

RESEARCH ARTICLE

DOI: 10.47703/ejgs.v2i4.82



Women's Access to Quality Employment in Kazakhstan: Institutional, Structural and Spatial Dimensions

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For citation:

Gamidullaeva, L.A. & Anessova A.G. (2025). Women's Access to Quality Employment in Kazakhstan: Institutional, Structural and Spatial Dimensions. Eurasian Journal of Gender Studies, 2(4), 20-37.

Conflict of interest:

author(s) declare that there is no conflict of interest.

Abstract

The article presents a three-stage assessment of women's access to quality employment in Kazakhstan based on macro and microdata for 2013-2023. The methodological basis of the study includes a three-stage analytical approach combining dynamic and index analysis of key indicators of participation and remuneration. The empirical database is based on official data from the Bureau of National Statistics for 2013-2023. The results of the study indicate that the gender gap in the labor market remains stable. The gender pay gap remained in the range of 25-34% for a decade, despite the growth of nominal incomes. Structural analysis revealed a high concentration of women in low- and medium-paid service sectors (education, healthcare, trade) and their critically low representation in capital-intensive and high-income industries (mining, construction, transport). Vertical segregation is manifested in the fact that the proportion of women in managerial positions does not exceed 41%, and in technical and engineering professions – 21%. In 2023, women in the Atyrau region received 399,015 tenge (54% of men's salaries – 738,421 tenge), in Mangystau, 49.6% of men's earnings. At the same time, in low-paid regions (Zhetysu, Zhambyl, North Kazakhstan region), a "low equalisation effect" is observed: the gap is minimal, but with low absolute incomes (women 250-280 thousand tenge). The results confirm that gender inequality is reproduced through institutional gaps, persistent horizontal and vertical segregation and regional polarization. Policy directions are proposed: a gender audit; reducing the "child penalty"; increasing women's participation in STEM and industrial professions; space-oriented measures to develop high-quality female employment.

Keywords: Gender Gap, Quality Employment, Women's Employment, Gender Segregation, Gender Pay Gap, Child Penalty, Regional Differences, Labour Market

SCSTI: 06.71.01

JEL Code: J16, J21, J31, J71

Financial support: The article was carried out with the support of the Committee of Science MSHE RK within the framework of the grant AP22784063 "Development of strategic directions for women's empowerment and access to quality employment in Kazakhstan".

1. INTRODUCTION

Modern transformations of Kazakhstan's socio-economic space underscore the importance of studying the gendered aspects of the labour market. Despite state efforts to institutionalise equal opportunities, women's access to quality employment remains constrained by structural imbalances and persistent gender barriers. In a dynamic economy, gender equality assumes not only a humanitarian but also a socio-economic dimension, directly influencing the sustainability and efficiency of the country's labour force. Recent studies confirm that the stability of women's employment and entrepreneurship in Kazakhstan largely depends on institutional trust and the presence of gender-sensitive regulatory mechanisms (Kireyeva et al., 2025).

The comprehensive assessment of women's opportunities and access to decent work is therefore aimed at identifying both the current situation and the underlying factors that limit the realisation of equality principles. In this study, quality employment is defined as a position that provides fair pay, job stability, professional development, social guarantees, and the ability to combine work and family life. This concept aligns with the Decent Work framework and shifts focus from quantitative employment rates to the qualitative characteristics of jobs. In the gender dimension, it includes analyses of economic activity, industry and occupational structures, hierarchical positions, wage disparities, and career mobility opportunities.

Kazakhstan's current context reflects contradictory dynamics. On the one hand, digitalisation, diversification, and the growth of the knowledge economy are expanding employment opportunities and formal equality measures. On the other hand, the inertia of sectoral and occupational segregation persists: women remain concentrated in low- and middle-paid service sectors, underrepresented in engineering, technical, and managerial roles, and continue to face wage disparities. Thus, institutional changes at the "entry" point into

the labour market have not yet translated into comparable improvements in the structure and quality of employment.

The empirical framework integrates macro- and micro-level data. At the macro level, trends in economic activity, employment, and wages are analysed by gender and region. At the micro level, the focus is on industry and professional segregation, access to management positions, and entrepreneurial leadership. Special attention is paid to regional heterogeneity — the contrast between resource-industrial and agricultural-service regions creates unequal opportunities for women's professional advancement.

The study tests four key hypotheses: (1) structural conditionality of gender gaps through sectoral composition; (2) the influence of institutional context on participation and earnings; (3) inequality across income distribution ("glass ceiling/floor" effects); and (4) spatial embeddedness of barriers, especially in capital-intensive industries.

The purpose of the study is to comprehensively assess women's actual access to quality employment in Kazakhstan and to identify the institutional, structural, and territorial factors that shape gender differences. The introduction thus outlines the conceptual and methodological framework for a three-stage analysis, participation and remuneration, structural features, and spatial disparities that provides a holistic foundation for policies promoting gender-balanced and inclusive employment.

2. LITERATURE REVIEW

Research on women's quality employment focuses on three interrelated areas: institutions (legal and organisational conditions of labour market participation), employment structure (horizontal and vertical segregation, industry/professional differences), and remuneration (gender pay gap, salary dynamics, and career paths). The global literature has consistently shown that formal alignment of rules without institutional enforcement mechanisms and without shifts in

the structure of demand for women's labour has a limited effect. A review of the latest international reports and classic works enables us to develop a conceptual framework for assessing Kazakhstan's realities and to identify the "places of application" of the policy.

On the institutional side, the key indicator is the legal environment. The updated Women, Business and the Law (WBL 2.0) methodology separately measures the "gap between law and implementation" and adds blocks on safety and child care, critical factors of women's participation. The snapshot for Kazakhstan (2024) records an integral score of 75.6/100 with ideal values for mobility, marriage, and assets, but with areas of improvement for "work", "pay", "parenthood" and especially "pensions", which objectively limits the incentives and trajectories of high-quality employment throughout the life cycle (World Bank, 2024). At the same time, the World Economic Forum's report on the global gender gap highlights persistent gaps in economic participation and opportunity, even as educational parity increases, a pattern typical of economies with high occupational segregation and "glass ceilings" (Abu Arqub et al., 2025). The totality of these testimonies confirms the thesis that institutional "rules of the game" and their enforceability are necessary but insufficient for equalising the quality of employment.

