

MISSING WOMEN, MISLEADING NUMBERS: A CRITICAL REVIEW OF PAKISTAN'S DEMOGRAPHIC TRENDS

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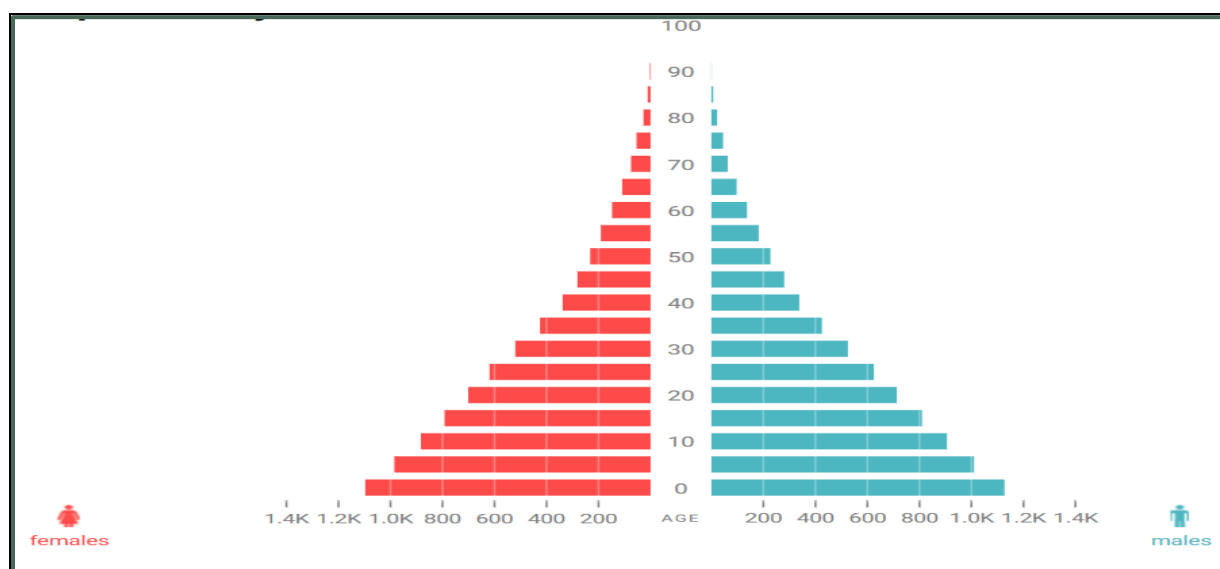
Key Outcomes

- The concept of 'missing women' in Pakistan is often misrepresented by static stock measures that overlook dynamic gender biases occurring throughout the life course; flow measures provide a more accurate assessment by tracking annual variations in gendered mortality and neglect.
- Static 'missing women' estimates in Pakistan overlook gender biases occurring across the life course; flow measures offer a clearer view of annual gendered mortality and neglect.
- Static gaps, especially in rural areas, mask the absolute scale of gender-based violence and health neglect.
- Key indicators, such as the adolescent fertility rate (41 per 1,000 girls) and low female school completion rate (43.9 per cent), highlight long-term disadvantages.
- Women's economic exclusion remains high, with only 24.5 per cent in the labor force and 74.7 per cent in vulnerable jobs.
- Pakistan lags neighboring countries in female education, employment, and political representation (20.5 per cent of parliamentary seats).
- Flow measures must be adapted to local contexts, including rural-urban divides and health-specific risks.
- Suggested policies include cash transfers, health subsidies, and local monitoring to address gender disparities more effectively

Introduction: The Misleading Numbers

The concept of ‘missing women’ in Pakistan is often glossed over with broad statistics and simplistic measures. While stock measures, which look at population deficits, have garnered significant attention, they fail to capture the dynamic nature of gender bias across different stages of life. The existing evidence also indicated that aggregated numbers distort the understanding of gender disparities, especially in mortality rates.¹

Flow measures, in contrast, offer a dynamic perspective by tracking annual variations in gender-biased mortality, neglect, and access to resources. These measures focus on deaths attributable to preventable causes and systemic biases that accumulate over time, providing a more accurate depiction of gender inequality. For instance, the consistent sex ratio at birth of 1.055 (male births per female birth) from 2015 to 2022 fails to reveal disparities arising from unequal access to healthcare, nutrition, and social opportunities. Such insights underscore the importance of integrating flow measures to understand better and address the issue of missing women in Pakistan.²



Source: United Nations Population Fund (UNFPA)³

FIGURE 1

Demographic Dividend of Pakistan (Population Pyramid)

