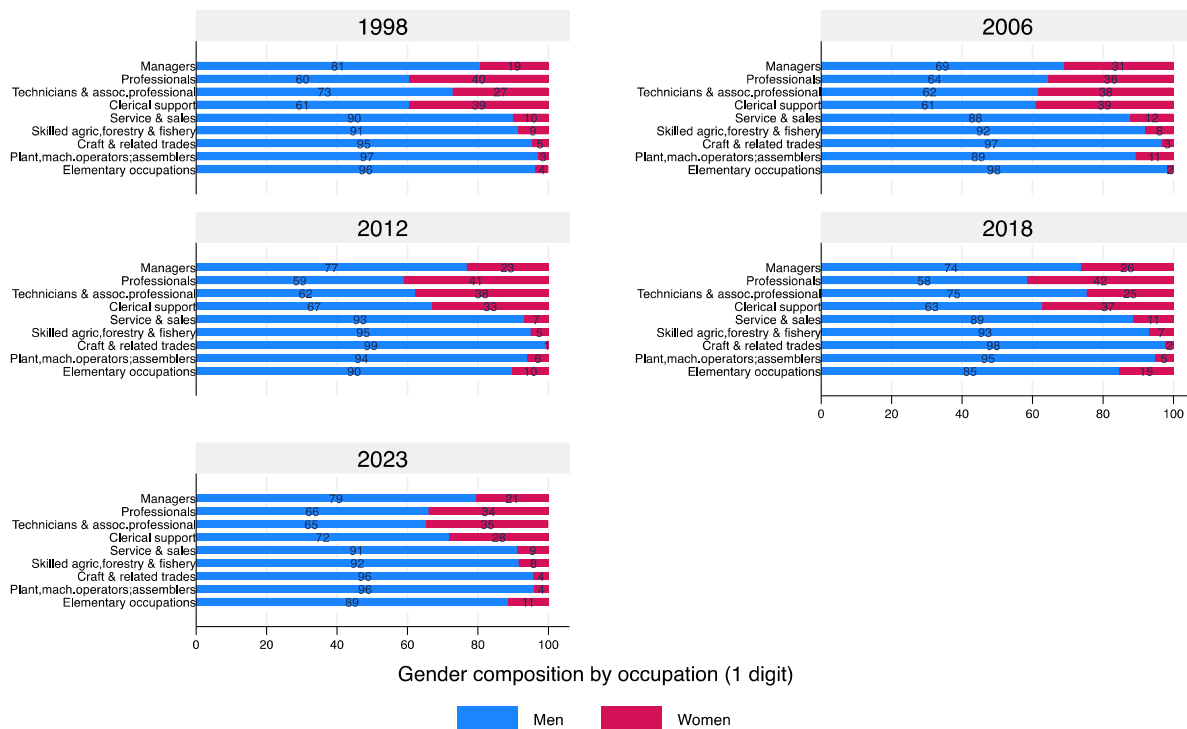


Figure 1. Work status by sex 1998 to 2023 (15 to 65-year-old)