The structural literature correlates gap stability with two-dimensional segregation. Horizontal segregation, the concentration of women in "caring" and service industries and vertical segregation, underrepresentation in leadership, engineering, and high-paying positions are seen as the primary channels for maintaining gaps. Theoretically, this is consistent with K's thesis. Goldin discusses the "last chapter" of gender convergence, which posits that institutional and corporate changes in labour organisation are needed to close the remaining gap, flexible scheduling, revisions to bonuses and compensation, and not merely the accumulation of human capital (Goldin, 2014). Sociological studies of discrimination along career paths also highlight the role of

organisational "gates" and promotion procedures, through which differential effects accumulate (Blau & Kahn, 2017; Moreno et al., 2021). Classical econometric reviews show that as human capital levels off, the contribution of industry and professional "composition" to explaining the gender gap increases, while differences in industry structure remain key determinants of the "glass ceiling" (Taparia & Lenka, 2024).

The third major block is the reward. Methods of gender gap decomposition have evolved from the classical Oaxaca–Blinder decomposition into explained and unexplained components to modern quantification and RIF approaches that capture heterogeneity across the earnings distribution and the effects of "glass floors" and "glass walls" (Oaxaca & Sierminska, 2025). Modern panel estimates summarised by the International Labour Organisation confirm that the average global wage gap remains at 20-30% and is characterised by high inertia, especially in capital-intensive and high-yield industries (ILO, 2023). An important mechanism is the "maternity penalty": Empirical data from Denmark show that having a first child is associated with a 20% long-term decline in women's earnings, through employment channels, hours of work, and sector choice (Kleven et al., 2019). This makes caregiving and flexible working arrangements central tools for bridging gaps.

The specifics of resource-based and industrial economies define special contours of inequality. In such economies, high-income segments – mining, transportation, industry, construction - have historically been male, with physical and organisational limitations for women. The result is a combination of high horizontal and vertical segregation, as well as non-production barriers related to infrastructure and employment (Simanavičienė & Bekbossinova, 2025). International reports confirm that without proactive tools such as gender auditing, quotas, and targeted training programs, spontaneous convergence of women's participation in such sectors is impossible.

Recent Kazakh scientific literature has actively addressed institutional factors. The analytical work of A. A. Kireyeva and co-authors shows that the sustainability of women's economic activity and entrepreneurship depends on a combination of legal guarantees, the quality of execution, and institutional trust (Kireyeva & Olzhebayeva, 2023; Kireyeva et al., 2024). At the same time, research on women's entrepreneurship during the COVID-19 pandemic reveals high financial vulnerability, concentration in low-margin sectors, and dependence on local support programs (Bulkhairova et al., 2022). Taken together, these results are consistent with international conclusions that the formal existence of laws, without effective implementation mechanisms, does not ensure equality of opportunity.

The political and economic literature emphasises that the legal indexes (WBL) and the financial participation indexes (WEF) measure different sides of the same problem: the first reflects institutional readiness (inputs), and the second reflects actual results (outcomes). The new versions of Women, Business and the Law address the implementation gap: in many countries, laws are formally in force, but the coverage of actual policies on care, safety, and pay does not exceed 40% of the required level (World Bank, 2024).

Methodological implications for the empirical analysis of Kazakhstan follow directly from this literature. It is necessary to evaluate not only average differences, but also quantile gaps (Meurs et al., 2021), supplementing the classical Oaxaca–Blinder decomposition with industry-specific shift-share estimates to account for structural shifts (Rahimi & Hashemi Nazari, 2021). When analysing the life cycle, it is essential to account for the impact of the "child penalty" (Kleven et al., 2025) and to link WBL institutional indicators (Pay, Parenthood, Pension) to actual outcomes across sectors and regions.

Nevertheless, research gaps remain: insufficient identification of informality, the

absence of panel assessments of regional differences, and limited attention to institutional trust in entrepreneurship. The synthesis of international approaches and local data enables us to construct a "ladder" of policy goals: the elimination of legal gaps (WBL), structural interventions in men's sectors, and the development of women's entrepreneurship beyond microbusinesses.

So, the consensus of the literature boils down to three provisions: (1) without institutional enforcement mechanisms, formal equality cannot be converted into equal career paths; (2) employment structure remains the primary driver of gender inequality; (3) the key life shock is the birth of children, which creates long-term penalties that require a policy of care and flexibility. For Kazakhstan, this means the need to simultaneously reduce legal and structural barriers and strengthen institutional support for women in the economy.

3. METHODOLOGY

The study's logic involves a step-by-step consideration of the key aspects that shape women's access to quality employment in Kazakhstan. A consistent structure has been adopted as the methodological basis, comprising an analysis of key indicators of the gender employment gap, a structural analysis of women's employment by economic sector, and an assessment of territorial differences in access to quality employment.

The stages of the analytical study are systematised and visualised in Figure 1, thereby ensuring the transparency and reproducibility of the presented approach.

Further stages of the research will be described in more detail.

1. Analysis of gender employment gap indicators. The first stage aims to quantify the magnitude and dynamics of gender differences in Kazakhstan's labour market. It compares fundamental macroeconomic indicators: the level of economic activity, the level of employment, and the average salary of men and women. The analysis uses data from the

