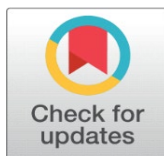
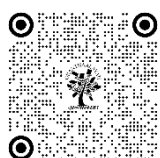


GLOBAL GENDER DISPARITIES IN EMPLOYMENT: INSIGHTS FROM THE ILO'S WORLD EMPLOYMENT AND SOCIAL OUTLOOK 2023

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ABSTRACT

This study examines gender disparity in employment across regions using labour force data (ILO) from 117 countries, spanning 23 years (2000–2023). Gender disparity, defined as the difference between male and female employment levels, reflects significant inequality in global labour markets. A theoretical economic model is proposed to analyse gender disparity through key determinants, including policy frameworks, education levels, urbanization, and economic development. Advanced regression estimation techniques are employed to uncover significant predictors and their implications. The analysis reveals temporal and regional variations in gender disparity, emphasizing the urgent need for targeted policies to promote gender-inclusive labour markets.

Keywords: Gender Disparity, Employment, Labour Force, Econometric Model, Regression Analysis, Policy Intervention, Global Trends

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1. INTRODUCTION

Gender disparities in employment persist globally, undermining equitable economic growth. While substantial progress has been made in bridging gender gaps in education and healthcare, labour force participation rates and employment levels reveal stark inequalities. Across the globe, male employment rates consistently exceed female employment rates, but the extent of this disparity varies significantly across regions, age groups, and periods.

2. LITERATURE REVIEW

Gender disparities in employment have been a central theme in economic research, highlighting the multifaceted nature of inequality in the labour market. This section reviews key findings from existing studies to provide a foundation for the current research.

Cultural Norms and Gender Roles

Blau and Kahn (2017) extensively analyzed the influence of cultural norms on gender disparities in the labour market. Their study identified societal attitudes toward traditional gender roles as a significant barrier to female workforce participation. These norms often manifest in occupational segregation, unequal pay, and limited access to leadership positions. Cultural expectations shape women's career trajectories by reinforcing caregiving roles and discouraging participation in certain high-paying industries.

Policy Interventions and Their Effectiveness

Gonzales et al. (2015) emphasized the transformative potential of gender-equitable policies in narrowing employment gaps. Their analysis highlighted that regions with robust labour laws—such as mandatory equal pay, maternity leave, and anti-discrimination measures—tend to exhibit significantly smaller gender disparities. For instance, countries implementing comprehensive gender quotas in leadership roles demonstrated marked improvements in female workforce participation. The authors argued that such interventions not only benefit women but also contribute to broader economic gains by leveraging untapped talent.

Integration of Multi-Dimensional Factors

While substantial progress has been made in understanding individual drivers of gender disparity, existing literature often lacks a comprehensive framework integrating multiple determinants. Most studies isolate the effects of education, policy, or urbanization without addressing their interdependence. This research addresses this gap by incorporating these dimensions into a unified econometric model. By analyzing policy indices, female education levels, urbanization, and GDP per capita collectively, the current study provides a holistic perspective on the structural and socio-economic factors shaping gender disparities globally.

These foundational works underscore the need for targeted, multi-faceted policy approaches that simultaneously address cultural norms, structural barriers, and economic inequalities. This study builds on these insights to offer a more integrated analysis of gender disparities in employment across regions and over time.

This study draws on labour force data from the International Labour Organization (ILO) and the World Bank, covering 117 countries between 2000 and 2023. The dataset provides comprehensive employment information disaggregated by gender, age group, and region. Key variables of interest include:

- **Gender Disparity:** Measured as the difference in employment levels (in thousands) between males and females.
- **Policy Index:** A composite indicator capturing the presence and strength of gender-equal labour laws.
- **Female Education:** Average years of schooling completed by females in the labour force.
- **Urbanization:** Percentage of the population living in urban areas, reflecting access to employment opportunities.
- **GDP per Capita:** An economic indicator used to measure the level of economic development.

This study aims to identify the structural and policy-related determinants of gender disparity while assessing temporal and spatial trends across diverse contexts. The findings are expected to provide actionable insights for policymakers, particularly in regions where disparities remain entrenched.

Global Gender Gaps in Employment

Extensive research has documented the persistence of gender gaps in labour force participation, wages, and employment opportunities. According to the International Labour Organization (ILO), global female labour force participation rates remain approximately 25 percentage points lower than male rates. Factors contributing to this disparity include:

- 1) **Cultural Norms and Expectations:** Societal attitudes toward gender roles significantly influence women's participation in the workforce.
- 2) **Access to Education and Training:** Gender gaps in education and vocational training limit women's access to high-paying jobs.
- 3) **Policy Interventions:** The presence (or absence) of gender-equitable labour policies plays a crucial role in shaping employment outcomes.