Source: Authors based on ELMPS 1998-2023

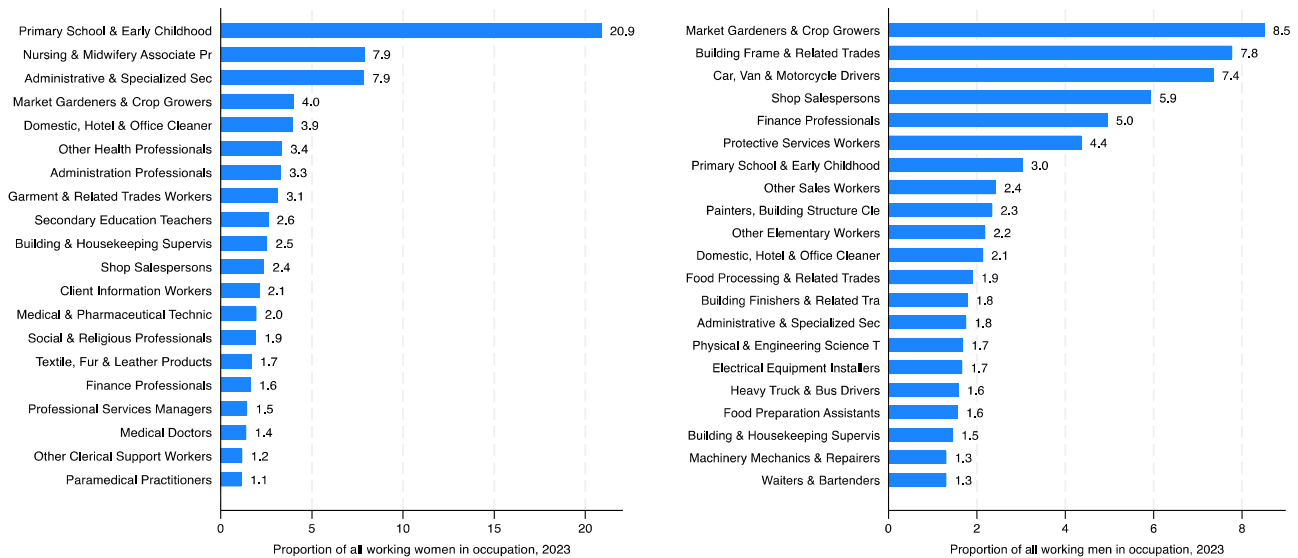
Figure 2. Gender composition of broad occupational categories, 1998-2023



Source: Authors based on ELMPS 1998-2023



Figure 3. Proportion of women and men in the largest 3-digit occupational categories as a share of all women and men workers, 2023



Source: Authors based on ELMPS 2023

Wage gaps and gender representation across occupations

Women's limited opportunities in the labor market translate into systematic wage gaps. In the private sector, men consistently outearn women at every point along the distribution, with the gaps most pronounced at the lower and middle percentiles. At the 10th percentile, representing low earners, women in 1998 earned only 56% of men's wages (Figure 4). By 2023, this gap has narrowed slightly but still left women with barely two-thirds of men's wages. At the median, women's wages in 1998 amounted to only 65% of men's wages. By 2023 this gap also narrowed, with women earning 77% of men's wages. This reflects persistent but moderate inequality. At the 90th percentile, representing high earners, the wage disparity is narrower and in 2023 has turned in favor of women. This finding should be viewed with caution, as it likely reflects the impact of declining female labor force participation and a high degree of selection into the private sector, whereby only the most skilled and motivated women retain their positions.

In the public sector, wage disparities between men and women are generally smaller, and wage outcomes are more equitable across the distribution. Nevertheless, across most years, gender gaps were evident at the upper percentiles, underscoring a persistent disparity and effectively a glass ceiling for women at the top end.

Of particular interest in this study, wage gaps are clearly related to the female representation within occupations. In the most prevalent private-sector occupation for women over the period – primary and early childhood teaching – female teachers earned in 1998 just 51% of the comparable male wages. This ratio plummeted in post Arab-Spring years to 30% in 2012, 43% in 2018, and as low as 28% in 2023. The persistent and rising wage gap in this highly feminized occupation suggests worsening job opportunities for women in the private sector, particularly in roles they are most likely to pursue.

Other key occupations, such as nursing, reveal more nuanced trends. In earlier years, nursing – another female-dominated field in the private sector – exhibited a relatively low wage gap. However, over time, the occupation category saw a widening wage gap, pointing to emerging disparities despite women's significant representation in the field. For occupations with high female shares but lower overall prevalence among all working women – such as clerical and administrative roles – the private sector also consistently shows substantial wage gaps.

These patterns underscore the dual impact of gendered occupational segregation and sectoral differences. While the public sector offers comparatively better outcomes for women in terms of wages, the private sector's rising wage disparities, particularly in occupations heavily



populated by women, highlight systemic challenges, especially in roles like teaching that are traditionally female-dominated and are integral to women's labor market participation.

In 1998, the share of women in private-sector occupations (as a percentage of all female wage workers) was associated positively with the real median hourly wage there. Over the following quarter-century, this relationship shifted to a clear negative association, indicating a worsening wage outcome for women in occupations where they are more heavily concentrated.