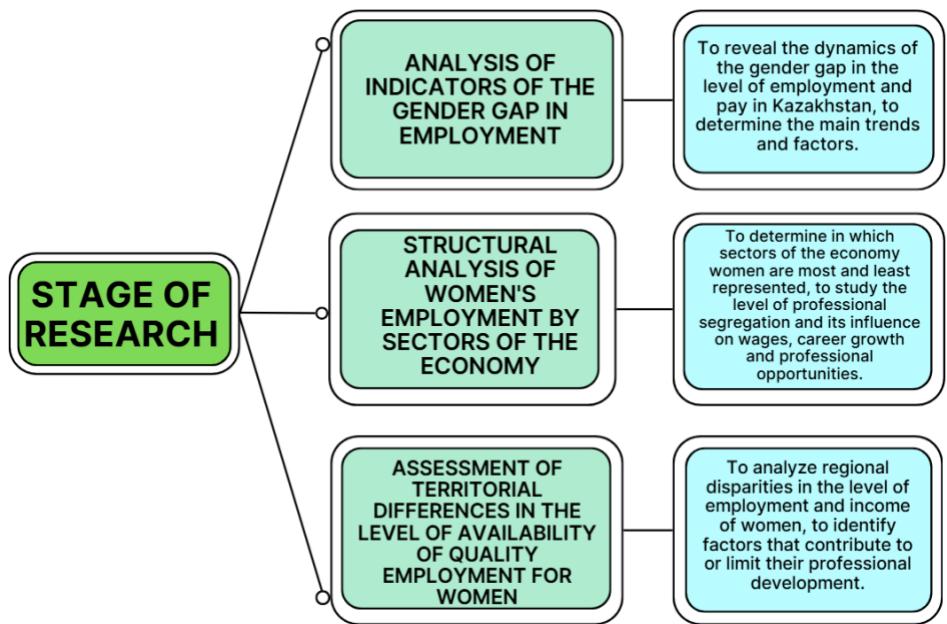


Figure 1. Stages of research

Bureau of National Statistics for 2013-2024, which helps to track long-term trends and identify periods of structural shifts. The key methods of analysis are: dynamic analysis – measurement of temporary changes and identification of stable trends in employment and wages; index method – calculation of relative differences (gender coefficients and gap indices) between men and women;

The result of this stage is to identify the main patterns of gender inequality at the macro level, to determine the extent of the gender gap in employment and wages, and to identify factors that contribute to or limit women's involvement in economic activity.

2. Structural analysis of women's employment by economic sector. At the second stage, a structural and sectoral analysis is conducted, enabling an assessment of the distribution of women by economic activity and the identification of the nature of occupational segregation. The primary focus is on identifying the industries in which women are most and least represented, as well as analysing the ratio of female employment to wages by sector.

The following methods are used for analysis: industry ranking and clustering to identify groups with high, medium and low female participation; Occupational Segregation Index (Duncan and Duncan Index) to measure the degree of horizontal segregation between men and women by economic sector; cross-sectoral comparison of income levels and the share of female employment, which makes it possible to assess the relationship between the distribution structure and wages.

This stage aims to identify stable structural constraints that define the “vertical” and “horizontal” boundaries of women's professional mobility, and to interpret industry differences in the context of institutional and socio-cultural factors. Special attention is paid to feminised industries (education, healthcare, social services) and male sectors (industry, transport, construction, mining), where wage differences are most pronounced.

3. Assessment of territorial differences in the level of access to quality employment. The final stage is devoted to a spatial (regional) analysis, which reveals the territorial patterns of women's labour-market participation and the

extent of their access to quality employment. It is based on a comparison of indicators of economic activity, employment, and wages for women and men across regions of Kazakhstan for 2013–2023.

A comparative inter-regional analysis aimed at identifying spatial disparities in employment and wages has been conducted. At this stage, spatial patterns are also interpreted in relation to the sectoral structure of the regional economy, the level of urbanisation, and institutional opportunities (job accessibility, infrastructure, and employment and entrepreneurship support programs).

Thus, the developed methodological scheme provides a holistic and analytically transparent approach to the study of gender aspects of the labour market in Kazakhstan. It enables the integration of statistical assessment, structural, and spatial analyses into a single system to identify factors that generate inequalities in employment and women's access to economic resources, and to develop practical recommendations for implementing gender-sensitive economic development policies.

4. ANALYSIS AND RESULTS

At the first stage of the analytical study, the focus is on a comprehensive assessment of key indicators of the gender employment gap, which serves as the basis for subsequent structural and spatial analyses of women's position in Kazakhstan's labour market. This

stage examines the dynamics of male and female employment over the past decade, identifying disparities in key socioeconomic parameters, economic activity, employment rates, and the gender pay gap.

Using official data from the Bureau of National Statistics for 2013–2023 enables the identification of both short-term fluctuations driven by macroeconomic and demographic factors and long-term trends in gender differentiation. The calculated indicators levels of activity, employment, and wage disparity, provide objective measures of current gender inequality, its scale, and its evolution. These findings provide a solid empirical foundation for deeper structural and regional analyses and help identify the primary barriers limiting women's access to quality, fairly paid employment.

To objectively assess the extent of gender inequality in the labour market, a detailed quantitative analysis of the dynamics of key indicators of economic activity and employment for women and men in Kazakhstan from 2013 to 2024 was conducted. This approach allows us to identify not only the absolute scale of the gap but also to trace long-term trends reflecting the labour market's response to macroeconomic, demographic, and institutional changes. The results of the analysis are summarised in Table 1, which provides an empirical basis for further interpretation of structural and territorial differences in women's access to quality employment.

TABLE 1. Dynamics of indicators of economic activity and employment by gender in Kazakhstan for 2013–2024, %

Year	Economic activity, women	Economic activity, men	Employment, women	Employment, men	Gender employment gap
2013	66,7	77,3	62,8	73,8	11,0
2014	65,4	70,7	60,3	72,7	12,4
2015	64,1	76	60,5	73,2	12,7
2016	64,1	76,6	60,3	72,8	12,5
2017	63,8	76,2	61,3	72,6	11,3
2018	64,8	75,9	61,2	73,0	11,8
2019	64,6	76,3	60,3	72,2	11,9
2020	63,7	75,5	60,4	72,2	11,8
2021	63,9	75,4	59,8	71,4	11,6

2022	63,3	74,6	60,0	71,0	11,0
2023	63,3	74,1	60,1	70,4	10,3
2024	63,3	73,5	62,8	73,8	11,0

Note: compiled by the authors

The analysis confirms a persistent gap in economic activity and employment between women and men in Kazakhstan over the past decade. Despite minor improvements, disparities in access to formal employment remain structurally entrenched.

In 2023, women's economic activity rate was 63.3%, compared to 74.1% for men a gap of 10.8 percentage points. A similar pattern is observed in employment levels: throughout 2013–2023, the gender employment gap remained around 11–12.7 percentage points, peaking in 2015–2016 (12.7 and 12.5 points). Although recent years show slight convergence, the persistence of this difference

highlights the limited effectiveness of current gender policy measures.