Pakistan’s demographic profile, characterized by a youthful population and a high fertility rate, adds urgency to this issue. The demographic dividend, as illustrated in Figure 1, presents an opportunity for economic and social transformation, provided that both males and females have equal access to health, education, and employment opportunities. However, the persistent gender disparities

¹ See Ebert et al. (2022), <https://www.iza.org/publications/dp/15778/counting-missing-women-a-reconciliation-of-the-flow-measure-and-the-stock-measure>

² See <https://www.unfpa.org/data/demographic-dividend/PK>

³ See <https://www.unfpa.org/data/world-population/PK>

threaten to undermine this potential by limiting women's contributions to the economy and society. Therefore, refining measurement tools to capture the dynamic nature of gender inequality is essential for unlocking Pakistan's full demographic and development potential.

In summary, moving beyond static stock measures toward flow measures represents a critical advancement in understanding and addressing the issue of missing women in Pakistan. By providing a clearer, more detailed picture of gender-biased mortality and neglect, flow measures equip policymakers, researchers, and advocates with the knowledge needed to design more effective interventions, ultimately advancing gender equality and improving the lives of millions of women across the country.

Data and Measures: The Pitfalls of Misleading Statistics

Pakistan's demographics reveal critical gaps that exacerbate the issue of missing women. These gaps in data collection and policy implementation demonstrate the need for a more comprehensive approach to understanding and addressing the systemic biases that drive the phenomenon of missing women in Pakistan. Only by tackling these interconnected issues can policymakers begin to develop meaningful and targeted solutions.

- **Underreporting:** Widespread underreporting of gender-based disparities, especially in rural and marginalized communities, severely limits the visibility of the true extent of gender inequities. Social stigma, fear of retaliation, and weak law enforcement mechanisms discourage women and families from reporting cases of intimate partner violence, sexual abuse, and neglect. This lack of reliable data masks the real prevalence of harmful practices, such as child marriage, female infanticide, and neglect of female healthcare needs, leading to a gross underestimation of gender-biased numbers.
- **Inconsistent Methodology:** The prevalent use of static stock measures—such as sex ratio imbalances at birth or population deficits, provides only a snapshot that fails to account for the fluid, ongoing nature of gender disparities over time. For instance, adolescent fertility rates of 41 births per 1,000 girls aged 15-19 in 2022 reveal significant preventable health risks that contribute to maternal and infant mortality. Yet, these critical year-to-year variations are often overlooked in policy formulation. Incorporating dynamic flow measures that track excess female mortality by age group and region would provide a more realistic and actionable understanding of the gendered impacts.
- **Access to Resources:** Structural barriers to healthcare access continue to undermine female health outcomes. Women in many parts of Pakistan face geographic, financial, and cultural obstacles that limit their ability to obtain essential services such as prenatal care, vaccinations, and nutrition support. Economic dependence and restricted mobility further exacerbate these challenges, leading to delayed treatment and increased vulnerability to preventable diseases. The interplay between poor access and low healthcare quality contributes directly to excess female mortality.
- **Educational Gaps:** Educational attainment for girls remains disproportionately low, with only 43.9 per cent completing lower secondary school as of 2021. This educational deficit has far-

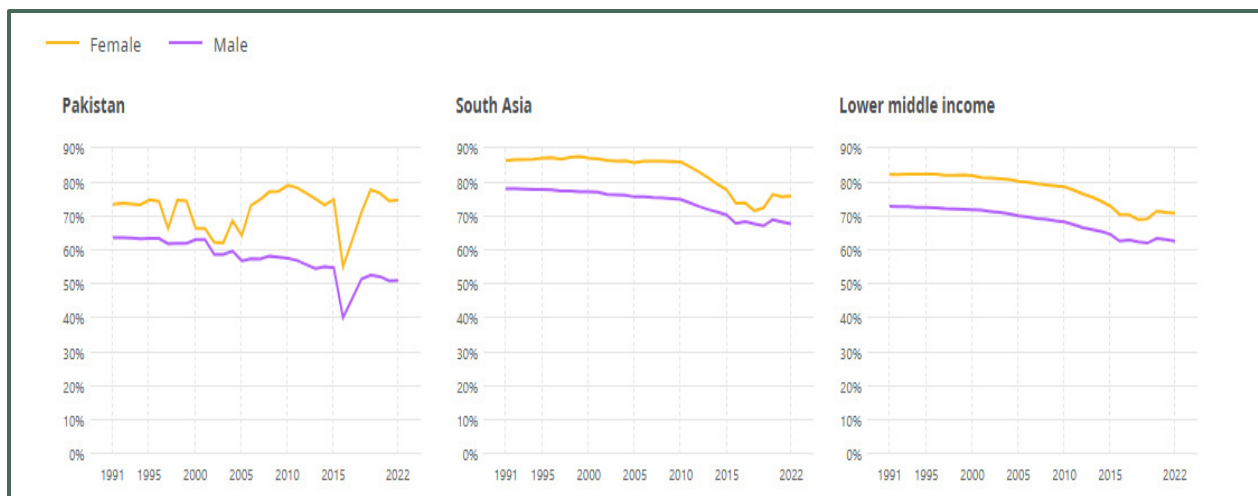
reaching consequences, limiting women’s awareness of health practices, reproductive rights, and their ability to participate fully in economic and social decision-making. Lower education levels correlate strongly with higher rates of early marriage, poorer maternal health, and diminished economic opportunities, all of which perpetuate cycles of gender inequality.