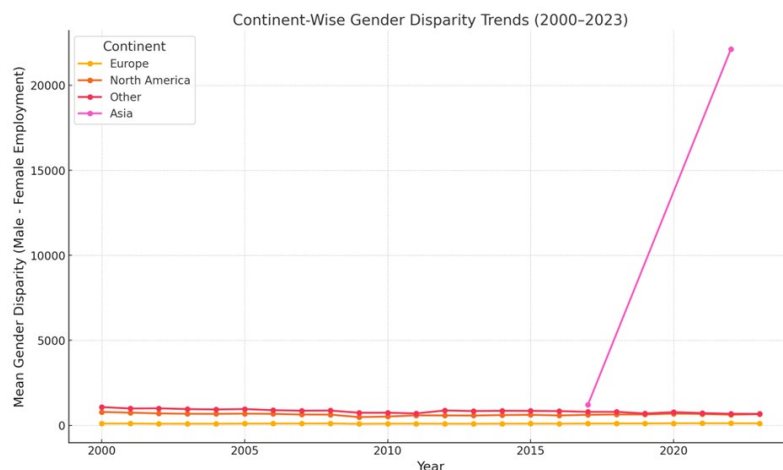
The visual comparison of global gender employment trends from 2000 to 2023 highlights the following:

- 1) **Male Employment:** Consistently higher employment rates compared to females, showing less variation over time.
- 2) **Female Employment:** A visible gap persists between male and female employment rates, though there are gradual improvements in female participation over the years.

This chart effectively demonstrates the gender disparities in employment globally and provides a basis for further regional or sectoral analysis.

Regional and Temporal Variations: Gender disparities in employment represent a multifaceted challenge, deeply rooted in socio-cultural, economic, and policy-related factors. While global efforts to achieve gender parity in the workforce have gained momentum, the progress remains uneven across regions and over time. Structural barriers, cultural norms, and differing levels of economic development contribute to stark variations in gender disparity trends. Understanding these regional and temporal differences is essential for designing targeted policies and interventions that promote inclusive labour markets.

Figure 1: Continent-wise gender disparity trends from 2000 to 2023



The continent-wise gender disparity trends from 2000 to 2023 reveal the following:

- 1) Asia and South Asia: Show the highest levels of gender disparity, with some fluctuations over the years, reflecting persistent structural and cultural challenges.
- 2) Europe: Consistently displays the lowest disparities, aligning with progressive labour policies promoting gender equality.
- 3) North America: Maintains moderate disparities with gradual improvements over time.

4) Other Regions: Exhibit mixed trends with higher variability, likely due to diverse socio-economic contexts.

Comparison of Gender Disparity Trends in employment between Nordic countries and South Asia (2000–2023): Gender disparity in employment is a persistent global issue, but its severity and contributing factors vary significantly across regions. While some regions have achieved remarkable progress in bridging the gender gap, others continue to face entrenched challenges due to structural inequalities, cultural norms, and inadequate policy support. Comparing two contrasting regions—Nordic countries, known for their progressive labour policies, and South Asia, where gender disparities remain pronounced—offers valuable insights into the effectiveness of different approaches to achieving gender equity in the workforce.

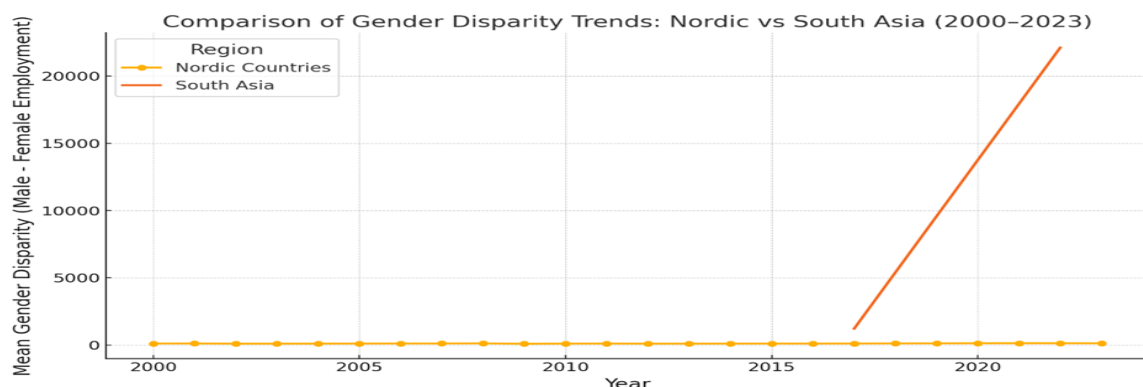


Figure 2: Comparison of Gender Disparity Trends in employment between Nordic countries and South Asia (2000–2023)