Beyond participation rates, the gender wage gap remains one of the most enduring forms of inequality. Despite overall income growth, women consistently earn less than men, reflecting institutional barriers such as occupational segregation and restricted access to high-paying sectors and managerial positions.

Figure 2 shows the dynamics of wages and the gender gap for 2013-2023, which clearly demonstrates that women consistently earn significantly lower incomes than men.

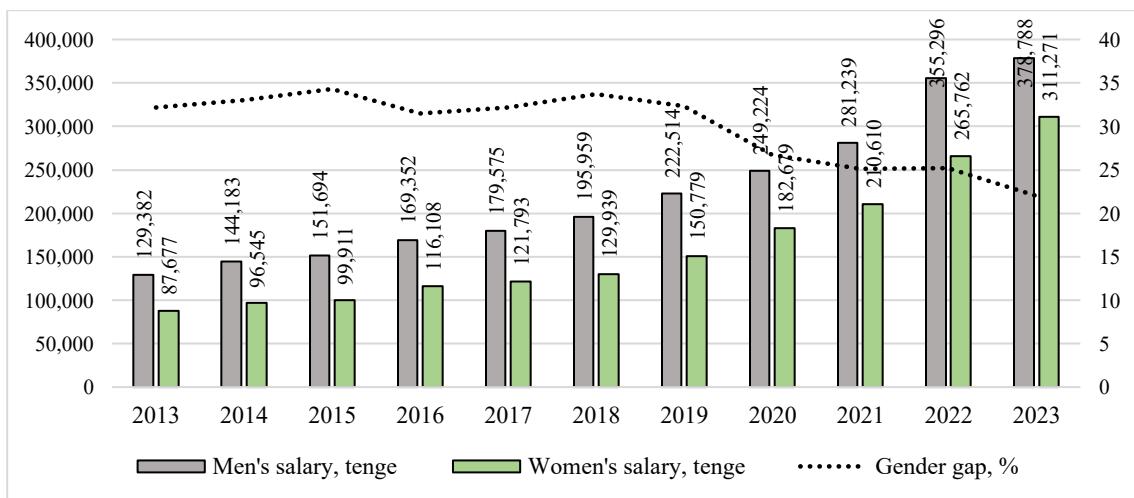


Figure 2. Gender pay gap and average wages by gender in Kazakhstan for 2013-2023

An analysis of the dynamics of average monthly wages for men and women in Kazakhstan for the period 2013-2023 reveals a persistent gender pay gap. Despite the overall increase in incomes for both sexes, men's wages increased from 129,382 tenge to 418,788 tenge over the decade, and for women from 87,677 tenge to 311,217 tenge, the relative gap between average incomes shows practically no pronounced downward trend. In

most years, women received 25-34% less than men, which is confirmed by the corresponding values of the gender pay gap indicator.

It is particularly notable that, despite the accelerated growth in women's nominal salaries relative to men, the absolute income gap persists and periodically widens, particularly during periods of macroeconomic turbulence. These dynamics reflect persistent structural constraints that hinder the expansion

of women's participation in high-paying professional segments, as well as the persistence of vertical and horizontal segregation in the labour market. In addition, the gender gap has been decreasing in recent years, not so much due to a significant increase in women's employment or income, but rather due to stagnation or a moderate decrease in the corresponding indicators for men. Such dynamics indicate the need for a deeper diagnosis of the causes, including a comprehensive analysis of the sectoral and regional structure of the labour market, as well as of factors that limit women's participation in economically active activities.

Taking into account the results of the first stage of the analysis, it is possible not only to determine the scale and dynamics of the gender gap, but also to identify directions for in-depth research within the framework of structural and territorial approaches. The results indicate the need to go beyond the purely quantitative measurement of inequality. A comprehensive understanding of the nature and sustainability of gender imbalances requires an analysis of their institutional, sectoral, and regional foundations. Special attention should be paid to the structure of women's employment across economic sectors, the nature of occupational segregation, and territorial differences in the

availability of high-quality jobs and working conditions.

The second stage of the assessment focuses on the structural analysis of women's employment across economic sectors. At this stage, the primary focus is on identifying the industries in which women are most and least represented, as well as analysing the specifics of their professional distribution. This approach enables the determination of the depth and specifics of horizontal and vertical segregation in the labour market, as well as its consequences for women's employment opportunities, income, and career growth.

The main objective of this stage is to examine how the distribution of women's employment across sectors reflects institutional and social barriers to equal participation in the country's economic life. Of particular importance is the analysis of sectors such as education, health and social services, where traditionally female employment prevails, as well as industry, agriculture, and trade, in which a significant gender gap persists. An analysis of industry structure enables the identification of the sectors with the most pronounced occupational segregation and tracing its impact on wages.

Table 2 shows the proportion of women in economic sectors.

TABLE 2. Proportion of women in economic sectors

Economic sector	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Agriculture, forestry and fisheries	0,46	0,44	0,42	0,42	0,42	0,41	0,40	0,40	0,40	0,39	0,39
Industry	0,32	0,31	0,31	0,33	0,31	0,31	0,31	0,31	0,31	0,23	0,22
Mining and quarrying	0,22	0,20	0,19	0,20	0,20	0,19	0,19	0,21	0,20	0,18	0,17
Manufacturing industry	0,37	0,37	0,37	0,39	0,37	0,35	0,35	0,36	0,36	0,35	0,35
Electricity, gas, steam and air conditioning	0,26	0,30	0,29	0,32	0,30	0,33	0,31	0,31	0,29	0,33	0,30
Water supply; sewerage system, control over waste	0,33	0,38	0,36	0,38	0,34	0,37	0,36	0,36	0,38	0,34	0,34