Median wages as well as the female-to-male wage ratio are consistently lower in female-dominated occupations (where 50% or more of workers are women) than in their male-dominated counterparts. This trend became more pronounced between 2018 and 2023, as the wage ratio in female-dominated occupations declined, while it improved in male-dominated occupations. These findings point to a deepening gender disparity in recent years, particularly in occupations with higher shares of female workers.

Wage gap determinants across the wage spectrum

Gender wage gaps are the result of interaction of various forces. Decomposing the wage gaps can tell us what part can be attributed to the assignment of workers to specific occupations, to workers' observed market-valued characteristics and to the differentials in the wage premium associated with these characteristics, or to other unobserved factors. Such decompositions, performed at different quantiles of the wage distribution, have previously revealed the presence of, both, glass ceiling effects in the public sector and sticky floor effects in the private sector (Said et al. 2022).

When accounting for differences in workers' endowments (education, potential work experience, proximity to markets, and assignment to a specific occupation, industry, formality, and firm size) and in the wage premiums derived from these endowments, Egyptian women are found to typically receive lower wages than men at the bottom of the wage distribution but outperform men at the top in some years, especially in the public sector (Figure 4). While men and women appear to be similarly endowed with market-valued characteristics, men consistently receive higher premiums for their endowments across the entire wage distribution in both the public and private sectors.

In the private sector, the observed differences in men's and women's endowments, including their occupation choice, explain little of the wage gap, with nearly all the wage gap attributable to the differentials in returns to these endowments. In the public sector, the role of endowments (other than occupation) in explaining the wage gap increases at higher wage deciles in recent years, while the returns to endowments remain the primary driver of wage differences across most of the distribution.

Policy recommendations

Building on the evidence presented, several recommendations can be drawn to address the structural and normative barriers to achieving gender equality in Egypt's labor market.

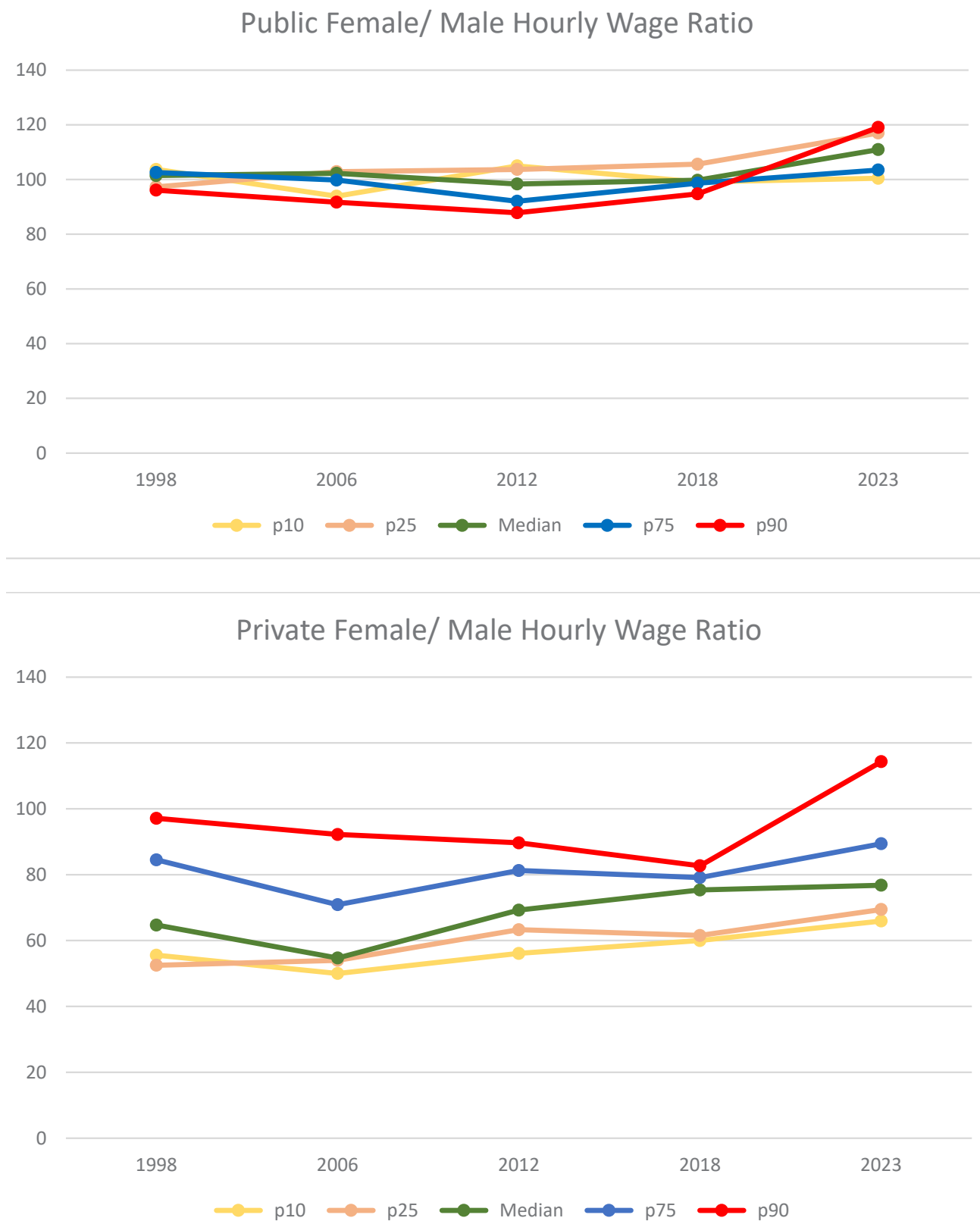
Promoting occupational integration and diversity should take priority, with targeted training programs and mentorship initiatives to equip women with skills for high-paying sectors. Anti-discrimination policies must be strengthened to ensure women have equal access to diverse occupations, especially at the top and especially in large firms and male-dominated industries.

