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# Does Economic Growth Close Gender Gaps?

**Featuring a paper by Patrick Agte, Orazio Attanasio, Pinelopi K. Goldberg, Aishwarya Lakshmi Ratan, Rohini Pande, Michael Peters, Charity Troyer Moore, and Fabrizio Zilibotti**

## BACKGROUND

Over the past century, many countries have seen remarkable economic growth. Alongside, there have been increases in women's participation in paid economic activities and closures of gender gaps. Yet low- and middle-income countries still seek to increase incomes, and those countries often have large gender gaps linked to economic activity. Should we assume that growth alone will close those gender gaps?

A growing body of evidence suggests that gender gaps may persist even in the face of rising incomes. Moreover, the recent experience of low- and middle-income countries may differ significantly from the more well-documented experience of today's higher income countries, which reduced historic gender gaps in their economies.

In a recent EGC Discussion Paper titled "Gender Gaps and Economic Growth: Why Haven't Women Won Globally (Yet)?", Agte et al. (2024) investigate the relationship between gender gaps and economic growth using a cross-country dataset to analyze a range of indicators of economically important gender gaps.

## KEY RESULTS

Analysis of a range of labor market indicators shows that gender gaps do not necessarily close as countries develop. Furthermore, countries with similar income levels have quite varied gender gaps, suggesting that income alone does not determine these outcomes.

As incomes grow, women tend to leave agriculture, often exiting paid work altogether or moving into service sector jobs, while men move into new non-agricultural jobs.

Yale *Economic Growth Center*

## METHOD

In Agte et al. (2024), we use data from the World Bank's Global Jobs Indicators (JOIN) Database to investigate the evolution of gender gaps with economic growth for 153 countries between 1998 and 2018. To understand the nuances of economic activity as countries grow, the analysis covers eight indicators of gender gaps in labor markets, including labor force participation, employment, hours worked, time spent on unpaid work (a common practice of women in low-income settings), and wages. Since economic growth entails the transition of many individuals from work as smallholder farmers to manufacturing or service-oriented wage work, the analysis also examines gender gaps in participation in these three sectors.[1]

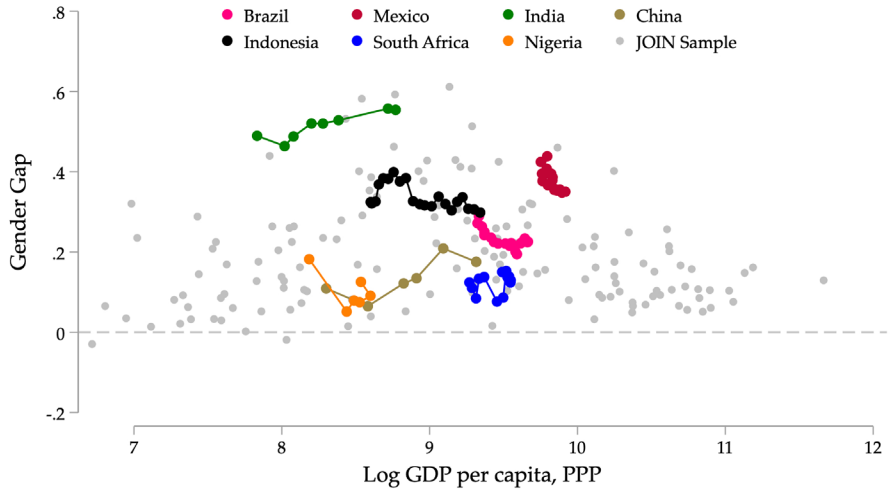
A challenge for establishing patterns in the data is that the results might depend on how the statistical model is set up. To address this, we examine how gender gaps in labor market outcomes change as incomes grow.[2] We focus on three approaches to understanding the associations between gender gaps and economic growth:

1. First, the raw relationship between growth and gender gaps, as a baseline to understand changes over time.
2. Second, the relationship between economic growth and gender gaps after adjusting for fixed country characteristics. This adjustment is important because it is possible that countries experiencing significant economic growth may have underlying features — e.g. differences in geography — that drive both gender gap closures and growth.
3. Finally, relationships after adjusting for country characteristics that are fixed over time (as in #2) and general time factors that affect all countries. Accounting for global time effects is important if there are trends or shocks that affect gender gaps globally that also relate to changes in countries' GDP per capita.