collection and distribution											
Construction	0,27	0,21	0,20	0,20	0,22	0,24	0,23	0,23	0,21	0,23	0,23
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,59	0,60	0,60	0,59	0,59	0,59	0,57	0,57	0,56	0,56	0,55
Transportation and warehousing	0,22	0,20	0,19	0,19	0,21	0,31	0,30	0,32	0,30	0,28	0,27
Accommodation and catering services	0,75	0,73	0,71	0,73	0,69	0,70	0,69	0,63	0,66	0,65	0,63
Information and communication	0,46	0,46	0,45	0,46	0,43	0,45	0,40	0,42	0,43	0,42	0,40
Financial and insurance activities	0,59	0,59	0,60	0,59	0,58	0,80	0,77	0,78	0,76	0,67	0,67
Real estate transactions	0,51	0,52	0,53	0,50	0,51	0,33	0,32	0,32	0,37	0,36	0,36
Professional, scientific and technical activities	0,49	0,50	0,52	0,52	0,49	0,45	0,43	0,43	0,46	0,48	0,49
Administrative and support services activities	0,44	0,41	0,42	0,37	0,35	0,37	0,41	0,40	0,40	0,42	0,43
Public administration and defense; compulsory social security	0,44	0,39	0,39	0,39	0,39	0,39	0,41	0,36	0,36	0,36	0,36
Education	0,72	0,74	0,75	0,74	0,74	0,73	0,73	0,80	0,71	0,73	0,74
Health and social services	0,74	0,75	0,76	0,74	0,74	0,71	0,73	0,74	0,78	0,72	0,74
Art, entertainment and recreation	0,57	0,58	0,58	0,57	0,57	0,58	0,55	0,56	0,58	0,54	0,52
Provision of other types of services	0,52	0,53	0,53	0,55	0,53	0,59	0,59	0,60	0,64	0,63	0,62

Note: compiled by the authors

The dynamics of horizontal occupational segregation in Kazakhstan's labour market during 2013–2023 reveal persistent sectoral asymmetry, driven by enduring institutional and socio-cultural barriers. Despite national programs promoting gender balance, women's access to high-paying and knowledge-

intensive sectors remains structurally constrained.

Women's employment remains highly concentrated in education (0.72-0.80), health and social services (0.71-0.78), and accommodation and food services (0.63-0.75). Such stability indicates entrenched

professional choice patterns and a “glass ceiling” that limits women’s upward mobility, despite institutional change. Conversely, women’s participation in industry (0.22-0.33), mining (0.17-0.22), construction (0.20-0.27), and transport (0.19-0.32) remains chronically low, with no substantial progress over the decade. Persistent stereotypes, rigid corporate cultures, and limited access to technical education continue to reinforce segregation.

The financial sector exhibits an anomalously high female share (up to 0.80 in 2018–2020), likely due to reporting shifts; even there, the gender balance has not translated into equitable pay. Along with professional, scientific, and technical activities (0.43-0.52) and information and communication (0.40-0.46), these remain among the few relatively balanced fields, though female participation has not expanded consistently.

These structural disparities correlate directly with gender wage gaps. Despite institutional reforms and rising average incomes, differences between men and women persist across all sectors. The most significant pay gaps occur in mining (165,983 tenge), manufacturing (103,585), and transport (105,169), reflecting limited access for women to high-status, capital-intensive professions. Even in feminised fields such as education and healthcare, women earn less by 2,802 and 13,301 tenge respectively in 2023, and remain underrepresented in leadership positions.

In financial and insurance activities, the gap is among the largest (155,222 tenge in 2023). In contrast, innovation-driven industries (ICT,

professional, scientific, and technical sectors) exhibit steady income differentiation, driven by limited access to project and managerial resources. Conversely, in low-paid sectors like accommodation, catering, and personal services, women face job insecurity, informality, and limited social protection, despite their numerical dominance. The COVID-19 pandemic further exacerbated these vulnerabilities, particularly among women entrepreneurs in services, trade, and agriculture.

Overall, the persistence of occupational and wage disparities confirms that Kazakhstan’s gender wage gap is reproduced through a combination of institutional constraints, occupational segregation, unequal skill distribution, and restricted advancement opportunities. Without systemic institutional and corporate reforms, these inequalities are likely to persist, constraining women’s full economic participation and labour potential.

During the analysed period, in such groups as “employees engaged in information preparation, documentation, accounting and maintenance” and “unskilled workers”, the proportion of women exceeds 50-65%, which confirms their consolidation in low- and medium-skilled segments of the labour market. The structural characteristics of women’s professional employment, presented in Table 3, demonstrate that even within the most feminised sectors – education, healthcare, and services – women tend to concentrate on positions that do not provide significant opportunities for advancement and have a relatively low status and level of remuneration.

TABLE 3. Proportion of women by occupation groups, %

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Heads of government and management bodies at all levels, including heads of organizations	38	36	37	37	37	41	43	41	38	41	41
Highly qualified specialists	63	65	65	63	63	64	64	65	65	64	64

Mid-level specialists	60	58	59	58	58	54	55	54	54	5	54
Employees involved in the preparation of information, documentation, accounting and maintenance	73	74	73	73	71	63	63	63	64	64	65
Employees in the service sector, housing and communal services, trade and related activities	61	62	63	62	59	61	60	59	59	59	59
Skilled workers in agriculture, forestry, hunting, fish farming and fishing	45	45	39	37	39	44	42	42	42	41	41
Skilled workers of industrial organizations, construction, transport and communications, geology and exploration of mineral resources	21	19	17	18	21	21	20	22	21	21	21
Operators, apparatuschiks, machinists of installations and machines, and assemblers	11	10	9	9	9	12	11	11	12	13	13
Unskilled workers	48	48	48	48	48	55	54	54	54	53	52
Other, unclassifiable	23	17	23	17	18	20	23	21	17	17	16

Note: compiled by the authors

Despite the noticeable presence of women among top-level specialists (63–65%), their participation in managerial and technical professions remains limited: women occupy no more than 41% of management positions and less than 21% of engineering and industrial roles. This pattern reflects persistent vertical segregation, in which barriers prevent advancement to high-responsibility and high-income positions, even in sectors with strong female participation at the operational level.

The most significant disparities are observed in industrial and technical occupations, where the share of women does not exceed 9–13%. At the same time, many women are concentrated in flexible or informal employment, reflecting both sectoral characteristics and socio-cultural expectations linked to family responsibilities. Over the past decade, these imbalances have remained stable, indicating limited institutional progress

and the continued reproduction of gender stereotypes in the labour market.