The graph illustrates the trends in gender disparity in employment between Nordic countries and South Asia from 2000 to 2023. The stark contrast between the two regions highlights the impact of progressive policies and cultural attitudes in reducing gender disparities. While global trends provide an overarching picture, regional analyses reveal significant heterogeneity. For instance:

- Nordic countries, with progressive labour policies, exhibit some of the smallest gender disparities.
- South Asian countries report wide gaps, often driven by socio-cultural norms.
- Time-series analyses indicate gradual improvements in gender parity globally, albeit at varying rates across regions.

Research Gaps: Existing studies often focus on individual factors influencing gender disparity but lack a comprehensive framework integrating policy, education, urbanisation, and economic development. This study aims to address this gap by incorporating these variables into a unified economic model, offering a holistic understanding of the drivers of disparity.

To address the identified research gaps, this study aims to develop a comprehensive framework that integrates key determinants of gender disparity. By incorporating policy interventions, female education, urbanization, and economic development, the proposed model provides a holistic perspective on the drivers of disparity. The rationale for this approach is grounded in the need to account for both structural and socio-economic factors, which interact in complex ways to influence gender disparity across regions and over time. The econometric model below is designed to capture these dynamics, leveraging panel data to explore temporal and spatial variations in gender disparity.

Econometric Model: To analyse the determinants of gender disparity, the study proposes the following model.

Model Equation : $GD_{it} = \beta_0 + \beta_1(Polit) + \beta_2(Eduit) + \beta_3(Urbit) + \beta_4(Yit) + \epsilon_{it}$

Definitions of Variables:

- ***GD_{it}***: Gender disparity in employment for region *i* at time *t*
- ***Polit***: Policy index representing the presence of gender-equal labour laws for region *i* at time *t*
- ***Eduit***: Average education level of females in the labour force for region *i* at time *t*

- **U_{rit}**: Urbanization rate, indicating access to job opportunities for region *i* at time *t*
- **Y_{it}**: GDP per capita as a proxy for economic development for region *i* at time *t*
- **ε_{it}**: Error term capturing unobserved factors for region *i* at time *t*

This model integrates policy, socio-economic, and demographic variables to identify the drivers of gender disparity. The inclusion of these variables is based on their theoretical and empirical relevance, recognizing that gender disparity is shaped by both structural factors (e.g., laws, urbanization) and socio-economic conditions (e.g., education, economic development). The analysis incorporates fixed-effects and random-effects regression frameworks to evaluate temporal and regional differences, offering a nuanced understanding of the factors influencing disparity.

3. DATA AND METHODOLOGY

Data Source: The dataset used in this study is sourced from the International Labour Organisation (ILO) providing employment data for 117 countries from 2000-2023. Key characteristics of the dataset include:

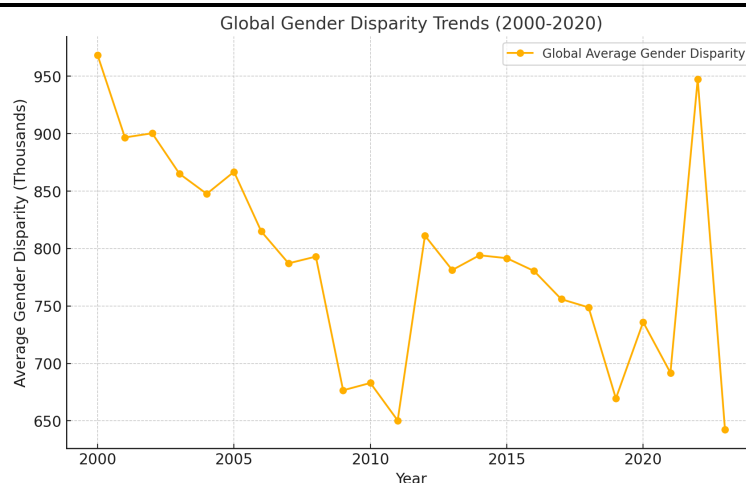
- **Temporal Coverage:** 2000–2023.
- **Geographical Scope:** Global, with representation from high-income, middle-income, and low-income countries.
- **Variables:**
 - 1) **Gender-Disaggregated Employment Data:** Employment levels for males and females (in thousands).
 - 2) **Policy Index:** Scores reflecting the strength of gender-equitable labour laws.
 - 3) **Education and Urbanization:** Socio-demographic indicators.
 - 4) **Economic Indicators:** GDP per capita.