## RESULTS

Our results suggest that recent improvements in gender gaps are not directly attributable to economic growth per se. Figure 1 shows descriptive evidence in support of this conclusion for specific country examples. First, across countries, there are major differences in gender gaps at the same income levels. For example, India's gender gaps in labor force participation are higher than Indonesia's and Nigeria's, even at similar levels of per capita income. Second, some countries — like Mexico and Brazil — see declines in the gender gap as their incomes increase, while others, like South Africa, do not see major gender gap changes as their income grows. In still some other cases- notably, in India and China — gaps have generally increased with income growth. More detailed statistical analysis supports this idea, suggesting that economic growth alone has not systematically improved women's outcomes.

**Figure 1: Gender gaps in labor force participation may increase or decrease with growth**




NOTES: Gender gaps are defined as the difference in male outcomes and female outcomes in a given country-year. Incomes are measured as the natural log of GDP per capita adjusted for purchasing power parity

Our analysis also highlights how conclusions can change depending on the type of analysis used: For labor force participation, our results show the inverse-U-shape considered standard by economists, in which the gender gap in this measure first increases with economic development (gets worse) and then decreases again. However, we find that the predicted turning point at which gender gaps begin to close again depend substantially on the statistical model. In particular, once we account for time trends and country characteristics, the implied turning point is much further out and higher than the current income levels of most countries. This suggests growth alone will not coincide with gender gap closures until today's low- and middle-income countries have significantly higher GDP per capita.