The findings of the second stage confirm that expanding formal access to employment is insufficient to overcome segregation; inclusive education and career policies, institutional support mechanisms, and efforts to combat gender stereotypes are required. The next stage focuses on the territorial dimensions of access

to quality employment, emphasising how regional and infrastructural factors shape gender equality.

The summarised dynamics of the gender pay ratio across Kazakhstan's regions during 2013–2023 are presented in Figure 3, which clearly illustrates the persistence of regional disparities despite overall wage growth.

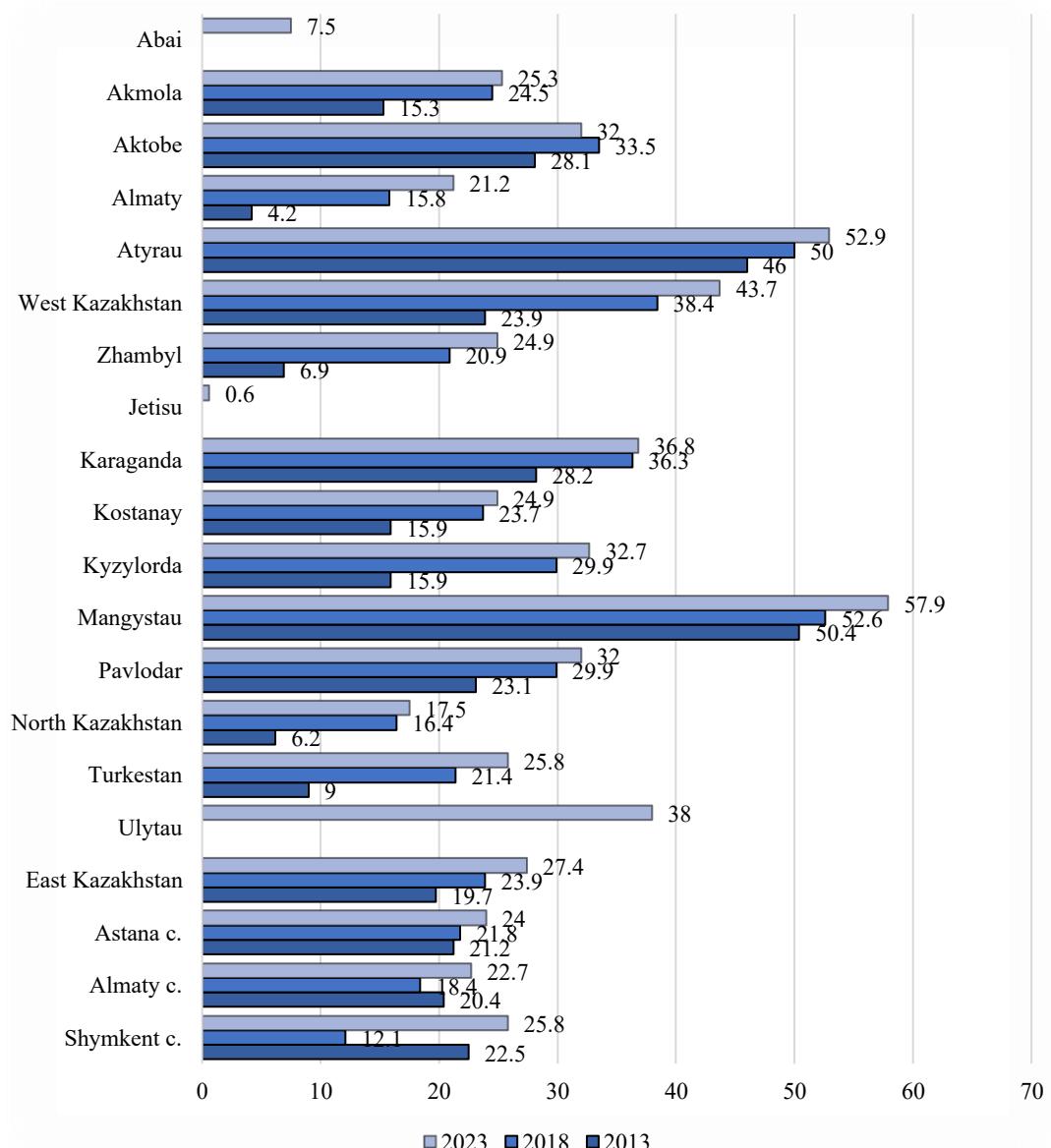


Figure 3. Ratio of the average monthly salary of women to men for 2013, 2018, 2023, %

A spatial analysis of wages in Kazakhstan (2013–2023) reveals persistent regional inequality in both income levels and gender terms. The highest salaries for both sexes are recorded in Atyrau and Mangystau regions, as well as Astana and Almaty. In 2023, men in Atyrau earned 738,421 tenge, compared with 399,015 tenge for women; in Mangystau, women's wages were only 49.6% of men's. These gaps persist due to the concentration of oil, gas, and capital-intensive industries, which exhibit low female participation.

Conversely, regions such as Zhetysu, North Kazakhstan, Turkestan, Zhambyl, and Shymkent show small gender pay gaps but low absolute incomes. In Zhetysu, women earned 268,660 tenge, compared with 270,213 tenge for men in 2023, equality achieved through overall wage depression, not genuine parity.

Comparative dynamics over a decade indicate that, despite nominal income growth, men's wages have generally risen faster, maintaining or widening the gender gap. For instance, in the Karaganda region (2013–2023), men's wages grew from 119,674 to 390,915 tenge (3.3×), while women's increased from 76,207 to 280,588 tenge (3.7×), keeping the ratio near 72%. Industrial regions remain the most unequal, whereas agrarian areas exhibit a “low-equality equilibrium,” combining formal parity with low wages and informality.

Overall, spatial disparities indicate that gender wage inequality in Kazakhstan is shaped by regional industrial specialisation, infrastructure development, and institutional access to formal, high-income employment. Addressing these disparities requires not only economic diversification but also territorial mechanisms of inclusion—particularly programs that support women's participation in high-productivity sectors and formalised labour relations.

