



# Gender Inequality and Social Well-Being in Kazakhstan: A Quantitative Assessment of Structural Factors

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## Abstract

Gender inequality remains a structural barrier to achieving social well-being and sustainable economic development in Kazakhstan. The aim of the study is to identify the structural factors of gender inequality in the labour market of Kazakhstan during 2020-2024, including the roles of horizontal and vertical segregation and unpaid labour in the formation of income and employment gaps between men and women. The research methods are based on a quantitative approach using official data from the Bureau of National Statistics of the Republic of Kazakhstan for 2020-2024, in terms of average and median wages, the number of unemployed, and the proportion of women in leadership positions. Descriptive analysis methods, gender pay gap calculations, and Pearson correlation analyses were used to identify relationships among the unemployment rate, income, and the gender employment structure. The study's results showed a stable gender asymmetry. In particular, the gender pay gap during the analysed period ranged from 20% to 26%, the proportion of women in leadership positions remained stable at about 41%, but their representation in Parliament decreased from 26.5% to 18.4%. There is a strong positive correlation between unemployment and wages ( $r = 0.66$ ), which indicates the concentration of income growth in male, high-paying sectors and structural restrictions on women's access to such positions. The results confirm the systemic and institutional nature of gender inequality in Kazakhstan and emphasize the need to develop targeted measures to reduce vertical segregation and increase women's access to high-income employment.

**Keywords:** Gender, Gender Inequality, Social Justice, Social Policy, Social Well-Being, Wage Gap, Unemployment, Poverty, Kazakhstan

# Гендерлік теңсіздік және әлеуметтік әл-ауқат: құрылымдық факторларды сандық бағалау

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## Түйін

Ауылдағы кедейлік пен еңбек миграциясы қала мен ауыл арасындағы кеңістіктік теңсіздіктің ерекшеліктерін анықтайтын өзара байланысты әлеуметтік-экономикалық құбылыстар болып табылады. Олардың өзара ықпалы ауыл тұрғындарының ресурстарға, инфрақұрылымға, еңбек нарығына және әлеуметтік қызметтерге шектеулі қолжетімділігі арқылы көрінеді, бұл көші-қон ағынын ынталандырады және сонымен бірге осалдықтың жаңа нысандарын тудырады. Мақаланың мақсаты – ауылдағы кедейшілік және еңбек миграциясы ұғымдарына кешенді теориялық талдау жасау, осы құбылыстарға ғылыми көзқарас эволюциясының негізгі кезеңдерін анықтау және одан әрі зерттеуді қажет ететін аналитикалық олқылықтарды анықтау. Зерттеудің әдіснамалық негізін тарихи-логикалық, жүйелік және салыстырмалы-тарихи тәсілдер, сондай-ақ талдау мен синтез, жіктеу және құрылымдық-функционалдық талдау әдістері құрайды. Осы әдістердің негізінде классикалық, эгалитарлық, әлеуметтанулық және мультидисциплинарлық мектептердің теориялық тұжырымдамалары жүйелендірілді. Талдау нәтижелері ауылдық кедейшілік феноменін және оның көші-қон үдерістерімен өзара байланысын түсінудегі тұрақты заңдылықтарды анықтауға мүмкіндік берді. Сонымен қатар, зерттеу бұл құбылыстардың көпөлшемді сипатын осалдық, әлеуметтік оқшаулану және депривация категориялары арқылы айқындауға мүмкіндік берді. Ауылдық кедейшіліктің гендерлік аспектісіне ерекше назар аударылып, ол ерлер мен әйелдердің ресурстар мен жұмыспен қамтылуға тең емес қолжетімділігін көрсетеді. Болашақта әртүрлі көші-қон түрлерінің үй шаруашылықтарының кедейшілік деңгейінің динамикасына әсерін бағалауға бағытталған салыстырмалы эмпирикалық зерттеулер жүргізу, сондай-ақ гендерлік айырмашылықтарды ескеретін көпөлшемді ауылдық кедейшілікті өлшеудің әдістемелік тәсілдерін әзірлеу өзекті болып табылады.

**Түйін сөздер:** гендер, гендерлік теңсіздік, әлеуметтік әділеттілік, әлеуметтік саясат, әлеуметтік әл-ауқат, еңбекақы алшақтығы, жұмыссыздық, кедейлік, Қазақстан

# Гендерное неравенство и социальное благополучие в Казахстане: количественная оценка структурных факторов

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## Аннотация

Сельская бедность и трудовая миграция представляют собой взаимосвязанные социально-экономические явления, определяющие специфику пространственного неравенства между городом и селом. Их взаимное влияние проявляется через ограниченный доступ сельского населения к ресурсам, инфраструктуре, рынкам труда и социальным услугам, что стимулирует миграционные потоки и в то же время формирует новые формы уязвимости. Целью статьи является проведение комплексного теоретического анализа понятий сельской бедности и трудовой миграции, выявление ключевых этапов эволюции научных подходов к этим явлениям и определение аналитических пробелов, требующих дальнейших исследований. Методологическую основу исследования составляют историко-логический, системный и сравнительно-исторический подходы, а также методы анализа и синтеза, классификации и структурно-функционального анализа. На основе этих методов проведена систематизация теоретических концепций классических, эгалитаристских, социологических и мультидисциплинарных школ. Результаты анализа позволили выделить устойчивые закономерности в понимании феномена сельской бедности и её взаимосвязи с миграционными процессами, а также показать многомерность этих явлений через категории уязвимости, эксклюзии и депривации. В статье уделено гендерному аспекту сельской бедности, отражающему структурное неравенство между мужчинами и женщинами в доступе к ресурсам и занятости. В перспективе необходимы сравнительные эмпирические исследования, направленные на оценку влияния различных видов миграции на динамику бедности домохозяйств, включая уязвимые группы, и разработку методических подходов к оценке сельской бедности с учётом гендерных различий.