Addressing the gender work-experience gap is critical. Policies to support work-life balance, such as improved maternity leave and affordable childcare services, will help women maintain continuous employment and better balance family responsibilities. Additionally, continued investment in women's education, particularly in STEM fields, is necessary for long-term progress. Incentives like scholarships to bolster merit-based admission to elite schools and guidance into high-growth disciplines can support this shift, while leadership development programs will prepare women for roles that can close the gender wage gap in top positions.

Systemic labor market reforms are needed to increase women's economic participation and facilitate their entry into higher-paying leadership roles. Promoting flexible work arrangements, such as remote work and job-sharing, can help break down barriers for women, particularly those with caretaker responsibilities. Improving technology infrastructure and internet connectivity can also enhance flexibility and open up more opportunities for remote and digital work. To reduce structural barriers, investing in safer, more reliable public transportation and increasing access to childcare services is important. Expanding these services will support working mothers and reduce constraints on their labor market participation.



Figure 4. Female-Male wage ratios across the distribution, hourly real wages, by sector 1998-2023



Source: Authors based on ELMPS 1998-2023



In the public sector, preserving employment in education and health services is important, as these sectors have historically provided decent work opportunities for women. Despite trends in public-sector downsizing, maintaining such roles can help ensure women retain stable and fair employment options.

Finally, combatting workplace and societal biases is another essential area for change. Launching awareness campaigns about gender biases and implementing equal opportunity practices in hiring and promotion processes will help create a more equitable work environment. Challenging traditional gender roles will promote equal opportunities for women across all sectors. Media campaigns and grassroots efforts can shift public perceptions and encourage women's participation in previously male-dominated fields.

In sum, our findings underscore the need for continued policy dialogue and interventions to address occupational segregation, enhance women's economic participation, and promote fair compensation across all sectors. Successful occupational integration could have profound impacts on individual economic outcomes, as well as on overall economic productivity through improved talent allocation and complementarity of different types of labor (Hsieh et al. 2019). Making a headway on these issues is essential for sustaining Egypt's economic development and social progress.

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