In regions with a relatively low gender pay gap, such as Zhambyl, Zhetysu, and North Kazakhstan, this does not indicate real improvement in women's employment conditions. Instead, it reflects the general undervaluation of labour in sectors with high

female participation, including education, healthcare, trade, and agriculture. Wages for both genders remain low, which narrows the gap statistically but not substantively. The higher female-to-male pay ratio (80–90%) in these regions arises not from women's income growth, but from the absence of significant male wage advantages — a typical pattern for low-wage economies.

In contrast, industrial and resource-rich regions (Atyrau, Mangystau, Pavlodar) with well-developed corporate sectors exhibit strong gender polarisation. Women's access to high-paying positions remains limited due to entrenched occupational segregation, even when they are formally present in the labour market. This structural inaccessibility to technical, engineering, and managerial roles perpetuates income inequality.

Such imbalances are reinforced by sectoral and regional polarisation: women are concentrated in socially oriented and service sectors, while men dominate capital-intensive industries. The territorial and economic structures thus determine the depth of sectoral segregation. The spatial distribution of female employment across Kazakhstan in 2023 clearly reflects persistent regional and sectoral disparities, forming a complex picture of unequal access to quality employment.

The highest concentration of female labour is traditionally observed in the service sector, with most regions recording values above 55%. Pavlodar (62.1%), Kostanay (59.4%), Mangystau (58.1%) and Karaganda (58.3%) regions occupy leading positions, reflecting the institutionalized feminization of the sector, which includes activities such as education, healthcare, social assistance, retail and administrative services. Despite the social importance of these professions, they remain poorly paid and uncompetitive in terms of career mobility, thereby creating mechanisms for the reproduction of inequality.

Figure 4 shows the average share of female employment in Kazakhstan's basic sectors for 2013–2023, revealing persistent territorial disparities and sectoral polarisation.

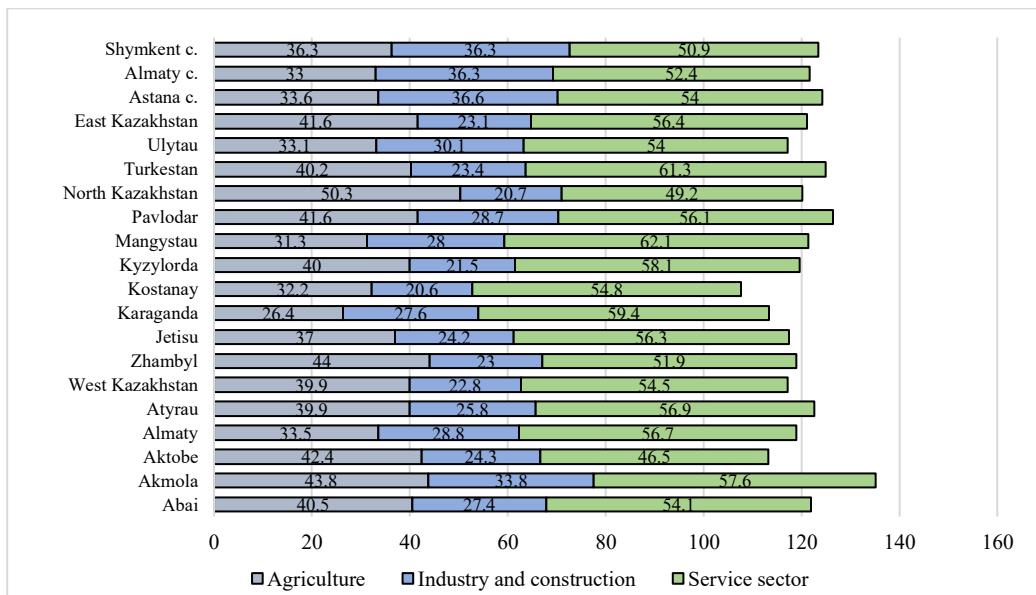


Figure 4. Average share of women in agriculture, services, industry and construction, %

The territorial distribution of women's employment across Kazakhstan in 2023 demonstrates persistent sectoral and regional segregation, indicating unequal access to quality jobs. The service sector remains the most feminised: in most regions, women constitute over 55% of employees, reaching 63.3% in Pavlodar, 61.1% in Kostanay, 60.6% in Atyrau, and 60.9% in Ulytau. This pattern reflects the institutional and sociocultural dependence of women's labour on "caring" and administrative professions, education, healthcare, social assistance, and retail which, despite their social importance, remain low-paid and offer limited career mobility.

By contrast, women's integration into industrial and construction sectors remains critically low. In Turkestan (17.3%), Zhambyl (21.0%), Mangystau (22.0%), Aktobe (24.2%), and West Kazakhstan (24.0%) regions, women are almost absent from high-tech and capital-intensive industries, widening both gender and territorial disparities and even in major industrial centers, Karaganda and Pavlodar, the share of women in manufacturing and construction averages 26–27%, showing little progress over the decade. Only the megacities

Almaty (37%) and Astana (31.9%) exhibit partial inclusion, supported by international firms, SME programs, and growth in the digital sector.

In agriculture, women remain concentrated in low-productivity and informal activities. The highest female shares are observed in Shymkent (57.3%), Almaty (45.5%), Turkestan (45.9%), and Ulytau (42.6%). However, this participation reflects structural marginalization, seasonal employment, limited access to technology, land, and finance—rather than formal integration into value chains. Many women work without contracts, limiting social protection and pension rights.

Overall, Kazakhstan's female employment structure exhibits stable spatial and sectoral differentiation: dominance in services, under-representation in industry, and persistence in low-wage agriculture reproduce institutional inequality. Regional strategies to balance women's employment should therefore include technical skills training, targeted support for women's entrepreneurship in industrial and agricultural sectors, and mandatory gender audits in enterprises. In terms of leadership, women remain concentrated in small

businesses – 44.1% of owners nationwide, while their share in medium-sized enterprises is 18% and in large enterprises is only 6%. The highest rates are observed in Almaty (48.6%), Zhambyl (47.3%), Turkestan (47.1%), and Shymkent (46.9%), driven primarily by micro-enterprise activity in retail, catering, and services. Conversely, in resource-intensive regions such as Atyrau, Mangystau, and Pavlodar, women hold just 3–11% of leadership roles, reflecting corporate inertia and limited inclusivity.