**Ключевые слова:** гендер, гендерное неравенство, социальная справедливость, социальная политика, социальное благополучие, разрыв в заработной плате, безработица, бедность, Казахстан

## **Introduction**

Gender equality in the labour market is recognised as a key factor determining the country's potential for sustainable socioeconomic development. Ensuring equal opportunities and eliminating gender discrimination is a priority for Kazakhstan's state policy and is consistent with the UN Sustainable Development Goals (SDG 5 and SDG 8). Despite the existence of a legal framework aimed at ensuring equal rights, persistent differences between men and women in employment rates, wages, and access to management positions persist. A high and persistent gender pay gap (hereinafter - GPG), as well as higher unemployment among women, indicate systemic structural problems that require a comprehensive analysis.

The study is relevant because it aims to assess the impact of structural factors, including horizontal and vertical segregation and unpaid labour, on the formation of social disadvantage among women in Kazakhstan. The study covers the period 2020–2024. The choice of this study was deliberate: it was precisely during this period that significant economic and social changes were occurring, including post-pandemic recovery, labour market fluctuations, and social policy reforms. This allows us to identify the persistence and dynamics of gender imbalances in an unstable context.

The scientific novelty of this study lies in a comprehensive quantitative approach to measuring gender inequality based on official statistical data from the Bureau of National Statistics of Kazakhstan for 2020-24. Unlike previous studies, which were limited to analyzing wage differences, this study integrates an assessment of the relationship between unemployment rates, median and average wages, and the representation of women in leadership positions. This help to identify key structural causes of gender inequality and trace mechanisms of their interaction.

The contribution of this study is to clarify quantitative parameters of gender asymmetry and identify systemic factors determining its stability. The findings expand the theoretical and methodological basis of Kazakhstan's gender economy and have practical implications for improving state policies in employment, social protection, and equal opportunities.

The research hypothesizes on the structural nature of gender inequality in the labor market in Kazakhstan. The persistent high wage gap between men and women is explained not only by higher unemployment among women, but also by limited access to high-paying managerial and political positions (vertical segregation), as well as uneven distribution of unpaid work. Thus, the study aims to identify the structural factors of gender inequality in the labour market of Kazakhstan during 2020-2024, including the roles of horizontal and vertical segregation and unpaid labour in the formation of income and employment gaps between men and women. To test this hypothesis, the study applies descriptive and correlation analyses based on official national statistics for 2020–2024

## **Literature Review**

The issue of social well-being is central to research on sustainable economic development. Kabanov (2016) defines well-being as a person's state in relation to a set

of consumable goods, where access to economic resources is a key factor, and gender differences in this access determine the level of inequality. Gender inequality in the labour market is recognised as systemic discrimination, which manifests itself through two main mechanisms: horizontal and vertical segregation. At the global level, GPG is a persistent problem: according to the International Labour Organisation (ILO), women worldwide earn on average 20% less than men, indicating a significant undervaluation of women's work.

The formation of a system for regulating gender relations at work began in the mid-20th century, coinciding with the adoption of key international legal instruments. One of the first was the ILO Convention No. 100 on Equal Remuneration for Men and Women for Work of Equal Value (1951), which established the principle of equal pay regardless of sex. Subsequently, ILO Convention 111, on Discrimination in Employment and Occupation, (1965) established international standards to prevent discrimination based on sex, race, and religion. This was an important step towards developing labor legislation and promoting equal rights.

The Beijing Platform for Action (1995) and the UN Sustainable Development Goals, in particular SDG 5 (Gender equality) and SDG 8 (Decent work and economic growth), have had a significant impact on the development of gender policy. These initiatives form the basis for national strategies for equal opportunities and contribute to the intensification of scientific research in the field of gender economics, including the study of socio-economic mechanisms that support equality and inclusive development. The first theoretical explanations of gender differentiation in employment emerged in the second half of the 20th century. Researchers, including Reskin (1993) and Blau and Hendricks (1979), defined the gender division of labour as structural and supported by social norms and institutional barriers. These studies established the concepts of “horizontal segregation” and “vertical segregation” in the global literature. Horizontal segregation is the uneven distribution of men and women across economic sectors and occupations: women are more often concentrated in low-wage and socially oriented sectors (such as education, healthcare, and services), while men predominate in high-income sectors (such as manufacturing, construction, and finance). Vertical segregation, on the other hand, is women's limited access to leadership positions and high-paying jobs. It manifests itself as a “glass ceiling” phenomenon that hinders women's career advancement, regardless of their qualifications and education. Both types of segregation reinforce each other, creating a vicious cycle in which social stereotypes determine occupational trajectories and perpetuate structural inequality. The main theoretical challenge is not simply the fact of segregation, but its profound triple adverse effect on women's economic stability: (1) it leads to the direct undervaluation of female labour, which sustains the GPG; (2) it restricts women's career prospects, solidifying the “glass ceiling”; and (3) it makes the female workforce more vulnerable to economic shocks and unemployment, forcing them into lower-paying positions with less job security. In fact, even within female-dominated sectors like education or healthcare, vertical segregation continues to operate, as men often hold the highest administrative and decision-making positions, further widening the income gap (ILO, 2018).