- **Economic Exclusion:** Women’s labour force participation is alarmingly low at 24.5 per cent, with 74.7 per cent engaged in vulnerable employment. These conditions deprive women of financial stability, and they need the agency to challenge systemic gender biases.

Comparing Global Efforts: Where Pakistan Lags

Globally, countries such as India, China, and Bangladesh have demonstrated progress in addressing the issue of missing women by improving data collection and implementing targeted interventions. For example:

- **School Enrollment:** In Pakistan, the female lower secondary school completion rate was only 43.9 per cent in 2021, compared to significantly higher rates in neighboring countries that have invested in education access. This gap highlights the perpetuation of disparities due to insufficient efforts in education.
- **Vulnerable Employment:** Vulnerable employment among women in Pakistan remains extremely high at 74.7 per cent as of 2022 in Figure 2. This rate highlights the lack of formal work opportunities and protection for women, particularly in comparison to countries that have made concerted efforts to integrate women into the formal workforce.



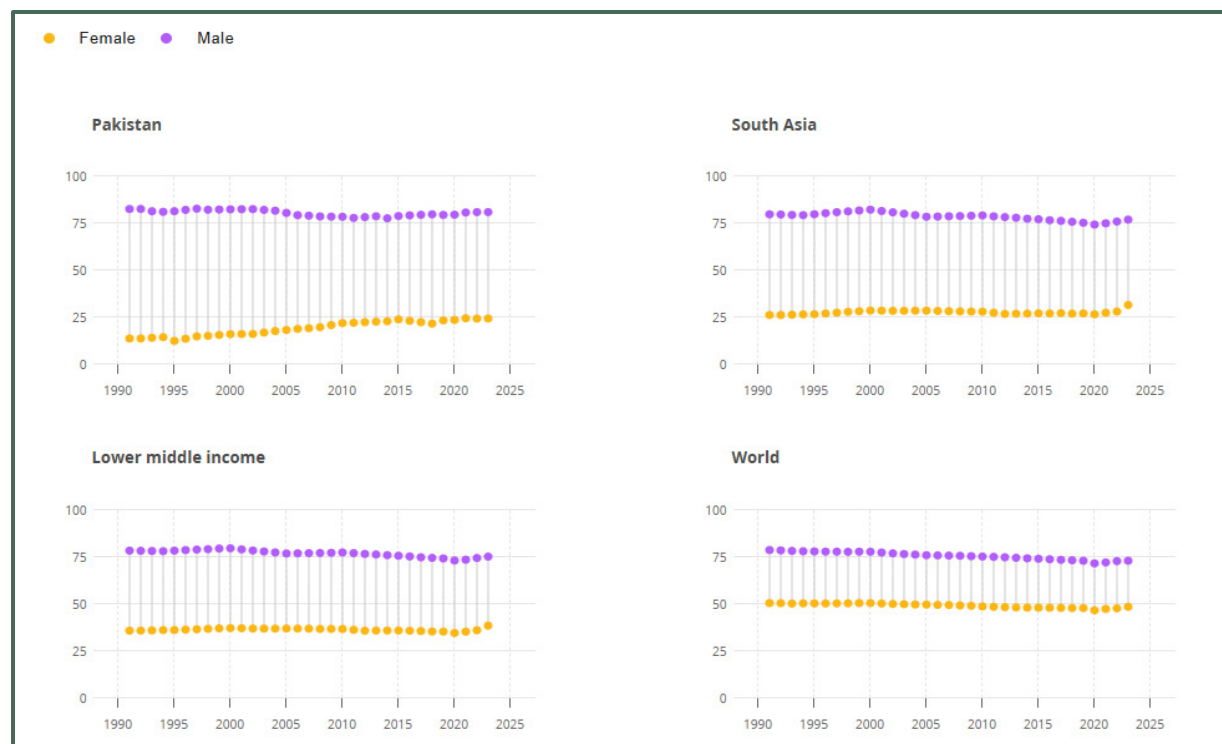
Source: World Bank Gender Portal (2024)⁴