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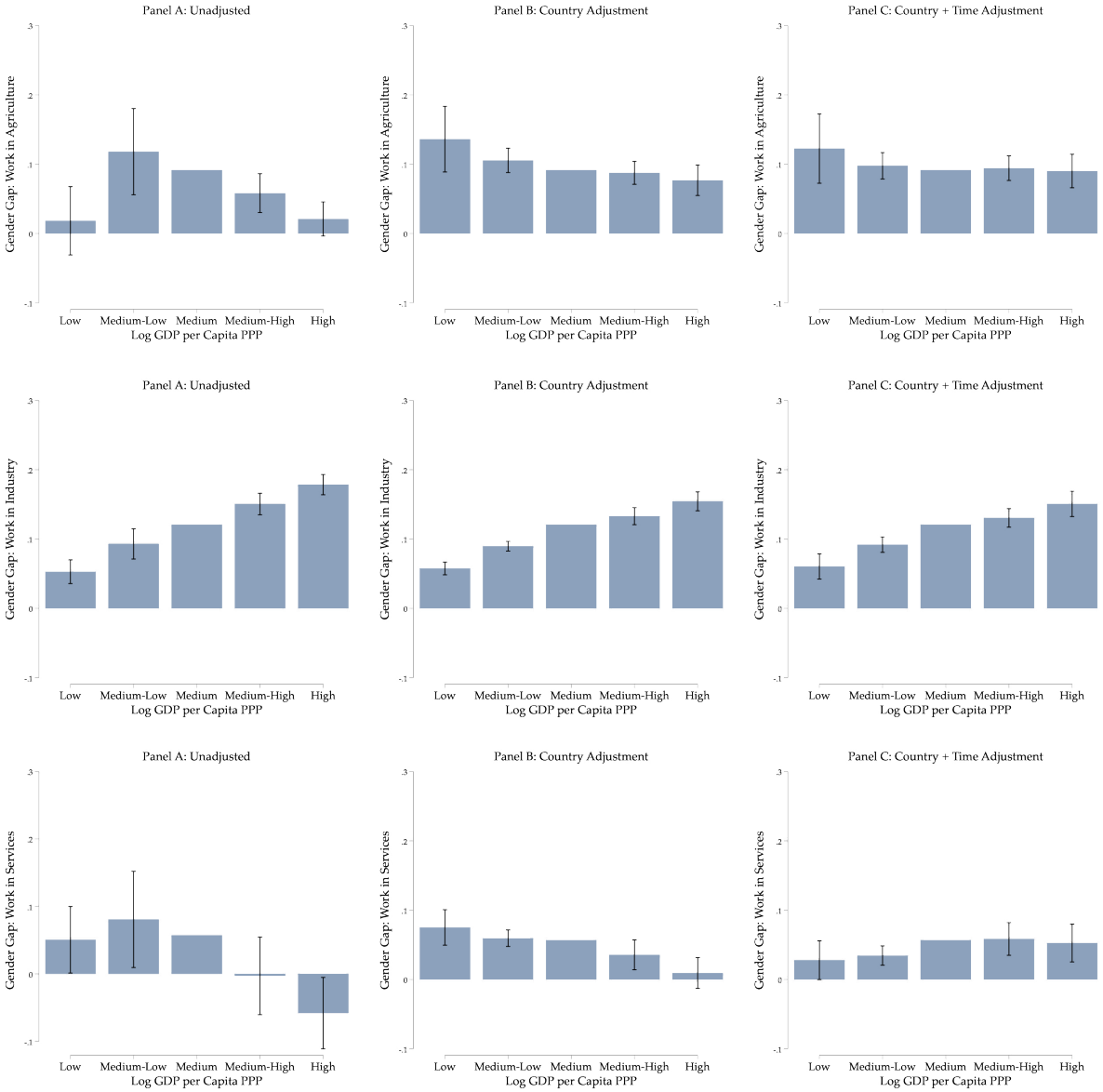
Further analysis of sectoral employment in the paper (shown in Figure 2) highlights the gendered nature of structural transformation. As countries become richer, both men and women tend to leave the agricultural sector, and gender gaps in agriculture vary depending on the analysis approach (row 1). However, gender gaps in industry employment are increasing as men enter manufacturing jobs, and this result is consistent across different empirical specifications (see row 2). When examining the association with gender gaps in service sector employment, a mixed picture appears. While the first two specifications suggest that gender gaps decline with economic development, the relationship mostly remains flat once we also account for general time factors.

What explains the differences across specifications? First, there are strong time trends in the data that lead to declines in gender gaps independent of the income level of a country in a specific year. These broader trends might reflect long-run economic growth or broader changes in technology and norms over time. Second, level differences in gender gaps vary substantially across countries, suggesting that any analysis needs to account for underlying contextual differences.

**Figure 2: Gender gaps in sectoral employment and GDP per capita**




NOTES: Gender gaps are defined as the difference in male outcomes and female outcomes in a given country-year. Incomes are measured as the natural log of GDP per capita adjusted for purchasing power parity.

A rich body of academic research has explored which factors tend to reduce gender gaps and which hold back progress. Whilst structural transformation from agriculture to manufacturing has mixed outcomes for women, the growing service sector is less reliant on brawn and more reliant on cognitive and interpersonal skills, creating a more level playing field for women. Improved legal equality and technological advancements (like electricity, household appliances, and computers) have further benefited women. However, multiple factors support the persistence of gender gaps even as potential economic rationales are no longer relevant. These include cultural norms, discrimination, male backlash, and gender-segregated networks, which suggests that gaps may need additional intervention to close.

P. Agte, O. Attanasio, P. Goldberg, A. Lakshmi Ratan, R. Pande, M. Peters, C. Troyer Moore, and F. Zilibotti. "Gender Gaps and Economic Growth: Why Haven't Women Won Globally (Yet)?" EGC Discussion Paper 1105. Available at **https://elischolar.library.yale.edu/egcenter-discussion-paper-series/1105/**

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