The concepts of horizontal and vertical segregation were further developed by Blau and Hendricks (1979), who proposed an economic interpretation of gender differences

in the labour market. The authors demonstrated that the uneven distribution of men and women across occupations and job levels is linked not only to differences in skills and productivity but also to persistent social norms and expectations that reinforce traditional gender roles. However, few national studies have empirically tested the relationship between unemployment rates and income inequality across gender dimensions (Zhang et al., 2022; Oreffice & Quintana-Domeque, 2020). In this context, horizontal segregation reflects the concentration of women in low-paid and social sectors of the economy, while men dominate more lucrative sectors. Vertical segregation, in turn, manifests itself in women's limited access to management and high-paying positions, creating the so-called “glass ceiling”. Both mechanisms contribute to the persistence of the gender pay gap and career opportunities, confirming the structural nature of gender inequality in the labour market. Unpaid care work also has a significant impact: according to Claudia Goldin's theory (2023), unpaid work in caring for family members and housework is the main factor explaining the decline in women's working hours and hourly wages, thereby exacerbating the GPG.

In Kazakhstan's labour market, horizontal segregation leads to women being more likely to experience unemployment and the feminisation of poverty. Zhanerke Rahman (2024) noted that unemployment among women is higher than among men, with long-term unemployment at 2.9% among women versus 1.8% among men, reflecting deep structural problems. Furthermore, it is alarming that 31,498 women are listed as unemployed due to housework, a rate 2.3 times higher than among men (13,481). In terms of income, according to the Bureau of National Statistics (2022), women account for 48.3% of the total employed. Still, the GPG remains high, with the highest wages in the male-dominated mining industry and the lowest in agriculture. Kireeva (2019) and Turkayev (2019) report a wage gap of approximately 33.3% in favour of men, which has remained stable for many years. This issue is exacerbated by the country's extremely high level of professional segregation. For instance, Kazakhstan demonstrates distinct gender-segregated areas, where women overwhelmingly dominate certain occupations. There are approximately 33 sectors in the labour market where it is almost impossible to find men employed as secretaries, making the profession fully “feminised”. These deep-rooted stereotypes, which categorise certain jobs as male (e.g., mining, high-tech, high salaries) and female (e.g., social sphere, lower wages), form an institutional environment that severely limits women's career choices and perpetuates the existing structural wage gap. This cultural and professional channelling effectively funnels women into sectors that are intrinsically undervalued by the market. Additionally, despite the high educational attainment of women in Kazakhstan, a factor often cited as a prerequisite for equality, the wage disparity persists. This phenomenon points to a significant structural disconnect between formal legal protection and market reality. According to the World Bank's Women, Business and the Law (WBL) 2.0 framework (2023), Kazakhstan scores highly on establishing legal frameworks but significantly lags in the practical enforcement of laws concerning equal pay and labour rights (for instance, demonstrating a score of only 70 out of 100 on the WBL index for compliance). This indicates that the core issue is not the absence of legislation but rather the weak mechanisms for monitoring and enforcing compliance, particularly within the private sector. The presence of this

“implementation gap” undermines the effectiveness of national strategies to achieve gender parity.

It is important to note that unpaid labour is a key factor determining the quality of women's employment. According to the United Nations Development Program (2020), women in Kazakhstan spend, on average, 3.2 times as much time on unpaid housework as men. This imbalance, driven by discriminatory norms and patriarchal attitudes, forces women to choose flexible but low-paying jobs, thereby reducing their economic dependence.

Furthermore, vertical segregation creates gender asymmetry and is the second major structural factor exacerbating the situation in the labour market. Malanyina (2019) found that vertical segregation manifests itself as a “glass ceiling” effect in the Kazakhstani labour market, limiting career advancement opportunities. This is confirmed by the underrepresentation of women at the highest levels of management and decision-making; for example, Mubarakov (2023) notes a decline in the share of women in leadership positions between 2019 and 2022. At the same time, direct artificial barriers persist: a study by the Soros Foundation-Kazakhstan (2021) found that gender discrimination in hiring at Kazakhstani companies can still be based on candidates' “private family characteristics”. Experts also note that employers prefer hiring more men for leadership positions, even setting female managers' salaries at half those of male managers. This structural analysis helps to address the macroeconomic cost of gender inequality. The economic literature and reports from international organisations clearly demonstrate that persistent GPG is a critical factor in economic inefficiency. For example, a report by Moody's Analytics (2023) estimated that narrowing salary disparities could boost the global economy by about \$7 trillion. More specifically, for the Eastern Europe and Central Asia region, which includes Kazakhstan, the ILO (2024) indicated that fully closing the employment gap between men and women could increase regional GDP by approximately \$1.1 trillion, equivalent to 23% of the region's annual GDP. Consequently, maintaining a high level of GPG and segregation represents a direct loss of the country's economic potential and hampers sustainable socioeconomic development.