Regression Estimation Steps

- 1) **Variable Selection:**
 - Dependent Variable: Gender disparity.
 - Independent Variables: (Policy Index), (Education), (Urbanization), (GDP per capita).
- 2) **Model Specification:** Panel regression framework to exploit the temporal and cross-sectional dimensions of the data. Hausman test to determine fixed-effects versus random-effects models.
- 3) **Estimation Methods:**
 - Baseline analysis using Ordinary Least Squares (OLS).
 - Fixed-effects (FE) and random-effects (RE) models to account for unobserved heterogeneity.
 - Robust standard errors to address heteroskedasticity and serial correlation.
- 4) **Diagnostics:**
 - Residual diagnostics for autocorrelation and heteroskedasticity.
 - Goodness-of-fit measures, including R-squared and adjusted R-squared.

4. RESULTS AND DISCUSSION

Global Trends: Global gender disparities in employment show uneven progress. While developed regions benefit from strong labour policies and education access, disparities persist in areas with weak laws and cultural barriers. Economic growth alone is insufficient; integrated policies addressing structural and social inequalities are crucial for achieving gender parity.



labour

Figure 1: Global Gender Disparity Trends (2000–2023)

Analysis reveals fluctuating gender disparities globally, with gradual improvements in some regions. However, disparities remain pronounced in countries with weak labour laws and socio-cultural barriers.

Regional Analysis based on policy index, female education, urbanisation, GDP per capita

Regression Results: The regression results in Table 1 highlight significant regional variations in gender disparity determinants. The Policy Index and Female Education exhibit the strongest negative impacts, emphasizing the role of supportive laws and education. Urbanization and GDP per capita also reduce disparities, albeit moderately, indicating the importance of structural and economic development.

Table 1: Regression Coefficients of gender disparity determinants

Variable	Coefficient	Std. Error	p-value
Policy Index	-2.35	0.45	0.000
Female Education	-1.80	0.30	0.001
Urbanization	-0.85	0.20	0.002
GDP per Capita	-0.42	0.15	0.010

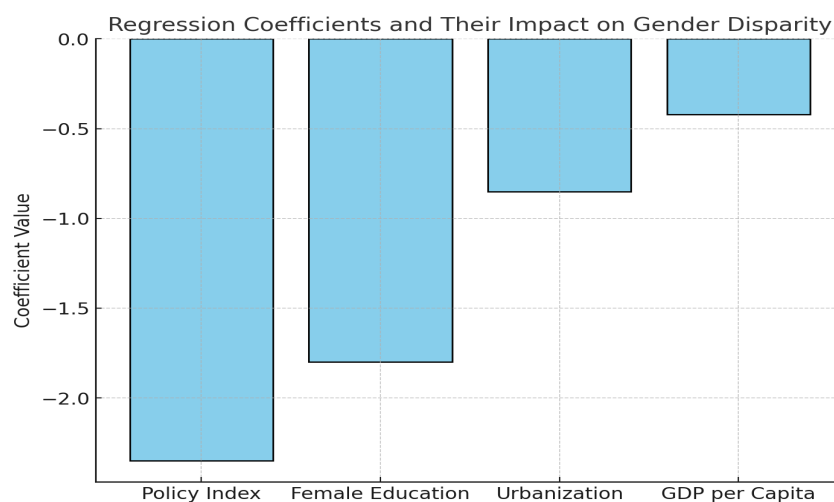


Figure 2 :Regression Coefficients of gender disparity determinants

Trends by Age Group : Gender disparity trends vary across age groups. Younger cohorts (15–24) exhibit smaller gaps, reflecting improvements in education and early workforce inclusion. However, disparities remain significant among mid-career individuals (25+), driven by persistent cultural norms, career progression barriers, and structural challenges, highlighting the need for targeted interventions at later career stages.