FIGURE 2

Vulnerable Employment by Gender (Modelle Estimates)

⁴ Vulnerable employment by gender as percentage of total employment. See <https://www.unfpa.org/data/demographic-dividend/PK>

- **Labor Force Participation:** Female labor force participation in Pakistan is only 24.5 compared to 81 per cent for men in 2023 in Figure 3. This stark disparity shows a lack of progress in creating opportunities for women to engage in the economy. Countries like Bangladesh have achieved better gender balance in workforce participation through targeted initiatives.



Source: World Bank Gender Portal (2024).

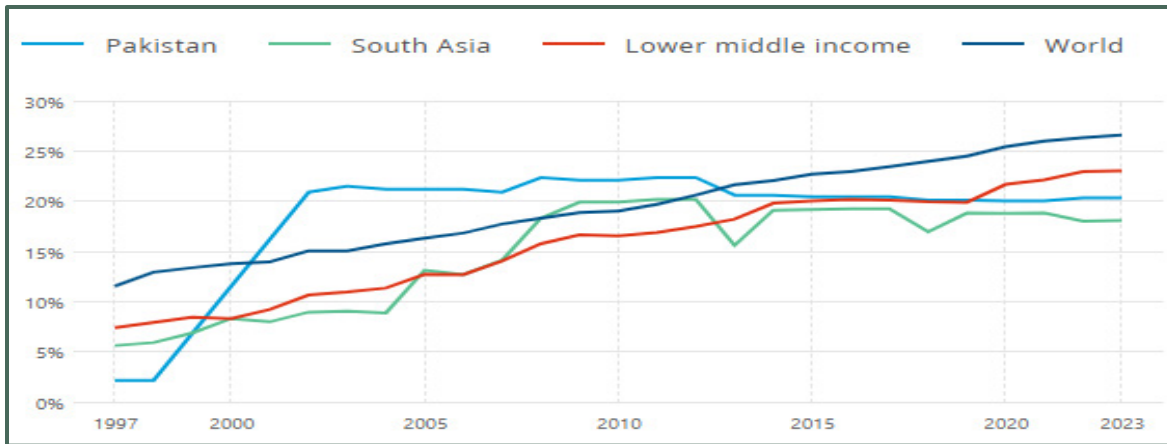
FIGURE 3

Labor Force Participation by Gender (Modelled Estimates)⁵

- **Political Representation:** in 2023, women held only 20.5 per cent of parliamentary seats in Pakistan, Figure 4 has stagnated for over a decade. Stronger enforcement of gender quotas in other countries has led to increased female representation in decision-making roles.

Pakistan's slow progress in these areas underscores the need for comprehensive reforms. While other nations have adopted policies to close these gaps, Pakistan continues to lag due to the weak implementation of gender equality policies and cultural norms that reinforce son preference and restrict women's roles in society.

⁵ See <https://www.unfpa.org/data/demographic-dividend/PK>



Source: World Bank Gender Portal (2024).⁶

FIGURE 4

Percentage of Women Representation in the National Parliament

The Way Forward: A Call for Action

The flow measure of missing women⁷ estimates excess female mortality (EFM)⁸ in specific age groups by comparing observed mortality rates with reference mortality rates from a standard population. To adapt this measure to Pakistan, modifications are necessary to account for regional health disparities, socio-cultural norms, and data availability. The calculation of excess female mortality for age group is given by Excess female mortality in age group, Observed mortality rates for females and males in age group, respectively and reference mortality rates for females and males in age group from a high-income population (e.g., 2000), and Female population in age group.⁹

Modifications for Pakistan

By tailoring the flow measure to Pakistan's demographic and healthcare landscape, policymakers can gain actionable insights into age-specific and region-specific excess female mortality, enabling targeted interventions to reduce gender disparities.