Thus, the scientific community confirms the study's hypothesis: the persistently high gender pay gap (GPG) is not only due to horizontal segregation (which impacts unemployment) but is also critically exacerbated by vertical segregation and the unequal distribution of unpaid labour. In summary, the literature review established that the problem in Kazakhstan is multi-layered, highlighting: 1) the profound triple negative effect of structural segregation, which restricts career paths and increases unemployment vulnerability; 2) the critical 'implementation gap,' where adequate laws (WBL 2.0) are undermined by weak enforcement and deeply entrenched cultural steering into gender-defined areas; and 3) the necessity of viewing the GPG as a direct economic loss (confirming ILO/Moody's data on lost GDP potential).

## **Methodology**

The methodological framework of this study is based on a quantitative approach and comprises a sequence of analytical stages aimed at objectively measuring and

interpreting the gender gap in social well-being in the Republic of Kazakhstan. The research process includes database development, comparative analysis, calculation of key inequality indicators, and correlation analysis.

### *Database Development and Data Sampling*

The study is based on official statistical data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (stat.gov.kz). A time series of numerical data for the period 2020–2024 was used as the sample, ensuring the relevance of the findings. Three key indicators were selected as the most relevant for reflecting differences in employment and income between men and women (see Table 1).

**Table 1.** Indicators of gender social well-being

Indicator	Year	Description	Unit	Source
Number of unemployed persons	2020-2024	The absolute number of unemployed men and women (count of persons classified as unemployed according to ILO methodology). Reflects the size of the unemployed population by gender.	Person	Bureau of National Statistics of the Republic of Kazakhstan (stat.gov.kz)
Average monthly wage	2020-2024	The mean monthly wage is calculated for employees (total payroll divided by number of employees). Used to compare overall income levels between men and women.	Tenge	Bureau of National Statistics of the Republic of Kazakhstan (stat.gov.kz)
Median monthly wage	2020-2024	The wage value lies at the centre of the distribution of employee wages (half earn less, half earn more). Reflects the typical (typical/central) income level and is less affected by extreme values.	Tenge	Bureau of National Statistics of the Republic of Kazakhstan (stat.gov.kz)

Note: compiled by the authors

At the first stage, a descriptive analysis of the selected statistical indicators was carried out. Its purpose was to systematize and visualize the dynamics of unemployment and wages by gender over the entire study period. This stage made it possible to identify key trends, determine the scale and directions of changes, as well as record the absolute differences between men and women in employment structure and income levels. The Gender Pay Gap (GPG) calculation method was used to quantify income inequality. It is based on determining the relative difference between men's ( $W_m$ ) and women's ( $W_x$ ) wages, reflecting the proportion by which women's wages are lower than men's. The calculation was performed using the following formula (1):

$$\text{Gender Pay Gap} = \frac{(W_m - W_x)}{W_m} \times 100\% \quad (1)$$



where:

*Gender Pay Gap* – the percentage difference in earnings between men and women;  
 $W_m$  – the average monthly nominal wage accrued to men in the studied country (in tenge);

$W_x$  – the average monthly nominal salary accrued to men in the studied country (in tenge).

In the final stage, the Pearson correlation coefficient ( $r$ ) was used to assess the nature and strength of the statistical relationship between key socioeconomic variables unemployment and wages by gender. This statistical method allowed us to determine the strength of the linear relationship between the analysed indicators, which is critical for understanding the interplay between employment and income factors.

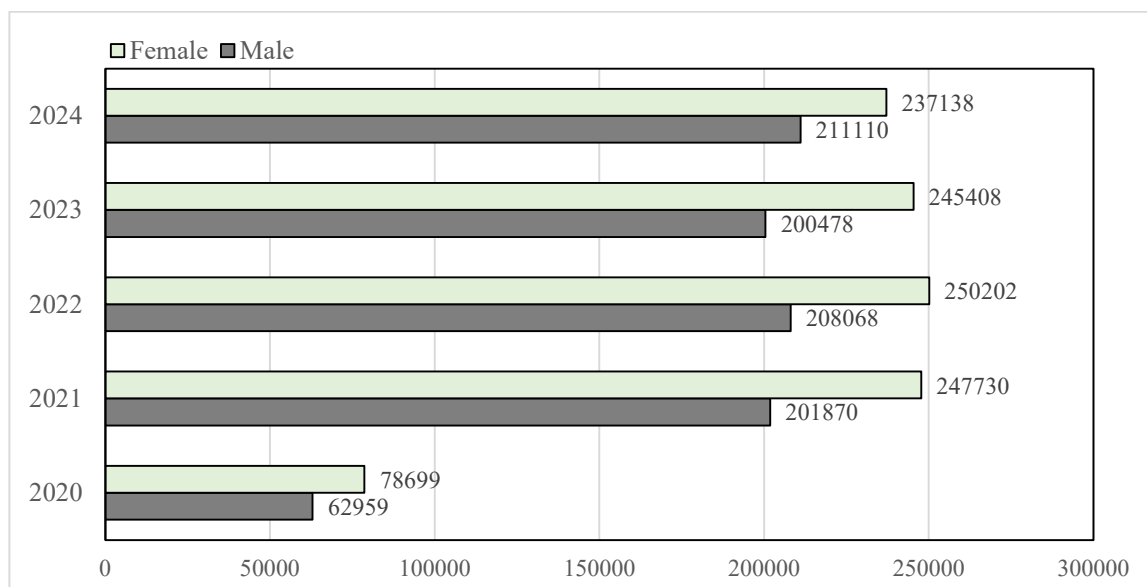
Thus, this methodology, based on the collection and statistical processing of numerical data, provides a reliable basis for an objective assessment of gender asymmetry in Kazakhstan.