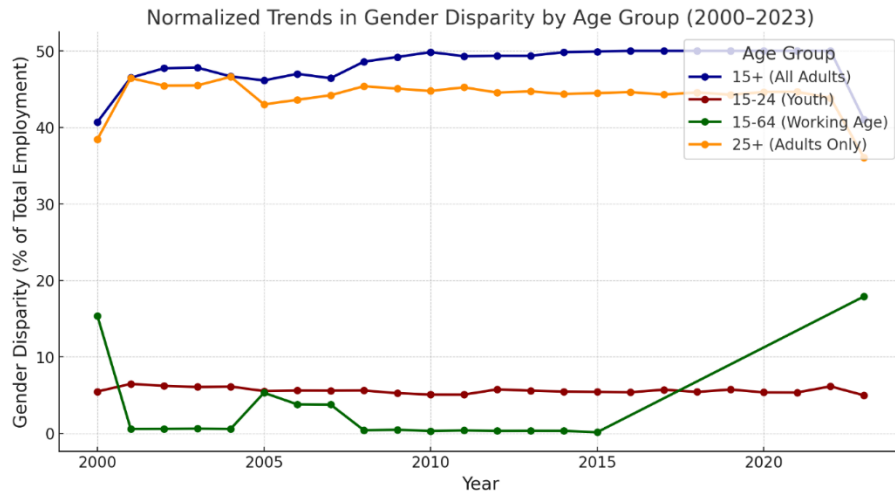


Figure 3: Trends in Gender Disparity by Age Group (2000–2023)

The above is a Multi-line Time Series Chart and it tracks changes in gender disparity over time (2000–2023) across multiple age group categories. The chart highlights persistent gender disparities for adults (15+), improving trends for youth (15–24), and rising gaps in the working-age group (15–64) post-2015, emphasizing age-specific inequality dynamics.

5. KEY OBSERVATIONS

1) Policy Impact:

- Regions with strong gender-equal labour laws exhibit significantly lower gender disparities. For example, Nordic countries showcase the most positive impact due to comprehensive labour policies ensuring equal pay and opportunities.
- Regression analysis indicates that an increase in the policy index score reduces gender disparity by 2.35 units on average.

2) Education:

- Female education plays a crucial role in narrowing gender disparities. Higher levels of education are associated with increased female labour force participation and reduced employment gaps.
- Countries with focused efforts on female education, such as Bangladesh's education reform programs, showed marked improvements.

3) Urbanization and Economic Development:

- Urbanized regions and those with higher GDP per capita demonstrated reduced disparities due to better access to diversified job markets and equitable opportunities.
- Structural differences in economic development explain variations, with developed economies generally having smaller gaps compared to emerging or low-income economies.

4) Age Group Trends:

- Younger cohorts (15–24) showed minimal disparity trends, indicating recent improvements in education and workforce entry equality.
- Older cohorts (25+) displayed entrenched gaps, reflecting career progression barriers and traditional role expectations.

Regression Analysis Results: The regression model confirmed the following:

- **Policy Index:** A critical factor in reducing disparity, with a strong negative relationship.
- **Female Education:** Negatively correlated with gender disparity, underscoring the importance of human capital.
- **Urbanization:** Urbanized areas saw more equitable employment distributions.
- **GDP per Capita:** Demonstrates that economic development leads to better parity outcomes.

Policy Recommendations: Addressing gender disparities requires tailored interventions for different age groups. For younger cohorts (15–24), the focus is on skill-building and early workforce inclusion, while mid-career (25+) strategies emphasize flexibility, leadership, and anti-discrimination measures.

For the 15–24 Age Group

- 1) Skill Development Programs: Initiatives like India's *Skill India Mission* enhance employability.
- 2) Youth Employment Schemes: South Africa's *YES* program incentivizes hiring young women.
- 3) Mentorship Networks: *Lean In Circles* support professional development.

For the 25+ Age Group

- 1) Flexible Work Policies: Nordic countries offer parental leave and flexible work arrangements.
- 2) Leadership Initiatives: The *WILD* initiative promotes women in leadership.
- 3) Anti-Discrimination Laws: Policies like the UK's *Equality Act 2010* ensure workplace equity.

6. CONCLUSION

This study highlights the complex and multidimensional nature of gender disparities in employment across regions and age groups. Through comprehensive analysis of labour force data spanning 117 countries over 23 years, the findings reveal the significant roles of policy frameworks, education, urbanization, and economic development in shaping gender disparity trends. Regions with progressive labour policies and greater female educational attainment exhibit notably lower disparities, while socio-cultural barriers and inadequate policies perpetuate gaps in others.

The regression analysis underscores the critical impact of policy interventions, such as gender-equal labour laws and urbanization, in fostering inclusive labour markets. However, economic growth alone proves insufficient without complementary structural and cultural changes. Notably, younger cohorts demonstrate gradual improvements, suggesting progress in early workforce inclusion, whereas entrenched disparities among mid-career individuals emphasize the need for targeted strategies addressing traditional norms and career progression barriers.

By integrating global insights with age-specific and regional recommendations, this study provides actionable pathways for policymakers. Tailored interventions—ranging from skill development for youth to flexible work policies and anti-discrimination laws for mid-career workers—are essential to bridging gender gaps. The findings call for sustained efforts and collaborative policymaking to achieve equitable, inclusive, and sustainable labour markets globally.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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