Localized Reference Population

Instead of using high-income countries as a reference, regional populations with similar socio-economic contexts and healthcare standards should be used. For example, urban centres in South

⁶ World Bank Gender Portal (2024). See <https://www.unfpa.org/data/demographic-dividend/PK>

⁷ As defined by Ebert et al. (2022),

⁸ The EFM was calculated through the following formula. $EFM(a) = \left(MR_f(a) - \left(\frac{MR_m(a)}{MR_m(a)/MR_f(a)} \right) \right) * Pop_f(a)$

⁹ The EFM The term acts as a correction factor, scaling the observed male mortality rate to derive a reference female mortality rate. This adjustment accounts for inherent sex differences in mortality due to biological and behavioral factors.

Asia with better health outcomes can provide a more accurate benchmark. Such localized references help in capturing relevant health dynamics and contextual realities that directly impact mortality and gender bias.

Incorporation of Disease Burden

Pakistan faces specific health challenges, such as higher maternal mortality and infectious diseases. These factors should be incorporated into reference mortality rates to reflect local health risks accurately. Accounting for the burden of diseases like tuberculosis, respiratory infections, and maternal health complications will improve the precision of excess female mortality estimates, ensuring that they truly reflect preventable and gender-based mortality rather than generalized health outcomes.

Adjustment for Rural-Urban Disparities

Mortality rates differ significantly between rural and urban areas in Pakistan. Separate flow measures should be calculated for these regions, with distinct population data. Rural areas often face greater healthcare access issues, lower literacy rates, and entrenched gender norms, all contributing to higher female mortality. Urban areas, while better equipped, also have pockets of deprivation where women face neglect. Distinguishing these contexts allows policymakers to direct resources efficiently.

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Age-Specific Considerations

Key age groups, such as 0–5 years (childhood), 15–49 years (reproductive age), and 60+ years (elderly), should be emphasized due to their unique mortality patterns and vulnerabilities. Childhood mortality reflects early-life neglect and nutritional deprivation, reproductive age mortality can highlight maternal health and gendered access to medical care, and elderly mortality reveals long-term societal biases affecting women's survival in later life.

Rationale for Adaptation

These modifications ensure that the flow measure provides realistic estimates of missing women in Pakistan by addressing:

- Regional disparities in healthcare access and quality.
- Socio-cultural norms that exacerbate gender-based neglect.
- Limitations of global benchmarks that may not reflect Pakistan's unique context.

Only by making these context-specific adjustments can the flow measure effectively guide policies aimed at reducing gender inequities, improving women's survival rates, and ultimately addressing the deeply rooted issue of missing women in Pakistan.

Conclusion and Policy Recommendations

Addressing the issue of missing women in Pakistan requires a nuanced and data-driven approach that goes beyond simplistic statistics. By adapting flow measures to the country's unique demographic, health, and socio-cultural context, policymakers can identify specific age groups and regions where excess female mortality is most severe. Implementing targeted interventions—such as conditional cash transfers, healthcare subsidies, community monitoring, and public awareness campaigns—can effectively reduce gender disparities in survival and wellbeing. Sustained commitment to data transparency, regional accountability, and culturally sensitive programs is essential to closing the gender gap and ensuring that every girl and woman in Pakistan has the opportunity to thrive.

The policy interventions emphasize systemic changes and localized solutions to address the issue of missing women in Pakistan. By leveraging targeted, measurable, and region-specific strategies, they aim to sustainably address gender disparities. Integrating these policies into national frameworks will not only enhance female survival rates but also contribute to broader social and economic development goals.

- Implement **conditional cash transfers** in high-risk regions, linking financial support to girls' regular healthcare visits, vaccinations, and nutrition compliance, to directly incentivize improved female health outcomes. Use secure mobile payment systems to ensure transparency and timely delivery.
- Provide **targeted healthcare subsidies and mobile clinics** for women and girls in underserved areas, partnering with NGOs and private providers to improve access. Regular monitoring through regional audits will track improvements in health service uptake and mortality reduction.
- Introduce **tax incentives** to encourage private sector investment in female health and welfare programs, supported by certification schemes and employer-led family welfare initiatives, to mobilize sustainable funding.
- Establish **community-based monitoring committees and regional mortality review boards** to oversee gender-specific healthcare access and mortality trends. These bodies will involve health experts, statisticians, and local leaders to ensure accurate data collection, grievance redressal, and tailored interventions.
- Launch **strategic public awareness campaigns** using social and traditional media to shift cultural attitudes towards gender equality, emphasizing economic and social benefits, with periodic surveys to assess impact.
- Prioritize and dynamically allocate **resources to high-excess female mortality areas**, using data-driven approaches to measure progress and maintain accountability through annual public reporting.

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