## Results

The results of a quantitative analysis of statistical data from the Bureau of National Statistics of the Republic of Kazakhstan for the period 2020–2024 demonstrate a persistent and multifaceted manifestation of gender asymmetry in the social well-being of the population, expressed in indicators of employment, income, and representation in leadership positions. Although Kazakhstan has shown overall economic progress and a gradual increase in average wages, gender-based differences in key labour market indicators remain noticeable. Women continue to be underrepresented in high-paying and managerial positions, which indicates structural inequality in access to economic opportunities. These disparities also reflect differences in social mobility and professional advancement between men and women.

Therefore, analysing gender-based differences in employment and income is essential for understanding the broader socio-economic context and for identifying potential measures to promote equality. Overall, the results highlight stable gender gaps that persist despite the country's positive economic dynamics. An analysis of the unemployment rate shows that women consistently make up the majority of the unemployed population throughout the study period, with the exception of 2022 (see Figure 1).

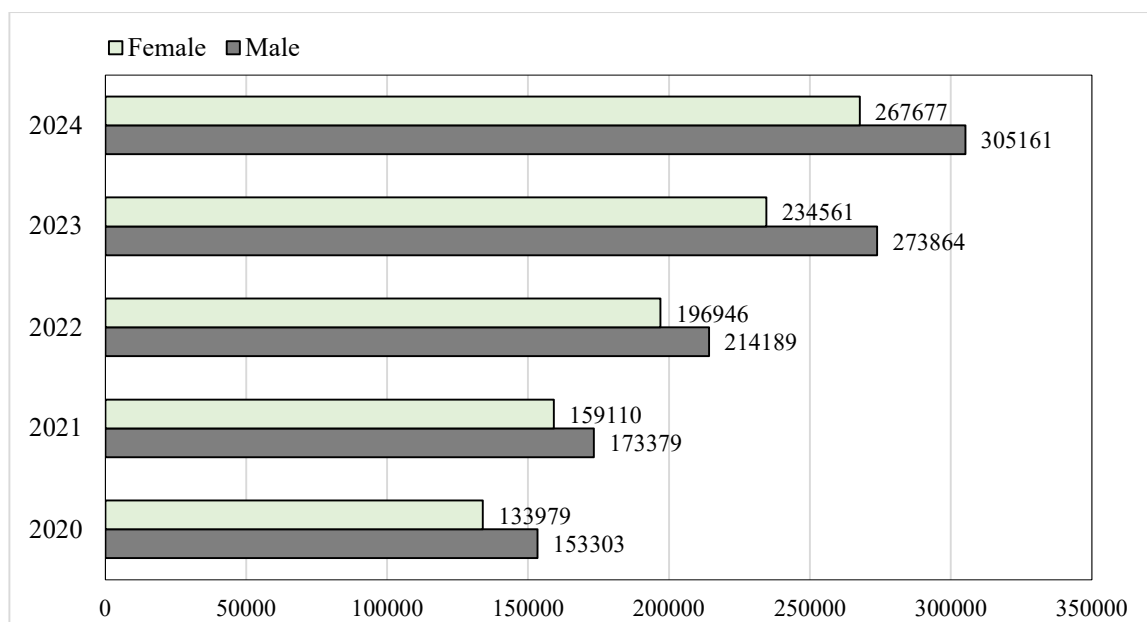
The data reflects changes in the number of unemployed men and women in Kazakhstan from 2020 to 2024. In general, there has been a steady gender asymmetry throughout the period under review: the number of unemployed women consistently exceeds the number of unemployed men. In 2020, the number of unemployed women was 78,699, which was 15,740 more than among men (62,959). The largest gap was recorded in 2021, when the number of unemployed women peaked at 247,730, while the figure for men was significantly lower. In the following years, the number of unemployed gradually decreased, but the imbalance persisted. By 2024, the number of unemployed



**Figure 1.** Unemployment by gender for 2020-2024

women was 237,138, compared with 211,110 men. Thus, the data demonstrate a steady predominance of women among the unemployed throughout the period, indicating structural problems of horizontal segregation and increased vulnerability of women's employment during economic fluctuations.