To overcome these constraints, a holistic strategy is needed, supporting women's entrepreneurship from registration to scaling, introducing gender audits and mentoring programs, expanding women's access to public procurement, and incentivising corporations to uphold gender balance in management.

5. DISCUSSION

The results of the analysis confirm that gender differences in Kazakhstan's labour market are stable and multilevel, despite the alignment of legal norms and government efforts to increase women's participation in the economy. The trends identified reflect three interrelated dimensions of gender inequality: institutional, structural, and spatial.

A comparison of Kazakhstan's regulatory framework with international standards (WBL, WEF) shows that formally established rights do not yet ensure equality of opportunity. With the Women, Business and the Law index of 75.6/100, gaps remain in pay, parenthood, and pension rights (World Bank, 2024). Institutional barriers are manifested in the lack of systemic child care support and flexible forms of employment, which enhances the child penalty effect (Kleven et al., 2019). Women are more likely to be concentrated in part-time and temporary employment or microbusiness, especially in the southern regions, where the model of "forced entrepreneurship" prevails (Bulkhairova et al., 2022).

The sectoral structure confirms the sustainability of occupational segregation, the

primary source of gender inequality. Women are concentrated in education, healthcare and services, while their share in industry, transport and construction remains low (20-22% among technical specialists, 38-41% among managers). An increase in educational attainment does not translate into higher income and status, reflecting the effects of "untapped human capital" (Goldin, 2014) and limited vertical mobility.

Spatial analysis revealed the contrast between resource-based and agricultural regions. Atyrau and Mangystau oblasts have the highest salaries with a gap of up to 45-50%; in agricultural regions, there is a "low alignment", close salaries with low incomes (Kireyeva & Olzhebayeva, 2023). In megacities (Astana, Almaty, Shymkent), women's participation in the digital and creative sectors is increasing, thereby exacerbating territorial polarisation and necessitating the inclusion of a regional dimension in gender policy.

Kazakhstan demonstrates patterns typical of resource-based economies: institutional changes outstrip structural ones. Despite the high level of education, the wage and employment gap (25-30%) is comparable to the OECD average (ILO, 2023). The main channels of reproducing inequality are motherhood, occupational segregation, and limited career ladders. International experience points to the effectiveness of return-to-work programs, gender audits, and corporate ESG commitments.

Thus, the research conducted allows us to conclude that gender inequality in Kazakhstan's labour market is systemic and is reproduced at the intersection of institutional, structural, and spatial factors. Despite successes in the regulatory sphere and the increase in women's educational attainment, fundamental differences in wages, the professional and territorial structure of employment, and employment remain significant. The persistence of the identified imbalances indicates the need to move from formal equality of rights to ensuring equality of opportunity based on comprehensive

measures, integrating gender analysis into strategic planning, strengthening social care infrastructure, developing flexible forms of employment and stimulating women's participation in high-tech and managerial sectors. Implementing these directions will not only increase women's economic activity but also be an important condition for achieving Kazakhstan's sustainable and inclusive development goals in the context of SDG 5 and SDG 8.

6. CONCLUSION

As a result, the following generalising conclusions can be identified, following from the conducted three-stage analysis:

- based on the results of the analysis of indicators of the gender gap in employment and wages, it was found that despite the moderate growth rate of female employment in the Republic of Kazakhstan, there remains a significant wage disparity between men and women, especially in resource-oriented and industrialised regions. The gender gap is most pronounced in Atyrau, Mangystau and Pavlodar regions, where vertical segregation and limited access of women to high-paying positions maintain structural inequality.

- a structural analysis of women's employment by economic sector revealed persistent occupational segregation: women are still concentrated in the service sector (education, healthcare, retail trade), while their share is significantly lower in industry and capital-intensive industries. This employment structure reduces women's income levels and limits their professional prospects, thereby creating an institutional barrier to career growth and to participation in management. There is a particularly pronounced polarisation between regions with a high proportion of female employment in the service sector (Pavlodar, Kostanay, and Ulytau) and regions with minimal participation of women in industry (Turkestan, Zhetysu, and Zhambyl).

- an assessment of territorial differences in the level of access to quality employment has revealed that in most regions with a low gender

gap, there is also a low absolute wage level. The observed wage ratio indicates a "low equalization" effect, in which equality is achieved through a general depreciation of labour. At the same time, pronounced differences between men and women persist in high-income regions, especially in the corporate and commodity sectors. Women's access to quality employment remains limited due to institutional, sociocultural, and economic barriers.

The evaluation results emphasise the need to implement a spatially differentiated policy to eliminate gender disparities through inclusive regional development tools, support for women's leadership, gender audits in economic institutions, and the diversification of women's employment in promising and high-tech sectors.

The analysis confirmed that gender differences in employment and wages in Kazakhstan remain stable, complex and spatially heterogeneous. Despite several progressive changes, including a formal increase in women's labour-market participation, the overall employment structure continues to reproduce gender stereotypes, consolidating women primarily in the service sector and in low-wage segments of the economy. A significant wage gap between men and women is observed in economically developed regions with a high concentration of capital-intensive and raw materials industries. In contrast, in low-income regions, there is relative wage equalisation, attributable not to equality of opportunity but to a general decline in wages. Structural segregation, territorial disparities, and women's limited access to high-income employment demonstrate the need for a systematic review of approaches to gender policy in the economy. Special attention should be paid to institutional mechanisms that support women in entrepreneurship, expand their access to managerial and engineering professions, and create incentives for the adoption of gender-sensitive practices.

Achieving absolute gender equality in the economy requires not only a comprehensive

regulatory framework but also the introduction of geographically oriented, sectorally adapted, and institutionally sound approaches to the creation of inclusive employment. Effective measures should include expanding women's access to the formal labour market, eliminating occupational segregation, strengthening gender audit mechanisms, and creating conditions for career growth in highly profitable and strategically important industries. An important condition is the transformation of the institutional context,

including business support systems, innovation infrastructure and corporate governance, towards the principles of equality and transparency. Such a rethink of employment policy will ensure that we go beyond formal equality and enable the use of the underutilised human capital represented by women as a strategic resource. Balanced participation of men and women in the economy will contribute not only to productivity growth and innovation but also to strengthening the overall sustainability of the social system.

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