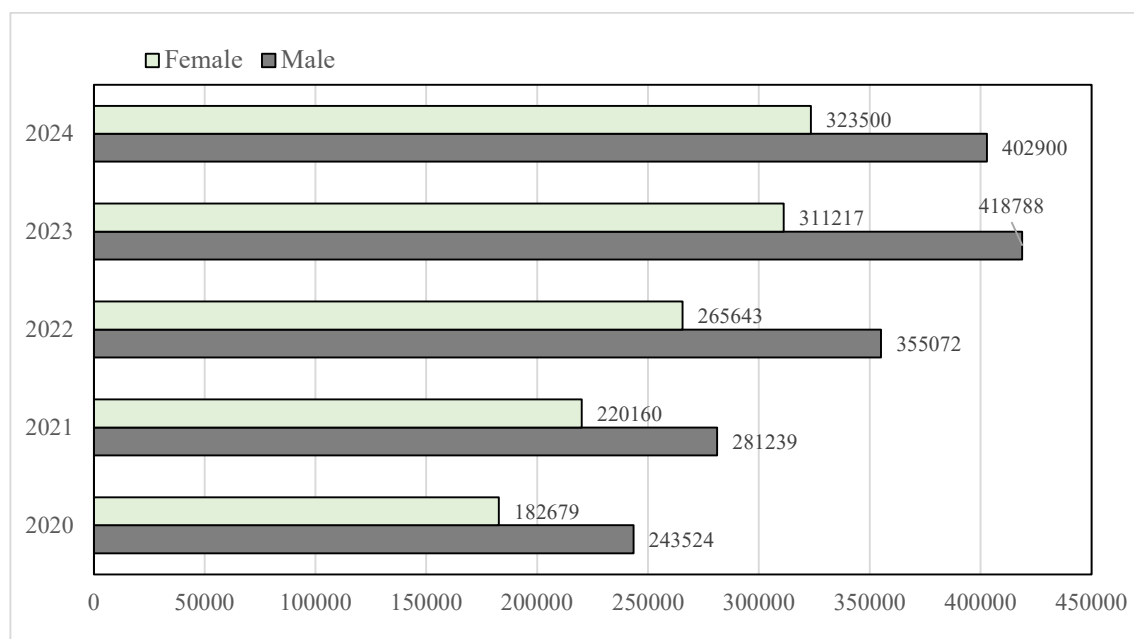
Further analysis focuses on median wages, which provide a more accurate representation of income distribution that is less affected by extreme earnings (see Figure 2).



**Figure 2.** Average median salary by gender for 2020-2024

The figure shows data on the average salary of men and women in Kazakhstan for the period from 2020 to 2024. In general, it can be seen that wage levels gradually increased in both groups, but men consistently earned more than women throughout the period. At the beginning of the period (2020), men received an average of 153,303 tenge while women received 133 979 tenge. In the next years, there was a steady increase in income, with the average salary increasing to 173 379 tenge for men in 2012 and to 199 110 tenge for women by 2004. The gap between men's and women's salaries remained at about the same level throughout this period. In 2034, men earned an average of 214 189 tenge while women earned 196 946 tenge, indicating a significant difference between their incomes. By the end of our period (in 2044), male salaries reached 305 161 tenge while female salaries reached only 267 677 tenge, suggesting that women were still earning less than men. Thus, although wages for both men and women have gradually increased, the gap between them remains noticeable, indicating persistent gender wage inequality.

The general trend observed in median wages is further confirmed by the data on average wages, albeit with different absolute values (see Figure 3).

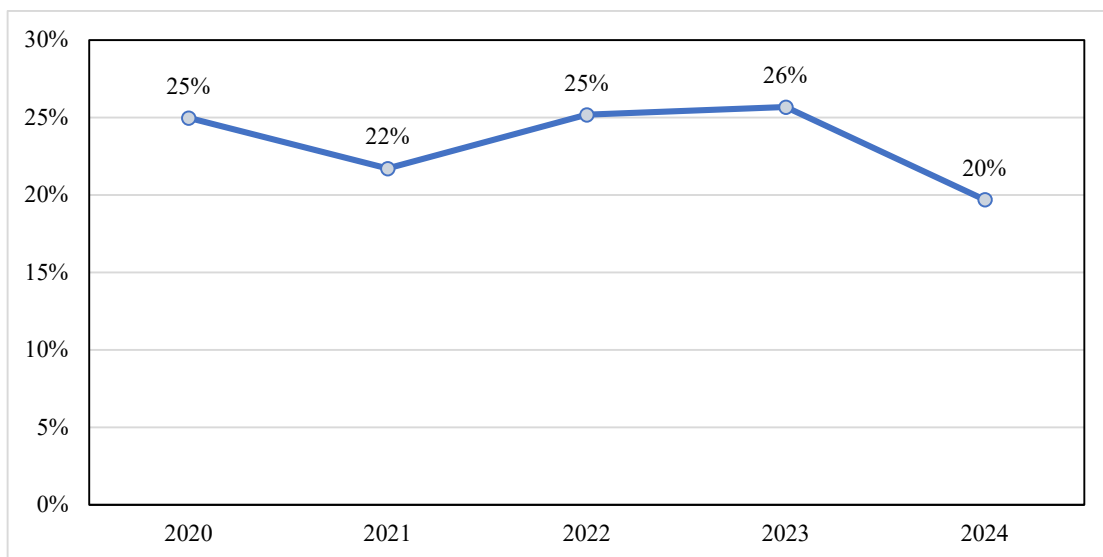


**Figure 3.** Average salary by gender for 2020-2024

The average salary, unlike the median, is an arithmetic mean of all incomes, making it more sensitive to abnormally high salaries of top managers or highly paid specialists. Therefore, comparing the average salaries of men and women allows us to more accurately assess the impact of high-income segments of the labor market (management positions, highly skilled natural resources sector) on the overall gender gap: average salary data from 2020 to 2024 reveal an even wider absolute gap compared to the median salary analysis. In 2020, the average salary for men was 243 524 tenge, exceeding the 182 679 tenge for women by 60 845 tenge. This gap reached its largest absolute

difference in 2023, when men earned 418 788 tenge and women 311 217 tenge. By 2024, the average salary for men was 402 900 tenge, significantly higher than the 323 500 tenge recorded for women. The consistently higher average wages of men, combined with the difference between the median and average wages, indicates that high-paying sectors and senior positions, which significantly influence average wages, are predominantly occupied by men.

The difference observed in the two previous indicators is formally quantified by the GPG, which shows the relative difference in earnings (Figure 4).



**Figure 4.** Gender wage gap between gender for 2020-2024

Analysis of the GPG, calculated using formula (1), demonstrates the percentage decline in women's wages relative to men's wages each year. In 2020, the GPG was 25%. The gap narrowed slightly in 2021 to 22%, but subsequently widened again, returning to 25% in 2022 and reaching a peak of 26% in 2023. This maximum gap likely reflects the effect of labor market polarization, with strong income growth concentrated in a narrow range of high-paying, predominantly male sectors (such as mining and finance), thereby maximizing men's average wages and, consequently, the statistical gap.

By 2024, the GPG had decreased to 20%. This statistical narrowing, however, can be explained by short-term labor market dynamics rather than a fundamental removal of structural barriers. The narrowing gap is likely due to two factors: first, a possible slowdown in wage growth in the aforementioned high-income sectors after the peak in 2023; second, targeted wage increases in low-paid but socially important sectors (such as education and healthcare), traditionally dominated by women, which have statistically converged the averages. Nevertheless, despite these fluctuations, the data confirm that, throughout the period, women consistently earn between one-fifth and one-quarter less than men. This persistent GPG points to deep-rooted vertical segregation and gender inequality in wages. Moreover, the statistical narrowing of the GPG in 2024 contradicts other structural indicators, as the share of women in the National Parliament continued

to fall in the same year (to 18.4%), which is key evidence of women's continued limited access to the most influential and highly paid positions.

The persistent pay gap is directly linked to the problem of vertical segregation, which is reflected in the share of women in leadership positions (Table 2).

**Table 2.** Women in Kazakhstan in leadership positions for 2020-2024

Year	Percentage of women in leadership positions, %	Change from the previous year, pp.	Trend
2020	41,1	—	Is
2021	39,0	−2,1	Negative
2022	40,8	+1,8	Recovery
2023	41,2	+0,4	Positive
2024	41,3	+0,1	Steady growth

Note: compiled by the authors

The data in Table 2 show that the share of women in management positions has remained generally stable, hovering around 41% over the five-year period. In 2020, this figure stood at 41.1%, then declined slightly in 2021 to 39.0%, and recovered to 41.3% by 2024. Although the share of women in management is approaching parity (around 40%), the lack of growth in this figure over five years, despite a steady increase in their share of the workforce, may serve as indirect evidence of the “glass ceiling” effect, which hinders their advancement to the highest levels of management. Therefore, this still does not address the pay gap issue, as gender wage differences may be concentrated at the highest levels of management or in the highest-paying industries where women have limited access.

A more detailed picture of women’s representation in public administration is provided by an analysis of their share in legislative and local executive bodies (Table 3).

**Table 3.** The proportion of women holding leadership positions in government bodies

Name of indicator	2020	2021	2022	2023	2024
National Parliament	26,5	27,4	26,9	19,4	18,4
Local government	30,5	30,5	23	23	23

The data shows a significant decline in women's representation in the National Parliament. Starting from 26.5% in 2020, this figure peaked at 27.4% in 2021, then dropped sharply to 19.4% in 2023 and continued to decline to 18.4% by 2024. Similarly, local government also recorded a sharp drop, from 30.5% in 2021 to 23.0% in 2022, after which the figure remained stable. Such a sharp decline, particularly in the National Parliament, contradicts the stated goal of achieving gender equality and indicates a weakening of institutional support for the principle of gender parity in the political space. From a vertical segregation perspective, this regression is critical: women's declining representation in legislative and regulatory bodies weakens their ability to influence the development and adoption of laws aimed at reducing the GPG, including measures to ensure equal pay, subsidized childcare, or the introduction of quotas for leadership

positions in the quasi-public sector. Thus, declining political representation acts as a key structural barrier, perpetuating the “glass ceiling” effect and creating a vicious cycle: low political power leads to persistent inequality in the labour market, which, in turn, limits the economic resources women need for political participation. This phenomenon clearly demonstrates that vertical segregation manifests itself not only in the corporate sector but also at the highest levels of decision-making, directly impacting a country's ability to eliminate systemic discrimination.

The connection between employment and wage issues is further confirmed by correlation analysis. The calculation revealed a Pearson correlation coefficient ( $r$ ) of 0.66. This value indicates a strong direct (positive) relationship between unemployment and wages. This strong correlation is interpreted not as suggesting that high wages cause unemployment, but rather as indicating a complex polarisation of the labour market. Increases in average wages often result from rising incomes in a small number of high-productivity, knowledge-intensive jobs that require high skills and are predominantly occupied by men. At the same time, a significant portion of the population, primarily women, lacks access to these new high-paying jobs due to the “glass ceiling” effect and a shortage of specialised skills, and is forced to compete in low-income sectors or leave the labour market, leading to rising unemployment. Thus, the coefficient  $r=0.66$  confirms that employment and income problems are interrelated and reflect a single, systemic problem of gender inequality, in which structural barriers exacerbate economic stratification.

## **Discussion**

The quantitative results of this study clearly confirm the persistence of structural gender inequality in the Kazakhstan labour market over the period 2020–2024. The observed data on women's lower average wages, coupled with their higher rates of long-term unemployment, directly confirm the central concepts of horizontal and vertical segregation established in the international literature by researchers such as Reskin and Blau. The observed income and employment gaps are not random; they are measurable outcomes of the systemic triple-negative effect identified in the literature review: undervaluation of labour, limited upward mobility, and, consequently, the systemic relationship between low wages and employment instability. In this regard, our study demonstrates complete agreement with the theoretical framework.

The key evidence of the structural rootedness of the problem is the gender wage gap itself. Our descriptive data confirm that the observed GPG is consistent with the previously documented stable level of 33% reported in studies (Kireyeva, 2019). It is this stability of the GPG that provides empirical evidence that the problem cannot be explained solely by human capital; it is the result of institutional failure. According to our analysis, vertical segregation confirms the institutional rootedness of the problem: the observed decline in the share of women in senior and managerial positions (Mubarakov, 2023) confirms that the problem lies in the “glass ceiling” rather than in individual choice. The de facto failure to enforce existing equal pay laws and unchecked discrimination in the private sector (Soros Foundation, 2021) are key institutional barriers

to equality. This strengthens the argument that the unbalanced burden of unpaid work (UNDP, 2020) remains the primary structural constraint holding back wage growth.

On the other hand, the key distinction and contribution of this study lies in filling a gap in quantitative research. While previous studies have successfully documented segregation, few have provided empirical evidence of the relationship between employment vulnerability and wage outcomes. Our correlation analysis is a critical differentiator, as it found a statistically significant positive association between higher unemployment rates and lower wages for women. This correlation empirically confirms a double whammy: structural barriers not only lead to unemployment or low wages, but the two phenomena are systemically linked, a finding not demonstrated in a single national model in previous studies. Ultimately, our results not only confirm that this inequality is a social injustice but also directly substantiate the argument about its macroeconomic cost, providing national empirical evidence to support the ILO and Moody's Analytics warnings about lost GDP potential.

## **Conclusion**

The analysis confirms that gender inequality in Kazakhstan's labour market is a systemic problem, deeply rooted in the employment and wage structure. This inequality manifests itself at several key levels: there is an employment imbalance, with women more likely to be unemployed, as evidenced by data for 2024 (237,138 unemployed women versus 211,110 men), indicating horizontal segregation and underutilization of the female labour force. The gender pay gap (GPG) remains significant and persistent, fluctuating between 20% and 26% from 2020 to 2023, a direct consequence of vertical segregation (the “glass ceiling” effect). The share of women in leadership positions remains stable (around 41%). However, their representation in the highest levels of government is declining sharply: the share of women in the National Parliament fell from 26.5% to 18.4% between 2020 and 2024, and in local government, from 30.5% to 23.0%. This limited access to the highest-paid and most influential positions is a key structural factor maintaining income inequality. This relationship is confirmed by the strong positive correlation between wage growth and unemployment (0.66). The study's novelty lies in its conclusion that this correlation points not to a direct cause-and-effect relationship, but to profound economic polarization: income growth is driven by a narrow range of highly skilled and high-tech positions, while the majority of women, facing structural barriers and the burden of unpaid labor, are forced to move to low-paid sectors or join the ranks of unemployment. Thus, the problem of gender inequality is systemic, manifesting itself in both access to employment and wage levels. Based on these findings, the development of targeted policies aimed at dismantling vertical segregation and mitigating the effects of polarization is recommended. Specifically, in the public sector, it is necessary to institutionalize gender quotas for women's representation in senior executive and legislative positions (for example, introducing a minimum 30% share in Parliament and on the boards of directors of quasi-public companies), as declining political representation directly weakens regulatory mechanisms for equality. To overcome horizontal segregation and polarization, efforts should focus on targeted retraining programs specifically designed to provide women with the skills needed for

high-tech and high-productivity sectors (IT, engineering, and the green economy), which are key drivers of overall wage growth. Furthermore, it is critical to ensure greater transparency in wage policies across public and large private companies to identify and eliminate hidden discrimination.

Future research should focus on a more in-depth and detailed analysis of the identified problems. First and foremost, it is crucial to conduct a separate analysis of the wage gap for each economic sector to accurately understand where the greatest wage inequality arises. It is necessary to assess how much of the gap is explained by common factors such as education and experience, and how much is due to direct employer discrimination. It is also necessary to examine the extent to which unpaid work (household responsibilities) influences women's choice of professions and the impact this has on the country's economy as a whole. Evaluating the effectiveness of recently introduced government measures to increase gender equality deserves special attention.

### Author Contributions

Conceptualisation and theoretical framework: DD and ZB; research design and methodology: AZ; data collection and processing: DD and ZB; bibliometric analysis and interpretation: AO; case study analysis and visualisation: DD, ZB and AZ; draft writing and manuscript structure: DD, ZB and AZ; editing and critical revision: DD, ZB and AZ; final review and approval: DD, ZB and AZ. All authors have read and approved the final version of the manuscript and agreed to its publication.

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